



**UNITED STATES ENVIRONMENTAL  
PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105**



**STATE OF HAWAII  
DEPARTMENT OF HEALTH  
P. O. BOX 3378  
HONOLULU, HI 96801-3378**

**FEB 04 2016**

James A. K. Miyamoto, P.E.  
Deputy Operations Officer  
Naval Facilities Engineering Command, Hawaii  
400 Marshall Road  
Joint Base Pearl Harbor Hickam, HI 96860

Dear Mr. Miyamoto,

This letter serves two purposes. The first is to declare that the Scoping for Sections 6 & 7 of the Red Hill Administrative Order on Consent Statement of Work (AOC SOW) is now complete. The second purpose is to respond to the recommended list of chemicals of potential concern (COPC) submitted to the Regulatory Agencies for approval via email by Ms. June Shimabuku, NAVFAC Hawaii on January 12, 2016.

**Final Scoping for AOC SOW Sections 6 and 7**

The U.S. Environmental Protection Agency ("EPA") and Hawaii Department of Health ("DOH"), collectively the "Regulatory Agencies" have reviewed the revised meeting minutes from our in-person meeting held November 30 – December 3, 2015 (submitted via email on January 22, 2016), as well as the Preliminary Work Plan/Statement of Work Task List (submitted via email on December 18, 2015) and agree that they correctly capture what was agreed to at the meetings.

One issue not explicitly reflected in the Agreed Upon Items List is that the Navy will incorporate appropriate catastrophic releases scenarios in its Fate and Transport Modeling. Similar to the linkage reflected in #21 of the Agreed Upon items, the Risk/Vulnerability Assessment being performed under Section 8 of the AOC SOW will provide information that can be used in the Fate and Transport Models to determine the threat that a large scale fuel release poses to drinking water wells in the vicinity of Red Hill.

Per Sections 6.2, 7.1.2, 7.2.2, and 7.3.2 of the AOC SOW, the Navy will develop the following Scopes of Work for approval by the Regulatory Agencies: the Investigation and Remediation of Releases Scope of Work, the Groundwater Flow Model Report Scope of Work, the Contaminant Fate and Transport Model Report Scope of Work, and the Groundwater Monitoring Well Network Scope of Work. These will all be included in a single Work Plan/Scope of Work that will be submitted to the Regulatory Agencies within 90 days of the

Final Scoping Meeting, which is the date of this letter. While Section 6.2 of the AOC SOW states that the Investigation and Remediation of Releases Scope of Work is due 60 days after the final scoping meeting, the Navy requested that the deadline be extended to 90 days. The Regulatory Agencies approved this request on January 20, 2016.

### **Navy's Proposed Chemical of Potential Concern (COPC) Recommendations**

The Regulatory Agencies have reviewed the Navy's proposed list of COPCs and for the most part agree with the proposal. While we agree with the list of COPCs, there are some additional requirements the Navy must meet in order for us to have confidence in the data submitted. We are willing to have further discussions about the specifics of these requirements, however, any further discussions on this subject does not suspend the 90 day deadline for submittal of the AOC SOW Section 6 & 7 Workplan/Scope of Work.

All samples taken from existing groundwater monitoring wells, designated as RHMW01, RHMW02, RHMW03, RHMW04, RHMW05, RHMW06, RHMW07, RHMW2254-01, HDMW2253, and OWDFMW01, will be analyzed for the approved list of COPCs. All samples taken from any new groundwater monitoring wells installed by the Navy will also be analyzed for the approved list of COPCs as well as for lead scavengers 1,2 dichloroethane and 1,2 dibromoethane. Analysis for lead scavengers will be conducted for one year's worth of sampling and can be discontinued if the analyses show levels of these contaminants are below the groundwater action levels established by the Hawaii Department of Health (DOH).

The analytes and the appropriate action levels are summarized in Tables 1, 2 and 3 in Enclosure A to this letter.

