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Ser N45/170
March 7, 2014

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Ms. Roxanne Kwan
Hawaii State Department of Health
Environmental Management Division
Solid and Hazardous Waste Branch
Underground Storage Tank Section
919 Ala Moana Boulevard, Room 212
Honolulu, HI 96814

Dear Ms. Kwan:

SUBJECT: RED HILL TANK 5 RELEASE WEEKLY STATUS REPORT NO. 1
DOH FACILITY ID NO. 9-102271
DOH RELEASE ID NO. 140010

As requested in DOH letter U0205RK of February 26, 2014, the following information is provided as the first weekly status report for the confirmed release of JP-8 fuel from Tank 5 at the Red Hill Fuel Storage Facility. This is the same information that was emailed to you on March 4, 2014.

1. Preliminary Work Plan (due Friday 14 March 2014)Preliminary Work Plan:

a) Item 1- Models to estimate downward vertical migration of free product.

There is a lack of models for investigating pure petroleum liquid. However, we will continue to evaluate the availability of transport models in basalt.

b) Item 2 - Methods or options for non-invasive scanning of basalt to determine area and volume of contaminant mass prior to any drilling investigation.

From our preliminary research, there are no remote sensing (geophysical) applications for non-invasive scanning of basalt to determine area and volume of contaminant mass. There is too much noise and obstructions for approaches such as seismic, ground penetrating radar (GPR), time-domain reflectometry (TDR), thermal, etc. The best quick and dirty approach available for near surface contamination would be to use something like laser induced fluorescence (LIF) with a direct push rig, but since basalt (competent or fractured) is the media, that approach won't work. The usual approach for differentiating/delineating the extent of contaminant plumes

for saturated and unsaturated is by way of intrusive methods. It is likely that the only methods available to determine approximate area and volume of contaminant mass are soil borings for soil and groundwater sampling.

c) Item 3 - Methods and locations for borings to most efficiently characterize the extent of contamination.

A contract is being pursued to address Items 1 and 3 of the preliminary Work Plan. The tank inspection may yield some information of the location of the release. The tank inspection will commence after Tank 5 has been vented.

2. Release Response Action Items (initiate immediately, complete as soon as practicable)

a) Action 1 - Provide a schedule for the ventilation of Tank 5 and an estimated date to commence the investigation of release point(s) within Tank 5.

The most current schedule is as follows:

- Contractor work plan approved by EXWC IOT commence preparation, venting, and equipment installation - February25, 2014
- Contractor commenced mobilization - February 27, 2014
- Contractor commenced venting preparations IOT stage and install venting equipment - February 28, 2014
- Venting commences - March 20, 2014

b) Action 2 - The rate of vertical migration for the released JP 8 free product is unknown. Information from the previously collected basalt cores could be used for initial modeling of vertical migration. This information is necessary to protect drinking water resources from petroleum contamination. Prepare models for petroleum JP-8 releases of 10,000, 20,000 and 30,000 gallons from points at 25% intervals from the bottom to the top of Tank 5. Progress in developing these models should be included in the preliminary work plan.

Previous borings and monitoring wells were installed in the lower access tunnel, which is located below the tank bottoms. In the interest of time, initial models for vertical migration of contaminant mass will assume the geology around the tanks is similar to the geology below the tanks.

As indicated in item 1.c above, contracted efforts are being pursued to characterize the situation. These models will be included with the contracted efforts for Item 1 of the preliminary Work Plan.

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c) Action 3 - Removal of petroleum free product from the area outside the tank will reduce downward migration of the released JP-8 free product. Characterization of the free product plume and recovery of free product with increased monitoring are required to address this plume.

As indicated in item 1.c above, contracted efforts are being pursued to characterize the situation. During this contracted effort, an assessment of the feasibility of product recovery will be accomplished and coordinated with the State Department of Health.

d) Action 4 - Additional studies and procedures are required to address the potential and impact of any future releases from the USTs within the Complex. This will require new financial and personnel resources to complete. Funding for the preliminary work plan and all necessary following work is critical.

The Navy has submitted a funding request to the Defense Logistics Agency Installation Support Energy Environmental Division (DS-FEE) to cover updating the Red Hill Groundwater Protection Plan and to develop models estimating groundwater flow and capture zones. Planning estimates have been provided, and additional funding requests will be submitted to DS-FEE as statements of work and estimates are provided.

If there are any questions regarding this matter, or if more information is needed, please contact me at (808) 471-1171, extension 226.

Sincerely,

AARON V. POENTIS
Director
Regional Environmental Department
By direction of the
Commander

Copy to: LCDR A. Watson, NAVSUP FLCPH