Enclosure (1)

Response to Tank Cleaning Plans Conditional Approval Comments

1. Disposal locations for sludge and oily rinsate

The following request for information was not provided in Navy's February 7th response: "specify how the wash water with be treated and disposed and what documentation will be provided to EPA to ensure that the treatment and discharge of oily rinsate meets all disposal regulations". This information is needed to ensure that all oily rinsate is handled in accordance with all Federal, State, and Local regulations as stated in the Tank Cleaning Work Plan.

NCTF-RH Response-
Waste generated from each process will undergo a TCLP test and waste determination in accordance 40 C.F.R. § 262.11 Hazardous Waste Determination. All waste warranting a waste code upon characteristics of hazardous waste will be treated and managed as such in accordance with the Joint Base Pearl Harbor Hickam Waste Accumulation Guide and RCRA permit. The waste that is determined to be solid waste will be managed and disposed of in accordance with applicable regulation governing the solid waste stream.

The disposal facility selected by the primary contractor for wash water is under review to confirm if its permit allows fuel tank wash water. The method in which the disposal facility treats and disposes of the wash water may be subject to proprietary means and methods. All regulatory reporting shall be provided to the EPA as required, but process may be protected knowledge.

The initial water injection and draining is not technically "wash water". This waste may be able to be disposed of by the contractor on-island under its used oil/oily water permit. As stated in the approved NCTF-RH closure plan, upon request manifests/shipping papers will be provided to DOH/EPA within 2 weeks of receipt by NCTF-RH

2. Standpipe and Nozzle Cleaning

a) EPA contends that ventilation alone is not a feasible method to remove residual fuel and clean the interior of the standpipe and nozzle. Due to the low vapor pressure of the fuel products stored at RHBFSF and potential for fuel to remain trapped in the line, it is unlikely that air circulation alone will adequately remove residual fuel product. Navy has likewise not provided sufficient evidence to suggest that ventilation will be an effective method to clean this segment of piping.

NCTF-RH Response-
The residual fuel remaining behind in the 12" and 20" nozzles will be removed by means of siphon, pumping, or absorbing as necessary for the quantity encountered.

The approximately 50-foot-long section of piping leading into a tank will be cleaned in similar fashion as the tank interior. A pressure washer attachment capable of spraying around the pipe interior will be utilized and all wash water will be collected and properly disposed.

b) EPA understands the diameter of the standpipe and nozzle may prevent personnel from safely entering the pipe for cleaning purposes. However, other cleaning methods that do not require entry should be evaluated. This section of piping will remain in place following facility closure and is therefore critical that it be free of all residual fuel.

NCTF-RH Response-
Using the pressure washer attachment, the 32" pipe (20" nozzle) can be cleaned and inspected. The 12" pipe can be cleaned, but as identified above, cannot be inspected due to the small inner diameter size.

3. Rinsate Accounting

Navy identified several perceived challenges in measuring the volume of rinsate used during tank cleaning. EPA recommends the following actions to address these limitations and improve the accuracy of rinsate accounting:

a) Install a meter on the GAC effluent discharge line. It is not clear from Navy's response why the volume of water entering the tanker truck is not metered.
b) Install a meter on the storage tank discharge line. It is not clear from Navy's response why the volume of water being utilized by the pressure washer is not metered.
c) Provide a volumetric measurement of the main sump including the liquid levels that initiate and cease pump cycling.

NCTF-RH Response-
Navy does not recommend installing a water meter at the GAC filling stations. Instead, the Navy proposes installing a usage meter device at the interior water supply line, prior to entering the tank. This will provide the best accounting of water entering the tank. .

As tank S311 is emptied during the wash process, the liquid quantities will be calculated - accounting for water exiting the system. The line-pack of the main sump to S311 will be factored in as it accounts for roughly 5,000 gallons.

A meter at the storage tank allows for too much unknown quantity as the line pack is over 3,000 ft long

The main sump holds approximately 600 gallons. Two pumps were recently replaced and tested. One pump will start at approximately the 50% level (300 gallons) and the second pump will start at approximately the 80% level (480 gallons) only if the first pump does not keep up.

