EIKON PLANNING AND DESIGN CORP.

ENVIRONMENTAL CONSULTING • LAND DEVELOPMENT

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November 23, 1992

Mr. Tony Leung
Environmental Engineer
New York State Department of Environmental Conservation
Building 40
SUNY
Stony Brook, New York 11790-2356

RE: ENVIRONMENTAL INVESTIGATION WORK PLAN
100 COMMERCIAL STREET
PLAINVIEW, NASSAU COUNTY, NEW YORK
OIL SPILL NO. 90-11105

Dear Mr. Leung:

Pursuant to the New York State Department of Environmental Conservation (NYSDEC) correspondence dated September 14, 1992 and subsequent telephone conversations undertaken regarding the above referenced site, outlined below please find the environmental investigation work plan compiled to further assess areas of potential environmental concern outlined in Eikon Planning and Design Corporation's (Eikon) March 5, 1991 Results of Environmental Investigations report.

The following activities shall be undertaken:

1. 10,000 Gallon Fuel Oil Underground Storage Tank (UST)

   One (1) groundwater monitoring well shall be installed within 10 ft. downgradient of the fuel oil UST located within the rear yard area of the subject facility (refer to Figure 1). The monitoring well shall be advanced utilizing a hollow stem auger drill rig fitted with a split spoon sampling device. Soil samples shall be obtained during each groundwater monitoring well installation for stratigraphic data acquisition on 5 ft. centers (i.e., 4 to 6 ft., 9 to 11 ft., 14 to 16 ft., etc.) until groundwater is encountered. The groundwater monitoring well shall be completed 10 ft. into the saturated zone.

Please note that prior to initiating groundwater installation activities at the subject site, the Nassau County Department of Health and the United States Geological Survey shall be contacted in order to obtain regional groundwater data (if available) regarding the subject site and vicinity.

a. Media to be Sampled

Groundwater samples shall be obtained to assess groundwater downgradient of the referenced UST.

b. Sampling Frequency and Location

One (1) groundwater sample shall be obtained. The proposed location of MW1 has been included on Figure 1 and Figure 2.

c. Sampling Depth

Following purging the equivalent of three (3) to five (5) well volumes of groundwater from the monitoring well, the well shall be permitted to recover to within 2 ft. of the static water level (if practical) and sampled for laboratory analyses.

d. Analytical Parameters

Groundwater samples shall be obtained and submitted for the following parameters:

- o volatile organic compounds (EPA Method 624+15)
- o total petroleum hydrocarbons (EPA Method 418.1)

2. Rear Yard Solvent Contaminated Soil

In order to further assess the environmental condition of soil material within the rear yard area previously delineated utilizing soil vapor screening, soil borings shall be advanced utilizing the hollow stem auger drill rig targeting areas which demonstrated elevated volatile organic vapor responses, and sampled with a split spoon sampling device for laboratory analyses (refer to Figure 2). No additional excavation of soil material shall be undertaken during this phase of the investigation.

In addition, one (1) soil boring shall be advanced through the backfill of the excavation which had been advanced to 25 ft. below ground surface (bgs). Said boring shall be ad-

vanced to 5 to 10 ft. below the limit of the former excavation (i.e., 30 to 35 ft. bgs) and sampled for laboratory analyses.

One (1) groundwater monitoring well shall also be advanced within 10 ft. downgradient of the solvent contaminated area (refer to Figures 1 and 2).

a. Media to be Sampled

Soil samples shall be obtained from soil borings advanced within the rear yard area.

A groundwater sample shall be obtained from the groundwater monitoring well designated MW2.

b. Sampling Frequency and Locations

Four (4) soil borings shall be advanced and sampled as indicated on Figure 2.

One (1) groundwater sample shall be obtained. The groundwater monitoring well shall be installed within 10 ft. downgradient of the solvent contaminated area (refer to Figure 1 and Figure 2).

c. Sampling Depths

Soil samples shall be obtained as indicated on Figure 2.

