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LETTER REGARDING ALTERNATIVE ACTION REQUEST BUILDING 2036 MAIN BASE WITH
ATTACHMENT NTC ORLANDO FL
12/5/1996
ABB ENVIRONMENTAL SERVICES, INC



December 5, 1996

Document No.: 08519.471

Mr. John W. Mitchell
Remedial Project Manager
State of Florida Department of Environmental Protection
Twin Towers Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Subject: NTC, Orlando, Florida
Main Base, Building 2036
Alternative Action Request
CTO 107, Contract No.: N62467-89-D-0317

Dear Mr. Mitchell:

As recommended in the Contamination Assessment Report (CAR) dated March 1996, ABB-ES is developing a Remedial Action Plan (RAP) for the above referenced site. As a part of the RAP investigation ABB-ES performed a pilot test study using the enhanced vacuum truck in order to determine the radius of influence and design a vapor extraction system. Two piezometers were installed; PZ-1 and PZ-2, approximately 5 and 10 feet away from the contaminated well MW-1 as shown in the attached figure. The length of the test was about 2 hrs and the vacuum truck operated at a constant vacuum rate of 50 inches of water. A total of 800 gallons of groundwater were extracted from MW-1 using the vacuum truck on August 15, 1996. Southern Waste Services Inc. disposed of the contaminated water at the Howco facility in St. Petersburg, Florida. Enclosed in Attachment A is the disposal manifest for the extracted groundwater.

On September 2, 1996 ABB-ES resampled wells MW-1 through MW-5 and DW-1 at the above mentioned site as a part of the RAP investigation. The groundwater samples were transported to PC&B Environmental Laboratories, Inc. in Oviedo, Florida to be analyzed using Environmental Protection Agency (EPA) Methods 602 and 610. Laboratory analytical results showed a significant decrease in the contaminant concentration for the EPA Method 602 Benzene from 20 ug/l to <1 ug/l and total VOA's from 465 to 77.4 ug/l. A comparison with EPA Method 602 and 610 parameters values collected during the CAR preparation and the RAP preparation are shown as Table 2-1 in Attachment B.

Based on the groundwater results, additional soil investigation was performed at the site. Three soil borings were installed to the depth of the watertable; SB-1a, SB-2a and SB-3a, the same locations as SB-1, SB-2 and SB-3. The results of OVA's were as follows: 50 ppm (SB-1a), 72 ppm (SB-2a) and 2 ppm (SB-3a) for total OVA's.

Based on the results of the October 12, 1996 sampling and analyses event the site qualifies for a Monitoring Only Plan. However, in view of the small area with low levels of contamination, ABB-ES recommends an additional groundwater extraction and sampling event, the results of which may qualify the site for No Further Action proposal.

ABB Environmental Services Inc.

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Orlando, Florida 32803

Tel. (407) 895-8845
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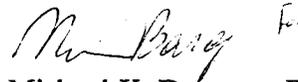
Mr. John Mitchell
December 5, 1996
Page 2 of 2

Please advise as to the acceptability of this course of action. This course of action would eliminate any concerns during the Navy's FOSL/FOST development process for this land parcel. If you have any questions concerning this site please contact Nick Ugolini at 803/820-5596 or Mirna Barq at 407/895-8845 or Mike Dunaway at 904/645-1293.

Very Truly Yours,
ABB Environmental Services, Inc.



