

**MINUTES OF MEETING  
TECHNICAL REVIEW COMMITTEE MEETING # 13  
APRIL 1, 1993  
NAS WILLOW GROVE**

The technical Review Committee Meeting # 13 was held at NAS Willow Grove on April 1, 1993. The meeting convened at 10:00 am in the conference room of the Public Works Building. A copy of the meeting agenda and a meeting attendance list are attached.

**1. TRC Welcome and Introduction**

A. Jim Colter, Remedial Project Manager from Northern Division, Naval Facilities Engineering Command (NORTHDIV) opened the meeting with introductions, welcome, and brief overview regarding the purpose of the meeting.

**2. Opening Comments/Questions**

A. Jim Colter asked the committee if there were any general comments or questions regarding the RI sites.

B. Commander Strand stated that the \$840,000 cost of the RI for sites 1,2,3 and 5 seemed excessive and suggested that something be done in the future to keep costs down.

C. Don Blackert, Project Manager for HALLIBURTON NUS, stated that the \$840,000 figure was the budget amount not the actual project cost and that the project was actually under budget by approximately \$125,000 with current expenditures to date including several originally out-of-scope activities including completion of an HRS scoring document and management of petroleum contaminated waste and hazardous waste associated with the Fuel Farm Project. Mr. Blackert agreed that the costs were higher than normal but stated that the work plan that the project team was required to follow included extensive sampling and analysis for full TCLP parameters and that the project was designated as a "Silver Bullet" which required rapid completion of field activities and sample analysis. These factors played a major role in determining the total project cost.

D. Commander Strand stated that he was aware that the project was extensive in scope and he felt that the budget was well managed but that future projects should be more sensitive to cost reduction during the planning stages.

**3. Navy Fuel Farm**

A. Jim Colter stated that the Navy Fuel Farm was currently being addressed under a Remedial Action Contract (RAC), however the project may not be applicable to this contracting mechanism since RAC orders are typically used for projects which have already been designed. Mr. Colter stated that LANTDIV and SOUTHDIV may have similar projects ongoing.

B. Commander Strand stated that the plume will continue to move during the period of remedial design and contracting.

C. Mark Leipert, Commander Strand and Jim Colter briefly discussed personnel availability when using the RAC and the potential need for a remedial construction oversight contractor.

D. Jim Colter indicated that Recommendation Number 1 of the EA Engineering Interim Report on the Navy Fuel Farm was awarded during January, 1993, and that drilling activities associated with this recommendation are expected to begin on or around April 15, 1993.

#### **4. RI Sites 1,2,3, and 5**

A. Jim Colter provided a brief overview of the RI project and stated that the Navy intends to pursue additional action at these sites as recommended by the RI Report, but that funding was not expected to be available until the fourth quarter of FY 1993, but more probable during the first quarter of FY 1994.

#### **5. Aircraft Apron Site**

A. Mr. Colter stated that the remaining funds within the RI budget will be used for investigation of the aircraft apron. A Scope Change Letter will be prepared and sent to Don Blackert to initiate the project.

B. Commander Strand indicated that the contractor (Burrows) building the new hanger would need to know of soil contamination problems prior to sewer line installation work to help avoid project delay charges. Contaminants at the site were reported by the contractor to have caused temporary illness of site workers during recent construction in the area. Mr. Strand restated the need to complete data acquisition at the site as soon as possible.

C. Jim Edmund indicated that all required drawings, etc. related to the apron facility would be made available by the base, or by Mr. Mike Wolfe from NORTHDIV.

#### **6. Site 7 - Rifle Range**

A. Jim Colter stated that a "No Further Action" determination had been made for this site. A Decision Document will be completed in the near future.

#### **7. Closing Discussion for Willow Grove**

A. Mr. Colter summarized funding problems and closed the Willow Grove discussion at approximately 10:30 AM.

#### **8. Air Force Site - Geraghty and Miller Discussion**

A. Matt Mulhall of Geraghty and Miller provided the committee with a description and discussion of the remediation system which has been installed at the Air Force Reserve 913th Tactical Airlift Group facility. Major discussion topics are listed below.

