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Consultants, P.C.

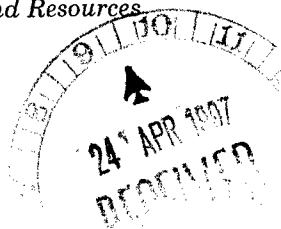
ENGINEERS

SCIENTISTS

MANAGEMENT CONSULTANTS

575 Oak Ridge Turnpike • Oak Ridge, TN 37830 • (423) 483-3191 • FAX (423) 483-8617

Pollution, Environment, Energy and Resources



APR 17 1997

Mr. Winston Crow
Air National Guard/CEVR
3500 Fetchet Avenue
Andrews Air Force Base, Maryland 20762-5157

DCN: Willow Grove 2 41585

Title: Meeting Minutes for 10 March

1997

ARF

17 Apr 1997

REFERENCE: PEER TASK NO. 1566-017; NGB CONTRACT NO. DAHA90-94-D-0011; DELIVERY ORDER NO. 0017; PRESUMPTIVE REMEDY ENGINEERING EVALUATION/COST ANALYSIS AND REMEDIAL DESIGN AT WILLOW GROVE AIR RESERVE STATION, WILLOW GROVE, PENNSYLVANIA

SUBJECT: REGULATORY MEETING FINAL MEETING MINUTES

Dear Mr. Crow:

Enclosed please find two (2) copies of the final meeting minutes for the referenced project.

If you have any questions or comments, please call Lori Melroy or me at (423) 483-3191.

Sincerely,

C.W. Stanley, P.G.
Oak Ridge Office Manager

RS:clh

Enclosures

cc: Angelia Pope (NGB-AQC-E)
Capt. Frattarelli (Pennsylvania ANG)
Attendees

**PRESUMPTIVE REMEDY ENGINEERING EVALUATION/COST ANALYSIS AND
REMEDIAL DESIGN AT WILLOW GROVE AIR RESERVE STATION,
WILLOW GROVE, PENNSYLVANIA**

REGULATORY MEETING DRAFT MEETING MINUTES

MARCH 10, 1997

On March 10, 1997, a regulatory meeting was held at the Pennsylvania Department of Environmental Protection (PADEP), Philadelphia, Pennsylvania, between representatives from PADEP, the Air National Guard (ANG), the Pennsylvania ANG, the Willow Grove Air Force Reserve (AFR) and PEER Consultants, P.C. (PEER), to discuss the scope of field activities at the Motor Pool Area (MPA) in order to facilitate closure of the site. Attendees are listed in Attachment A. The MPA was originally planned to undergo a Presumptive Remedy Engineering Evaluation/Cost Analysis and Remedial Design. Then, in an effort to streamline cleanup activities, the MPA was to be remediated concurrently with another site located at the Joint Reserve Base. However, since the Joint Reserve Base has been placed on the National Priorities List (NPL), an expedited method for closing the MPA is now being sought.

The meeting began with an introduction by Capt. Richard Frattarelli (Pennsylvania ANG) and by passing out briefing handouts. Briefing handouts are provided in Attachment B. Capt. Frattarelli presented a map of the Willow Grove Air Reserve Station (station) and surrounding areas. The location of the MPA with respect to the Petroleum, Oil and Lubricants (POL) Area and Graeme Park was discussed. Ms. Pam Reigh of PADEP observed that groundwater in the vicinity of the MPA flows in the same general direction as the groundwater in the POL Area. She then asked if any contamination had been found in a stream leading from the station to Graeme Park. Subsequent to the meeting, Mr. Crow determined that occasional jet fuel contamination had been found in the stream. The meeting then proceeded to a discussion concerning the history of the site. Mr. Crow stated that the ANG originally desired to combine remedial activities at the MPA and the POL Area, and to remediate them concurrently as one site. However, since the Joint Reserve Base has been placed on the NPL, a more expeditious method of closing out the MPA is being sought. Mr. Crow then stated that the MPA should fall under the state underground storage tank program and Ms. Reigh agreed. With the briefing handouts (Attachment B), Mr. Richard Stout (PEER) presented an overview of the project and discussed work previously performed at the station. He discussed the POL Remedial Investigation and the initial Site Assessment (SA), and discussed the initial MPA SA analytical results obtained from the soils and groundwater investigation of the MPA, stating that soil samples obtained from the MPA during the initial SA contained concentrations of total petroleum hydrocarbons (TPH) at concentrations up to 77 mg/kg, and groundwater samples contained concentrations of benzene ranging from 7.0 to 16.2 µg/L in the two downgradient wells.

Mr. Crow continued the discussion of the initial SA results by stating that the all the TPH concentrations in soil were below the current cleanup level of 500 mg/kg, and that the concentrations of benzene in groundwater were low compared to the cleanup level of 5.0 µg/L.