Response to Waste Management Plan Comments

Section 4 – Waste Characterization

1. "*To ensure proper disposal, all project wastes much be characterized in accordance with 40 Code of Federal Regulations (CFR) Parts 261, 262, and 279…*" – 40 CFR Parts 265 and 268 are also applicable. Please confirm that waste characterization will comply with these regulations in addition to 40 CFR Parts 261, 262, and 279.

NCTF-RH Response-
40 CFR Part 265 does not apply in this scenario. As provided by 40 CFR 262.17 a large quantity generator may accumulate waste on site without a permit or interim status, and without complying with the requirements of parts 124, 264 through 267 and 270 or notification requirements of section 3010 of RCRA provided that all of the conditions in 40 CFR §262.17 are met. The requirements of 40 CFR §279 only applies to the management of used oil as defined in 40 CFR 279.10. Per the used oil definition, no used oil is expected to be to be generated during the cleaning of the tanks. Details of the efforts to be taken to maintain compliance with the generator standards of 40 CFR 262.17 which reference the LDR requirements of Part 268 are contained in section IV of the approved NCTF-RH closure plan and in Aptim's Waste Management Plan.

40 CFR §261.11 requires a generator to make a waste determination of each waste stream. Per the approved NCTF-RH Waste Management Plan, waste generated will be evaluated through the waste determination processes outlined in the JBPHH and the installation Waste Accumulation Guide to ensure compliance with 40 C.F.R. § 262.11. Waste generated will be reviewed and characterized in accordance with existing JBPHH waste profiles using knowledge of the waste. New waste streams not previously characterized will be subject to analysis and have a waste determination completed in accordance with the testing requirements of 40 C.F.R. § 262.11.

2. Hazardous waste record keeping – Pursuant to 40 CFR 262.11, please describe what records will be kept and how those records will be maintained.

NCTF-RH Response- *R*
Records for all waste generated will be maintained in accordance with RCRA, 40 C.F.R. parts 260–268, and Solid Waste Regulations. NCTF-RH will keep the project operating record for the life of the project. Transfer of records to the Installation will be coordinated after the closure of the facility. Records will include central accumulation area locations, weekly inspections, training, manifests, exception reports, waste determinations and LDR forms for all waste generated. Per 40 C.F.R. § 262.40, manifests, exception reports, and waste determinations and LDR forms are required to be maintained for 3 years. Navy hazardous waste record policy requires retention of waste records for 50 years.

Table 3 – Waste Testing Requirements

3. Oily water/tank wash water – Provide an explanation for why total halogen field screening (SW-846 Method 9077) is being used for tank wash water, and how the results from this test will inform subsequent handling and disposal. Why was total halogen screening selected as the waste characterization method instead of TCLP sampling?

NCTF-RH Response-
Per the provisions of 40 C.F.R. § 262.11, the initial determination that the material is a non-hazardous waste may be based on the knowledge or testing of the waste to be generated during cleaning of the tanks. The use of the field screening total halogen test is to identify if solvents are contained in used oil. The total halogen field screening is to be used similarly to determine if solvents are contained within these waste streams. The total halogen field screening (SW-846 Method 9077) is a quality control effort to ensure that a knowledge-based waste determination is accurate. The determination to use this procedure is based upon the USEPA Document 905-R03-005 Guidance and Summary of the Information Regarding RCRA Used Oil Rebuttable Presumption Page 4-9. PCS will test oily Wash water to establish a profile on the material upon receipt to ensure it meets permit standards. Previous tank cleanings oily sludge was treated at another vendor on island. Utilization of the halogen test at that time demonstrated that level was at 300 parts per million which is indicative of non-contaminated fuel

4. Oily water/tank wash water – Navy has stated that they do not anticipate the oily wash water will be characterized as a hazardous waste based on previous tank cleanings. Has the wash water previously been analyzed using the same suite of tests required for residual sludge (i.e. TPH, TCLP, RCRA metals, VOC, PAHs, and flash point)? If not, what method was used to establish the oily wash water as a non-hazardous waste?

