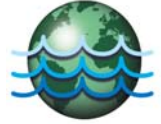


P.W. GROSSER CONSULTING



May 5, 2016

Mr. Conor Shea, PE
New York State Department of Environmental Conservation
Division of Environmental Remediation, Remedial Bureau A
625 Broadway, 12th Floor
Albany, NY 12233

**RE: Corrective Measures Work Plan
Penetrex Processing
Site No.: 130034**

Dear Mr. Shea:

P.W. Grosser Consulting, Inc. (PWGC) has prepared this Corrective Measures Work Plan (CMWP) to provide a plan to correct the off-site portion of the groundwater monitoring system at the former Penetrex Processing facility located at 1 Shore Road, Glenwood Landing, New York (Site), in accordance with Section 5.4 of PWGC's *Site Management Plan (SMP)* dated February 2015. A site vicinity map is included as **Figure 1**. The corrective measures include an investigation to locate and rehabilitate the off-site monitoring well which is believed to be destroyed, or determine the viability of installing a new off-site monitoring well.

Background

The Site is listed by the New York State Department of Environmental Conservation as an Inactive Hazardous Waste Disposal Site (IHWDS) due to the detection of chlorinated volatile organic compounds (VOCs) in the Site's subsurface. Remediation at the subject site included excavation of soils from impacted on-site leaching pools and in-situ chemical injection of potassium permanganate. The success of the remedial effort led to the downgrading of the site to a Class 4 IHWDS with the implementation of the SMP with institutional and engineering controls. The SMP specifies the semi-annual sampling of the network of 12 groundwater monitoring wells, including 11 on-site wells and one off-site monitoring well identified as MW-6. A Site Plan indicating the monitoring wells is included as **Figure 2**.

During the April 2015 groundwater sampling event, MW-6 could not be located and was presumed to have been destroyed since the previous sampling. As MW-6 has been located consistently outside the area of impact, PWGC recommended that MW-6 not be replaced. In the Periodic Review Report (PRR) response letter dated April 7, 2016, the NYSDEC rejected PWGC's recommendation, the PRR, and the IC/EC certification stating that, "As there are currently no wells located off-site which can show off-site plume migration, DER is requesting that groundwater

monitoring be completed off-site during the next periodic review period to ascertain whether there are off-site impacts to groundwater quality”.

Corrective Measures

In order to locate off-site groundwater monitoring well MW-6, PWGC will utilize metal detecting equipment (Fisher M-Scope FX-3 Ferro Probe magnetometer or equivalent and Fisher M-Scope TW-6 split box metal detector or equivalent) and hand tools. If discovered, the viability of the well will be assessed.

If repairable, damage to the well will be repaired and the well will be redeveloped by a low stress (low flow) method to restore the hydraulic properties of the aquifer, while preserving soil horizons, and water quality. The development of the well will continue until the turbidity is less than or equal to 50 Nephelometric Turbidity Units (NTUs), and when pH, temperature, and conductivity measurements stabilize. Stabilization will be considered achieved when three consecutive readings within five percent of each other are collected in five minutes. Portable field instruments will be used to collect measurements. If turbidity cannot be reduced to 50 NTUs, but other parameters stabilize, the well will be considered developed.

If MW-6 is found to be irreparable, the well will be properly abandoned in accordance with NYSDEC CP-43, *Groundwater Monitoring Well Decommissioning Policy*.

Since the installation of MW-6, a guard rail has been installed along Shore Road, between MW-6 and the roadway. The guardrail may prevent the installation of a monitoring well in the area of MW-6. PWGC will conduct a site walkthrough with a well drilling contractor to determine if a viable location for an off-site monitoring well is available. If appropriate, the proposed well location will be submitted for NYSDEC approval. If a replacement off-site monitoring well can be installed, the monitoring well will be constructed of two-inch diameter, schedule 40 PVC casing and screen with 0.010 inch slot. The well will be screened at the water table with 10 feet of screen and riser to grade. The top of the screen will be set 3 feet above the water table. The bottom of the screen will be set 7 feet below the water table. Water table measurements will be confirmed prior to drilling. A gravel pack of No. 2 Morie sand will be placed in the annulus around the screen. A two-foot bentonite seal will be installed above the gravel pack. Above the bentonite layer, the annulus around the well will be backfilled with clean sand.

The well will be set flush to grade with a protective locking manhole cover. The riser will be fitted with a water tight cap. Drill cuttings will be monitored for VOC vapors with a photo-ionization detector (PID). Soils in which VOCs are not detected may be used to backfill the annulus of the wells. Soils in which VOCs are detected will be containerized for proper off-site disposal.

The monitoring well will be developed by a low stress (low flow) method to restore the hydraulic properties of the aquifer, while preserving soil horizons, and water quality. The development of the well will continue until the turbidity is less than or equal to 50 Nephelometric Turbidity Units (NTUs), and when pH, temperature, and conductivity measurements stabilize. Stabilization will be considered achieved when three consecutive readings within five percent of each other are collected in five minutes. Portable field instruments will be used to collect measurements. If turbidity cannot be reduced to 50 NTUs, but other parameters stabilize, the well will be considered developed.