He also stated that the ANG desired to address the MPA under the Land Recycling and Environmental Remediation Standard Act (Act 2). Mr. Crow discussed the proposed options for the site including conducting additional investigation and preparing a Site Characterization/ Remedial Action Plan (SCRAP), performing bioventing for soil remediation, or allowing soil remediation via natural attenuation. Ms. Christy Hughes (PADEP) stated that the data previously collected from the MPA may be grandfathered in under Act 2. Ms. Reigh stated that if the ANG desires to use the data obtained during the RI and SA, new groundwater and soil samples must be collected from the MPA. She stated that analysis of TPH is no longer required by PADEP, and that new samples collected from the MPA should be analyzed according to the abbreviated list of analytical requirements for gasoline and diesel fuel oil no. 2. However, since only a diesel underground storage tank is under investigation at the site, both Ms. Reigh and Ms. Hughes agreed that samples should be analyzed according the abbreviated list of analytical requirements for diesel fuel oil no. 2 only. The abbreviated list of analytical requirements is provided in Attachment C.

Ms. Hughes asked if any upgradient data from the POL Area was available since this data could possibly serve as downgradient data for the MPA. Mr. Charanjit Gill (Willow Grove AFR) said that the data were available and that he would obtain the data and provide it to Mr. Crow. Mr. Crow stated that the focus of any field activities at the MPA should be on groundwater rather than soil. Ms. Reigh and Ms. Hughes agreed and stated that at least two new wells and two new soil borings needed to be sampled at the site in order to update the previous data. Mr. Crow asked if the proposed sampling locations to be completed as a part of an SA/CAP were acceptable (Attachment B - Proposed Sampling Locations). The proposed sampling locations on the briefing handouts included two wells and five soil borings. Both Ms. Hughes and Ms. Reigh stated that the locations were acceptable, but suggested that the sampling locations, and number of soil borings could be revised based on the upgradient data from the POL Area. Ms. Reigh requested that Mr. Crow fax a map to her showing both the previous and final sampling locations once they are decided upon. Mr. Crow said that he would. Ms. Reigh stated that if the analyte concentrations from the new sampling locations were low, that the site could probably be closed, and that if the analyte concentrations are high, then natural attenuation or a risk based cleanup might be appropriate. Risk based cleanups are required when all contaminant migration pathways can not be eliminated. She said that under Act 2 only a Final Remedial Report must be submitted to PADEP, and that no newspaper notifications or notices to remediate are required. She stated that the Act 2 standards with the supplement, and the PA Code Title 25 regulations should be used in order to properly plan the project activities. Mr. Stout was given copies of these documents prior to leaving the PADEP office.

Mr. Crow then discussed the correspondence from PADEP to the ANG which requested a schedule for completion of project activities. He stated that although the letter was not a Notice of Violation (NOV), that the ANG was handling it as such. Ms. Hughes said that the letter was an NOV since soil and groundwater contamination were confirmed at the site. In order to close the NOV, Mr. Crow presented a preliminary schedule for completion of the MPA activities. He stated that the schedule included time for any necessary cleanup activities, and was based on a worst-case scenario. He asked Ms. Hughes and Ms. Reigh if they would agree to the schedule and sign-off on it in order to help close the NOV, and fulfill his project management objectives.

Ms. Reigh requested that the current schedule be revised to around 18 months or 2 years since the project appeared to be a small one. She said that upon receipt of the meeting minutes with the revised project schedule (Attachment D), a letter could be prepared stating that PADEP concurs with the revised schedule with the understanding that the timeframe may be modified as necessary. Mr. Crow stated that the described letter from PADEP would meet his objectives. He stated that the meeting minutes with the revised schedule would be available within two to three weeks, and that Mr. Gill would provide the upgradient POL data to him by the end of the first week of April. The revised schedule is provided in Attachment D. He thanked Ms. Hughes and Ms. Reigh for their cooperation and the meeting was concluded.

Action Items

Action items included the following:

Person Responsible	Required Action	Date Due
Mr. Gill	Provide the upgradient data from the POL Area to Winston Crow	April 4, 1997 (was mailed on that date)
Mr. Crow	Fax a map of the final locations of the previous and planned sampling locations to PADEP.	Within 2 working days of receipt of upgradient data from the POL Area
Richard Stout	Prepare a revised project schedule for completion of a Site Characterization/Remedial Action Plan with an 18-month to 2-year timeframe and meeting minutes.	Completed
PADEP	Provide a letter to Winston Crow which agrees upon the timeframe with the understanding that modifications will be made if necessary.	Within 2 working days of receipt of the Final Meeting Minutes with the revised project schedule

