

Kleen Environmental Technologies, Inc.

August 17, 1998

Ron Timm
Washington State Department of Ecology
Northwest Regional Office
Toxic Cleanup Program
3190 160th Avenue S.E.
Bellevue, WA 98008

RECEIVED
AUG 17 1998
DEPT OF ECOLOGY

Re: 14 Roy Street, Seattle, WA (#N-17-5513-000)

Dear Mr. Timm:

On August 7, 1998 Kleen Environmental Technologies, Inc. (Kleen) conducted an environmental site investigation at Motion Financial Services, Inc.'s (MFM) 14 Roy Street property (Figure 1). The purpose of this investigation was to fill in data gaps associated with the geology and subsurface soil quality underlying the site. The basis for this investigation is outlined in Kleen's July 24, 1998 letter to the Washington State Department of Ecology (WDOE). Kleen's objectives for the investigation were as follows:

- Remove the abandoned subsurface electrical utility at the site;
- Define the lateral and vertical extent of contaminated soil at the site; and
- Map the contact between sand and silt/clay soils at the site.

FIELD ACTIVITIES

Using a tire-mounted backhoe, Kleen excavated five tests pits and an electrical utility vault at the site. The depth of the test pits varied from approximately 3 to 9 feet below ground surface (bgs). Six soil samples were collected at the site (RSEX-S1 – S6). Soil sample locations are presented in Figure 2. Samples were analyzed for the following analytes:

- Total Petroleum Hydrocarbons (TPH) – Washington State Test Method NWTPH-G
- Total Petroleum Hydrocarbons (TPH) – Washington State Test Method NWTPH-Dx; and
- Volatile Organic Compounds (VOCs) – EPA Test Method 8260.

Kleen collected two additional soil samples for hazardous waste characterization. Samples were leached using the EPA's Toxicity Characteristic Leaching Procedure (TCLP). The leachate was analyzed for VOCs.

FINDINGS

While on-site Kleen made the following observations:

- The electrical vault contained approximately 2,000 gallons of water. The water was pumped from the vault and disposed of off-site;
- After removing the vault, water was present in the excavation pit and oil was observed on the water (Photo 1). Kleen pumped the water/oil mixture into two 55-gallon drums. During the 8 hours Kleen was on-site, water did not reenter the excavation;
- Contaminated soil and water were observed in the vault excavation pit at a depth of approximately 7 to 8 feet below ground surface (bgs) (Figure 2 and Photos 1 and 2). Gray colored contaminated soil was observed on the north, east, and west sides of the excavation, but not on the south side. The texture of the contaminated soil was wet, slightly silty, fine to medium sand with petroleum hydrocarbon odor.
- Test Pits 1 through 5 (TP-1 through -5) were used to map the near surface contact between sand and clayey silt units. These soils were previously mapped in geotechnical and environmental soil borings drilled at the site. Clayey silt soil was observed to be in contact with the surface at distances of approximately 10 to 40 feet east of the site's western boundary (Figure 3 and Photos 3, 4, and 7);
- Contamination was observed predominately in sand and locally at sand/silt contacts (Photo 7), particularly in the vault excavation pit and the former location of chlorinated solvent vessels (see Figure 5 in Kleen's July 24, 1998 letter), ;

- TP-4 was excavated approximately 15 to 20 feet north of the vault. The west end of the pit was excavated to a depth of 8 feet bgs. Contaminated soil was not observed at this depth; however, black stained soil with petroleum odor was observed at one to two feet bgs. This black stained soil extends the length of the pit (Figure 2 and Photo 5; Figure 5 in Kleen's July 24, 1998 letter);
- In TP-5 sand, a strong petroleum odor was observed at a depth of approximately 8 feet bgs. TP-5 was excavated just south of MW-1;
- TP-6 was excavated approximately 20 feet south of the former 4000-gallon UST. The pit was excavated to a depth of 9 feet bgs. From near surface to approximately 8 feet bgs, soil was a dry to moist, olive-gray, stiff, trace, fine, sandy clayey silt. At approximately 8 feet bgs, the silt was in contact with a dry to moist, hard, gray, silty clay. Contaminated soil was not observed in the test pit.