Groundwater samples shall be obtained from within 2 ft. of the static water level within the well (if practical) following the evacuation of three (3) to five (5) well volumes of groundwater.

d. Analytical Parameters

Soil samples shall be obtained and submitted for the following parameter:

o volatile organic compounds (EPA Method 624+15)

The groundwater sample shall be obtained and submitted for the following parameter:

- o volatile organic compounds (EPA Method 624+15)

3. Upgradient Groundwater Quality Assessment

In order to assess the quality of groundwater upgradient and entering the subject parcel, one (1) groundwater monitoring well shall be advanced at an inferred upgradient location (refer to Figure 1). Said well shall be advanced utilizing a hollow stem auger drill rig and shall be completed 10 ft. into the saturated zone.

a. Media to be Sampled

Groundwater samples shall be obtained.

b. Sampling Frequency and Location

One (1) groundwater sample shall be obtained from MW3 located at an inferred upgradient location (refer to Figure 1).

c. Sampling Depth

Groundwater samples shall be obtained from within 2 ft. of the static water level within the well (if practical) following the evacuation of three (3) to five (5) well volumes of groundwater.

d. Analytical Parameters

The groundwater sample shall be collected and submitted for the following parameter:

- o volatile organic compounds (EPA Method 624+15)
- o total petroleum hydrocarbon compounds (EPA Method 418.1)

4. Leaching Pool Content Assessment

Based upon results of laboratory analytical data obtained regarding soil borings advanced and sampled at an inferred downgradient location outside each of the five (5) leaching pools located within the front and rear yard areas of the subject parcel, levels of soil contamination did not appear to be above regulatory concern.

To further assess the environmental condition of soil material within the leaching pools, soil samples shall be obtained from material on the bottom of each of the pits utilizing a split spoon sampler.

a. Media to be Sampled

Soil samples shall be obtained.

b. Sampling Frequency and Location

One (1) soil sample shall be collected from within each of the pits (refer to Figure 1).

c. Sampling Depths

Soil samples shall be obtained from 0 to 6 in. below the invert of each pit for semivolatile organic compound and metals analyses, and from 18 to 24 in. below invert of each pit for volatile organic compound analysis.

d. Analytical Parameters

Soil samples shall be collected and submitted to the analytical laboratory for the following parameters:

- volatile organic compounds (EPA Method 624+15)
- semivolatile organic compounds (EPA Method 625+25)
- priority pollutant metals

5. Electrical Transformer Investigation

Preliminary soil sampling activities revealed the presence of 2.2 ppm PCBs in a composite grab sample obtained adjacent to the rear yard electrical transformer.

Based upon preliminary discussions with Long Island Lighting Company (LILCO) personnel, the liability for dielectric liquid discharges resulting from LILCO owned electrical transformers rests with LILCO. Therefore, Eikon proposes to report said discharge to LILCO and suggest that the following additional investigatory activities be undertaken by LILCO in order to satisfy concerns regarding soil material adjacent to the referenced transformer.

a. Media to be Sampled

Soil samples should be obtained.

b. Sampling Frequency and Locations

Two (2) soil samples should be obtained at target depths along each side of the transformer for a total of eight (8) soil samples.

c. Sampling Depths

Soil samples should be obtained at 0 to 6 inches bgs to characterized surface soil conditions and 18 to 24 inches bgs to characterize deeper soil material.

d. Analytical Parameters

Soil samples should be submitted for the following parameter:

- o polychlorinated biphenyl compounds (EPA Method SW846)

Pursuant to telephone discussions with the NYSDEC, Division of Hazardous Waste Remediation Unit, the NYSDEC shall be copied on all correspondence with LILCO.

6. Stockpiled Soil Classification and Disposal

Suspect soil material generated during groundwater monitoring well installation activities and, if applicable, soil boring activities, shall be compiled with the approximately 140 cubic yards of suspect soil material currently staged at the subject site.

Stockpiled soil material shall be sampled for RCRA characteristics prior to the assessment of disposal alternatives. Said material shall be disposed of properly following NYSDEC protocols. Disposal documentation shall be forwarded to the NYSDEC upon completion of soil disposal activities.

7. Quality Assurance/Quality Control

a. Groundwater Monitoring Well Construction and Development

Groundwater Monitoring wells installed at the subject parcel shall be constructed as indicated in Exhibit 1. All well materials shall be steam cleaned prior to placing into the borehole.