ATTACHMENT A
MEETING ATTENDEES

ATTACHMENT A
REGULATORY MEETING
MARCH 10, 1997

MEETING ATTENDEES

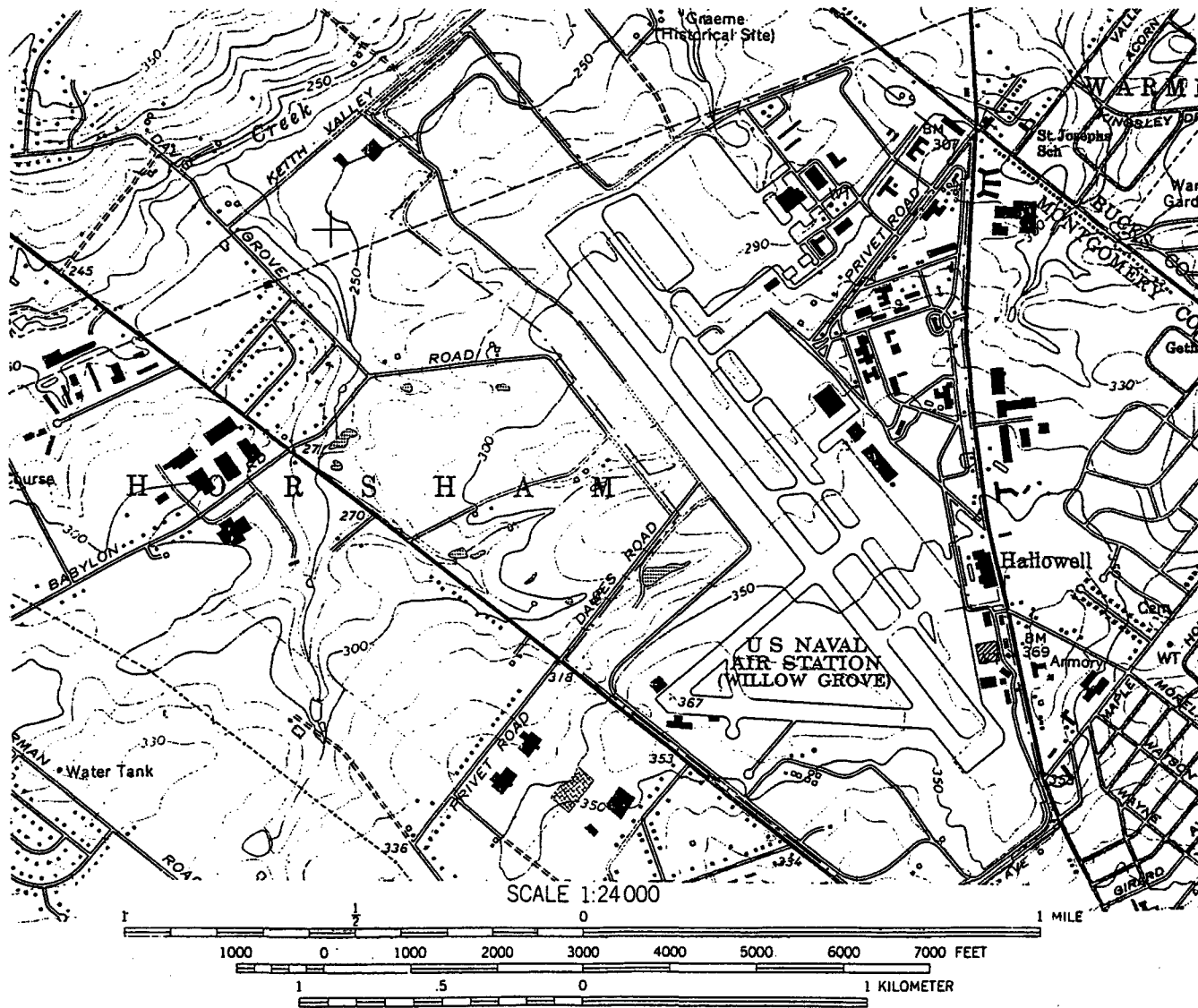
Name/Rank	Organization/Address	Phone No./DSN
Winston Crow	Air National Guard/CEVR 3500 Fetchet Avenue Andrews AFB, MD 20762-5157	(301) 836-8155 DSN 278-8155
Capt. Richard Frattarelli	111 FW/EM 1120 Fairchild St. Willow Grove ARS, PA 19090-5236	(215) 443-1433 DSN 991-1433
Charanjit Gill	913 SPTG/CEV 2164 McGuire Street Willow Grove ARS, PA 19090-5232	(215) 443-1105 DSN 991-1105
Christy Hughes	Pennsylvania Dept. of Environmental Protection Lee Park, Suite 6010 555 North Lane Conshohocken, PA 19428	(610) 832-5921
Pamela S. Reigh	Pennsylvania Dept. of Environmental Protection Lee Park, Suite 6010 555 North Lane Conshohocken, PA 19428	(610) 832-5929
Richard Stout	PEER Consultants, P.C. 575 Oak Ridge Turnpike Oak Ridge, TN 37830	(423) 483-3191

