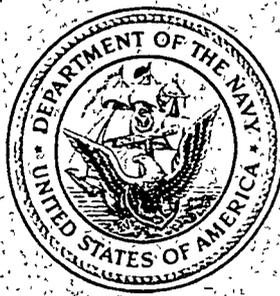


**Phase 2 - RCRA
Facility Investigation
Field Sampling Plan**
for
**Naval Weapons Industrial
Reserve Plant**
Calverton, New York



**Northern Division
Naval Facilities Engineering Command**

Contract Number N62472-90-D-1298

Contract Task Order 0270

January 1997

CF BRAUN ENGINEERING CORPORATION

ATTACHMENT

FIELD SAMPLING PLAN FOR PHASE 2 - RFI AT NWIRP CALVERTON NEW YORK

This Field Sampling Plan has been prepared under Contract Task Order (CTO) 0270 by CF Braun under the Comprehensive Long-Term Environmental Action Navy (CLEAN) Contract N62472-90-D-1298. The purpose of this plan is to describe field activities to be performed as part of a Phase 2 Resource Conservation and Recovery Act (RCRA) Facility Investigation (RFI) at the Naval Weapons Industrial Reserve Plant, Calverton New York.

The work described in this plan is based on recommendations for additional field investigation activities described in the Navy's RFI and RCRA Facility Assessment (RFA) reports, as well as comments from the New York State Department of Environmental Conservation. A description of field activities is provided in Tables 1 to 9. Planned sample locations are provided in Figures 1 to 6. This plan has been prepared as an addendum to the RFI Work Plan. As a result, all details on sampling procedures, analytical methodology, history, etc. can be found in the RFI Work Plan. The one exception to the Work Plan is that the quick turn-around samples will also be analyzed for chloroethane.

The field activities are anticipated to start in late March 1997 and will be mostly completed in June 1997. A second round of groundwater samples will be collected in August 1997. A draft report is scheduled for submittal to the TRC for review in November 1997. The results of the second round of groundwater samples will be presented in a draft addendum, with a scheduled submittal in January 1998.

TABLE 1

SAMPLING RATIONALE
 PHASE II RFI - CTO 270
 NWIRP CALVERTON, NEW YORK

SITE	ACTIVITY	NUMBER OF SAMPLES	ANALYSES	RATIONALE
1	Temporary Monitoring Wells	3 TMW - 6 Samples (2 per well)	VOC's (Quick Turn)	Chlorinated solvents were observed in the soils surrounding the excavated drum area. Temporary monitoring wells will be placed northeast of excavated drum area to determine if the groundwater has been effected by these chemicals and to optimize the location of a permanent monitoring well.
	Permanent Monitoring Wells	4 new wells plus 4 existing wells (2 rounds)	SVOC's, PCB/Pest, Metals VOC's at drum excavation area	<p>Based on the results of the temporary monitoring wells and as requested by the USEPA Region II office, one permanent monitoring well will be placed northeast of the drum excavation area to confirm whether the drum contents impacted the groundwater.</p> <p>One intermediate-depth monitoring well will be placed in the northern-eastern edge of the fill to determine if vertical migration of site chemicals has occurred. Two shallow monitoring wells will be placed north of the pond (hydraulically downgradient) to determine if site chemicals have migrated beyond the pond. Low flow sampling techniques will be used to minimize concerns with fill material intrusion into the wells. Chemical analysis will be for PCB/pesticides, metals, and semi-volatile organics. Four existing monitoring wells will also be re-sampled to determine if previous findings of chemicals are valid.</p>

TABLE 1
 SAMPLING RATIONALE
 PHASE II RFI - CTO 270
 NWIRP CALVERTON, NEW YORK - PAGE 2

SITE	ACTIVITY	NUMBER OF SAMPLES	ANALYSES	RATIONALE
1 (continued)	Sediment Sampling	10 Samples (2 per location)	SVOC's, PCB/Pest, Metals, 3 species diversity tests	<p>PCBs, pesticides, and metals were found in the pond sediments along the edge of the fill.</p> <p>Additional sediment samples will be collected at these locations to better define the vertical extent of this contamination.</p> <p>One sample (two depths) will be collected from Shannon's Pond (southeast) of the Northeast Pond to determine if site chemicals have migrated to this pond.</p> <p>Sediment samples will also be collected to evaluate the bio-diversity of micro-organisms in the ponds to determine if site chemicals have had any adverse impacts.</p>
	Test Pits	No samples planned	No analysis	A trench was noted in a historical aerial photograph of the facility, southeast of the Site 1 access road intersection. Test pits will be excavated to determine if wastes were disposed in this area.
2 - Onsite	Temporary Monitoring Wells	3 TMW - 6 Samples (2 per well)	VOC's (Quick Turn)	With the exception of a relatively small area southeast of the fire training ring, the extent of onsite VOC contamination in groundwater has been defined. Temporary monitoring wells will be installed southeast of the Fire Training Ring to better define the eastern edge of the onsite groundwater contamination and will be used to optimize the location of one permanent monitoring well. For each area, if the deepest groundwater sample is contaminated, and in particular, is more contaminated than the shallow sample(s), then additional sample(s) may be collected at a greater depth.
	Permanent Monitoring Wells	1 plus 3 existing wells (2 rounds)	VOC's	One permanent monitoring well will be installed to monitor the migration of onsite groundwater contamination. Existing perimeter wells will also be re-sampled.

