



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
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Enforcement and
Compliance Assurance Division

VIA ELECTRONIC MAIL ONLY

CAPT Steven James Stasick
Repair Director
Joint Task Force, Red Hill
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Joint Base Pearl Harbor Hickam, Hawaii 96860-5101
steven.j.stasick.mil@us.navy.mil

Re: Fitness-for-Service Assessments of Repairs at RHBFSF

Dear CAPT Stasick,

On May 24, 2023, the Environmental Protection Agency, Region 9 (EPA) submitted comments to the Joint Task Force – Red Hill (JTF-RH) in response to a May 4, 2023, submittal of Quality Validation (QV) reports documenting the third-party evaluation of repairs and/or enhancements performed to the Red Hill Bulk Fuel Storage Facility (RHBFSF). In this correspondence, EPA asked for additional information on, "...Finite Element Analysis (FEA) performed for certain repairs...[for] spot peer review..." EPA sought FEA data for seven repairs from the numbered Consolidated Repair/Enhancement List: #189, 191, 192, 209, 219, 224, and 229. JTF-RH responded to EPA's request by email on June 27, 2023, providing data related to Fitness-for-Service (FFS) assessments performed on these seven repairs. EPA has reviewed this submittal. In response, EPA is requesting additional information to ensure safe and expeditious defueling.

The email response submitted by JTF-RH on June 27, 2023, clarified that the FFS assessment report for repairs at the RHBFSF is still under review. In place of providing documentation from this report, JTF-RH provided portions of appendices to this report. The submitted information is what appears to be software-generated data and calculations from pipeline inspections of the identified "features" (i.e., anomaly, dent, gouge, etc.) relevant to the seven referenced repairs. JTF did not provide an evaluation of output data rationalizing the "run, repair, replace" decisions that were made (i.e., whether a repair was necessary). Without the benefit of reviewing the entire FFS report, EPA is unable to determine how JTF interpreted inspection findings in context of acceptance criteria to determine best course of action for each identified feature. Essential questions that remain unanswered following this initial review include:

1. How were run/repair/replace decisions made when maximum calculated strain values exceeded B31.8R limits? For example, the computed strain for repair #219 was over 85%. For most dents, the acceptance criteria are in the range of 4% - 6% peak strain.

2. For simple dents not in cyclic service, the FFS assessment by industry standards such as API or ASME is a typical acceptable criterion. Other denting scenarios, such as complex (multi-apex) dents, dents combined with another feature (“feature interaction”), or dents with coincident wall loss may require other evaluation. How were features and feature interaction, other than simple dents, taken into consideration when making acceptance criteria/decisions?
3. When will the full FFS analysis be prepared, and will it be available for EPA review?
4. Five of the seven dimensional and strain contour plots provided in the June 27, 2023 email response depict unlabeled rectangular shapes (e.g., Repairs 191, 192, 209, 224, and 229). What are these features?
5. Historical pressurization of a pipeline (including, pressurization during operation) provides anecdotal evidence of integrity. What is the recent and relevant history of pressurization in the subject pipelines, and how will this compare to the pressures expected during defueling?

EPA is requesting that the JTF-RH address these comments as soon as possible so that all Quality Validation reports for repairs/enhancements can be approved unconditionally. On July 10, 2023, EPA issued an initial approval of 56 QV reports with a condition that future data related to FFS assessment may be required. EPA cannot issue unconditional approvals for repair QV reports involving an FFS assessment without first gathering additional information on FFS methodology. Satisfactorily addressing the comments above will provide EPA with information it needs to confirm that the FFS methodology used by JTF-RH aligns with good engineering practice, which in turn helps ensure safe defueling. EPA does not necessarily need to review the entire FFS report currently under review by JTF-RH; though, providing this information may be a direct way to address EPA’s comments.

If JTF-RH would like further clarification, please contact Evan Osborne (206-553-1747, osborne.evan@epa.gov), the staff lead on this matter.

Sincerely,

/s/ July 11, 2023

Jamie Marincola
2023 Consent Order Coordinator
EPA R9 ECAD

cc: Kathy Ho, HDOH [email only]
Lene Ichinotsubo, HDOH [email only]
BG Michelle Link, JTF-RH [email only]