John P. Kaiser
Installation Manager

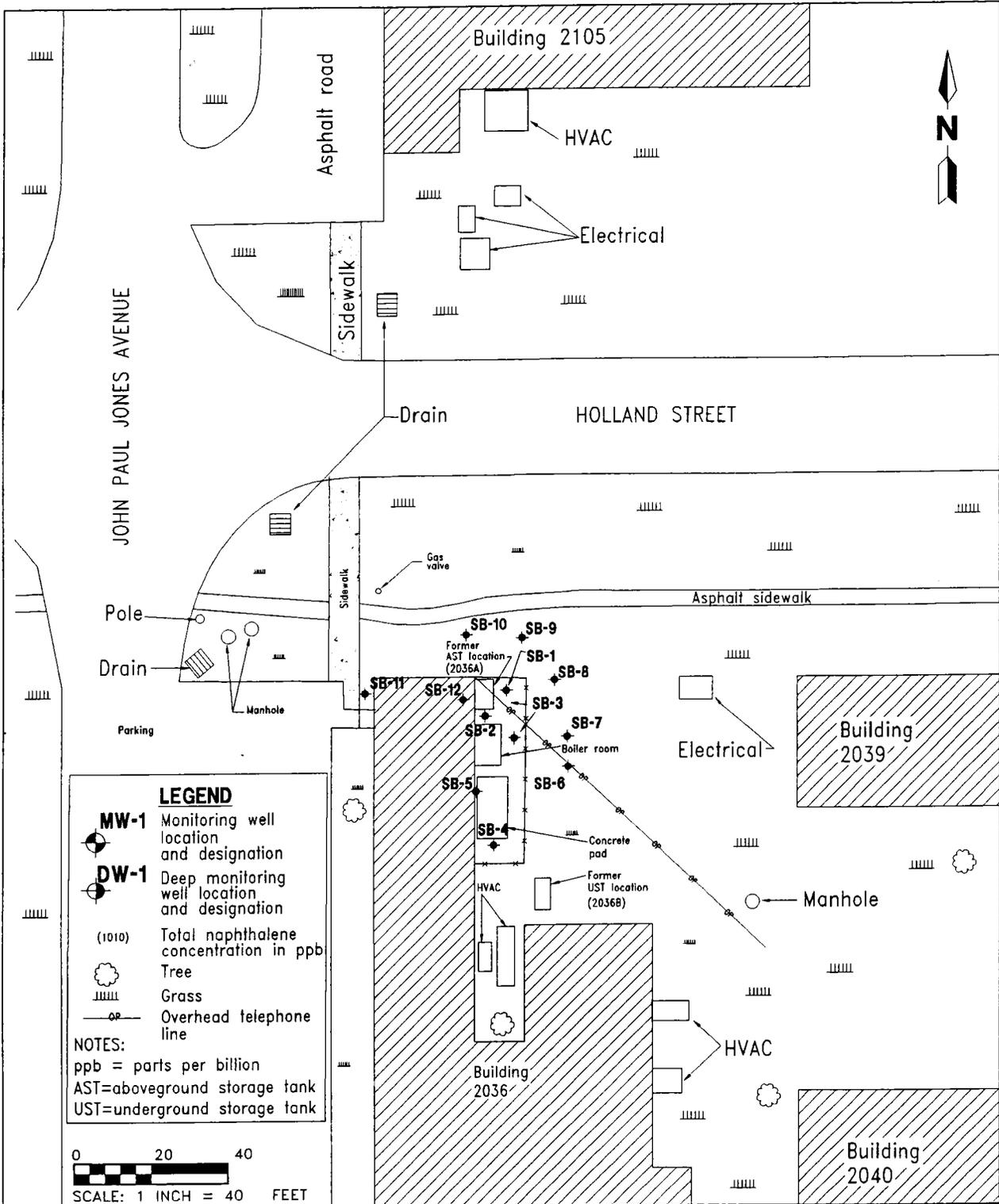


Michael K. Dunaway P.E
Senior Engineer

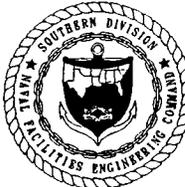
JPK/MKD/lak

cc: Nick Ugolini, Code 1843, Southern Division
Wayne Hansel, Code 18B7, Southern Division
Lt Gary Whipple, NTC, Orlando
Nancy Rodriguez, USEPA
Mirna Barq, ABB-ES
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**FIGURE 1
 SITE MAP**



**CONTAMINATION ASSESSMENT
 REPORT ADDENDUM
 BUILDING 2036
 MAIN BASE
 NAVAL TRAINING CENTER
 ORLANDO, FLORIDA**

**Table 3-1
Summary of Organic Vapor Analyses**

Contamination Assessment Report
Building No. 2036, Main Base
Naval Training Center
Orlando, Florida