TABLE 1
 SAMPLING RATIONALE
 PHASE II RFI - CTO 270
 NWIRP CALVERTON, NEW YORK - PAGE 3

SITE	ACTIVITY	NUMBER OF SAMPLES	ANALYSES	RATIONALE
2 - Offsite (continued)	Temporary Monitoring Wells	10 TMW - 20 Samples (2 per well)	VOC's (Quick Turn)	Based on groundwater monitoring at the property boundary, VOC-contaminated groundwater may have migrated off site. Temporary monitoring wells will be placed off site to define the horizontal and vertical extent of groundwater contamination. These wells will also be used to optimize the location of two new permanent monitoring wells. For each area, if the deepest groundwater sample is contaminated, and in particular, is more contaminated than the shallow sample(s), then additional sample(s) may be collected at a greater depth.
	Permanent Monitoring Wells	2 (2 rounds)	VOC's	Two permanent monitoring wells will be installed to monitor the migration of offsite groundwater contamination.
6A	Temporary Monitoring Wells	6 TMW - 18 Samples (3 per well)	VOC's (Quick Turn)	VOCs were found in the groundwater at the new fuel calibration pad. Temporary monitoring wells will be placed south east of new fuel calibration area to define the extent of groundwater contamination and to optimize the location of new permanent monitoring wells. For each area, if the deepest groundwater sample is contaminated, and in particular, is more contaminated than the shallow sample(s), then additional sample(s) may be collected at a greater depth. A new temporary monitoring well will be placed at the location of the proposed deep permanent monitoring well. Groundwater samples will be collected at a depth of 80 to 100 feet below ground surface to determine if contamination has migrated to this depth.
	Subsurface Soil	6 (collected at GW interface)	TPH - GRO/DRO	Based on the level of VOCs in groundwater, a free product layer may be present. Soil samples will be collected at the groundwater interface to determine if a free product layer is present, and if present, the horizontal extent of this layer.

TABLE 1
 SAMPLING RATIONALE
 PHASE II RFI - CTO 270
 NWIRP CALVERTON, NEW YORK - PAGE 4

SITE	ACTIVITY	NUMBER OF SAMPLES	ANALYSES	RATIONALE
6A (continued)	Permanent Monitoring Wells	3 (2 rounds)	VOC's	<p>The intermediate depth monitoring well at the site was found to be contaminated with VOCs. If the new temporary monitoring well results at this location indicate that contamination has reached this depth, then one deep monitoring well will be placed at this location.</p> <p>Two shallow monitoring wells will be placed east of the old and new fuel calibration area to monitor the migration of groundwater contamination.</p>
7	Temporary Monitoring Wells	3 TMW - 6 Samples (2 per well)	VOC's (Quick Turn)	<p>Except for a relatively small area northeast of Site 7, the horizontal extent of VOC-contaminated at the site has been defined. Temporary monitoring wells will be placed northeast of the fuel depot area to define the extent of groundwater contamination and to optimize the location of a new permanent monitoring well. For each area, if the deepest groundwater sample is contaminated, and in particular, is more contaminated than the shallow sample (s), then additional sample(s) may be collected at a greater depth.</p>
	Permanent Monitoring Wells	1 (2 rounds)	VOC's	<p>One shallow monitoring well will be placed northeast of the fuel depot area to monitor the migration of groundwater contamination.</p>
9	Temporary Monitoring Wells	6 TMW - 12 Samples (2 per well)	VOC's (Quick Turn)	<p>The extent of the offsite groundwater contamination at the ECM area is undefined. Prior to field activities, groundwater contours for the ECM area will be developed. Temporary monitoring wells will be placed off site to the northeast to define the extent of groundwater contamination. For each area, if the deepest groundwater samples is contaminated, and in particular, is more contaminated than the shallow sample(s), then additional samples may be collected at a greater depth.</p>

TABLE 1
 SAMPLING RATIONALE
 PHASE II RFI - CTO 270
 NWIRP CALVERTON, NEW YORK - PAGE 5

SITE	ACTIVITY	NUMBER OF SAMPLES	ANALYSES	RATIONALE
10A	Temporary Monitoring Wells	24 TMW - 48 Samples (2 per well)	VOC's plus freon (Quick Turn)	Freon and fuel-related chemicals and been detected around the jet fuel systems laboratory. The extent of this VOC contamination has not been defined. Temporary monitoring wells will be placed around the jet fuel systems laboratory and south of the fuel depot to define the extent of groundwater contamination and to optimize the location of new permanent monitoring wells. For each area, if the deepest groundwater sample is contaminated, and in particular, is more contaminated than the shallow sample(s), then additional sample(s) may be collected at a greater depth.
	Subsurface Soil	24 (collected at GW interface)	TPH - GRO/DRO	Soil samples will be collected at the groundwater interface to determine if a free product layer is present, and if present, the horizontal extent of this layer.
	Permanent Monitoring Wells	5 (2 rounds)	VOC's plus freon	Three shallow and two intermediate monitoring wells will be placed around this area to monitor the migration of groundwater contamination.
10B	Temporary Monitoring Wells	6 TMW - 12 Samples (2 per well)	VOC's (Quick Turn)	Fuel has been detected in the soil and groundwater around a former fuel tank. Temporary monitoring wells will be placed around this former fuel tank to define the extent of groundwater contamination. For each area, if the deepest groundwater sample is contaminated, and in particular, is more contaminated than the shallow sample(s), then additional sample(s) may be collected at a greater depth.
	Subsurface Soil	6 (collected at GW interface)	TPH - GRO/DRO	Soil samples will be collected at the groundwater interface to determine if a free product layer is present, and if present, the horizontal extent of this layer.