Preliminary work was performed by Dames and Moore in 1988 to identify the extent of JP4 contamination.

During 1991 Geraghty and Miller (G&M) performed additional work to finalize the design and to acquire additional site information. This work included installation of wells and piezometers

Discussion of site geology indicated that the depth to bedrock ranged from 3 to 8 feet below ground surface at the site and consisted of the Middle Arkosic Member of the Stockton Formation, comprised of sandstone interbedded with shale. Groundwater flow is toward the northwest creating an easy to solve problem due to the single flow direction.

Several hundred PPB of Xylene and Ethylbenzene were detected during a 1989 investigation. In the 1991 investigation, free phase JP4 as well as dissolved phase contamination had migrated further downgradient. There is a distinction between an area of 2 to 3 feet product thickness and a product sheen on the groundwater correlating to a break in topography at the site.

A discharge of product to the adjacent stream resulted in emergency action being required in the past at the site. This action consisted of a trench with collector sumps and an impermeable downgradient boundary.

Vapor extraction recovery wells were installed at a later date to intercept the migrating free product plume. Six dedicated vapor extraction wells were installed near the break in topography and were combined with two wells previously installed by Dames and Moore.

Vacuum wells are used to pull product vapor with greater vacuum resulting in more air movement through the subsurface. System running at 100 CFM with 15 inch water column vacuum. Off gasses being thermally oxidized. Vapors running around 40% LEL. System results in decreased oxygen levels which is important for bioremediation.

Final system design is expected to result in removal of 50 gallons per day. The objective is to remove free product and expect the dissolved phase to retreat. A time frame of 5 to 6 years is anticipated for vapor extraction and bioremediation as opposed to the estimated 30 year duration for the Dames and Moore pump and treat design.

Several brief discussions of similar projects and findings at Hill AFB, Tyndall AFB, and a USGS site located in Bemidji, Minnesota were used in support of the design and findings.

Microbial investigation at the site indicated high populations in the saturated and shallow subsurface zones and low populations in the capillary fringe. A relatively high percentage (28%) of the microbes were determined to be species capable of using hydrocarbons as a food source.

In response to an inquiry by Commander Strand it was stated that no microbe introduction or addition of nutrients will be necessary. Dead bacteria will become a food source as well as the hydrocarbons.

System air flow will probably be reduced after removal of free product. Excess air flow dries the soils and strips light end hydrocarbons that the microorganisms need to get started. Should drop from 500 CFM to approximately 40 CFM in the well line.

In response to an inquiry by Greg Castello of Pennsylvania DER, it was explained that no oxygen addition (other than that supplied by air circulation resulting from vapor extraction) was considered to be necessary.

The goal of the project is to make the trench obsolete by stopping migration away from the source using the designed system.

Closing remarks and request for questions occurred at approximately 11:00 AM

**9. Open Discussion**

A. Commander Strand expressed a desire to have a similar system installed at the Fuel Farm.

B. Matt Mulhall indicated in response to committee inquiry that additional wells ( 1 to 2 more lines) may be needed.

**10. Closing/adjournment**

A. Mr. Colter closed the meeting at approximately 11:05 AM.

AGENDA

TECHNICAL REVIEW COMMITTEE MEETING #13  
NAS WILLOW GROVE, PA  
April 01, 1993

1. INTRODUCTION
  
2. STATUS OF NAS WILLOW GROVE'S IR PROGRAM
  - \* SITES 1, 2, 3, & 5
  - \* SITE 11 - AIRCRAFT APRON
  - \* SITE 10 - FUEL FARM
  - \* SITE 7 - ABANDONED RIFLE RANGE #2
  