Each well shall be constructed of threaded, flush joint, schedule 40 PVC well materials supplied by the drilling contractor. The well borehole shall be advanced utilizing a drill rig outfitted with hollow stem augers.

Subsurface soil conditions and stratigraphic data shall be logged during the advance of monitoring well boreholes. Split spoon soil samples shall be obtained every 5 ft.

Once the borehole is completed, a section of 4 in. diameter PVC, flush-joint, threaded, 0.010 slotted well screen shall be installed from approximately 10 ft. below to 5 ft. above groundwater table level. The remaining well material shall consist of 4 in. PVC, flush-joint casing material to near ground surface. Gravel pack material (NO. 0 sand) shall be placed in the annulus between the well-screen and the borehole to a level approximately 2 to 3 ft. above the top of screen. A bentonite seal consisting of 1.5 lbs. of bentonite per 1 gallon of water shall be placed on top of the filler sand. The remainder of the annulus shall be grouted with cement bentonite grout.

Each monitoring well shall be provided with a lockable steel cap installed inside a water-tight valve box, mounted slightly above ground surface (refer to Exhibit 1.

The monitoring wells installed at the subject site shall be developed immediately following the completion of the well installation. The wells shall be developed until the discharge is clear (if practical) utilizing a submersible pump or air-lift methods. Development water shall be containerized in 55 gallon drums pending proper classification and disposal.

b. Sampling Equipment and Procedures

1. Soil Sampling Activities

Soil samples shall be obtained utilizing a spilt spoon sampling device incorporating the use of a drill rig outfitted with hollow stem augers. The

augers shall be advanced to the target depth and the 24 in. long split spoon sampler shall be placed through the borehole and driven to obtain the sample from the undisturbed material at the bottom of the borehole. If difficulty is experienced in recovering material, the sampler shall be equipped with a sample retention device.

Once the sample is obtained, the split spoon shall be opened permitting screening of the soil material with a portable photoionization detector (PID). The interval which reveals the greatest volatile organic response shall be collected for analyses.

A laboratory prepared sample bottle shall be placed beneath the split spoon allowing the collection of the soil sample. Bottles shall remain sealed until time of sample collection to prevent sample contamination by windblown soils. Upon collection of adequate volume, the sample jar shall be sealed with a screw cap, and labeled.

2. Groundwater Sampling Activities

Groundwater samples shall be collected a minimum of two (2) weeks following the installation of the third monitoring well. This time lag shall be necessary to allow the stabilization of the aquifer, and thus insure that a representative groundwater sample is obtained. Prior to the collection of samples, static water level measurements shall be obtained, and the water within the well shall be inspected for the presence of free product utilizing dedicated clear Teflon bailers. Each monitoring well shall be subsequently purged the equivalent of three (3) to five (5) well volumes of groundwater utilizing a submersible pump. Additional bailers, dedicated for each sample acquisition, shall be subsequently lowered into the well for sample collection. Sample jars shall remain closed until time of sample collection to avoid the introduction of contamination from windblown sources.

c. Quality Assurance Samples

1. Field Blanks

Field blanks shall be obtained during each day of sampling. Laboratory prepared deionized water shall be poured over laboratory and/or field decontaminated sampling equipment and submitted to the analytical laboratory for analyses to test for inadequate cleaning.

One (1) field blank shall be obtained and analyzed for volatile organic and total petroleum hydrocarbon compounds during groundwater sampling activities.

2. Travel Blanks

One (1) travel blank shall remain with the glassware during groundwater sampling activities and shall be submitted to the analytical laboratory only for volatile organic compound analysis.

3. Duplicate Samples

During the soil boring/sampling investigation, one (1) duplicate soil sample shall be obtained and submitted for the following analytical parameters:

- volatile organic compounds (EPA Method 624+15)
- semivolatile organic compounds (EPA Method 625+25)
- priority pollutant metals

One (1) duplicate groundwater sample shall also be obtained during groundwater sampling activities and submitted for the following analytical parameters:

- volatile organic compounds (EPA Method 624+15)
- petroleum hydrocarbon compounds (EPA Method 418.1)

d. Chain of Custody Procedures

Each sample shall be separately recorded on a chain-of-custody manifest provided by the analytical laboratory. This provision, included as part of the sampling procedure, shall include recording the following information regarding each sample submitted:

- Project location
- Sampler
- Sample to laboratory arrival date
- Sample identification
- Sample collection date
- Sample collection time
- Laboratory sample number
- Analysis to be performed

Chain-of-custody procedures shall include the following:

- All samples shall be listed on the chain-of-custody manifest.
- All personnel who have handled samples shall sign the manifest.
- Analyst's identity and laboratory shall be recorded on the manifest and the lab chronicles documents.
- Samples shall be transported in a secured container with manifests attached.
- Samples shall be kept in a locked vehicle and/or within site of a custodian until received by the laboratory.

e. Laboratory Deliverables

Tier II deliverable packages shall be compiled by the analytical laboratory and included with each analytical data report obtained. Complete results of analyses, including Tier II deliverable packages, shall be submitted to the NYSDEC.

f. Decontamination of Field Equipment

The New Jersey Department of Environmental Protection and Energy has recently revised protocols regarding the decontamination of field equipment. Therefore, the following field decontamination of sampling equipment is

proposed to be undertaken at the subject site for all sampling activities:

- o non-phosphate soap and potable water wash
- o potable water rinse
- o deionized water rinse

If sampling activities reveal the presence of saturated petroleum hydrocarbon contamination, the following decontamination protocol shall be followed:

- o non-phosphate soap and water wash
- o potable water rinse
- o dilute nitric acid rinse (if targeting metals)
- o deionized water rinse
- o acetone rinse
- o total air dry
- o deionized water rinse

The decontamination of drilling equipment shall include the physical removal of soil material from the drill rig at the borehole location. Residual soil material shall be subsequently removed from the drilling equipment utilizing a potable water steam cleaner. Water generated shall be collected into 55 gallon steel drums and staged onsite pending the review of disposal options. Drilling equipment shall be steam cleaned between borings and monitoring well locations.

8. Health and Safety Procedures

A site specific health and safety plan shall be compiled prior to mobilization onto the subject site. Each field team member will have read said plan and signed same before arriving onsite.

All workers onsite will have received specific training meeting the requirements set forth by C.F.R. 1910.120. Said training shall include:

a. Initial Training

General site workers will have completed a minimum of 40 hours of instruction off site, and a minimum of 3 days actual field experience under the direct supervision of a trained, experienced supervisor.

b. Management and Supervisor Training

Onsite management and supervisors will have received 8 hours specialized training in addition to the initial 40 hours of instruction and the 3 days experience.

c. Refresher Training

Workers specified in items 8.a. and 8.b. above will have received 8 hour refresher courses annually as required.

If you have any questions or comments, or require additional information, please do not hesitate to call.

Very truly yours,

EIKON PLANNING AND DESIGN CORP.