TABLE 2

ANALYTICAL PROGRAM SUMMARY (INCLUDING QA/QC SAMPLES)
 PHASE 2 RFI - CTO 270
 NWIRP CALVERTON, NEW YORK

MEDIA	ANALYSIS	METHOD	BOTTLE REQUIREMENTS	PRESERVATION REQUIREMENTS	HOLDING TIMES	NUMBER OF SAMPLES	TRIP BLANKS ¹	DUPLICATE ²	MS/MSD ³	TOTAL SAMPLES
Subsurface Soil	TPH (Diesel Range)	SW 8015 Mod	8 oz. Amber Glass	Cool 4° C	14 days	36	-	4	-	40
	TPH (Gasoline Range)	SW 8015 Mod				36	-	4	-	40
Groundwater (Permanent Wells) ⁴	VOC's	CLP OLM03.1	(2) 40 ml VOA	4° C; HCl, pH<2	14 days	22	6	3	2	33
	VOC's plus freon	CLP OLM03.1	(2) 40 ml VOA	4° C; HCl, pH<2	14 days	10	2	2	1	15
	SVOC's	CLP OLM03.1	2.5 L Amber Glass	Cool 4° C	Extract 7 days; Analyze 40 days	16	-	2	2	20
	PCB/Pesticides	CLP OLM03.1	2.5 L Amber Glass	Cool 4° C	Extract 7 days; Analyze 40 days	16	-	2	2	20
	Metals	CLP ILM03.0	1 liter Poly	4° C; HNO ₃ , pH<2	6 months; Hg 28 days	16	-	2	2	20
Groundwater (Temporary Wells)	VOC's		(2) 40 ml VOA	4° C; HCl, pH<2	24 hours	68	10	7	-	85
	VOC's plus freon		(2) 40 ml VOA	4° C; HCl, pH<2	24 hours	48	8	5	-	61
Sediment	SVOC's	CLP OLM03.1	8 oz. Amber Glass	Cool 4° C	Extract 7 days; Analyze 40 days	10	-	1	1	12
	PCB/Pesticides	CLP OLM03.1	8 oz. Amber Glass	Cool 4° C	Extract 7 days; Analyze 40 days	10	-	1	1	12
	Metals	CLP ILM03.0	8 oz. Amber Glass	Cool 4° C	6 months; Hg 28 days	10	-	1	1	12
	Species Diversity Test					3	-	-	-	3

- (1) Trip Blanks - Samples which originate from analyte free water taken from the laboratory to the sampling site and returned to the laboratory with the volatile organic (VOA) samples. One trip blank per cooler per day will be collected when sampling for VOC's.
- (2) Duplicate - A single sample split into equal portions during a single act of sampling. Assess the overall precision of the sampling and analysis program. Obtained at a frequency of 10 percent of the total number of samples to be collected.
- (3) MS/MSD - Matrix Spike/Matrix Spike Duplicate samples are collected in the field and provided to the laboratory for the purpose of internal QA/QC checks. Additional sample volume is required (2X to 3X times) for the laboratory. MS/MSD will be collected on a frequency of 5 percent of the total number of samples collected.
- (4) The number of samples to be collected from the permanent monitoring wells reflect 2 rounds of sampling.

TABLE 3

SUMMARY OF FIELD TASKS - SITE 1 (NORTHEAST POND DISPOSAL AREA)
 PHASE II RFI - CTO 270
 NWIRP, CALVERTON, NEW YORK

ACTIVITY	NOMENCLATURE	ANALYSIS	COMMENTS
Install 3 temporary monitoring wells at predetermined locations. GW samples will be collected from 2 depths; (approximately 5 ft. and 20 ft. below the water table).	NP-TW01-X-XX thru NP-TW03-X-XX	VOC's - Quick Turnaround	X-XX equals the number and depth at which each sample is collected; e.g. NP-TW01-1-20 equals the first sample collected from TW01 at a depth of 20 ft.
Drill and install 3 shallow and 1 intermediate depth permanent monitoring wells. Shallow wells will be screened across the water table and intermediate wells will be screened approximately 40 - 50 ft. below the water table.	NP-MW05 thru NP-MW07 NP-MW02-I		Split-spoon samples will be collected every 10-feet below the water-table and characterized for soil type and FID readings. Well depth may be modified based on findings.
The 4 newly installed wells and 4 existing wells (NP-MW01 thru NP-MW04) will be sampled. 2 rounds of sampling will be scheduled.		All wells: SVOC's, PCB/Pest., and metals Excavated Drum Area: VOC's	
A total of 8 sediment samples will be collected from 4 existing locations at the Northeast Pond. Sample depths will from 1.0 - 1.5 ft. and 1.5 - 2.0 ft. 2 additional sediment samples will be collected from 1 location at Shannon's Pond. Sampling depths will be from 0 - 0.5 ft. and 0.5 - 1.0 ft.	NP-SD09-XXXX thru NP-SD13-XXXX	All Samples: SVOC's, PCB/Pest., and metals. 3 Samples: Species Diversity Test	XXXX indicates the depth at which the sediment sample was collected; e.g. NP-SD09-0115 means from 0.1-1.5 ft.
Approximately 5 to 10 test pits will be excavated in a east/west direction, starting just south of the intersection of the Site 1 access road and moving to the south. If wastes are encountered, the Navy will be notified immediately.	No samples planned.	No samples planned.	No samples planned.

TABLE 4

SUMMARY OF FIELD TASKS - SITE 2 (FIRE TRAINING AREA)
 PHASE II RFI - CTO 270
 NWIRP, CALVERTON, NEW YORK

ACTIVITY	NOMENCLATURE	ANALYSIS	COMMENTS
<p>(ONSITE) Install 3 temporary monitoring wells. One location will be predetermined. Groundwater samples will be collected from 2 depths; (approximately 5 ft. and 20 ft. below the water table).</p> <p>(OFFSITE) Install 10 temporary monitoring wells (3 at predetermined locations and the remainder based on data from the initial 3 locations). GW samples will be collected from 2 depths; (approximately 5 ft. and 20 ft. below the water table).</p> <p>If the groundwater sample collected at 20 feet is contaminated, and in particular, is more contaminated than the shallow sample, then additional samples may be collected at 40 feet and/or 60 feet. The 40 and/or 60 feet samples will be generally collected at the next hydraulically downgradient well point.</p>	<p>FT-TW25-X-XX thru FT-TW27-X-XX</p> <p>FT-TW28-X-XX thru FT-TW37-X-XX</p>	<p>VOC's - Quick Turnaround</p> <p>VOC's - Quick Turnaround</p>	<p>X-XX equals the number and depth at which each sample is collected; e.g. FT-TW25-1-05 equals the initial sample collected from TW25 at a depth of 5 ft.</p>
<p>(ONSITE) Drill and install 1 shallow permanent monitoring well. The well will be screened across the water table.</p> <p>(OFFSITE) Drill and install 2 shallow permanent monitoring wells. The well will be screened across the water table.</p>	<p>FT-MW08</p> <p>FT-MW09 and FT-MW10</p>		<p>(ONSITE) The location of the permanent monitoring well will be located along the fenceline but will be determined by the temporary monitoring well sample results.</p> <p>(OFFSITE) The location of the permanent monitoring well will be determined by the temporary monitoring well sample results.</p>
<p>The 2 newly installed wells (FT-MW08 and FT-MW09) and 3 existing wells (FT-MW05-S, FT-MW06-S, and FT-MW07) will be sampled. 2 rounds of sampling will be scheduled.</p>		<p>VOC's only.</p>	