Conclusions

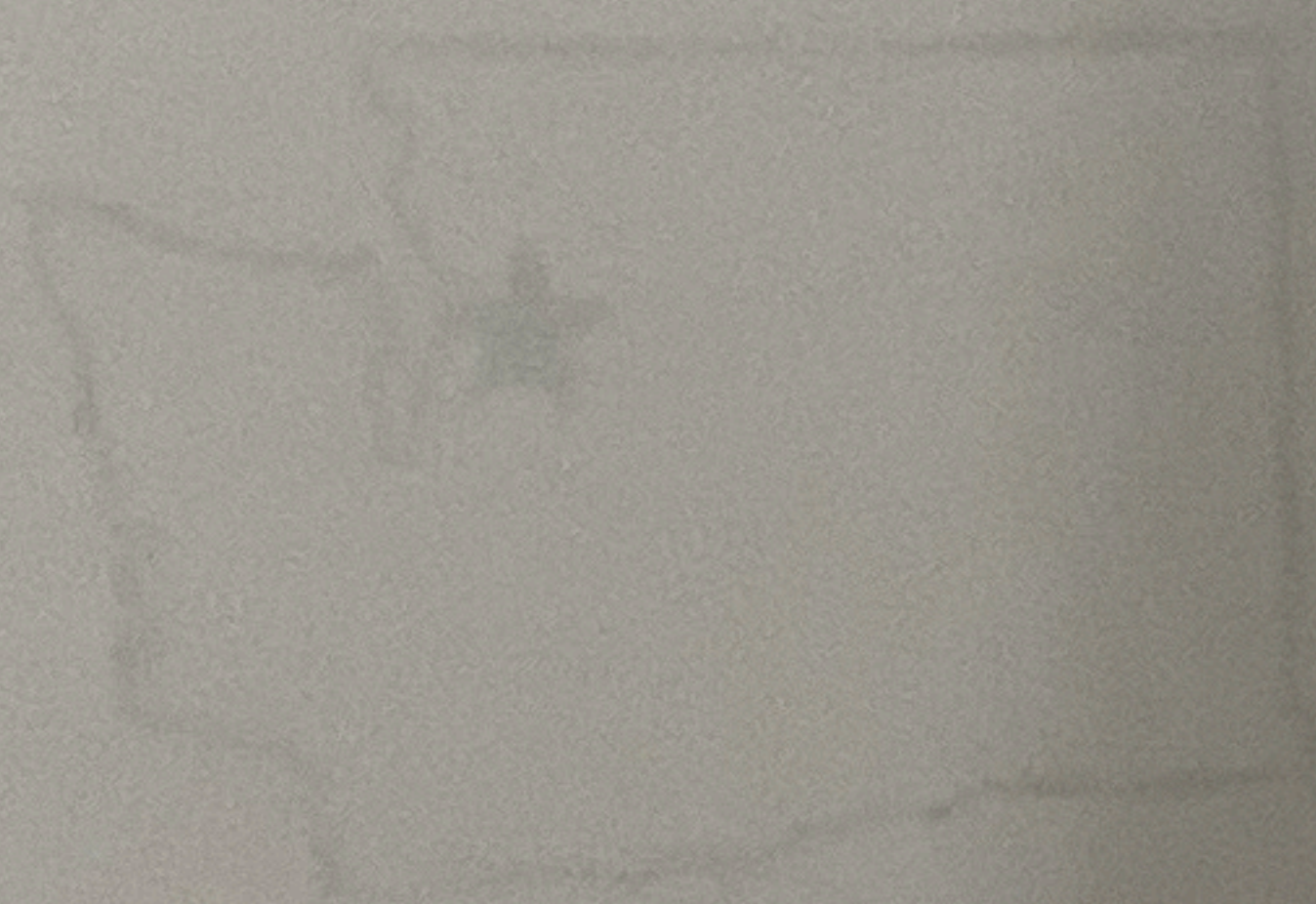
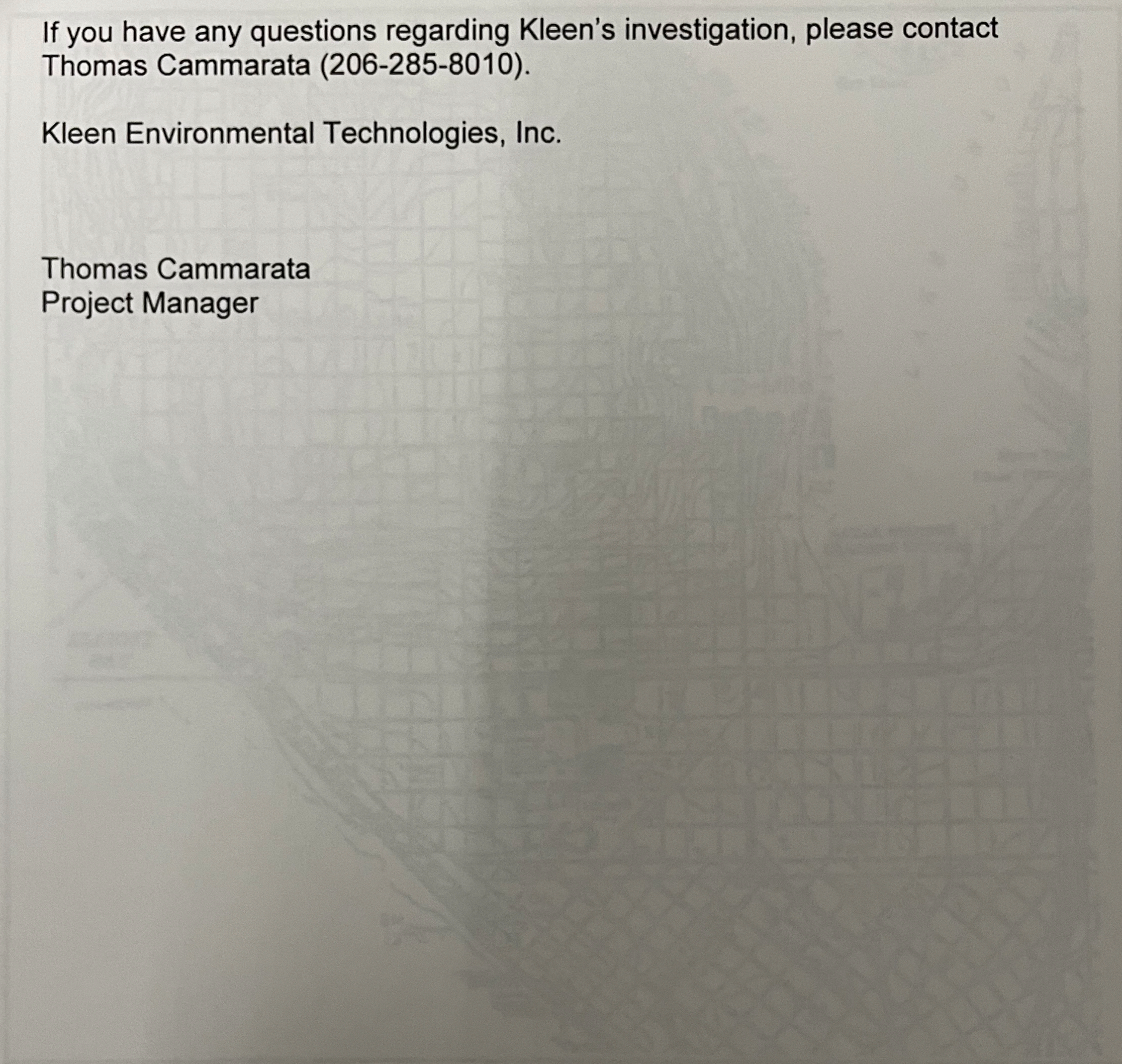
Based on the findings from Kleen's field investigation, the following conclusions are made:

- Contaminated soil is confined to the west side of the site and at the former location of the 4000-gallon UST;
- Contamination is predominately confined to sandy soil. Pervasive contamination was not observed in silt and clay soils;
- The source area for chlorinated compounds discovered in on-site groundwater monitoring wells is probably associated with contaminated soil underlying the former location of solvent vessels and the mineral spirits UST;
- Excavating contaminated soil in the former locations of the 4000-gallon UST, 860-gallon UST, and chlorinated solvent tanks would probably have a positive impact on soil and groundwater quality at the site and down-gradient from the site; and
- Shallow contamination discovered in TP-3 probably resulted from the release product from a subsurface 2-inch diameter pipe that connected the 4000-gallon UST with the 860-gallon mineral spirits UST.

If you have any questions regarding Kleen's investigation, please contact
Thomas Cammarata (206-285-8010).

Kleen Environmental Technologies, Inc.

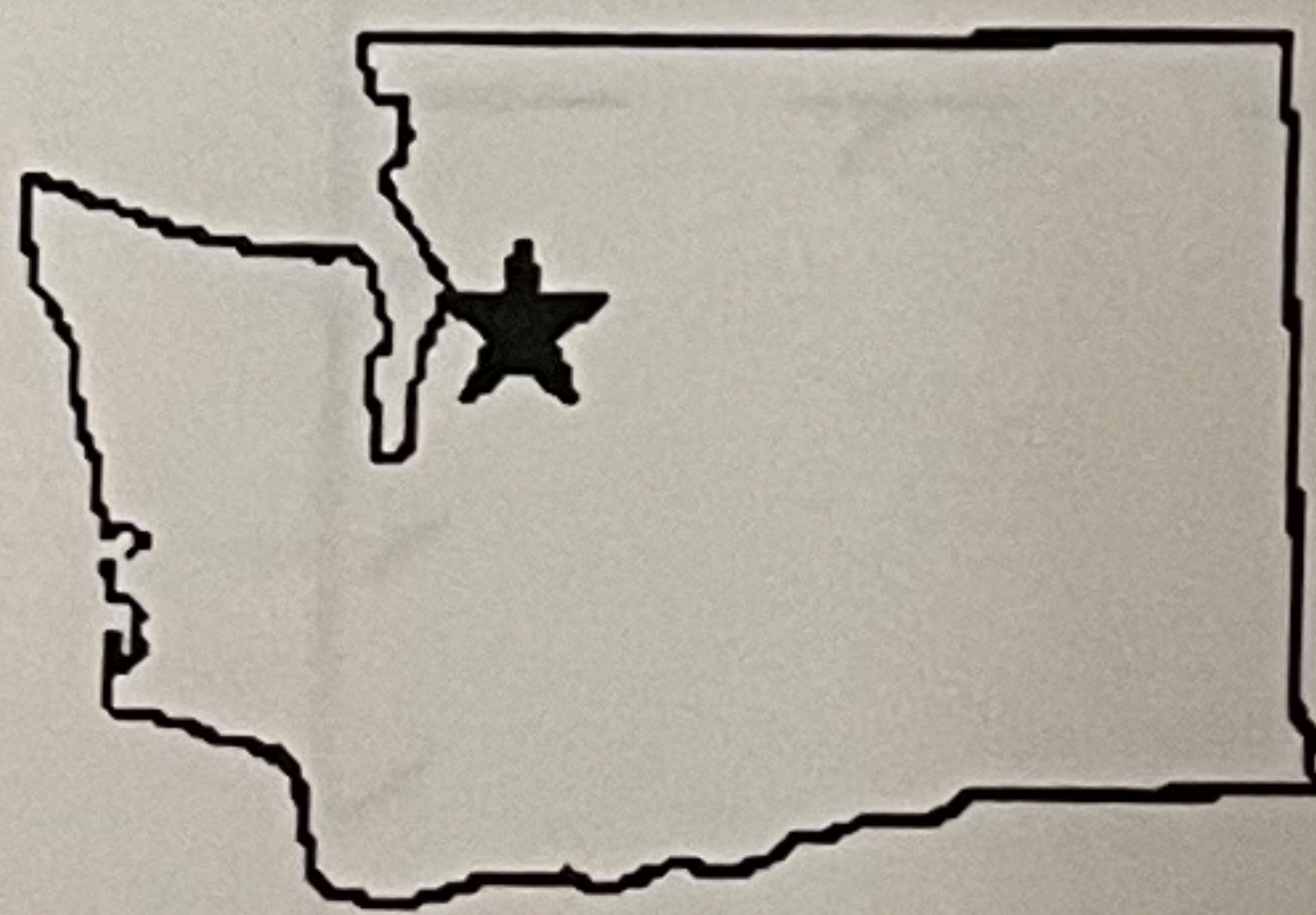
Thomas Cammarata
Project Manager



1000
SOURCE: USGS 1:50,000 TOPOGRAPHIC MAP OF
SEATTLE, WASH. 1960



KLEEN ENVIRONMENTAL TECHNOLOGIES, INC.		Figure 1 USGS MAP	
PROJECT NO. 1045		14 ROY STREET, SEATTLE, WASH.	
PREPARED BY: T.C.	SCALE: 1" = 1 MILE	PROPERTY LOCATED AT	
DATE: 11/11/01	BY: T.C.	14 ROY STREET, SEATTLE, WASH.	