ATTACHMENT B

**REGULATORY MEETING
MARCH 10, 1997**

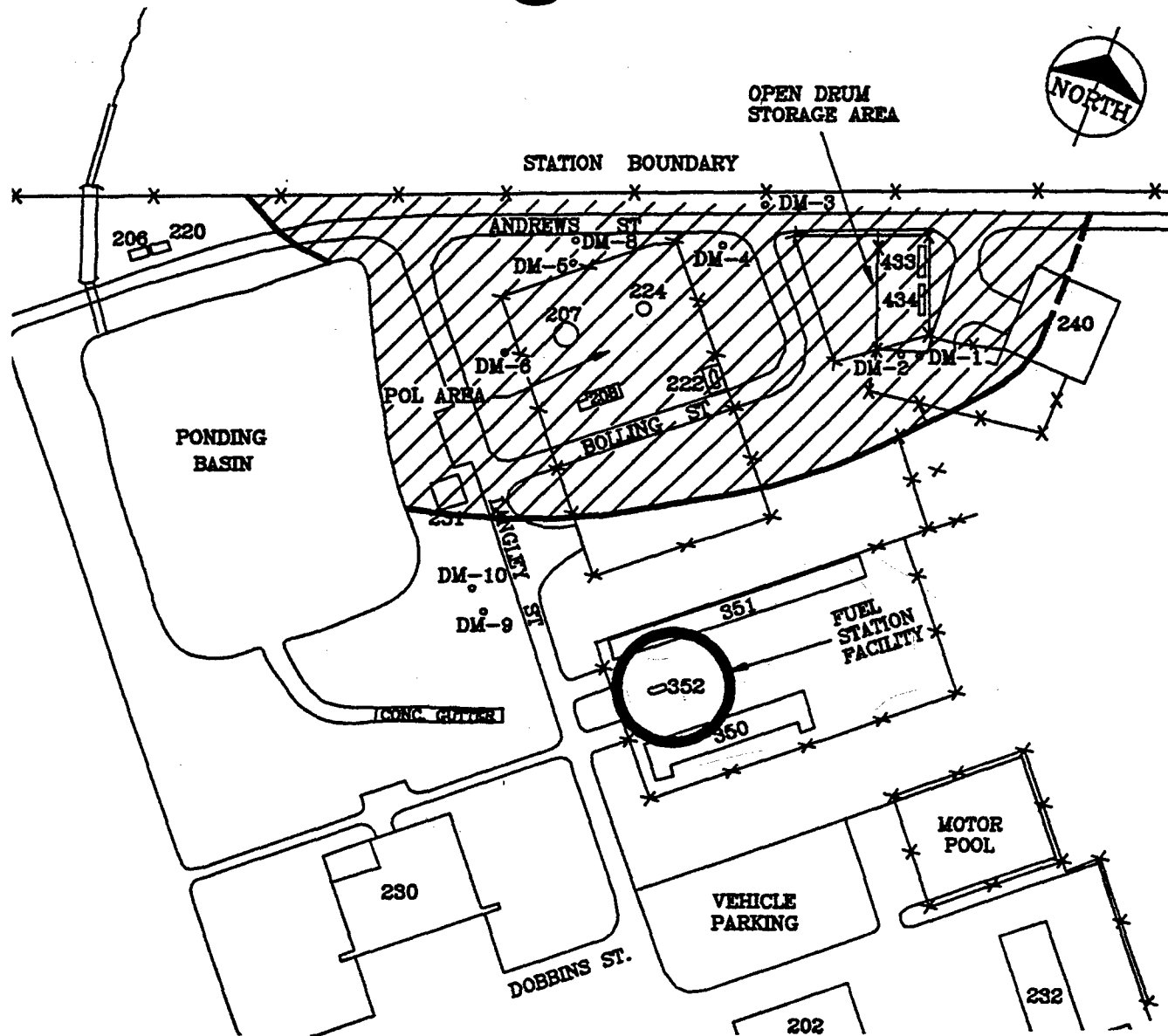
BRIEFING HANDOUTS

Base and Vicinity