TABLE 5

SUMMARY OF FIELD TASKS - SITE 6A (FUEL CALIBRATION AREA)
 PHASE II RFI - CTO 270
 NWIRP, CALVERTON, NEW YORK

ACTIVITY	NOMENCLATURE	ANALYSIS	COMMENTS
<p>Install 7 temporary monitoring wells. Three locations are predetermined. The first temporary monitoring well will be installed adjacent to FC-MW02, with groundwater samples collected at a depth of 80 and 100 feet below ground surface. For the other temporary monitoring wells, groundwater samples will be collected from 3 depths; (approximately 5 ft., 20 ft., and 40 ft. below the water table).</p>	<p>FC-TW19-X-XX thru FC-TW25-X-XX</p>	<p>VOC's - Quick Turnaround</p>	<p>X-XX equals the number and depth at which each sample is collected; e.g. FC-TW19-1-5 equals the initial sample collected from TW19 at a depth of 5 ft.</p>
<p>A subsurface soil sample will be collected from each of the 6 temporary monitoring wells at the new fuel calibration area at the groundwater interface for chemical analyses.</p>	<p>FC-SB20-XXXX thru FC-SB25-XXXX</p>	<p>TPH - Diesel Range/Gasoline Range Organics (DRO/GRO)</p>	<p>XXXX equals the depth at which the subsurface soil sample is collected; e.g. FC-SB19-0507 equals subsurface soil sample collected at a depth of 5-7 ft.</p> <p>Two split-spoon samples may be collected at the groundwater interface. Sampling will be biased to depths with evidence of fuels (e.g. staining, odors, FID readings).</p>
<p>Drill and install 2 shallow and 1 deep permanent monitoring wells. Shallow wells will be screened across the water table and the deep well will be screened based on the results of the temporary monitoring well at this location. 2 rounds of groundwater sampling will be performed. In the event that contamination is not found in the temporary monitoring well adjacent to FC-MW02, then the deep well will not be installed.</p>	<p>FC-MW07 thru FC-MW08 FC-MW02-D</p>	<p>VOC's only.</p>	<p>For the temporary monitoring wells at the new fuel calibration area, split-spoon samples will be collected every 10-feet below the water table and characterized for soil type and FID readings. Well depth may be modified based on findings.</p> <p>For the deep temporary monitoring well, split spoon samples will be collected at 90 and 100 feet below ground surface. No chemical testing will be conducted on these samples.</p>

TABLE 6

SUMMARY OF FIELD TASKS - SITE 7 (FUEL DEPOT AREA)
 PHASE II RFI - CTO 270
 NWIRP, CALVERTON, NEW YORK

ACTIVITY	NOMENCLATURE	ANALYSIS	COMMENTS
<p>Install 3 temporary monitoring wells. One location will be predetermined. GW samples will be collected from 2 depths; (approximately 5 ft. and 20 ft. below the water table).</p> <p>If the groundwater sample collected at 20 feet is contaminated, and in particular, is more contaminated than the shallow sample, then additional samples may be collected at 40 feet and/or 60 feet. The 40 and/or 60 feet samples will be generally collected at the next hydraulically downgradient well point.</p>	<p>FD-TW13-X-XX thru FD-TW15-X-XX</p>	<p>VOC's - Quick Turnaround</p>	<p>X-XX equals the number and depth at which each sample is collected; e.g. FD-TW13-1-05 equals the initial sample collected from TW13 at a depth of 5 ft.</p>
<p>Drill and install 1 shallow depth permanent monitoring well. The well will be screened across the water table.</p>	<p>FD-MW07</p>	<p>VOC's only.</p>	

TABLE 7

SUMMARY OF FIELD TASKS - SITE 9 (ECM AREA)
 PHASE II RFI - CTO 270
 NWIRP, CALVERTON, NEW YORK

ACTIVITY	NOMENCLATURE	ANALYSIS	COMMENTS
<p>Install 6 temporary monitoring wells. Three locations will be predetermined. GW samples will be collected from 2 depths; (approximately 5 ft. and 20 ft. below the water table).</p> <p>If the groundwater sample collected at 20 feet is contaminated, and in particular, is more contaminated than the shallow sample, then additional samples may be collected at 40 feet and/or 60 feet. The 40 and/or 60 feet samples will be generally collected at the next hydraulically downgradient well point.</p>	<p>ECM-TW07-X-XX thru ECM-TW12-X-XX</p>	<p>VOC's - Quick Turnaround</p>	<p>X-XX equals the number and depth at which each sample is collected; e.g. ECM-TW13-1-05 equals the initial sample collected from ECM TW 13 at a depth of 5'ft.</p>