0

1 mile

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC SURVEY MAPS OF
SEATTLE NORTH QUADRANGLE.

Kleen ENVIRONMENTAL TECHNOLOGIES, INC.

PROJECT NO.: 7043

DESIGNED BY: TJC

SCALE: 1:24,000

FILE: FIG1.VSD

DRAWN BY: TJC

DATE: 7/20/98

CHECKED BY:

Figure 1 USGS MAP

14 ROY STREET ROY STREET PROJECT
PROPERTY LOCATED AT
WEST 14 ROY STREET
SEATTLE, WASHINGTON

06/15/2011

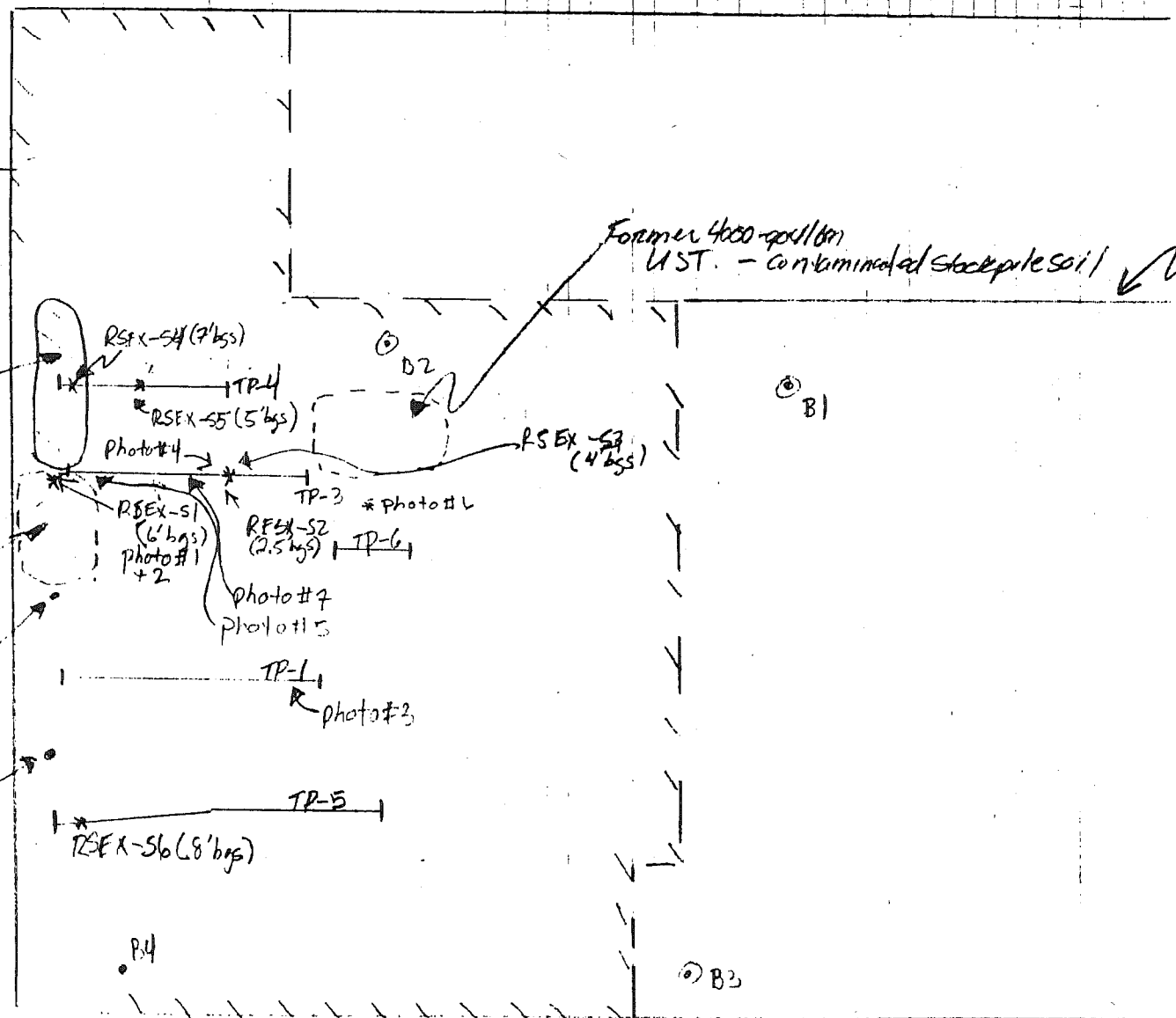
High Rise Apt.