The monitoring well will be surveyed so that groundwater elevations can be calculated. Water level measurements will be obtained and converted into groundwater elevation data to construct groundwater contour maps and determine flow direction. The measuring point on the well casing will be marked.

The new monitoring well will be sampled in accordance with the methods specified in the SMP at the time of the next semi-annual groundwater sampling event.

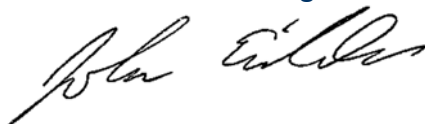
Field work will be performed in accordance with the site-specific HASP. Air monitoring will be performed in accordance with the site-specific CAMP.

Schedule

Upon approval of this CMWP by the NYSDEC, PWGC will mobilize to the Site with a drilling contractor to investigate the MW-6 location and determine a suitable replacement well location, if necessary, within 30 days. MW-6, or the off-site replacement well will be installed and/or developed prior to the October 2016 semi-annual groundwater sampling event.

Please contact me with any questions or comments.

Very truly yours,
P.W. Grosser Consulting

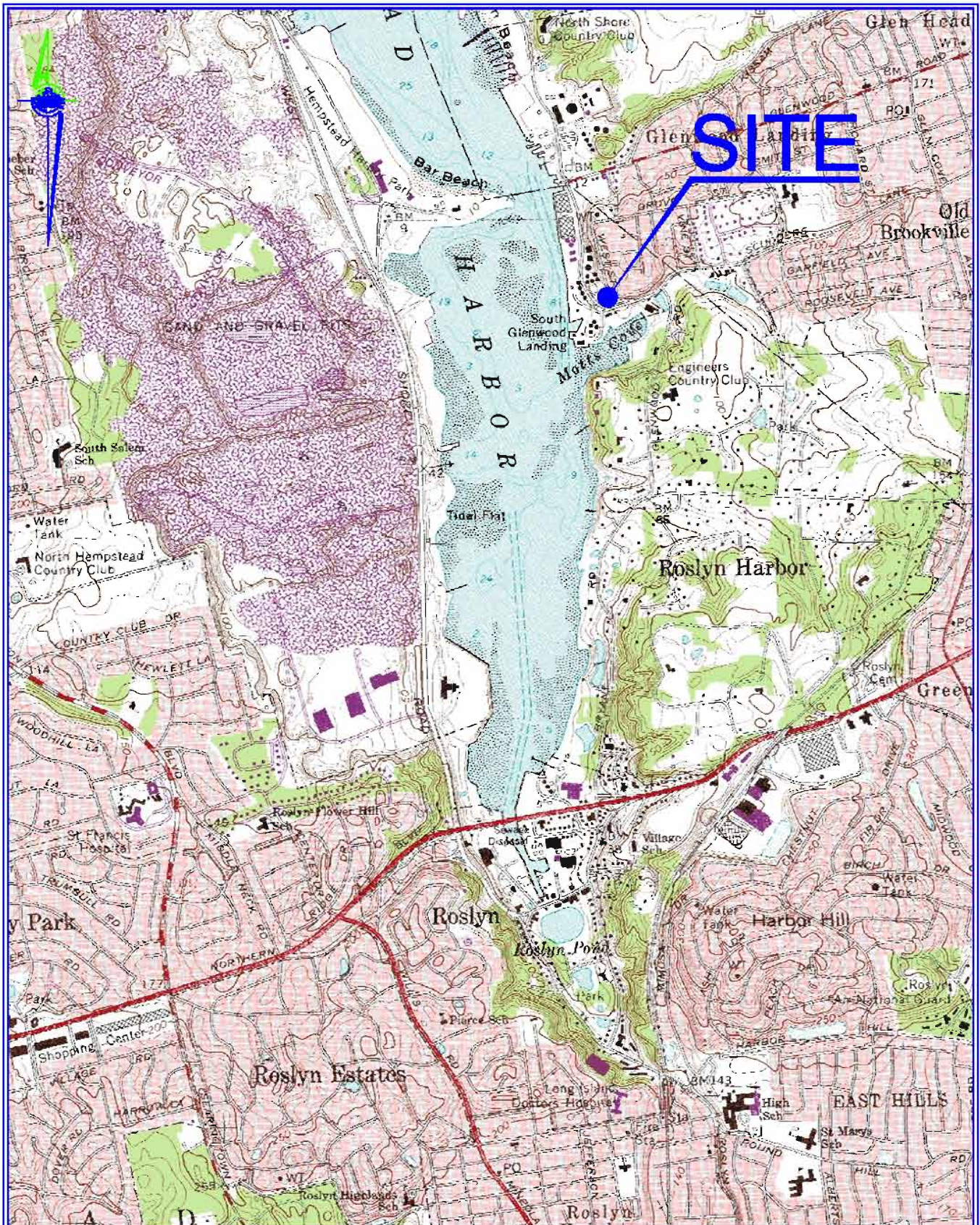


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Mapped, edited, and published by the Geological Survey
 Revised in cooperation with New York
 Department of Transportation
 Control by USGS, USACAGS, and New Jersey Geodetic Survey