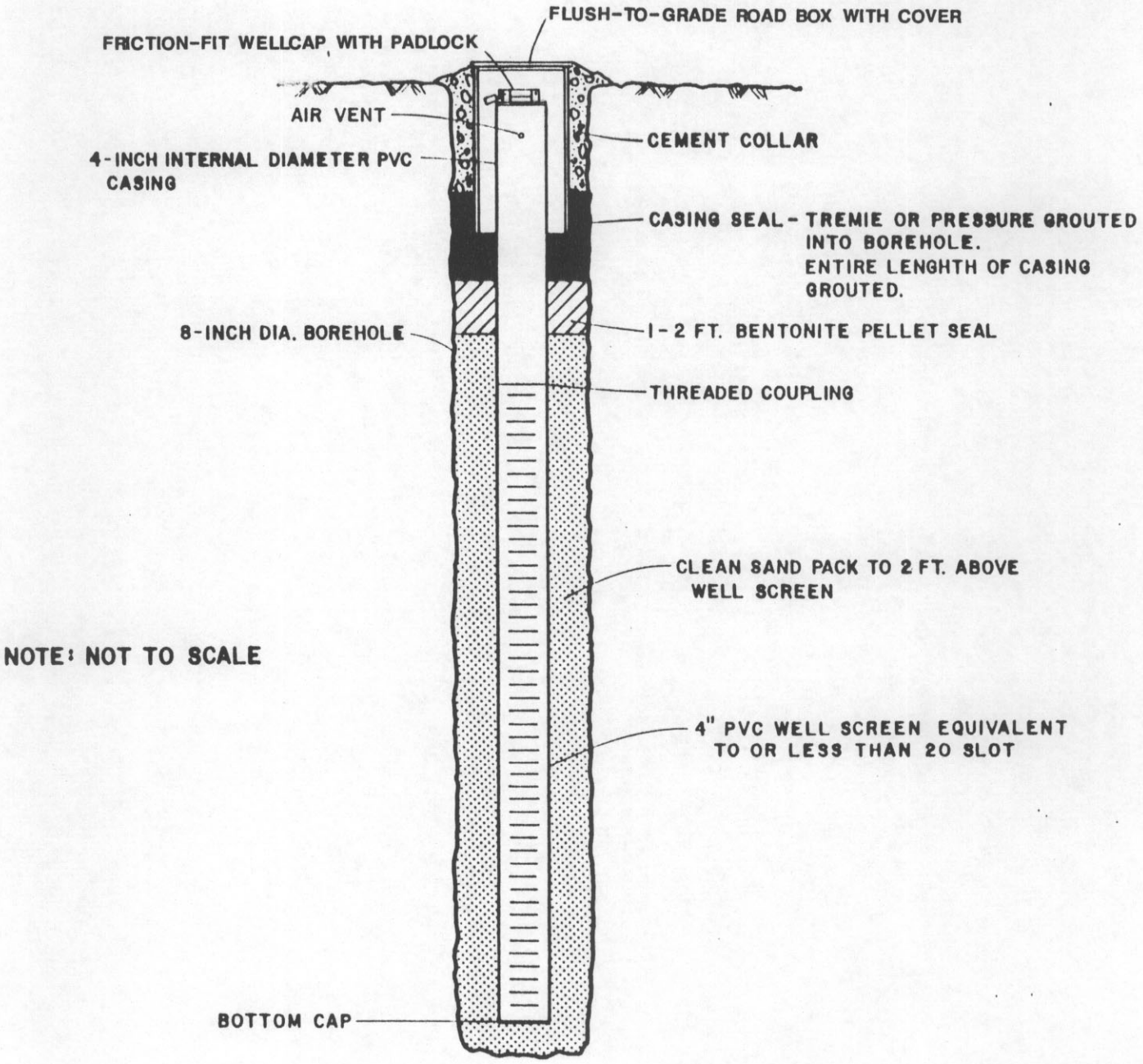
Andreas W. Eisenberger

Attachment

cc: Ms. Jodi Monello
Banque Nationale de Paris
(w/ Attachments)