Hand Auger Soil Boring No.	Depth (feet)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)	Soil Profile and Comments
SB-1	1-3	16	<1	16	Medium sand, gray to tan; strong petroleum odor, sample moist.
	3-5	340	<1	340	Medium sand, gray to tan; strong petroleum odor, sample saturated.
SB-2	0-1	<1	<1	<1	Fine sand, grey.
	2	10	<1	10	Fine sand, dark grey; sample moist.
	2.5	1000	<1	1000	Fine sand, tan; sample saturated.
SB-3	0-1	<1	<1	<1	Fine sand, dark grey.
	2	<1	<1	<1	Fine sand, dark grey; sample moist.
	2.5	1800	<1	1800	Fine sand, dark grey; sample saturated.
SB-4	0-1	<1	<1	<1	Fine sand, dark grey.
	2	<1	<1	<1	Fine sand, dark grey; sample moist.
	2.5	<1	<1	<1	Fine sand, tan; sample saturated.
SB-5	0-1	<1	<1	<1	Fine sand, brown.
	2	<1	<1	<1	Fine sand, grey to brown; sample moist.
	2.5	1	<1	1	Fine sand, tan; sample saturated.
SB-6	0-1	<1	<1	<1	Fine sand, dark grey.
	2	<1	<1	<1	Fine sand, dark grey; sample moist.
	2.5	<1	<1	<1	Fine sand, tan to grey; sample saturated.
SB-7	0-1	<1	<1	<1	Fine sand, grey.
	2	<1	<1	<1	Fine sand, dark grey; sample moist.
	2.5	6	<1	6	Fine sand, tan; sample saturated.
SB-8	0-1	<1	<1	<1	Fine sand, grey.
	2	<1	<1	<1	Fine sand, brown; sample moist.
	2.5	<1	<1	<1	Fine sand, dark grey; sample saturated.
SB-9	0-1	<1	<1	<1	Fine sand, grey.
	2	<1	<1	<1	Fine sand, brown; sample moist.
	2.5	<1	<1	<1	Fine sand, tan to grey; sample saturated.
SB-10	0-1	<1	<1	<1	Fine sand, grey.
	2	<1	<1	<1	Fine sand, brown; sample moist.
	2.5	<1	<1	<1	Fine sand, tan to grey; sample saturated.
SB-11	0-1	<1	<1	<1	Fine sand, grey.
	2	<1	<1	<1	Fine sand, brown; sample moist.
	2.5	<1	<1	<1	Fine sand, brown to grey; sample saturated.
SB-12	0-2	2	<1	2	Fine sand, brown to gray, moist; no odor.
	2-4	4	<1	4	Fine sand, tan, wet; no odor. Water table found at 2.5 feet bls.

Readings for unfiltered samples are total hydrocarbon readings including methane; readings for filtered samples are methane only.

Notes: ppm = parts per million.
<1 = nondetectable limit for PortaFID (portable flame ionization detector) II™.
bls = below land surface.

Table 3-1 Cont'
Summary of Organic Vapor Analyses, October 25, 1995

Contamination Assessment Report
 Building 2036
 Naval Training Center
 Orlando, Florida

Hand Auger Soil Boring No.	Depth (feet)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)	Comments
SB-1A	0-1	<1	<1	<1	Well sorted fine grained brown silty sand; no odor
	1-2	20	3	17	Well sorted fine grained brown silty sand; no odor
	2-3	140	3	134	Well sorted fine grained brown silty sand; no odor
SB-2A	0-1	<1	<1	<1	Well sorted fine grained light gray to dark brown silty sand; no odor
	1-2	4	<1	4	Well sorted fine grained light gray to dark brown silty sand; no odor
	2-3	<1	<1	<1	Well sorted fine grained light gray to dark brown silty sand; no odor
SE-3A	0-1	2	<1	2	Well sorted fine grained light gray to dark brown silty sand; no odor
	1-2	2	<1	2	Well sorted fine grained dark brown to light tan silty sand; strong organic odor
	2-3	12	2	10	Well sorted fine grained light tan silty sand; no odor

Notes: Readings for unfiltered samples are total hydrocarbon readings including methane; readings for filtered samples are methane only.
 ppm = parts per million.
 <1 = nondetectable limit for PortaFID II™.
 bls = below land surface.
 ft = feet

Table 3-1 Cont'
Summary of Organic Vapor Analyses, October 25, 1995

Contamination Assessment Report
 Building 2036
 Naval Training Center
 Orlando, Florida

Hand Auger Soil Boring No.	Depth (feet)	Unfiltered (ppm)	Filtered (ppm)	Total Hydrocarbons (ppm)	Comments
SB-1A	0-2	<1	<1	<1	Well sorted fine grained brown silty sand; no odor
	2-3	50	<1	50	Well sorted fine grained brown silty sand; no odor
SB-2A	0-2	20	<1	20	Well sorted fine grained light gray to dark brown silty sand; no odor
	2-3	72	<1	72	Well sorted fine grained light gray to dark brown silty sand; no odor
SE-3A	0-2	4	<1	4	Well sorted fine grained light gray to dark brown silty sand; no odor
	2-3	2	<1	2	Well sorted fine grained dark brown to light tan silty sand; no odor