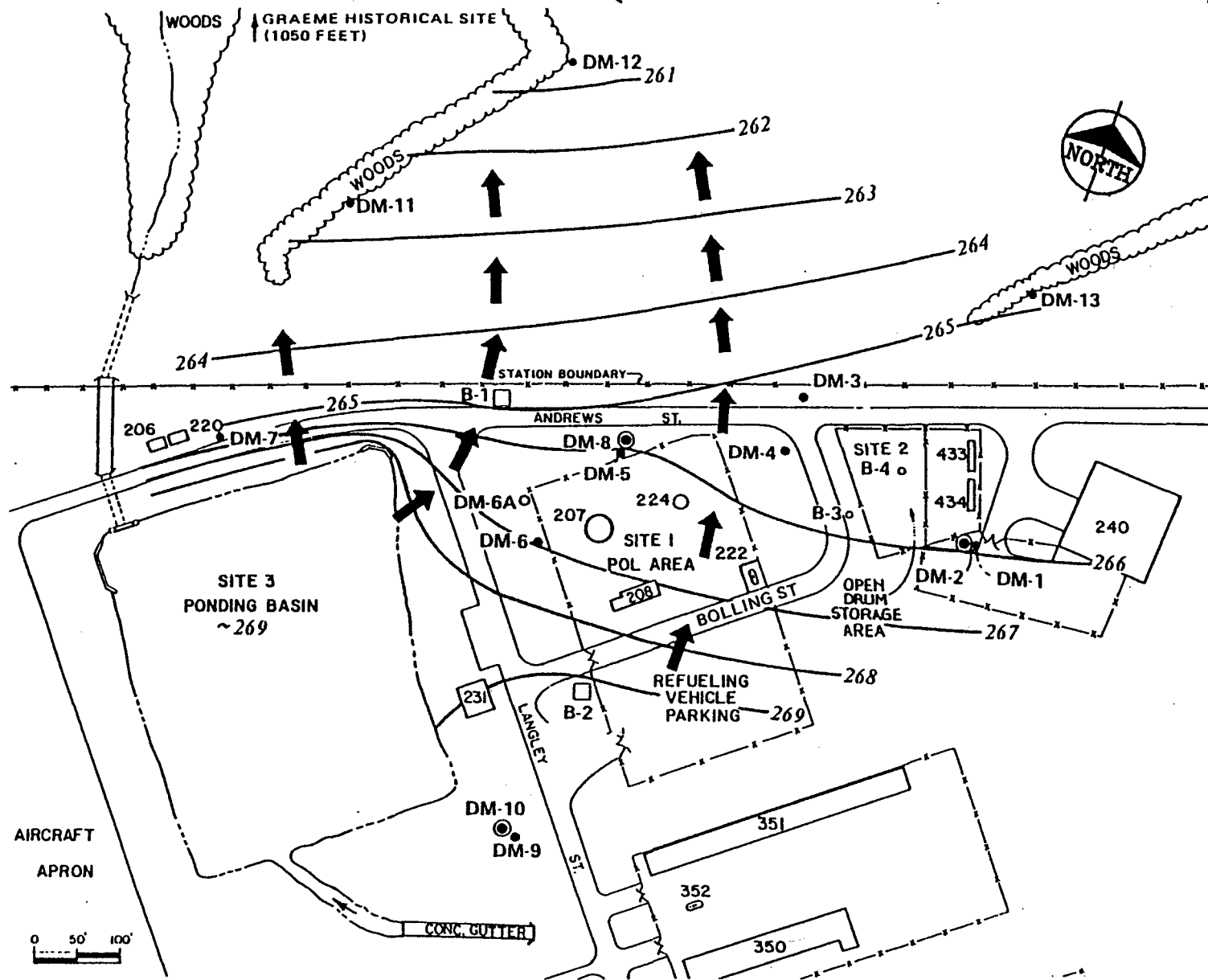


SCALE 1:24 000
CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

