N62661.AR.002312
NAVSTA NEWPORT
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RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

July 27, 2007

Dogrul Hasan
Environmental & Safety Division
Facilities and Distribution Management
Defense Logistics Agency
Defense Energy Support Center
8726 John J. Kingham Rd.
Suite 4950
Ft. Belvoir, VA 22060-6222

RE Tank Farms 1,2 & 3 Investigations, NETC Portsmouth, Rhode Island

Dear Mr. Hasan:

As you are aware the Rhode Island Department of Environmental Management, Office of Waste Management and the Defense Logistics Agency, Defense Energy Support Center have been cooperatively working together in the investigation and remediation of Tank Farms 2 & 3, at NETC in Newport, Rhode Island. Initially the Defense Logistics Agency issued a comprehensive Work Plan, which addressed investigation of the Tank Farms and all sources of contamination to soil and groundwater. After issuing comments on this document our agencies held a series of meetings and it was decided that it would be more efficient and cost effective to perform the investigation in phases. Each phase would deal with certain aspects of the investigation. In regards to the production of the work plans the agencies elected to work together in their development and many issues were addressed informally. This reduced and/or eliminated the need to issue formal comments and/or engage in multiple review cycles.

During the implementation of the work plans it was mutually decided to implement elements of the TRAID approach. In this approach issues were addressed during the implementation of fieldwork. This avoided the need to produce Phase I, Phase II or Phase III documents and their corresponding work plans. These efforts by both agencies greatly facilitated the production, review and implementation of the work plans and has greatly reduce the overall cost and time for both the investigation and remedation of these sites.

In conjunction with the above approach our Offices has held preliminary discussions concerning the work plan for the installation of monitoring wells around Tank Farm # 2. The Defense Logistics Agency has issued a draft work plan. Enclosed are comments on said work plan. It is anticipated that these issues will be resolved informally and we can work together on the implementation of the work plan.

30% post-consumer fiber

The Defense Logistics Agency has also issued a Work Plan for the investigation of sludge pits and surface soil release at Tank Farm 1. As previously discussed it would be more effective to proceed forward with the remaining work at Tank Farms 2 & 3 before starting work at Tank Farm # 1.

The Office of Waste Management looks forward to working with the Defense Logistics Agency in the development of the work plans for the investigation and remediation of Tank Farms 2 & 3. Please contact this Office at (401) 222-2797 ext. 7111 if you have any questions concerning the above.

Sincerely,

Paul Kulpa

Paul Kulpa

cc Mathew DeStefano, OWM
Richard Gottlieb, OWM

Comments on
Work Plan for Monitoring Well Installation
Tank Farm # 2

1. **Section 1.1.1 Project Description**
   Page 1, Paragraph 2.

The work plan notes that historical aerial photographs were used to determine the location of the tank excavations and consequently the siting of the proposed monitoring wells. Please include a copy of the aforementioned aerial photographs in the report. This copy should also depict the location of the proposed monitoring wells.

2. **Section 1.1.1 Project Description**
   Page 1, Paragraph 2.

Although not stated it is assumed that historical engineering plans depicting the construction of the tanks, the locations of the rings drains, the depth and location of the pump chambers, the depth and location of the pipes existing the tanks, etc were reviewed when the location of the monitoring wells were selected. Please include copies of these engineering plans, (both plan and cross section views).

3. **Section 1.1.1 Project Description**
   Page 1, Paragraph 2.

The Office of Waste Management is aware that, as typically done, the DLA, created a map that contained the results of the previous investigations, (contamination distribution from boring logs, test pits, monitoring wells, etc, groundwater contours, location of backfill, etc). This map in conjunction with the information from the engineering plans, aerial photographs, etc, was used to determine where the new monitoring wells should be placed. Please provide a copy of this map in the report (draft or hand written copies are acceptable).

4. **Section 1.2, Work Approach**
   Page 3.

The Work Plan notes that the nature of the backfill and the influence of the ring drain created irregular groundwater patterns around the tanks. In addition the tanks themselves are large and contaminate distribution is expected to be heterogeneous. Therefore, prior to installing the monitoring wells around the tanks, the DLA must take additional measures to obtain site contaminate distribution information before the monitoring wells are installed. These additional measures may include performing a geoprobe investigation around each tank, taking a series of soils borings from around

each tank, etc. Please modify the work plan to include an additional measure to ascertain contaminant distribution. The DLA may also propose a pilot study at a tank, to determine the effectiveness of a particular method, before this method is applied to other tanks.

5. Section 1.2, Work Approach
Page 3.

The geology, construction of the tanks and the nature of the backfill at Tank Farm # 5 is similar to that observed at Tank Farm # 2. At Tank Farm # 5 a geoprobe, equipped with an optical sensor, was used to obtain continuous, field information concerning TPH contamination at the tank. The approached worked well, and was able to provide rapid, low cost, real time, information concerning contaminant distribution at a fraction of the cost of standard borings. One contributing factor to the success of the geoprobe investigation was the fact that the unit was mounted to a large paneled truck. This provided the weight and the stability to allow for the use of a geoprobe. If the geoprobe option is selected it is strongly recommended that the equipment and approach be similar to that employed at Tank Farm # 5 which was found to be successful.