3. STATUS OF AIR FORCE'S IR PROGRAM
  
4. GENERAL DISCUSSION
  
5. CLOSING REMARKS

# LIST OF ATTENDEES

NAME	ORGANIZATION	PHONE #
Jim COLTER	NORTHERN DIVISION, NAFAC	(215) 595-0567
Mark Leperit	NORTH DIV	(215) 595-0567
Don Blackett	Halliburton NUS	412-921-8351
Colme D. Vanderhoof	WGARS / CIV ENG	215-443-1105
Jim Vance	WGARS / CEC	(215) 443-1107
Hal Dusen	WGARS / CEV	(215) 443-1107
Bob Rovinsky	WGARS / SGPB	(215) 443-1147
Jeff Smith	Geoghty & Miller, Inc.	215 - 752-6840
Water Fogelsangor	Geoghty & Miller Inc	215 - 752-6840
Matt Mulhall	Geoghty & Miller, Inc.	215-752-6840
Carl N.G. STRAND	NAS ENVIRONMENTAL	215 443-6929
Greg A Barr	9/2 <sup>nd</sup> Support Op. CC	443-1100
Gregory Castello	Pa DER	215 832-6212
GARY Powell	NAS WG	215 443 6051
Tony Broyles	"	"
John Edmond	" ENVIRON	215 443 6939
Bill Rottent	III FC / Pa ANG	215 443 -1348

WILLOW GROVE IR SCHEDULE				INSTALLATION RESTORATION MANAGEMENT SECTION				03/03/93				SITES INCLUDED ON THIS SCHEDULE 1,2,3,4,5,6,7,8,9,10,11,ARF 4																
		FY 93				FY 94				FY 95				FY 96														
		1993				1994				1995				1996														
		JA	FE	MA	AP	MA	JU	JU	AU	SE	OC	NO	DE	JA	FE	MA	AP	MA	JU	JU	AU	SE	OC	NO	DE	JA	FE	MA
COST LINE		D				C				B				C														
RI SITES SITES 1, 2, 3, & 5  CLEAN CONTRACT		* PREPARE SOW AND GE FOR DATA GAP'S, FB, AND RISK ASSESSMENT * AWARD CTO #XXXX				* WORKPLAN ADDENDUM FINALIZED * START FIELDWORK * END FIELDWORK				* ROUGH DRAFT RI/FS, RISK ASSESSMENT * DRAFT RI/FS, RA * FINAL RI/FS, BA * AWARD ROD				* COMPLETE ROD * AWARD REMEDIAL DESIGN				* COMPLETE REMEDIAL DESIGN * AWARD REMEDIAL ACTION										
... CONTINUING RI REPORT DEVELOPMENT (1/5) RESOLVE COMMENTS (1/20) FINAL RI REPORT (1/22) DISTRIBUTE FINAL RI TO TRC																												
SITE 11 AIRCRAFT APRON  CLEAN CONTRACT		* PREPARE SOW & GE FOR SAMPLING PLAN, FIELDWORK, & REPORT * AWARD CTO #XXXX				* ROUGH DRAFT SAMPLING PLAN * DRAFT SAMPLING PLAN * FINAL SAMPLING PLAN * START FIELDWORK * END FIELDWORK				* ROUGH DRAFT REPORT * DRAFT REPORT * FINAL REPORT																		
SITE 10 FUEL FARM  EA ENGR  GTI - RAC		* PREPARE INTERIM PRAP & ROD FOR RAC * COMPLETE INTERIM PRAP & ROD FOR RAC * AWARD RAC CONTRACT				* AWARD ROD * COMPLETE ROD * AWARD REMEDIAL DESIGN - SOILS				* COMPLETE REMEDIAL DESIGN - SOILS * AWARD REMEDIAL ACTION - SOILS				* COMPLETE RAC CONTRACT														
* PREPARE SOW & GE TO IMPLEMENT REC. 1 OF EA'S INTERIM REPORT * AWARD RECOMMENDATION 1 OF EA'S INTERIM REPORT * START FIELDWORK.....* END FIELDWORK						* ROUGH DRAFT REPORT * DRAFT REPORT * FINAL REPORT																						
NFA SITES SITES 4, 6, 8, 9 SITE 7, ARF SITE 4		* PREPARE NFA DECISION DOCUMENT FOR SITE 7																										
TRC MEETINGS		(5/30)				(8/24), tentative				(10/21), tentative																		