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NCBC GULFPORT
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MEETING MINUTES REGARDING TECHNOLOGY SELECTION FOR FREE PHASE
PRODUCT ASSESSMENT SITE 6 1 JUNE 1994 NCBC GULFPORT MS
6/17/1994
ABB



June 17, 1994

Commanding Officer
Southern Division
Naval Facilities Engineering Command
2155 Eagle Drive
North Charleston, SC 29418

Attention: Mr. Marshall Knight
Subject: Meeting Minutes - June 1, 1994
Technology Selection
NCBC Site 6 Free Phase Product Assessment

Dear Mr. Knight:

Enclosed are the meeting minutes from the June 1, 1994 meeting in Gulfport, MS between Southern Division, NCBC, ABB-ES, M-K Corporation, and the USGS. Copies of these minutes have been forwarded to all attendees.

If you have any questions, please call me at (615) 531-1922.

Sincerely,

ABB ENVIRONMENTAL SERVICES, INC.

Penny M. Baxter
Senior Project Manager

attachment

cc: file

[8505.20]

ATTENDEES: If you have any corrections to these minutes, please notify me by July 20, 1994.

ABB Environmental Services, Inc.

Meeting Minutes
June 1, 1994
Technology Selection
Site 6 Free Phase Product Assessment
NCBC, Gulfport, MS

Attendees:	Marshall Knight	SouthDiv	(803) 743-0515
	Gordon Crane	NCBC	(601) 871-2485
	Lt. Jerry Davis	NCBC	(601) 871-3149
	Harry Y. Doo	SouthDiv	(803) 743-0353
	James F. Jones	SouthDiv	(803) 743-0544
	Jim Hamrick	SouthDiv/ROICC	(601) 871-2943
	Scott Newman	M-K	(208) 331-1869
	Han Maung	M-K	(216) 523-3422
	Mike Bradford	Jacobs	(713) 669-2277
	John Harsh	USGS	(601) 965-5582
	Bill Oakley	USGS	(601) 965-5788
	Penny Baxter	ABB-ES	(615) 531-1922
	Valerie Rule	ABB-ES	(615) 531-1922
	Harlan Faircloth	ABB-ES	(615) 531-1922
	Robert Fisher	ABB-ES	(615) 531-1922
	Richard May	ABB-ES	(904) 656-1293
	Donna Scarborough	ABB-ES	(904) 656-1293

A meeting was held at NCBC on June 1, 1994 in Gulfport, MS to discuss the technology alternatives for removal of the free phase product at NCBC Gulfport Site 6.

Opening remarks for the meeting were made by Penny Baxter. Ms Baxter welcomed members of the Morrison Knudsen (M-K) team to the Site 6 project to perform as the remedial action contractors. The objective of the meeting was stated to be for the team members to reach a concurrence on the best methods to extract and treat the free product present at the site. The meeting was structured as follows: (1) a presentation of current conditions at the site; (2) presentation/discussion of extraction systems; (3) site visit; (4) presentation/discussion of treatment systems; (5) discussion of responsibility assignment matrix; and (6) detailing responsibilities associated with execution of removal activities at Site 6.

Bob Fisher presented the field investigation findings of the free product plume and aquifer properties. The configuration of the free phase product plume was delineated by utilizing push-probe technology and visual inspection and measurement of the bailed product. Attachment 1 illustrates the plume configuration. Estimates of aquifer properties included a transmissivity of 1500 ft²/day and a hydraulic conductivity on the order of 10⁻³ cm/sec. The current estimate for amount of free product is 35,000 gallons (assumed to be a high estimate). A pumping test was performed to evaluate the most viable free product extraction procedure. The results of the pumping test illustrated that the most efficient method of extraction is plume migration control with groundwater depression and total fluids recovery.

Harlan Faircloth presented screening alternatives for free product removal. Alternatives considered included use of recovery wells, a well point system and a recovery trench. Computer models, using Quickflow, were presented to evaluate each of the three alternative technologies. Using equal assumptions for each, the models were evaluated on a time-to-recovery basis. After presentation of the alternatives, an open discussion period was held. The integrated Site 6 team reached the consensus that use of a recovery trench would be the most viable recovery technology based on time of recovery and implementability.