6. Section 1.2, Work Approach
Page 3.

Soil borings, utilizing continuous split spoons from ground surface, are useful measures for determining contaminate distribution. In light of the size of the tank, and other site related factors, it is anticipated that six to eight borings will be needed for each tank (minimum of six borings around the tanks and two borings around the pump house).

7. Section 1.21 Mobilization
Page 3.

Please modify the work plan to include a requirement for regulatory notification prior to the commencement of field activities and a provision for submitting weekly updates of upcoming weeks activities so that regulatory inspections can be scheduled. Also, when possible a twenty-four hour notification to the regulators is needed for the cancellation or change in field activities.

8. Section 1.22, Placement of Monitoring Wells Around the Tanks
Page 4.

Comments on the proposed locations of the monitoring wells will be made once the requested information in the proceeding comments are submitted.

9. Section 1.22, Placement of Monitoring Wells Around the Tanks
Page 4.

This section of the work plan must state that the proposed locations of the monitoring wells are tentative. The final location will be determined once the results of the additional investigations are obtained.

10. Section 1.2.2, Placement of Monitoring Wells Around the Tanks Page 4.

The nomenclature used for the monitoring wells will eventually be incorporated into the base wide data based being created by Navy. To be in concert with that system the wells should be designated to include the name of the tank farm, the number of the tank and the location of the well. As an illustration MW TF2 21 E would represent a well installed on the eastern side of Tank number 21 in Tank Farm # 2. This system also avoids confusion in the field and allows for quick and easy recognition of the location of a monitoring well. Please modify the report accordingly.

11. Section 1.22, Placement of Monitoring Wells Around the Tanks Page 4.

The work plan proposes installing two wells around each tank. The actual number of wells installed around each tank will reflect contaminant distribution. As an illustration a tank with a release may require more wells. Therefore, in order to avoid confusion in the field the work plan must stipulate that at least two additional wells will be installed around each tank. More wells may be installed as needed.

12. Section 1.2.3, Monitoring Well Installation Page 6.

The work plan proposes collecting samples for screening every five feet. Samples must be taken at the water table interface and the expected smear zone. As the tanks are in bedrock a socket, which results in variable water tables, and as perched water has already been observed at one tank, continuous split spoon samples must be collected.

13. Section 1.2.3, Monitoring Well Installation Page 6.

The work plan proposes using a PID to determine which soil sample will be sent to the lab. The tanks were used to store heavy oils. PID and FIDs have limited effectiveness in detecting heavy oil contamination (at other sites on the Navy base these instruments did not register contamination at soils which were known to be contaminated). Olfactory or visual may provide useful information, however, the due to the color of the soils at the site visual examination has limitations. Field TPH test kits may be used to overcome this problem. Therefore, the work plan must specify that field TPH test kits will be used, in conjunction with other field observations, to determine which samples will be sent to the lab. A minimum of three field TPH samples should be collected at each monitoring well.

14. Section 1.2.3, Monitoring Well Installation
Page 6.

The work plan notes that one sample from each borehole will be sent for off site analysis. In the field conditions may arise which would warrant sending more than one sample for laboratory analysis. Therefore, the work plan should be modified to state that tentatively one sample per bore hoe will be sent offsite for laboratory analysis. Additional samples may be sent off as warranted.

15. Section 1.2.3, Monitoring Well Installation
Page 6.

This section of the work plan notes that one sample per borehole will be sent offsite for laboratory analysis. Typically, when monitoring wells are installed a minimum of two samples is sent offsite for laboratory analysis. However, since soil samples will undergo field TPH analysis, the criteria of at a minimum of one sample per bore hole for laboratory analysis is sufficient.

16. Section 1.2.3, Monitoring Well Installation
Page 6.

The work plan notes that a large size filter pack will be need due to the nature of the contamination. It is recommended that in lieu of # 2 sand pea gravel be used at the site.

17. Section 1.2.3, Monitoring Well Installation
Page 6.

On accordance with RI Groundwater Regulations the name of the monitoring well must be permanently attached to the well. Acceptable methods including riveting a name plate to the well cap or stand pipe, using a etching instrument to scribe the inside of the well cap, writing the name of the well on the protective concrete pad.

18. Section 1.2.3, Monitoring Well Installation
Page 6.

The work plan notes that wells will be developed within 48 hours of installation. Prior to development the wells should be checked for the presence of free product.

19. Section 1.2.3, Monitoring Well Installation
Page 6.

The work plan notes that wells will be checked for free product. Although not specified it is assumed that an oil/water interface probe and a bailer will be used. In order to avoid confusion in the field please modify the work plan accordingly.