The following are additional requirements the Navy shall meet in conducting groundwater and soil vapor sampling. These requirements are to be implemented in a timely manner and shall also be addressed in the Sampling and Analysis Plan to be developed under Task #3 of the Navy's Scope of Work for Sections 6 & 7 of the Administrative Order on Consent Statement of Work.

- Laboratory analysis of all samples shall be able to achieve quantification limits lower than DOH environmental action levels.
- All groundwater samples should be analyzed without dilution whenever possible to avoid laboratory "D" flags.
- Over the next year split samples for TPH in groundwater shall be taken at RHMW01, RHMW02, RHMW03, and OWDFM01 to run a silica gel prep before analysis. These split sampling events should be performed twice over the year, one during the dry season and one during the wet season. This should be done in order to show the ratio of polar (degraded) TPH in the samples without silica gel prep. This can provide a valuable measure of degradation of TPH at the site.
- Two or more consecutive months of soil vapor samples shall be analyzed with Methods TO-15 and/or TO-17 to obtain carbon ranges from C5 to C18 (see Hawaii Department of Health Hazard Evaluation and Emergency Response Technical Guidance Manual, Section 7.8.2) at all Soil Vapor monitoring locations.

- The Navy shall modify the quarterly groundwater sampling procedure at groundwater monitoring well HDMW2253-03. Sampling at this well shall use a low-flow groundwater sample collection method at bottom of casing in this well. Due to a lack of an appropriate screen in the well casing, this well, as currently constructed, does not meet DOH guidance which would qualify it to provide groundwater samples for assessing contamination.

Thank you for your cooperative efforts to develop this Scope of Work outline. We look forward to continuing the progress of implementing the work outlined in the Red Hill AOC. Please contact us with any questions or concerns.

Sincerely,



Bob Pallarino, EPA Region 9  
EPA Red Hill Project Coordinator



Steven Chang, DOH  
DOH Red Hill Project Coordinator

Enclosure

cc: Aaron Poentis, NAVFAC Hawaii  
June Shimabuku, NAVFAC Hawaii

**ENCLOSURE A  
ANALYTES AND ACTION LEVELS**

**TABLE 1  
ANALYTES AND ACTION LEVELS FOR RED HILL MONITORING WELLS  
RHMW01, RHMW02, AND RHMW03**

<b>ANALYTE</b>	<b>Environmental Action Level µg/L</b>	<b>SSRBL µg/L</b>
TPH-g	100	NA
TPH-d	100	4500
TPH-o	100	NA
Benzene	5	750
Ethylbenzene	30	NA
Toluene	40	NA
Total Xylenes	20	NA
Naphthalene	17	NA
1-Methylnaphthalene	4.7	NA
2-Methylnaphthalene	10	NA

**NA - Not Applicable**

**TABLE 2  
ANALYTES AND ACTION LEVELS FOR RED HILL MONITORING WELLS  
RHMW04, RHMW05, RHMW06, RHMW07, RHMW2254-01,  
HDMW2253, AND OWDFMW01**

<b>ANALYTE</b>	<b>Environmental Action Level µg/L</b>
TPH-g	100
TPH-d	100
TPH-o	100
Benzene	5.0
Ethylbenzene	30
Toulene	40
Total Xylenes	20
Naphthalene	17
1-Methylnaphthalene	4.7
2-Methylnaphthalene	10

**ENCLOSURE A  
ANALYTES AND ACTION LEVELS**

**TABLE 3  
ANALYTES AND ACTION LEVELS FOR FUTURE RED HILL MONITORING  
WELLS RHMW08, RHMW09, RHMW10, AND RHMW11**

<b>ANALYTE</b>	<b>Environmental Action Level µg/L</b>
TPH-g	100.0
TPH-d	100.0
TPH-o	100.0
Benzene	5.0
Ethylbenzene	30.0
Toulene	40.0
Total Xylenes	20.0
Naphthalene	17.0
1-Methylnaphthalene	4.7
2-Methylnaphthalene	10.0
1,2 Dichloroethane*	5.0
1,2 Dibromoethane*	0.04

\*Lead Scavengers can be discontinued after one year of sampling if all samples result in non-detection.