The meeting adjourned at this point for a visit to Site 6. Bob Fisher led the site walkover pointing out salient features such as plume location, monitoring wells and well points, and source locations (fire-fighting training pits).

The discussion of screening alternatives for the treatment system was led by Valerie Rule. Elements of the treatment discussed included discharge alternatives, product separation, treatment of organic and inorganic constituents, product disposal, and process residual disposal. The overall process agreed upon by the team is illustrated in Attachment 2. After product/groundwater extraction, the influent is passed through an oil/water separation system and free product is recycled by a waste handler. The effluent is transferred to a low profile air stripper for removal of volatile organic components. The team considered whether treatment of the vapor stream would be required. This issue was left open pending outcome of the system design and interaction with State of Mississippi regulatory agencies. The team agreed to an observational approach to decide if treatment of inorganic constituents was needed. The preferred disposal of waste water effluent, as agreed by the team, was to the Harrison County POTW.

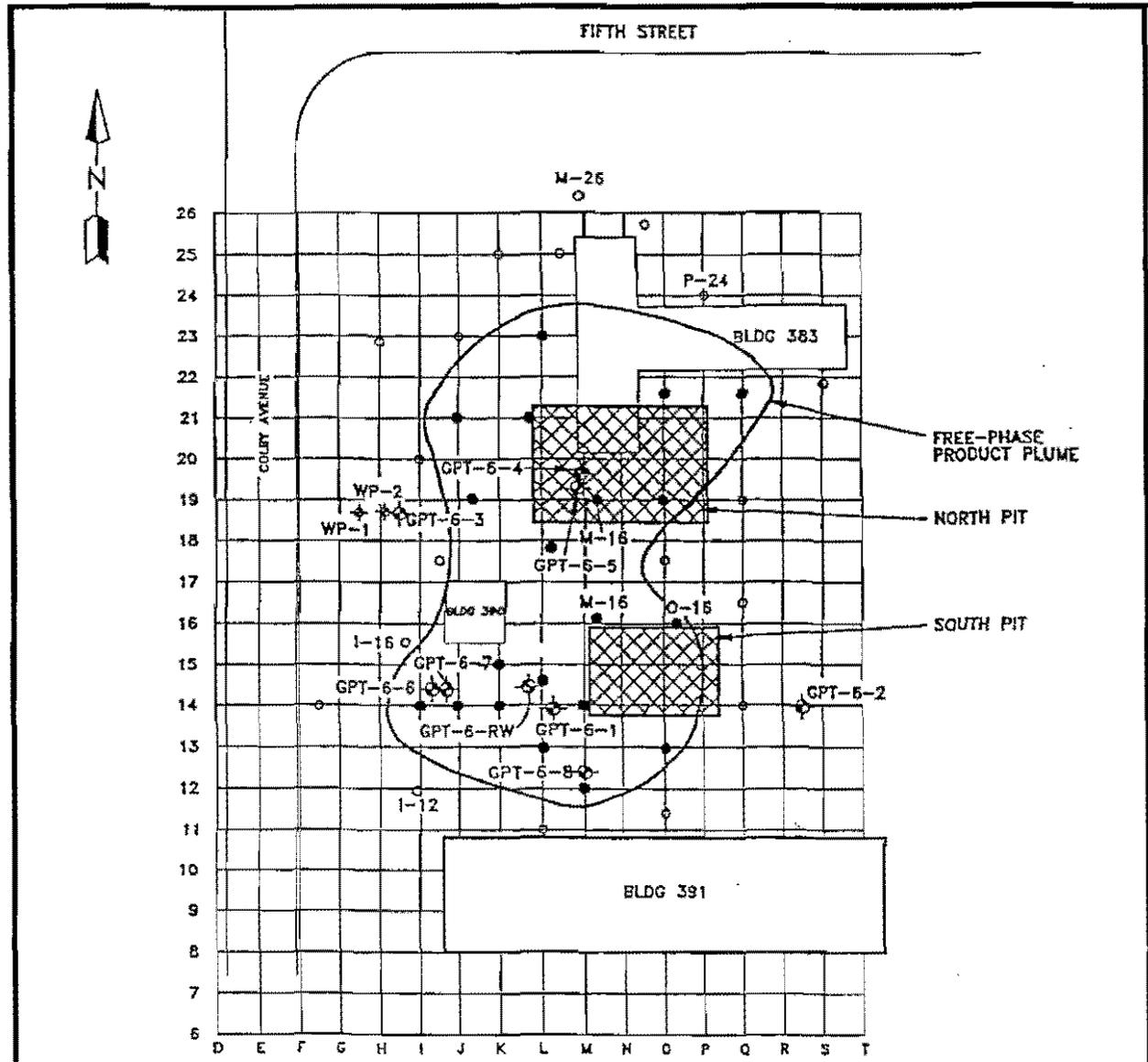
Harry Doo presented the blueprint for collaborative interaction and partnering between contractors and commended M-K and ABB-ES for their cooperation in working through the screening alternatives during the morning's session. The concept of the responsibility assignment matrix (RAM) was explained by Harry Doo and Rich May. The team was tasked with the responsibility to develop a RAM to define lead and support roles. During the open discussion that followed, handoff points and responsibilities for the design components were addressed.

