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EDMUND G. BROWN JR.
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DATE: February 23, 2016

TO: Remedios Sunga
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FROM: Sheetal Singh, PhD
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A handwritten signature in blue ink, appearing to read 'S. Singh', is written over the printed name and title of the sender.

SUBJECT: Review *DRAFT WORK PLAN Data Gaps Investigation at Installation Restoration Site 31 Former Naval Station Treasure Island San Francisco*. Issued January 6, 2016; received January 8, 2016.

Upon the request of the Department of Toxic Substance Control (DTSC), the Environmental Management Branch (EMB) of the California Department of Public Health (CDPH) has reviewed the *DRAFT WORK PLAN Data Gaps Investigation at Installation Restoration Site 31 Former Naval Station Treasure Island San Francisco*. Issued January 6, 2016; received January 8, 2016. This review was performed in support of the Interagency Agreement between DTSC and CDPH.

If you need further assistance about this response please contact Matthew Wright of my staff at (916) 449-5687.



Activity: Review *DRAFTWORK PLAN Data Gaps Investigation at Installation Restoration Site 31 Former Naval Station Treasure Island San Francisco, California*. Issued January 6, 2016

February 23, 2015

page 1 of 5

The Environmental Management Branch (EMB) of the California Department of Public Health (CDPH) appreciates the opportunity to review the submitted document, *DRAFT WORK PLAN Data Gaps Investigation at Installation Restoration Site 31 Former Naval Station Treasure Island San Francisco*, Issued January 6, 2016.

General Comments:

1. Please note that CDPH-EMB utilizes Section 30256 in Title 17 of the California Code of Regulations (17 CCR 30256) to render a decision to concur with an unrestricted release. As a result, CDPH-EMB requires a final status survey report that compares the distribution of data from the former excavation site(s) with applicable reference area data and documents the remediation efforts. The final status survey should document and explain reasonable efforts that have been made to remediate the site.
2. The Southern Time Critical Removal Action (TCRA) is not addressed in this document. Please clarify where Southern TCRA will be addressed.
3. Please supply any information that establishes to a certainty that no other waste pits, not previously identified, exist within the boundaries of Installation Remediation Site 31 Former Naval Station Treasure Island, San Francisco.
4. The current work plan addresses the work being planned for IR Site 31. In this document there is no discussion of Excavation D within this site. Please include commentary on what previous work has already been conducted in Excavation D and why it is not being addressed in this work plan.

Specific Comments:

5. Section 1.1 Scope of Work, page 1-1, paragraph one, bullet number three, "Provide the results of the surveys and data evaluation in an IR Site 31 final status survey (FSS) report and gain acceptance from regulatory agencies on the findings and conclusions of the surveys to obtain unrestricted radiological release for IR Site 31." Please include previously collected data from Debris Area D in a final status survey (FSS) report to gain acceptance from regulatory agencies on the findings and conclusions of the surveys to obtain unrestricted radiological release for IR Site 31.

Activity: Review *DRAFTWORK PLAN Data Gaps Investigation at Installation Restoration Site 31 Former Naval Station Treasure Island San Francisco, California*. Issued January 6, 2016

February 23, 2015

page 2 of 5

6. Section 2.2.2 Additional Excavations, page 2-3, paragraph two, sentence eight, "Confirmation sidewall samples were obtained by California Department of Public Health (CDPH) on May 2, 2014, before Debris Area D was backfilled. No additional data collection is required from this area."
 - a. Please note that CDPH has not been provided a work plan to address the elevated count rate in Debris Area D; which is indicated by the star in Figure 5, IR Site 31 Excavation and Sampling Plan. While CDPH has been assured by DON that the radiological remediation of Debris Area D has been completed and that final status survey quality data has been collected for this area; CDPH has yet to receive such data from DON. Upon CDPH's inquiry if DON had retained confirmation soil samples for Excavation Area D North, DON asserted that due to a change in contractors engaged on IR Site 31, the confirmation soil samples could not be located.
 - b. Contemporaneously, it became apparent that it was DON's intention to backfill Excavation Area D North prior to submitting documentation to CDPH. At this juncture; in order to support DON's future documents, including Final Status Survey for Excavation Area D North; CDPH made special arrangements to collect soil samples. These soil samples were drawn from only the sidewalls of Excavation Area D North, blue and orange rectangles in Figure 5, IR Site 31 Excavation and Sampling Plan. Whether the soil samples collected by CDPH can be used as confirmatory soil samples will be decided when CDPH's receives the Final Status Survey Report for Excavation Area D North.
 - c. Please note that the samples collected by CDPH are only for Excavation Area D North and not the whole of Excavation D. Please rectify the above statement accordingly.
7. Please include additional information on the method(s) employed to determine the boundaries of Debris Area D; which demonstrate to a certainty that all parts of any existing debris field were captured within its boundaries.