TABLE 8

SUMMARY OF FIELD TASKS - SITE 10A (JET FUEL SYSTEMS LAB)
 PHASE II RFI - CTO 270
 NWIRP, CALVERTON, NEW YORK

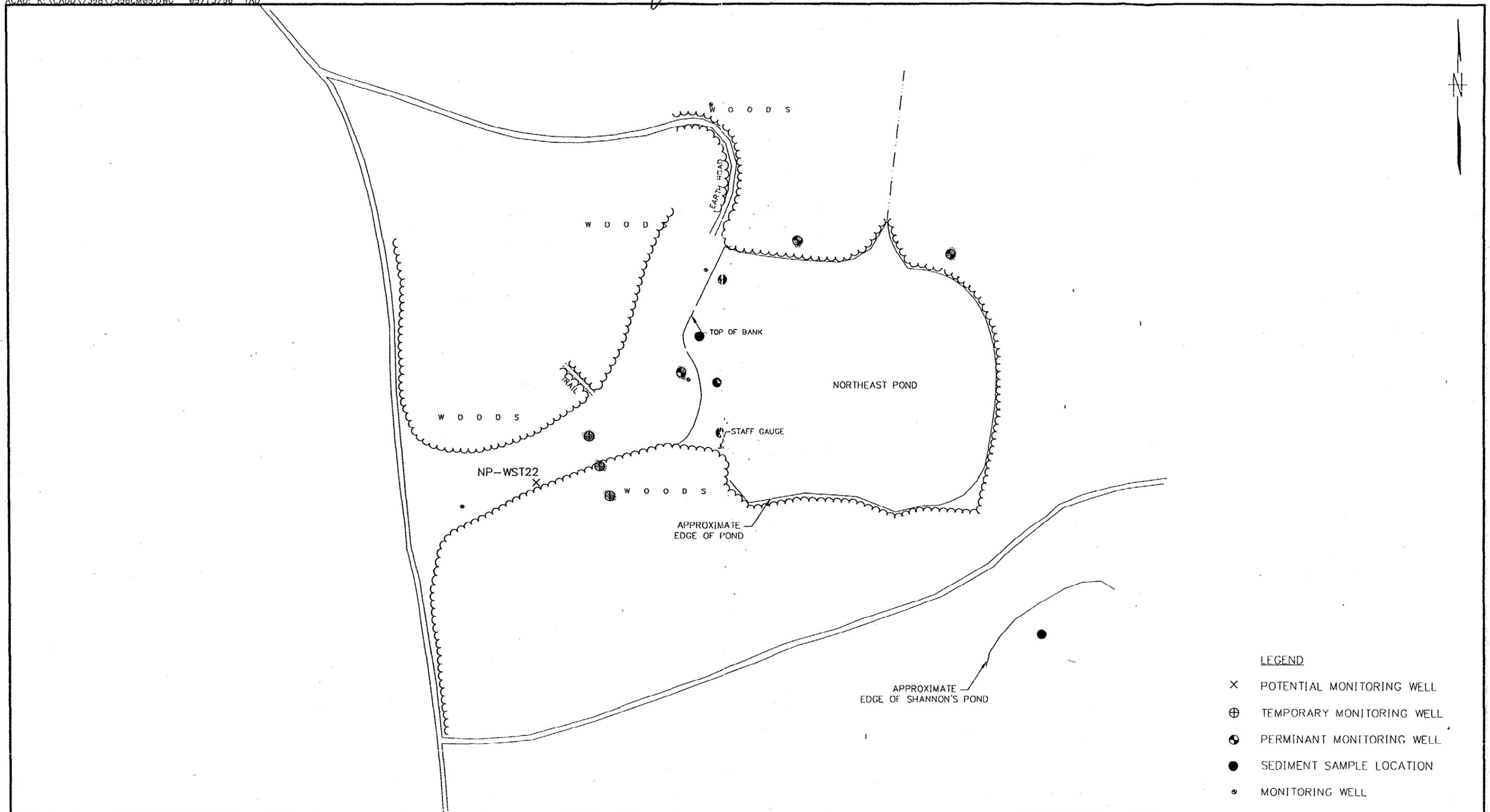
ACTIVITY	NOMENCLATURE	ANALYSIS	COMMENTS
<p>Install 24 temporary monitoring wells (6 at predetermined locations and the remainder based on results of initial locations). GW samples will be collected from 2 depths; (approximately 5 ft. and 20 ft. below the water table).</p> <p>If the groundwater sample collected at 20 feet is contaminated, and in particular, is more contaminated than the shallow sample, then additional samples may be collected at 40 feet and/or 60 feet. The 40 and/or 60 feet samples will be generally collected at the next hydraulically downgradient well point.</p>	<p>JF-TW07-X-XX thru JF-TW30-X-XX</p>	<p>VOC's and freon - Quick Turnaround</p>	<p>X-XX equals the number and depth at which each sample is collected; e.g. JF-TW07-1-5 equals the initial sample collected from TW07 at a depth of 5 ft.</p>
<p>A subsurface soil sample will be collected from each of the temporary monitoring wells at the groundwater interface for chemical analyses.</p>	<p>JF-SB07-XXXX thru JF-SB30-XXXX</p>	<p>TPH - Diesel Range/Gasoline Range Organics (DRO/GRO)</p>	<p>XXXX equals the depth at which the subsurface soil sample is collected; e.g. JF-SB07-0507 equals subsurface soil sample collected at a depth of 5-7 ft.</p> <p>Two split-spoon samples may be collected at the groundwater interface. Sampling will be biased to depths with evidence of fuels (e.g. staining, odors, FID readings).</p>
<p>Drill and install 3 shallow and 2 intermediate depth permanent monitoring wells. Shallow wells will be screened across the water table and intermediate depth wells will be screened approximately 40 - 50 ft. below the water table. 2 rounds of groundwater sampling will be performed.</p>	<p>JF-MW07-S, JF-MW07-I, JF-MW08, JF-MW09-S, JF-MW09-I</p>	<p>VOC's and freon only.</p>	<p>Split-spoon samples will be collected every 10-feet below the water-table and characterized for soil type and FID readings. Well depth may be modified based on findings.</p>

TABLE 9

SUMMARY OF FIELD TASKS - SITE 10B (ENGINE TEST HOUSE)
 PHASE II RFI - CTO 270
 NWIRP, CALVERTON, NEW YORK

ACTIVITY	NOMENCLATURE	ANALYSIS	COMMENTS
<p>Install 6 temporary monitoring wells (3 at predetermined locations and the remainder based on results of initial locations). GW samples will be collected from 2 depths; (approximately 5 ft. and 20 ft. below the water table).</p> <p>If the groundwater sample collected at 20 feet is contaminated, and in particular is more contaminated than the shallow sample, then additional samples may be collected at 40 feet and/or 60 feet. The 40 and/or 60 feet samples will be generally collected at the next hydraulically downgradient well point.</p>	<p>ETH-TW08-X-XX thru ETH-TW13-X-XX</p>	<p>VOC's - Quick Turnaround</p>	<p>X-XX equals the number and depth at which each sample is collected; e.g. ETH-TW08-1-5 equals the initial sample collected from TW08 at a depth of 5 ft.</p>
<p>A subsurface soil sample will be collected from each of the temporary monitoring wells at the groundwater interface for chemical analyses.</p>	<p>ETH-SB08-XXXX thru ETH-SB13-XXXX</p>	<p>TPH - Diesel Range/Gasoline Range Organics (DRO/GRO)</p>	<p>XXXX equals the depth at which the subsurface soil sample is collected; e.g. ETH-SB08-0507 equals subsurface soil sample collected at a depth of 5-7 ft.</p> <p>Two split-spoon samples may be collected at the groundwater interface. Sampling will be biased to depths with evidence of fuels (e.g. staining, odors, FID readings).</p>