Former 4000-gallon UST

Former vault location

NAVI 22

MIN-1



Retaining wall

SIDE WALK

1st Ave North

SIDE WALK

Roll St.

Scale 1" = 20'

Figure 2

1st Ave North

side walk

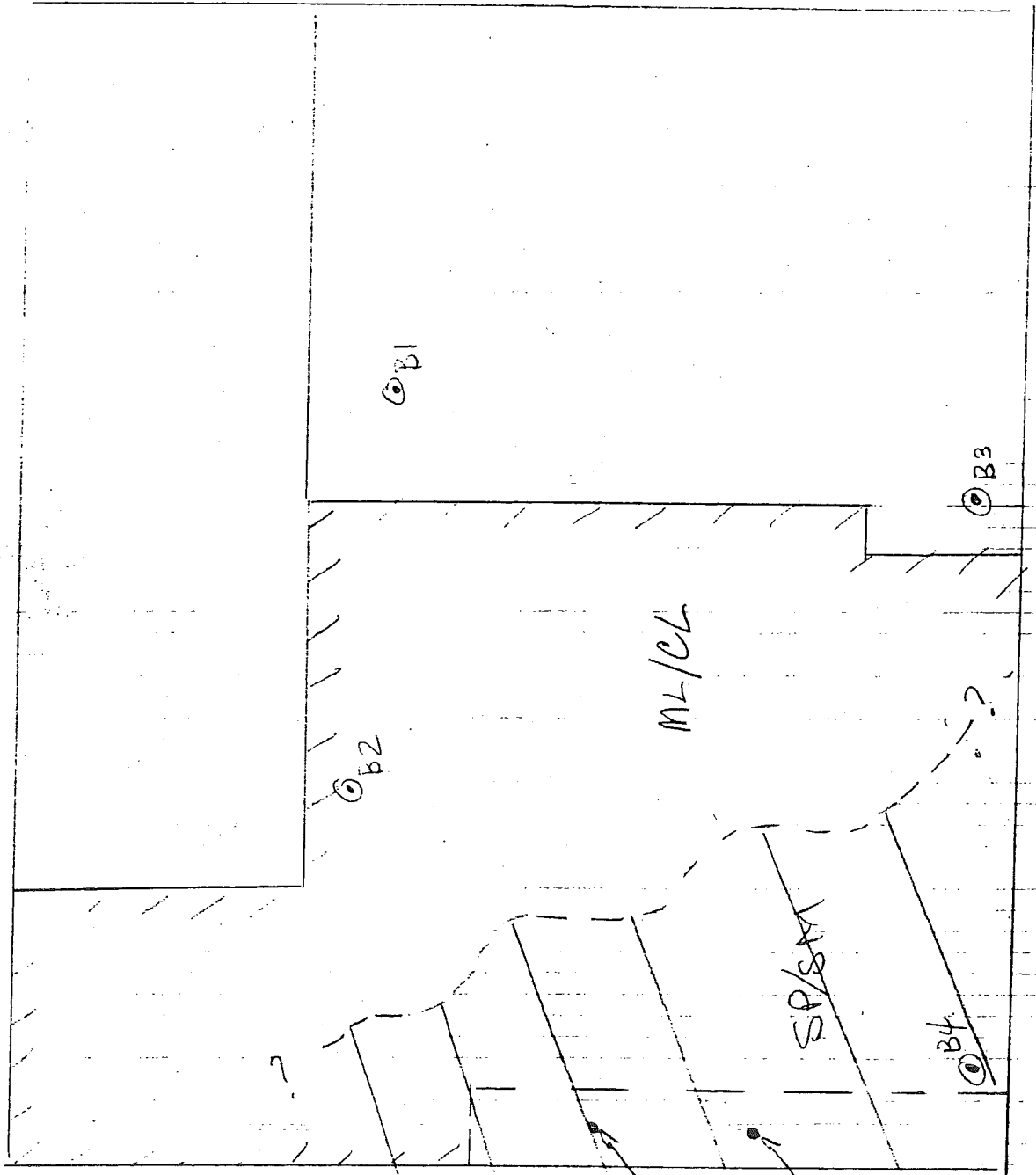


Figure 3

1111

Perm St.