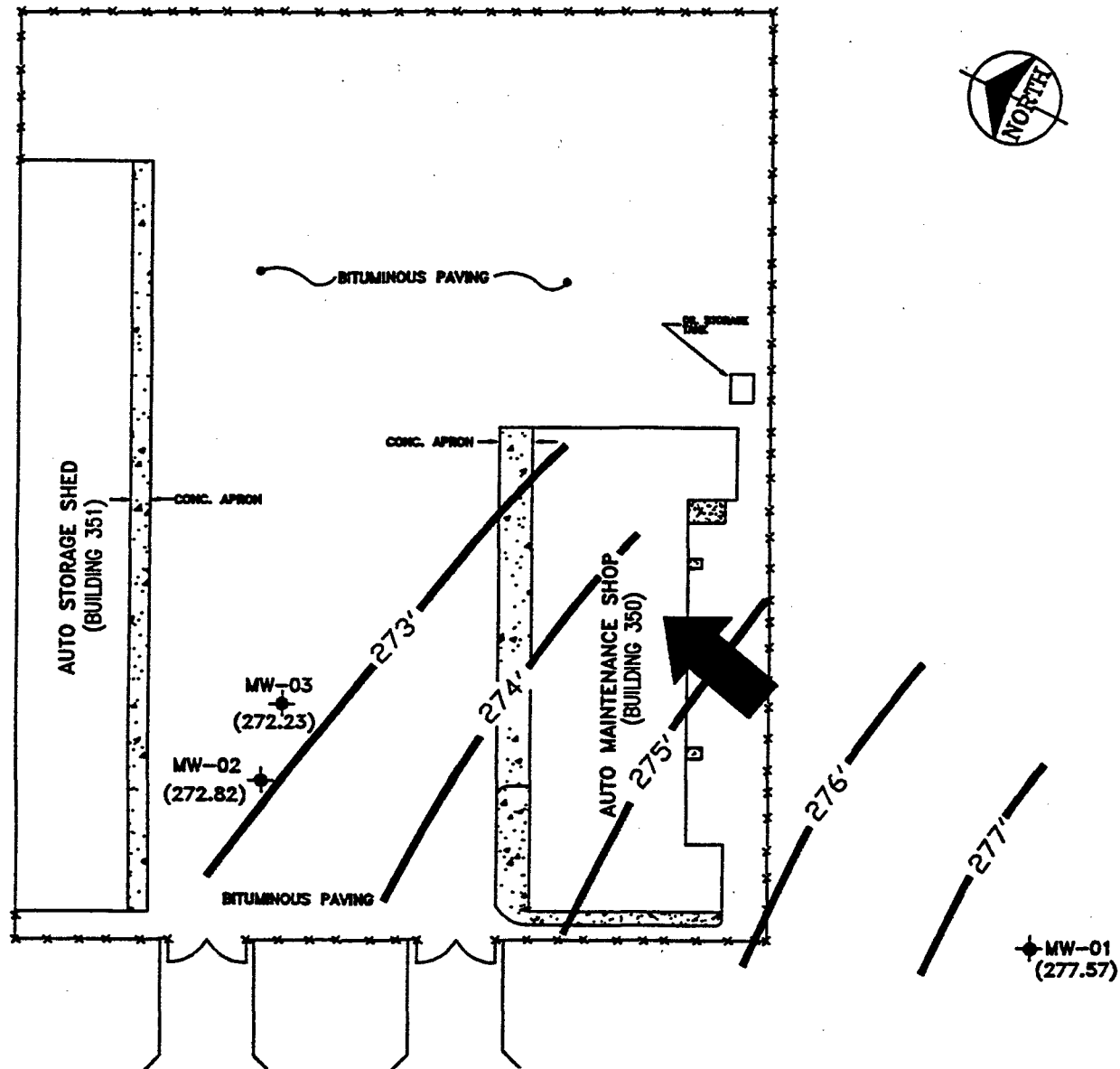
Investigated Areas



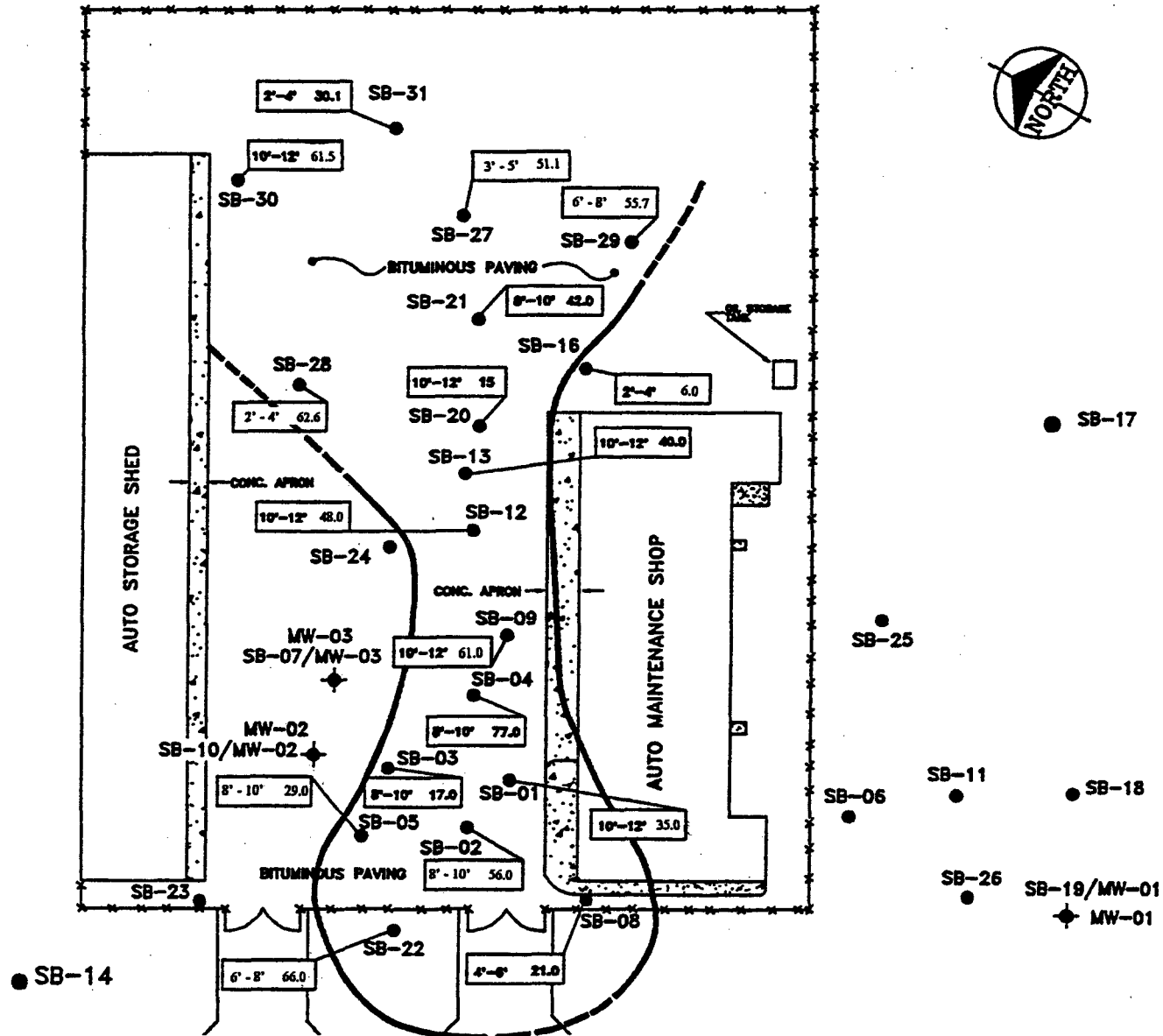
RI GW Flow (October 1987)