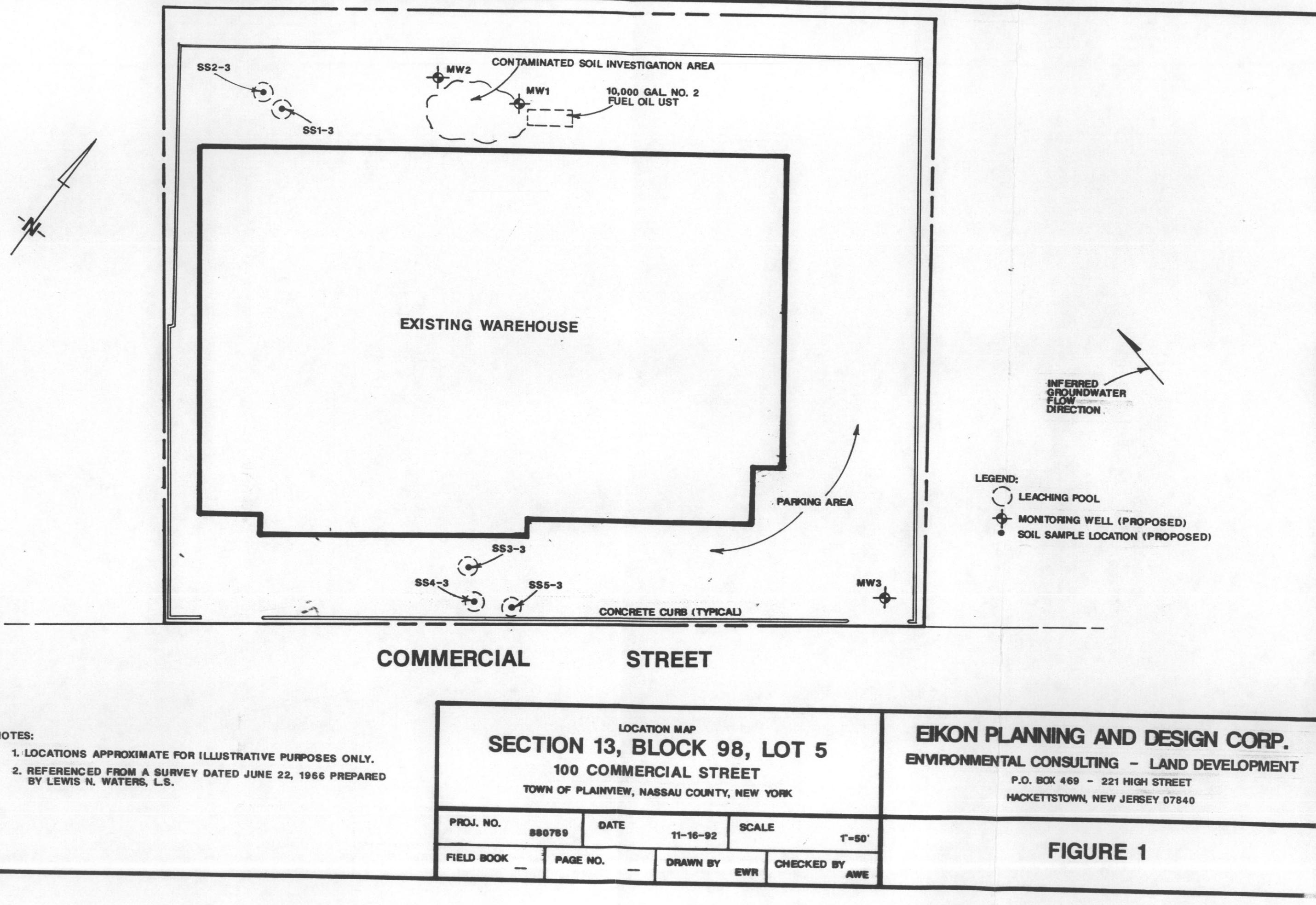
Mr. Jamie Ascher✓
NYSDEC, DHWRU
(w/ Attachments)

FL#523.1192



MONITORING WELL CONSTRUCTION AND INSTALLATION

Reference: NJDEP, N.J.A.C. 7:14A-6, 7:9-7,8 and 9.



NOTES:

1. LOCATIONS APPROXIMATE FOR ILLUSTRATIVE PURPOSES ONLY.
2. REFERENCED FROM A SURVEY DATED JUNE 22, 1966 PREPARED BY LEWIS N. WATERS, L.S.

LOCATION MAP

SECTION 13, BLOCK 98, LOT 5

100 COMMERCIAL STREET

TOWN OF PLAINVIEW, NASSAU COUNTY, NEW YORK

PROJ. NO.	DATE	SCALE
880789	11-16-92	1"=50'

FIELD BOOK	PAGE NO.	DRAWN BY	CHECKED BY
—	—	EWR	AWE

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HACKETTSTOWN, NEW JERSEY 07840

FIGURE 1

100 Commercial St 1-30-075

- RCRA for TSDF for soil removal

Pit 3, 4, 5 metals removal successful

Unresolved

1. Pit # 2 (vertical boring 45-47 bls)
2. 35 yds to be removed
3. stock piled soil (non hazardous) to be transported out

Is there any g.w. flow maps (recent of 4/93) from Veeco

Pit # 1 40-42 clean 45-47 clean

260 yds btex
35 yds ethylbenzene xylene
Pit # 2 clean
Pit # 1 gross perc
Pit # 3 metals
Pit # 4 metals
Pit # 5 clean

Agy

- pt source within int., ext. potential source
  sludge sample
- soil gas survey ext perimeter sample
- from Fd int.

SI (or PSA) and IRM + Court Order

- pit # 1

for

1. workplan SI - contract } Soil gas survey of remaining resample clean source areas

2. determine IRM contract IRM confirmatory

resample 2 rds gave at MW7