WT 2'-20'-bgs



- LEGEND**
- X POTENTIAL MONITORING WELL
 - ⊕ TEMPORARY MONITORING WELL
 - ⊙ PERMINANT MONITORING WELL
 - SEDIMENT SAMPLE LOCATION
 - MONITORING WELL

PHASE 2 - RFI SAMPLE LOCATIONS
SITE 1 - NORTHEAST POND DISPOSAL AREA
NWIRP, CALVERTON, NY

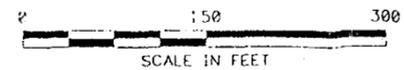
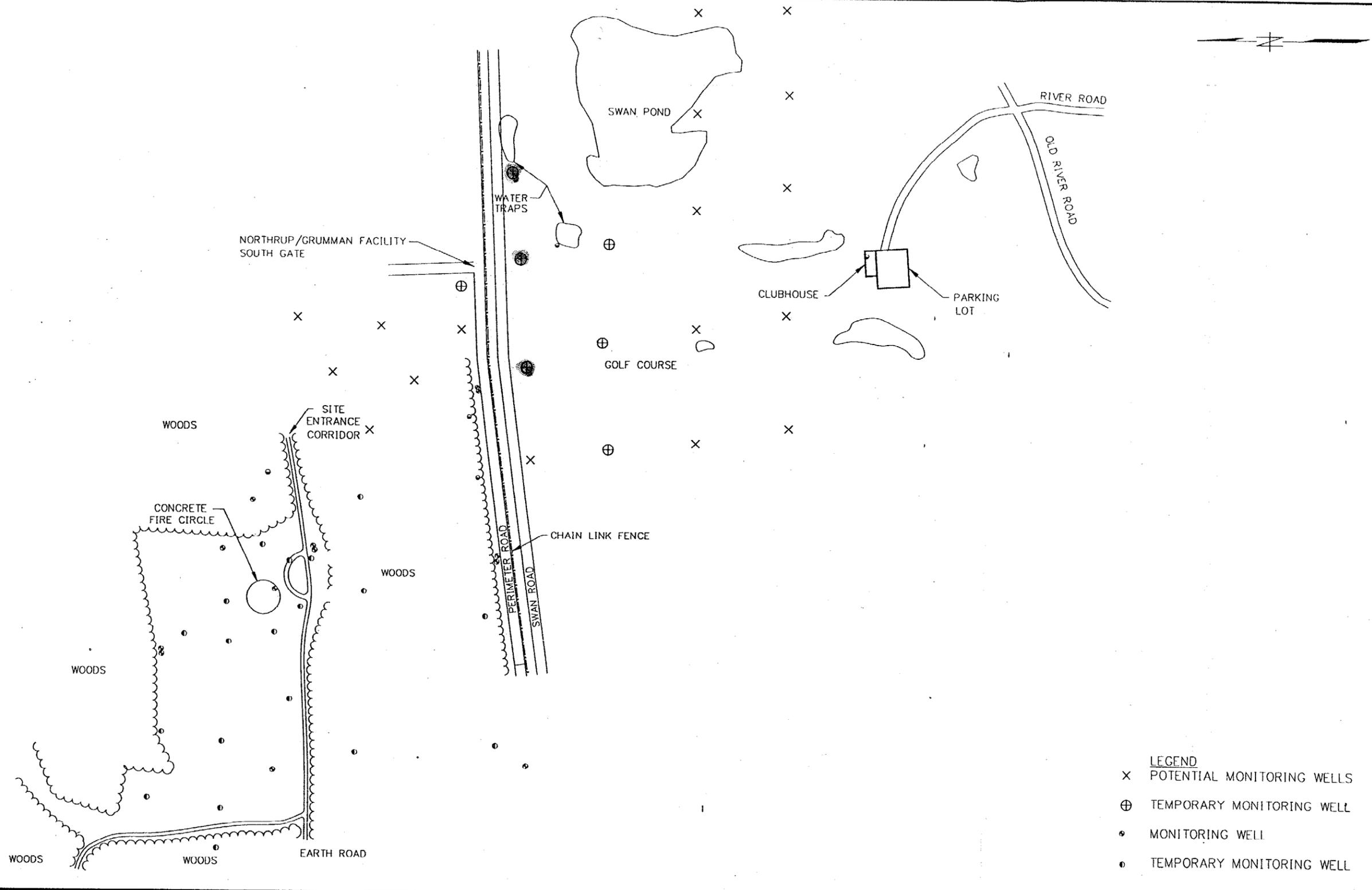


FIGURE 1

C.F. BRAUN

00501R17

5-15'