Notes: Readings for unfiltered samples are total hydrocarbon readings including methane; readings for filtered samples are methane only.
 ppm = parts per million.
 <1 = nondetectable limit for PortaFID II™.
 bls = below land surface.
 ft = feet

Table 3-2
Summary of Groundwater Analytical Results

Contamination Assessment Report
Building No. 2036, Main Base
Naval Training Center
Orlando, Florida

Parameter	Chapter 62-770 Target Cleanup Levels	Monitoring Well Number						
		MW-1 11/15/95	MW-2 11/15/95	MW-3 11/15/95	MW-4 11/15/95	MW-5 11/15/95	DW-1 11/15/95	TW-1 10/9/95
Benzene	1	<20.0	<1	<5	<1	<1	<1	<2
Toluene	NA	65	<1	<5	<1	<1	<1	10
Ethylbenzene	NA	50	<1	<5	<1	<1	<1	4.5
Xylenes	NA	350	<1	<5	<1	<1	<1	59
Total VOAs	50	465	<1	<5	<1	<1	<1	73.5
MTBE	50	8.7	<1	<1	<1	<1	<1	<2
EDB	0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	NA
Total Lead	50	1520	8.6	13.5	17.7	9.8	<2.0	NA
TRPH	5	17,400	<1	<1	<1	<1	<1	NA
Naphthalenes (total)	100	1010	<2	<2	<2	<2	<2	490
Acenaphthylene	<2	<80	<2	<2	<2	<2	<2	120
Acenaphthene	<2	<80	<2	<2	<2	<2	<2	59
Dichlorodifluoromethane	*1,400	<20	100	7.2	<1	<1	<1	NA
Fluorene	<2	230	<2	<2	<2	<2	<2	220
Phenanthrene	<2	95	<2	<2	<2	<2	<2	94
Pyrene	<2	<80	<2	<2	<2	<2	<2	<20

* State of Florida Guidance Concentration.

Notes: All data listed in parts per billion (ppb).

< = less than.

NA = not applicable.

Total VOA = sum of the concentrations of benzene, toluene, ethylbenzene, and xylenes.

MTBE = methyl tert-butyl ether.

EDB = ethylene dibromide.

TRPH = total recoverable petroleum hydrocarbons.

TABLE 3-2 Cont'
SUMMARY OF GROUNDWATER LABORATORY RESULTS

Contamination Assessment Report
 Building 2036, Main Base
 Naval Training Center
 Orlando, Florida

Parameter	Chapter 62-770 FAC Target Cleanup Levels	Monitoring Well Number						
		MW-1 10/2/96	MW-2 10/2/96	MW-3 10/2/96	MW-4 10/2/96	MW-5 10/2/96	DW-1 10/2/96	TW-1 10/2/96
Benzene	1	<1	<1	<1	<1	<1	<1	NS
Ethylbenzene	NA	10.1	<1	<1	<1	<1	<1	NS
Toluene	NA	13.5	<1	<1	<1	<1	<1	NS
Xylenes	NA	53.8	<1	<1	<1	<1	<1	NS
Total VOAs	50	77.4	<1	<1	<1	<1	<1	NS
MTBE	50	<5	<5	<5	<5	<5	<5	NS
EDB	0.02	NS	NS	NS	NS	NS	NS	NS
Total Lead	50	48	<3	<3	<3	<3	<3	NS
TRPH	5	2.5	<1	<1	<1	<1	<1	NS
Naphthalene(Total)	100	49	<5	<5	<5	<5	<5	NS
Acenaphthylene	<2	<5	<5	<5	<5	<5	<5	NS
Acenaphthene	<2	<5	<5	<5	<5	<5	<5	NS
Dichlorodifluoromethan	*1,400	<5	<5	<5	<5	<5	<5	NS
Fluorene	<2	<5	<5	<5	<5	<5	<5	NS
Phenanthrene	<2	<5	<5	<5	<5	<5	<5	NS
Pyrene	<2	<5	<5	<5	<5	<5	<5	NS

Notes: FAC = Florida Administrative Code

All data listed in parts per billion (ppb)

NS = not sampled < = less than

Total VOAs = sum of concentration of benzene, toluene, ethylbenzene and xylenes.