NCTF-RH Response-
The oily wash water will be comparable to wash water generated from onboard ship tank cleaning and previous tank cleanings at RHBFF. Tank cleaning is a routine process in the maritime industry. The wash water generated is anticipated to contain less than five percent fuel compounds. This level of wash water is treated on the installation in the FORFAC facility on a routine basis from ships within the fleet. The material will be tested for TCLP with a waste determination prior to any disposal to ensure it meets permit standards.

5. All waste streams – Please provide details on when and where samples will be taken for residual fuel, sludge, and tank wash water (e.g. will samples be taken prior to disposal or when the tank/container is full? Will it be a single grab sample or a composite of several grabs? If sampling from Tank 311, where will the sample be collected?)

NCTF-RH Response-
Residual Fuel: Samples will be taken from collection container/drum.

Sludge: Samples will be taken of sludge at bottom of tank prior to removing and placing in drums for disposal.

Fuel Tank Wash Water: Sample taken at S311 prior to filling vac truck. A single grab sample will be collected either from the top at the gauging port or at the discharge port on the side of the tank.

Pending the amount of wash water that is generated during the cleaning of 2 tanks simultaneously, sampling most likely completed once S311 reaches a determined capacity such as 30K gals compared to the total capacity of 40K gal. All waste leaving S311 shall have a halogen field test completed prior to filling the vac truck.

Section 5.2 – Waste Labeling and Marking
6. This section identifies the appropriate DOT regulations for hazardous waste marking and labeling. Please also confirm that all 40 CFR 262.32 marking requirements will be met.

NCTF-RH Response-
All waste generated that is subject to management, labeling, and, manifesting in accordance with 40 C.F.R. part 262 will be labeled and marked with the appropriate labels. The management of such waste will be based upon waste determinations as required. Page 31 of the Red Hill Tank Closure Plan presents the labels to be utilized in Figure 4-1.

Hazardous Waste

Non- Hazardous Waste

Pending Analysis

FIGURE 4-1: WASTE CONTAINER LABELS

Section 7 – Treatment and Disposal

Table 4 – Waste Recycle/Disposal Method, Proposed Facilities, and Proposed Transporters

7. Residual Fuel – It is unclear from the table what disposal method will be used for residual fuel. The total halogen field screening test proposed in Table 3 is not an appropriate analysis if Navy intends to dispose of the fuel (as opposed to recovery and recycle). A hazardous waste determination will need to be made prior to disposal. The same analyses proposed for sludge would also apply to residual fuel (ie. TCLP for RCRA metals, VOC, PAHs, and flash point). Please clarify which transporters and TSDF will be used should the residual fuel be characterized as hazardous waste.

NCTF-RH Response-
Small amounts of residual fuel maybe generated during tank residual floating process. The residual fuel will be tested for halogens which will be performed by PCS as a field screening test

to determine if they can accept the material. PCS will conduct testing to determine if the residual fuel is a hazardous waste treat. Priority is recycle/ recovery. A hazardous waste determination will be made in accordance with 40 C.F.R. § 262.11 prior to offering the waste for disposal per 40 C.F.R. § 262.11. The previously approved Waste Management Plan indicates that PCS is the identified transporter and TSDF. However, recent correspondence from HI DOH indicates that PCS may not currently accept residual fuel and fuel tank wash water. It is understood PCS and HI DOH are in negotiations regarding the acceptance of this material. NCTF-RH has asked the prime contractor to evaluate other potential waste disposal facilities. Significant delays in commencing cleaning may occur if HI DOH maintains its retraction of the approval of the use of PCS for disposal. PCS is the on-island transporter.

For waste transported off island, maritime shipment will be Alaska Maritime and Matson Navigation companies. Chemical Waste Treatment of Arlington, Oregon or Clean Harbors Grassy Mountain treatment facility located in Graniteville, Utah will be used for any residual fuel determined to be hazardous if generated.

Section 9.1 – Containers and Labeling

8. "*Containers holding waste that is incompatible (flammable, reactive, ect.) with any waste or materials stored nearby in other containers or piles will be separated from the other materials or protected from them by a dike, berm, wall, or other device*" – Please specify which device will be used in this situation. What potential waste or materials are anticipated to be incompatible? For the uncharacterized wastes pending sample results, the generator needs to consider potential compatibility/incompatibility of the wastes when staging the containers.