PHASE 2 - RFI SAMPLE LOCATIONS
SITE 2 - FIRE TRAINING AREA
NWIRP, CALVERTON, NY

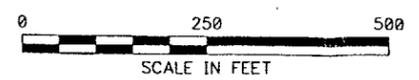
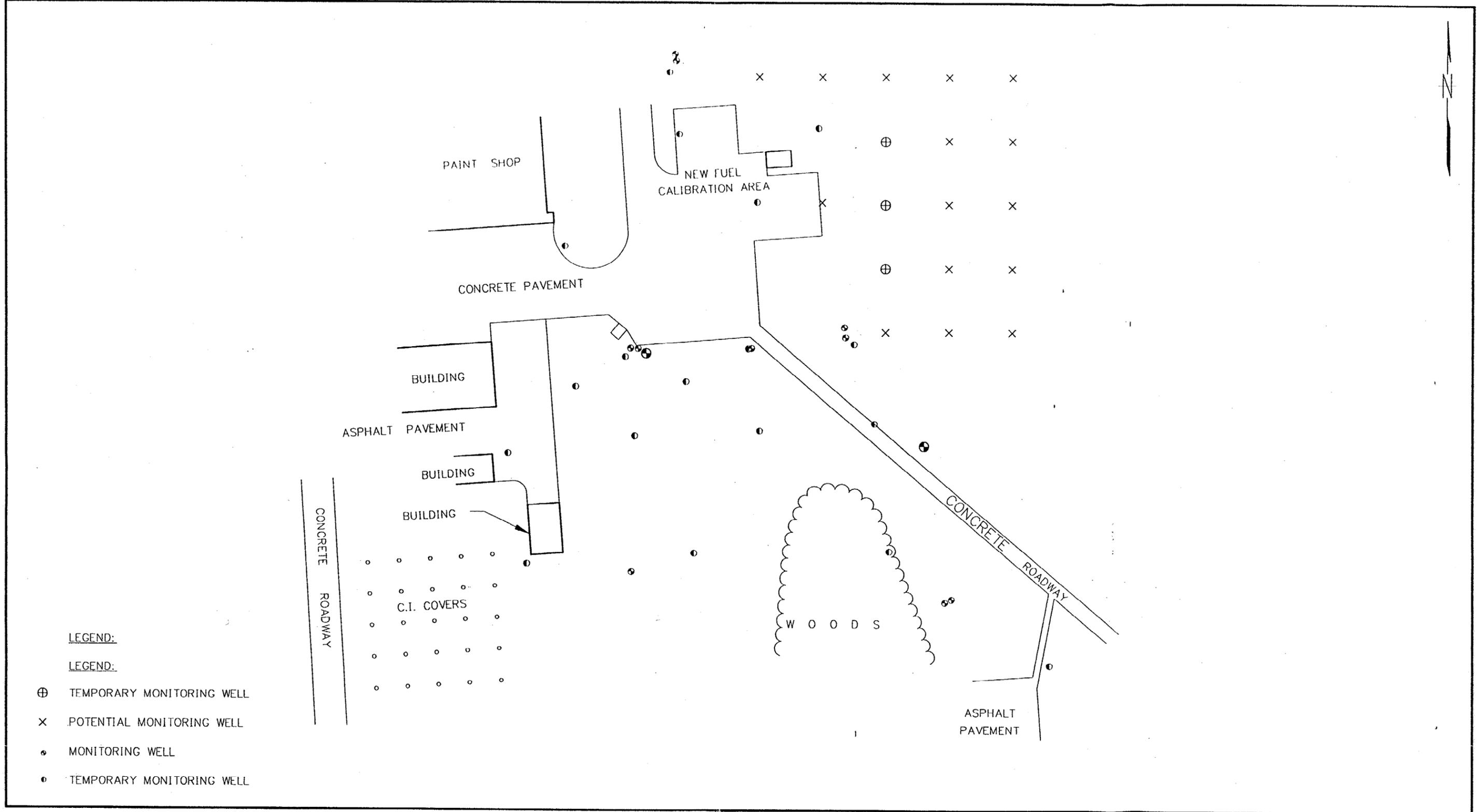


FIGURE 2
C.F. BRAUN

2-5'



PHASE 2 - RFI SAMPLING LOCATIONS
SITE 6A - FUEL CALIBRATION AREA
NWIRP, CALVERTON, NY

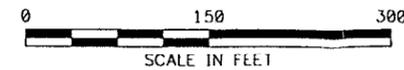
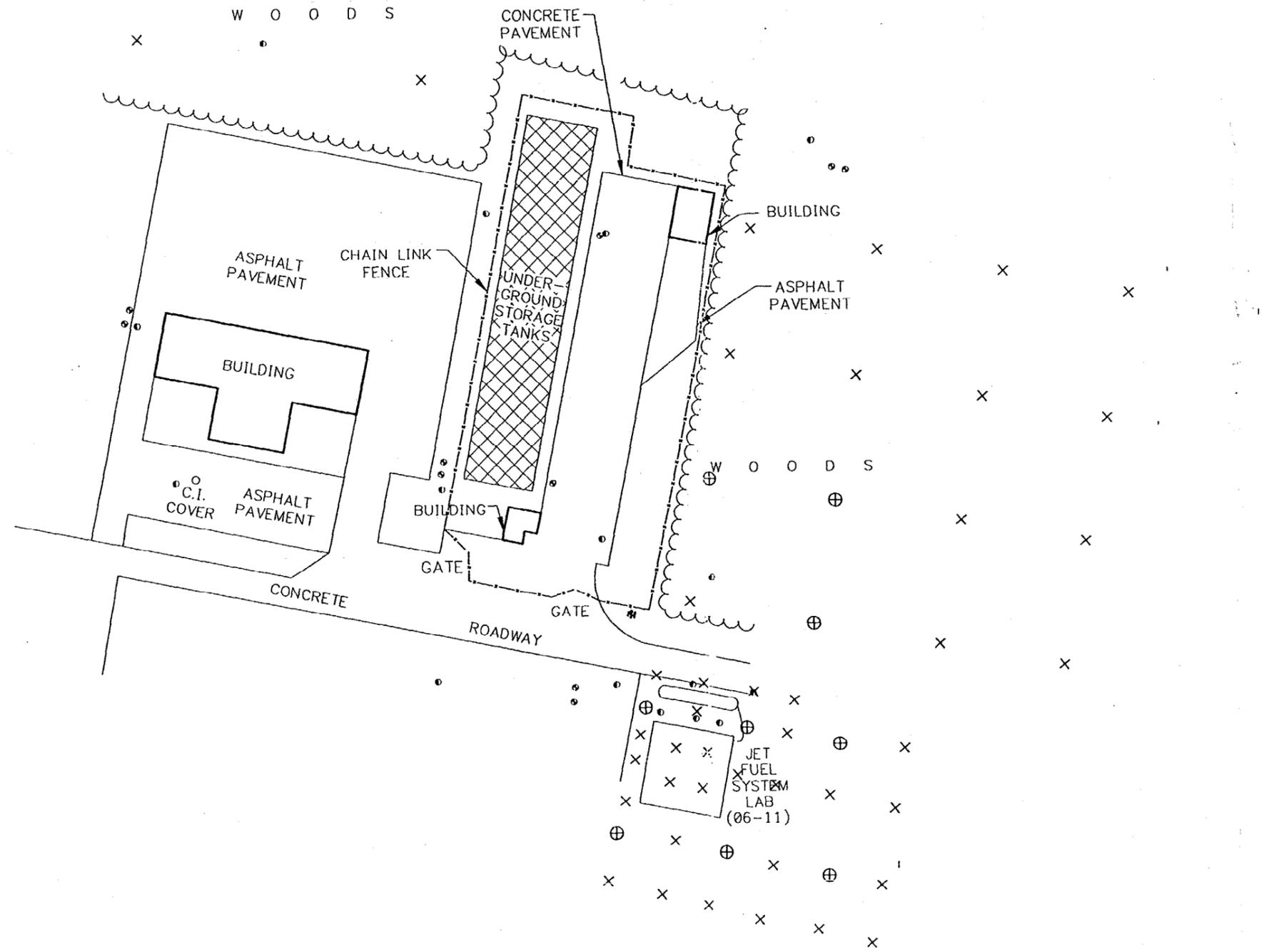