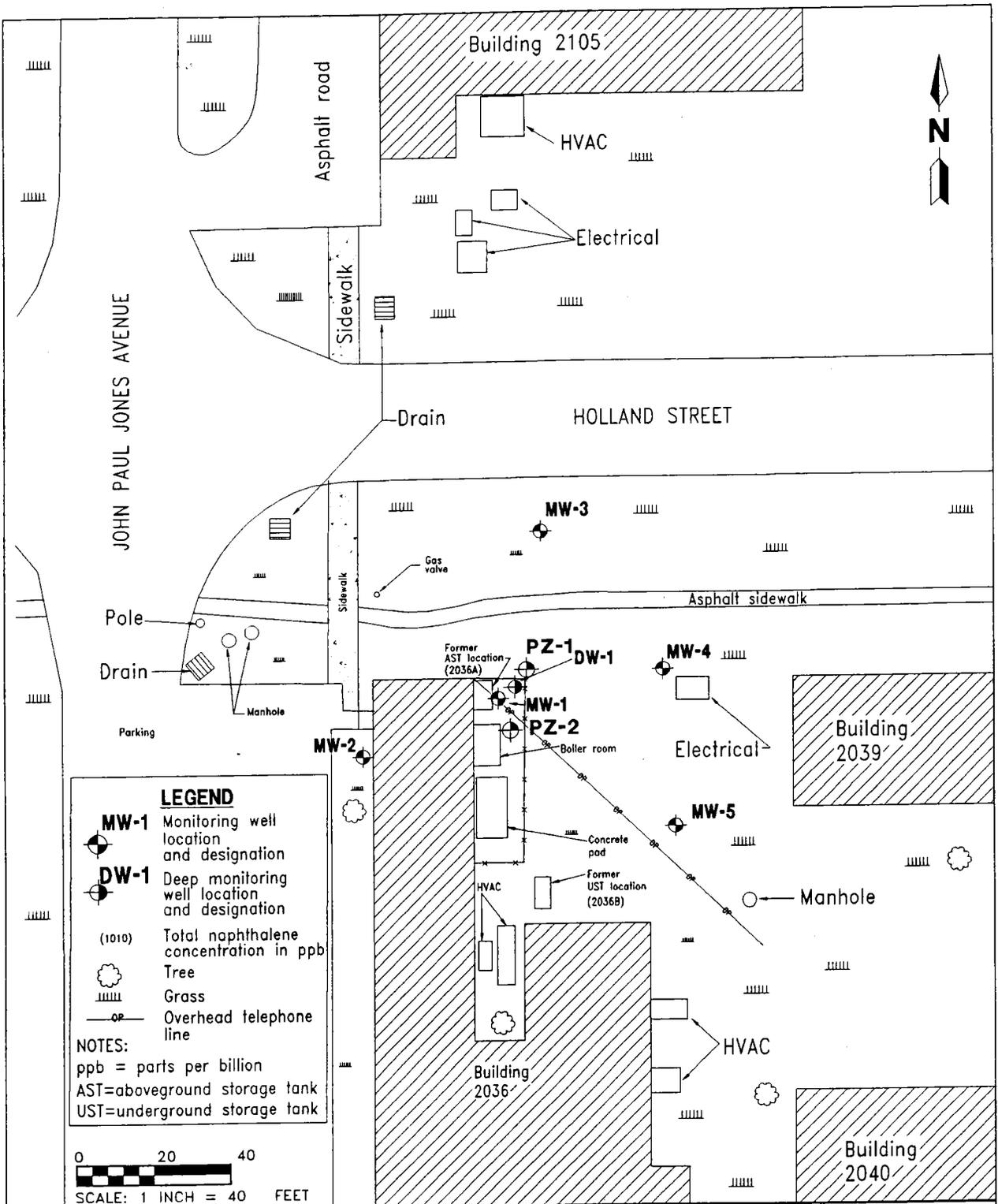
VOAs = volatile organic aromatics.

MTBE = methyl tert-butyl ether

EDB = ethylene dibromide

TRPH = total recoverable petroleum hydrocarbons.

Total Naphthalene = sum of all naphthalene species



**FIGURE 2
 SITE MAP**



**CONTAMINATION ASSESSMENT
 REPORT ADDENDUM
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 MAIN BASE
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