NCTF-RH Response-

Primary waste streams will be sludge, waste oily water, and wash water. Other potential waste streams include lights, batteries from fire alarms, and paint generated during maintenance operations. These will be limited in quantity and will not be a continual waste stream.

Each waste stream will have a waste profile generated and/or compared to existing ones generated by JBPHH for the same product. The waste will be separated by category in separate accumulation areas in the lower gallery of the complex. The alcoves are all located underground and in size are estimated to be roughly 25-30 feet wide and 30-50 feet in depth carved out of the hillside. The alcoves are separated by over 50-200 feet in distance. The Central Accumulation Areas (CAAs) will be managed in accordance with the JBPHH Waste Accumulation Guide. All drums will be located within secondary containment to hold 110% of the volume of the largest container.

Section 9.2 – Container Selection, Management, and Secondary Containment

9. Please confirm that the staging of drums in the tank alcoves will conform to the aisle space requirements detailed in 40 CFR Part 262.255. In addition to maintaining unobstructed aisle space for the movement of personnel, fire protection equipment, and spill control equipment, Navy must also maintain access to current and future planned sampling locations. Storage of waste during tank cleaning activities should be coordinated

with Remediation and Site Investigation teams to deconflict with any environmental sampling efforts.

NCTF-RH Response-
The Central Accumulation Areas (CAAs) will be established and maintained in accordance with the JBPHH Waste Accumulation Guide. The Waste Accumulation Guide is based upon the Installation RCRA hazardous waste permit and 40 C.F.R. parts 260-268. The sites will be managed in accordance with the aisle spacing and container management requirements in the waste accumulation guide. The requirements cover proper spacing of 3 feet per aisle and labels facing front and legible. Signs will be posted identifying Central Accumulation Areas (CAAs) per the Installation Waste Accumulation Guide. The accumulation points will be located in alcoves that are out of the main areas of work. No work will be completed in the alcoves where CAAs are located. In the event an alcove is required for a phase of work, the waste will be disposed of and a CAA will be re-established in another alcove where work has been completed.

10. "*All drums must be placed fully over secondary containment and protected from rain. A covered containment must hold 110 percent of the volume of largest container*" – This plan does not meet the requirements of 40 CFR Part 264.175(b)(3). The secondary containment system must have the capacity to contain at least 10 percent of the volume of the containers or 100 percent of the volume of the largest container, <u>whichever is greater.</u>

NCTF-RH Response-
NCTF-RH has proposed to manage solid waste in accordance with the RCRA and HAR hazardous waste management principles as a best management practice to provide the highest level of protection. Per 40 C.F.R. § 262.17, a large quantity generator may accumulate waste on-site without a permit or interim status and without complying with the requirements of parts 124, 264 through 267, and 270 of the federal regulations. Therefore, the secondary containment requirements of 40 C.F.R. § 264.175(b)(3) only applies to RCRA-permitted or interim status facilities.

Nonetheless, NCTF-RH's best management practice is to provide secondary containment that will have the capacity to contain at least 10% of the volume of the containers or 100% of the largest container.

Section 9.5 - Procedures for Handling Rejected Load of Hazardous Waste

11. "*In the event a load is returned, APTIM may request to establish a CAA as a temporary holding location. CAA establishment shall follow all applicable regulations and must conform to this Waste Management Plan.*" – Please clarify whether the rejected load would be the only situation where a CAA would be established.

NCTF-RH Response-
Satellite Accumulation Areas (SAA's) will be established at points of generation for the work to be accomplished during the life of the project. SAA's will be established in accordance with the JBPHH Waste Accumulation Guide. Central Accumulation Areas (CAAs) will be created to manage waste in excess of 55 gallons for greater than 72 hours. Within 72 hours of the

accumulation of 55 gallons of waste in an SAA, the material will be moved to a CAA. Within 90 days of generation the waste container shall be removed to an appropriate treatment, storage or disposal facility. In the event a load is rejected by a TSDF a CAA will be established at that time for such waste and will comply with the JBPHH Waste Accumulation Guide.