November 1994 GW Flow



MPA Impacted Soil Area



Cleanup Options

- Additional Investigation (SA/CAP)
- Bioventing (SVE)
- Natural Attenuation
- Other Suggestions

SA Proposed Activities

- Advancing 5 Borings
- Installing 2 Wells
- Collecting Soil Samples
- Collecting Groundwater Samples (2 Rounds)
- Screening and Laboratory Analyses
- Preparing SA Report and CAP

Proposed Analyses

Soil:

Chemical: Naphthalene, Fluorene, Phenanthrene, Benzo(a)Anthracene, Benzo(a)Pyrene, BTEX (Screening)

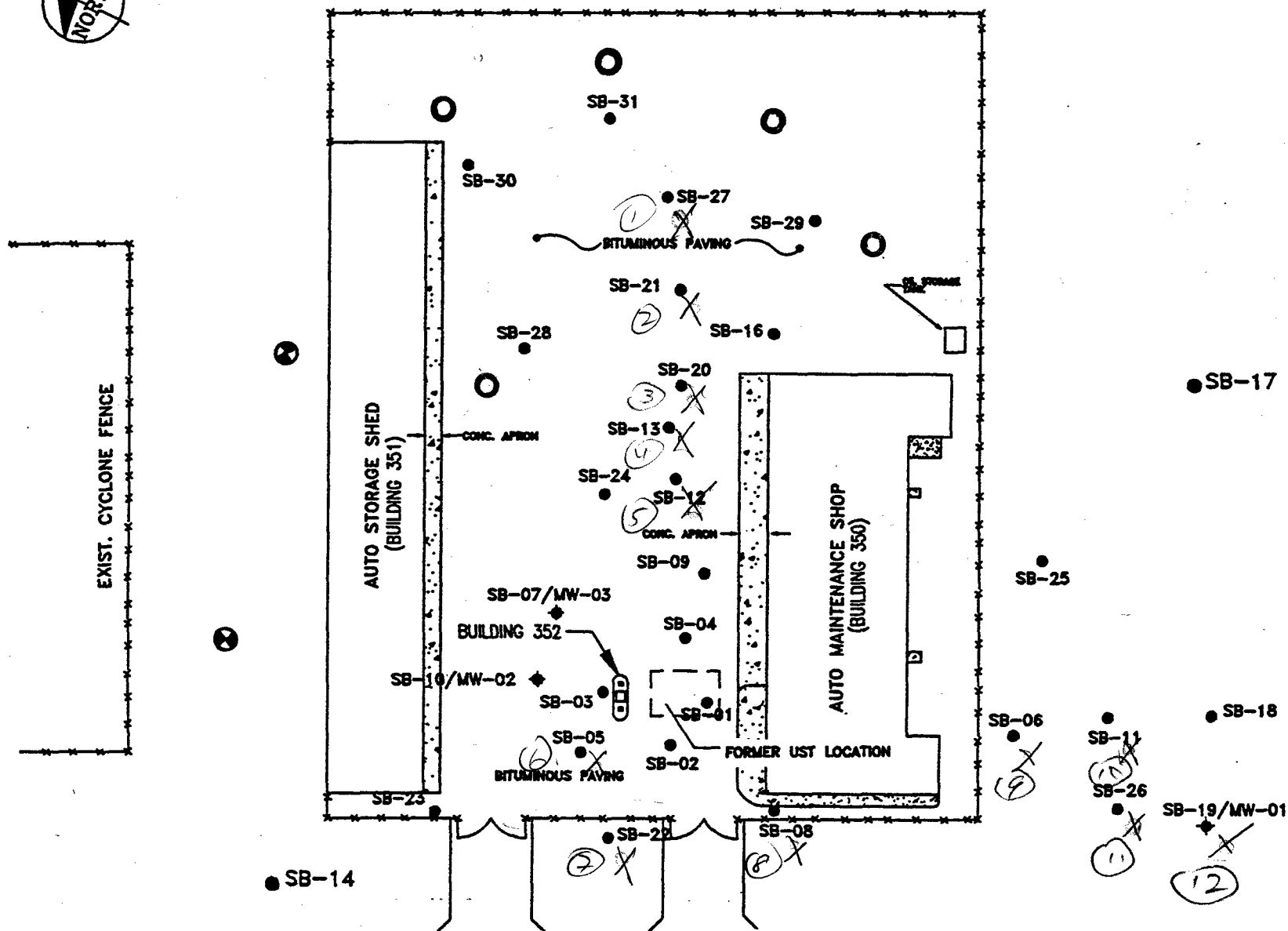
Physical: Sieve and moisture analyses, density, compaction, triaxial shear

Groundwater:

Chemical: BTEX, Naphthalene, Total Nitrogen, TOC, PO₄, Fe, Magnesium, Manganese, Sulfates, Nitrates, Calcium