VICINITY MAP
 SCALE: 1:24,000

CONSULTANTS

UNAUTHORIZED ALTERATION OR ADDITION TO THIS DRAWING AND RELATED DOCUMENTS IS A VIOLATION OF SEC. 7209 OF THE N.Y.S. EDUCATION LAW

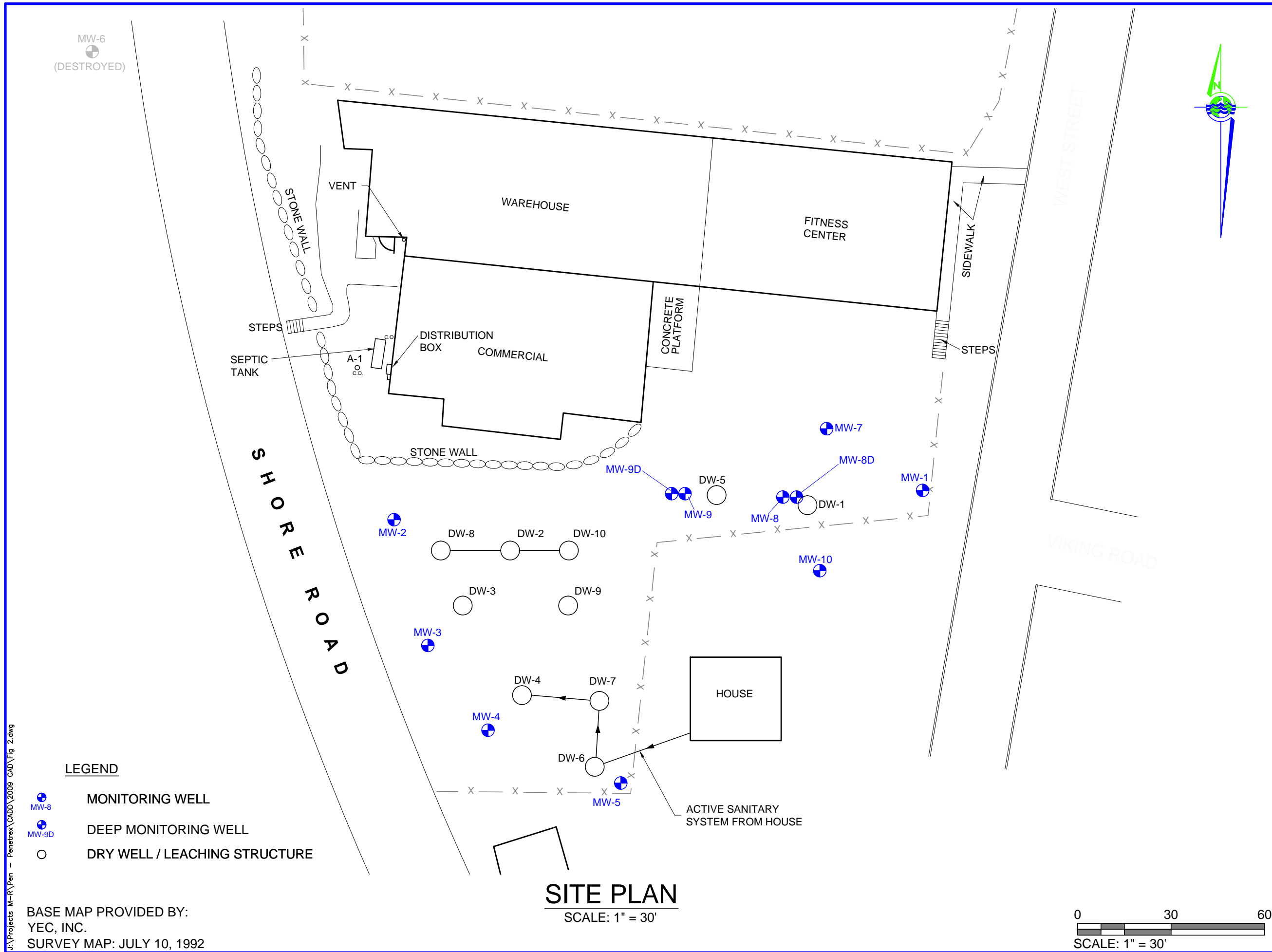
DRAWINGS PREPARED FOR

REVISION	DATE	INITIALS	COMMENTS

SITE PLAN
FORMER PENETREX
PROCESSING NYSDEC
I.D. No. 130034

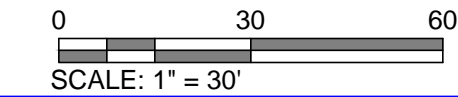
FIGURE NO
2

SHEET - OF -



- LEGEND**
- MW-8 MONITORING WELL
 - MW-9D DEEP MONITORING WELL
 - DRY WELL / LEACHING STRUCTURE

SITE PLAN
SCALE: 1" = 30'



BASE MAP PROVIDED BY:
YEC, INC.
SURVEY MAP: JULY 10, 1992

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