Following the lunch break, the team began to discuss the level of detail needed in the design process and to assign responsibility for specific design components. Each element of the removal and treatment system was discussed in detail. In general, ABB-ES was tasked to furnish the detailed mechanics of the trench configuration and provide general process details for the treatment system. For items that are "off the shelf" that are to be provided by M-K, ABB-ES is to specify only those elements of the treatment system that are integral to system function. ABB-ES was assigned the responsibility of applying for any required permits with the understanding that M-K may be required to modify the permit(s) as the system goes through the startup phase. M-K was tasked to furnish the O&M manual for site operations with ABB-ES to review. Each team member, M-K and ABB-ES, agreed to furnish timely reviews of each other's proposed components to support early agreement of design segments.

The meeting ended with a review and refinement of the RAM. A copy of the current responsibilities is included in Attachment 3.

End.

Attachment 1
Plume Delineation Map



LEGEND

- GPT-6-8-○ MONITORING WELL LOCATION
- WP-1-⊕ WELL POINT LOCATION
- I-15 ○ HYDROPUNCH WELL POINT LOCATION WITHOUT FREE-PHASE PRODUCT
- M-16 ● HYDROPUNCH WELL POINT LOCATION WITH FREE-PHASE PRODUCT
-  FREE-PHASE PRODUCT PLUME
-  FORMER FIRE FIGHTING TRAINING AREA