Physical: pH, eH, Alkalinity, Temperature, Redox, Dissolved O₂, CO₂, Hardness, TSS, TDS, Hydrocarbon Degrading, Bacteria Plate Counts

Proposed Sampling Locations



ATTACHMENT C

**ABBREVIATED LIST
OF ANALYTICAL REQUIREMENTS**

PRODUCT STORED	PARAMETERS TO BE TESTED IN SOIL	ANALYTICAL METHOD (reported on a dry weight basis)	PARAMETERS TO BE TESTED IN WATER	ANALYTICAL METHOD
Leaded Gasoline, Aviation Gasoline, and Jet Fuel	BTEX ¹	EPA Method 8021A or 8260A	BTEX ¹	EPA Method 8021A or 8260A
	Cumene (Isopropylbenzene)		Naphthalene	
	1,2-Dibromoethane (EDB)		1,2-Dichloroethane (EDC)	
	1,2-Dichloroethane (EDC)		1,2-Dibromoethane (EDB)	
	Naphthalene	EPA Method 8270B or 8310		
	Benzo[a]anthracene			
	Benzo[a]pyrene			
	Lead (total)	EPA Method 6010A or 7420	Lead (dissolved)	EPA Method 6020 or 7421
Unleaded Gasoline	BTEX ¹	EPA Method 8021A or 8260A	BTEX ¹	EPA Method 8021A or 8260A
	Cumene (Isopropylbenzene)		MTBE ²	
	MTBE ²		Naphthalene	
	Naphthalene			
	Benzo[a]anthracene	EPA Method 8270B or 8310		
	Benzo[a]pyrene			
Kerosene Fuel Oil No. 1	BTEX ¹	EPA Method 8021A or 8260A	BTEX ¹	EPA Method 8021A or 8260A
	Naphthalene		Naphthalene	
	Fluorene	EPA Method 8270B or 8310		
	Phenanthrene			
	Benzo[a]pyrene			
Diesel Fuel, Fuel Oil No. 2	Naphthalene	EPA Method 8270B or 8310	BTEX ¹	EPA Method 8021A or 8260A
	Fluorene		Naphthalene	
	Phenanthrene			
	Benzo[a]anthracene			
	Benzo[a]pyrene			
Fuel Oil Nos. 4, 5 and 6 and Lubricating Oils and Fluids	TRPH ³	EPA Method 418.1 or 3560/8440 (proposed)	TRPH ³	EPA Method 418.1
			BTEX ¹	EPA Method 8020A, 8021A or 8260A

PRODUCT STORED	PARAMETERS PARAMETERS TO BE TESTED IN SOIL	ANALYTICAL METHOD (reported on a dry weight basis)	PARAMETERS TO BE TESTED IN WATER	ANALYTICAL METHOD
Used Motor Oil	Benzene	EPA Method 8021A or 8260A	Benzene	EPA Method 8021A or 8260A
	Toluene		Toluene	
	Xylenes (total)		Xylenes (total)	
	Naphthalene		Naphthalene	
	Pyrene	EPA Method 8270B or 8310		
	Benzo[b]fluoranthene			
	Benzo[a]anthracene			
	Benzo[a]pyrene			
	Indeno[1,2,3-cd]pyrene			
	Benzo[ghi]perylene			
Lead (total)	EPA Method 6010A or 7420	Lead (dissolved)	EPA Method 6020 or 7421	
Other Petroleum Products Blended Petroleum Products Unknown Petroleum Products Other Regulated Substances	Contact Regional Office Responsible for County in Which Tank is Located			

- 1 Benzene, Toluene, Ethyl Benzene, Xylenes (total)
- 2 Methyl Tert-Butyl Ether
- 3 Total Recoverable Petroleum Hydrocarbons

ATTACHMENT D

**REVISED PROJECT SCHEDULE
FOR MOTOR POOL AREA**

ID	Task Name	Duration	Start	Finish	1997												1998												1999											
					M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N			
1	Regulatory Meeting	22d	3/12/97	4/10/97																																				
2	Meeting	2d	3/12/97	3/13/97																																				
3	Draft Minutes	10d	3/14/97	3/27/97																																				
4	Client Review	5d	3/28/97	4/3/97																																				
5	Final Minutes	5d	4/4/97	4/10/97																																				
6	Project Contracting	40d	3/14/97	5/8/97																																				
7	Prepare RFP (ANG)	10d	3/14/97	3/27/97																																				
8	PEER Cost Proposal	10d	3/28/97	4/10/97																																				
9	ANG Tech Evaluation	5d	4/11/97	4/17/97																																				
10	Proposal Negotiations	5d	4/18/97	4/24/97																																				
11	Deliv. Order Issuance	10d	4/25/97	5/8/97																																				
12	SC Work Plan	105d	5/9/97	10/2/97																																				
13	Draft SC Work Plan	25d	5/9/97	6/12/97																																				
14	Client Review	20d	6/13/97	7/10/97																																				

Project: Date: 4/17/97	Task		Summary		Rolled Up Progress	
	Progress		Rolled Up Task			
	Milestone		Rolled Up Milestone			