Photograph One



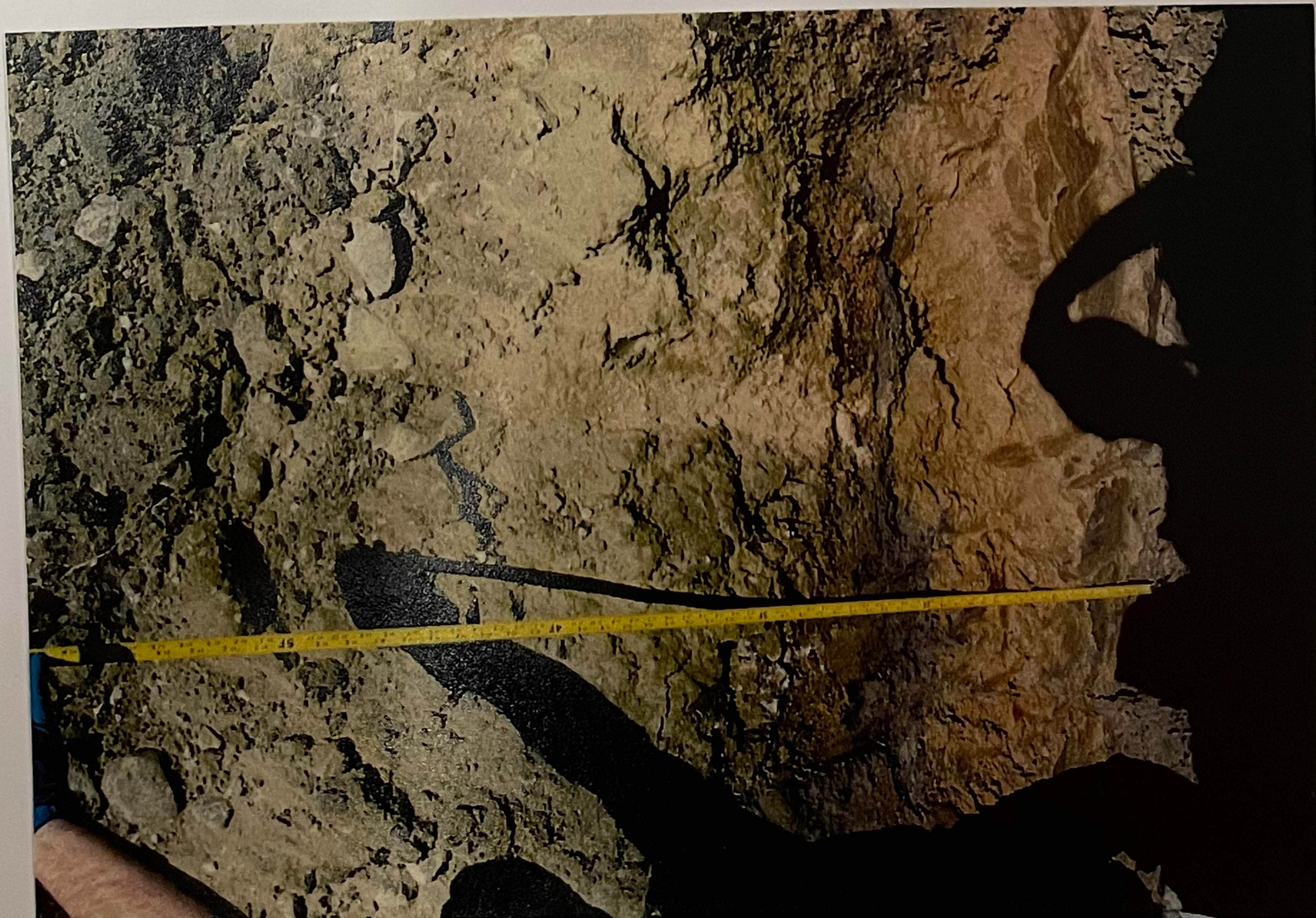
Photograph Two



Photograph Three



Photograph Four



Photograph Five



Photograph Six



Photograph Seven