SOURCE: E. PATRICK CASSADY & ASSOC., INC., 1994

**GROUNDWATER SCREENING GRID WITH
FREE-PHASE PRODUCT PLUME**



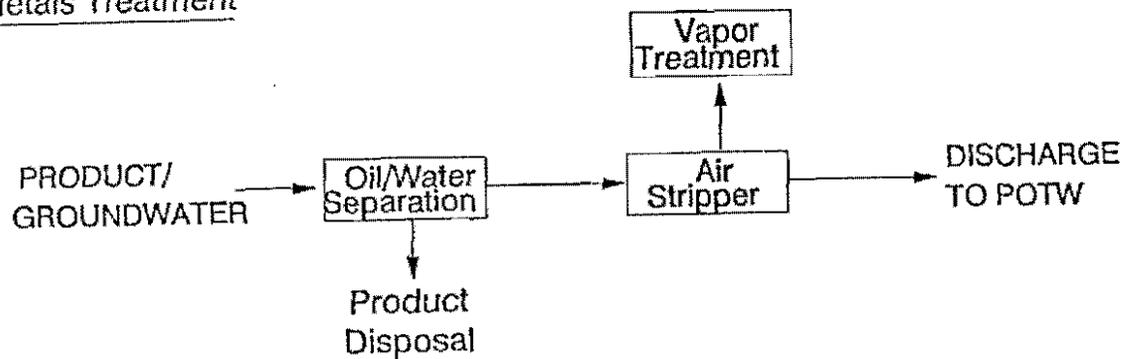
**NCBC GULFPORT
GULFPORT, MISSISSIPPI**

Attachment 2
Schematic of the Treatment Process

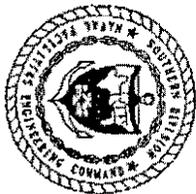
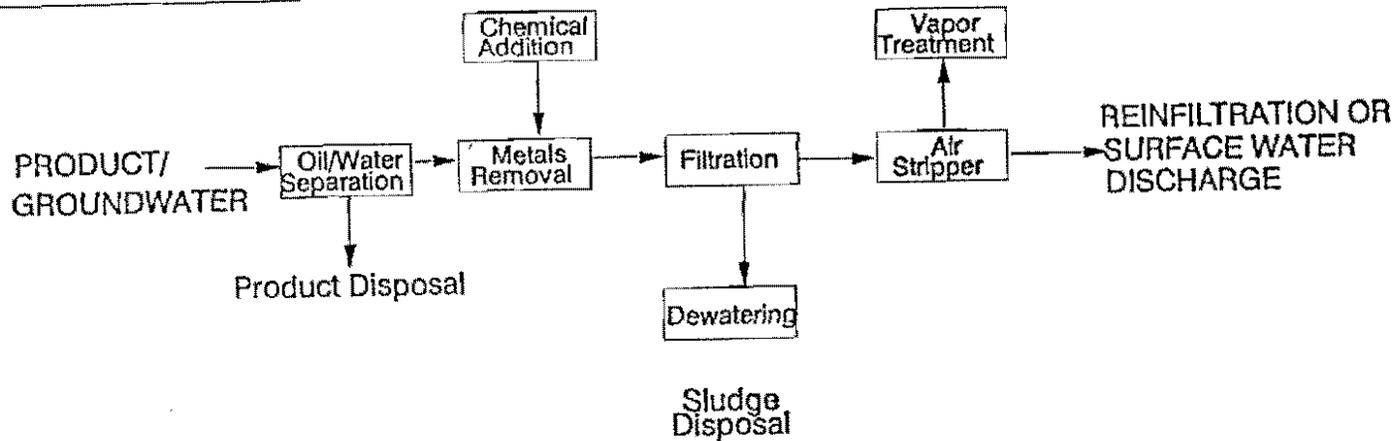
ATTACHMENT
AIR STRIPPING

AIR STRIPPING

Without Metals Treatment



With Metals Treatment



F-PPA REPORT
NOBC GULFPORT
GULFPORT, MISSISSIPPI

Attachment 3
Responsibility Assignment Matrix

Responsibility Assignment Matrix

Free-Phase Product Assessment
 Site 6 - Fire Fighting Training Area
 Naval Construction Battalion Center
 Gulfport, Mississippi

TASK	CLEAN	RAC	SOUTHDIV	ACTIVITY	STATE	USEPA	ROIC	USGS
Remedial Investigation	L	S	A	A	A	A	---	---
Technology Review (Conceptual Design)	M(L)	M(L)	M	M	NA	NA	---	---
Determination of PSC Characteristics	L	S	R	R	R	R	---	---
Performance Design	L	S	A	A	A	A	R	R
Shop Specifications & Drawings	S	L	A	A	A	A	R	R
Permitting	L	S	R	A	A	A	R	R
Construction	S	L	R	A	A	A	R	R
Operation & Monitoring	S	L	R	R	R	R	R	R
Closure Documentation	L	S	A	A	A	A	R	R
<p>L = Lead Responsibility S = Support Responsibility R = Review Responsibility A = Approval M = Meeting NA = Not Applicable</p>								