FIGURE 3

C.F. BRAUN

10'



LEGEND

- MONITORING WELL
- TEMPORARY MONITORING WELL
- x POTENTIAL MONITORING WELL
- ⊕ TEMPORARY MONITORING WELL

PHASE 2 - RFI SAMPLING LOCATIONS
 SITE 7 & 10A - FUEL DEPOT AREA
 NWIRP, CALVERTON, NY

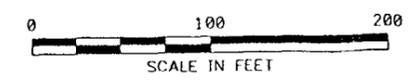
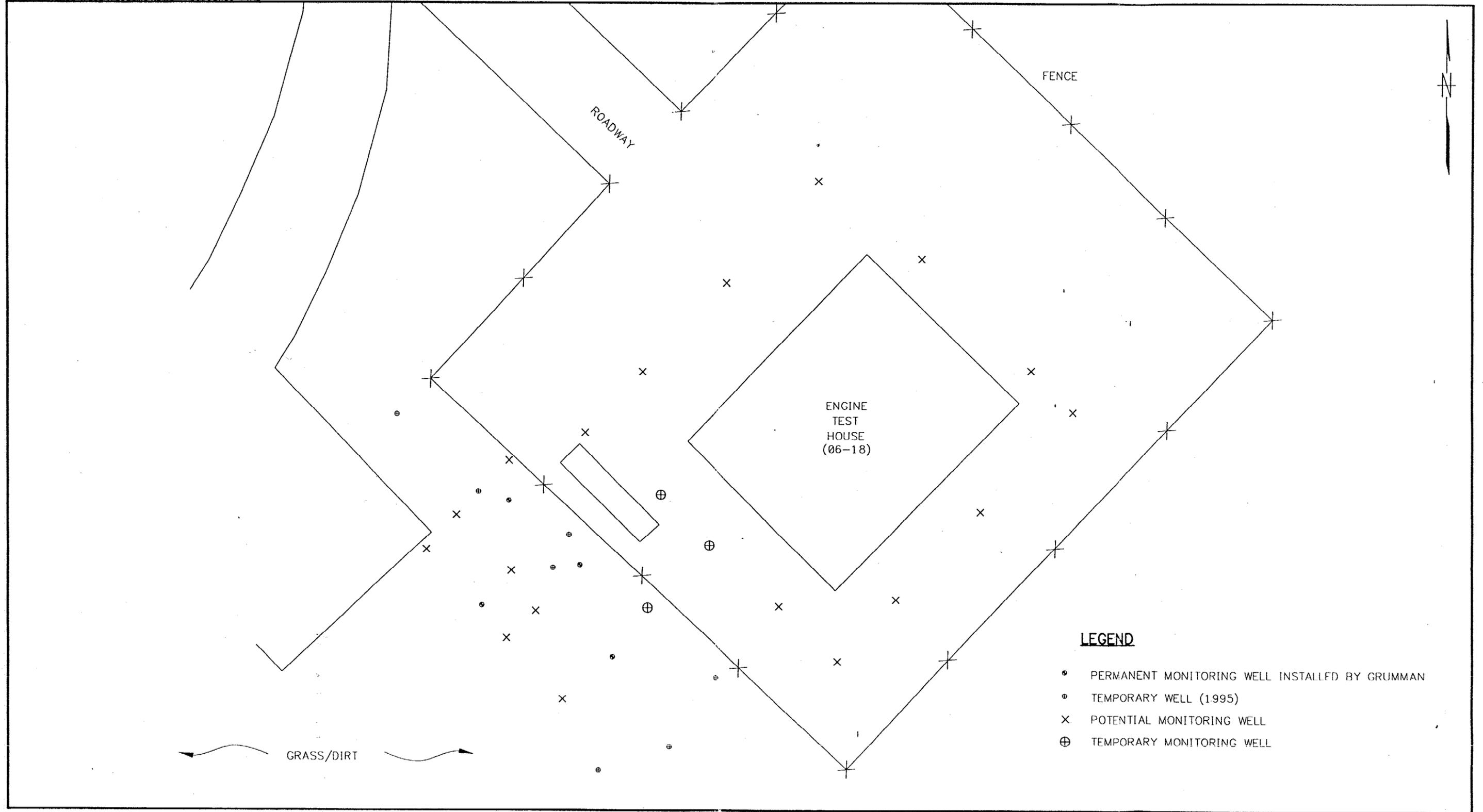


FIGURE 4

C.F. BRAUN

5'-10'



LEGEND

- PERMANENT MONITORING WELL INSTALLED BY GRUMMAN
- TEMPORARY WELL (1995)
- x POTENTIAL MONITORING WELL
- ⊕ TEMPORARY MONITORING WELL

PHASE 2 - RFI SAMPLING LOCATION
 SITE 10B - ENGINE TEST HOUSE (06-18)
 RFA ADDENDUM
 NWIRP, CALVERTON, NRE YORK

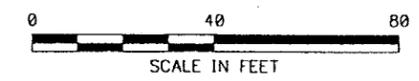


FIGURE 6

C.F. BRAUN