Activity: Review *DRAFTWORK PLAN Data Gaps Investigation at Installation Restoration Site 31 Former Naval Station Treasure Island San Francisco, California*. Issued January 6, 2016

February 23, 2015

page 3 of 5

8. Please note that CDPH-EMB has not received a work plan or a final status survey of Debris Area D; please ensure that the data developed is robust enough to gain acceptance from regulatory agencies on the findings and conclusions of the surveys to obtain unrestricted radiological release for IR Site 31.
9. Section 3.1 Permitting Requirements, page 3-2, paragraph two, "The radiation protection program is implemented at NSTI in compliance with a series of standard operating procedures (SOPs) and Treasure Island Work Instructions (TIWIs; Shaw, 2012a)." Please include these documents as an appendix.
10. Section 3.2 Project Objective, page 3-2, paragraph two, bullet number one, "Navy will demonstrate through a FSS (or similar) report that 226 Ra levels at the Site result in a maximum potential dose of less than 12-millirem per year." Please include as a Project Objective; the second step for obtaining radiological release, "analytical results and scanning measurements from the SU will be statistically evaluated to demonstrate that residual radioactivity within the SU is comparable to the TI Sitewide Background data set and reference areas." This quote can be found in Section 4.1 Radiological Criteria, paragraph two, sentence three.
11. Section 6.4.2 Radiological Screening, page 6-3, paragraph one, sentence one, "Gamma scanning will be performed on 20 percent of the excavation sidewall surfaces and on any identified debris as described in Section 7.5.2.1." This statement indicates that only 10% of the total sidewall surfaces will be analyzed by gamma scanning. CDPH-EMB's suggests that 100% gamma scan survey of excavation trench sidewall(s) be performed to get confirmation that the excavations are free of any radiological contamination.
12. Section 6.5.3 Soil Sampling, page 6-4, paragraph one, sentence one, "A total of 61 systematic samples will be collected from the three SU's." Please rewrite this sentence to make clear that the 61 soil samples will be collected from the surface soil and does not include any soil samples from excavations. Please include an explanation as to why the surfaces of the backfilled areas are not included in the gamma scan or systematic soil samples.
13. Section 7.3 Survey Instrumentation, page 7-2,three, sentence two, "Prior to use of the radiological survey instruments, calibration verification, physical

Activity: Review *DRAFTWORK PLAN Data Gaps Investigation at Installation Restoration Site 31 Former Naval Station Treasure Island San Francisco, California*. Issued January 6, 2016

February 23, 2015

page 4 of 5

inspection, battery check, and a source response QC check are performed daily in accordance with TIWI-12-01, "Operation and Use of Portable Instruments at Treasure Island," (Shaw, 2012a) and other applicable TIWIs." Please ensure that all applicable instrument QA/QC checks are performed at the end of the final survey performed so as to, "book end", that the final day's instrument(s) performance(s) were acceptable.

14. Section 7.5.1.5 Step Five - Develop a Decision Rule, page 7-5, paragraph one, sentence one, "If the results of the survey are below 12 millirem/year with NSTI background and there is no sign of debris indicating radiological contamination, the data will be used to support a conclusion that the IR Site 31 is not radiologically contaminated; otherwise, the site will require further investigation." Please see comment ten.
15. Section 7.5.2 Gamma Scanning Surveys page, 7-5, paragraph one, sentence one, "Gamma scanning will be performed on 20 percent of the exposed sidewall surfaces and on any identified debris." Please see comment number eleven.
16. Section 7.5.2.1 Excavation Sidewalls, page 7-5. Paragraph one, sentence two, "The first stage is a gamma scan conducted over 20 percent of the area using a Ludlum Model 44 20 sodium iodide detector and Ludlum Model 2221 ratemeter/scaler (or equivalent combination)." Please see comment number eleven.
17. Figure 5, IR Site 31 Excavation and Sampling Plan, in the legend, please make clear that the, "PURPOSED BORING LOCATIONS", is to obtain soil samples for Gamma Spectroscopy if that is in fact the case.
18. Figure 6, Survey Units and Sampling Locations. Please redraw the boundaries of Survey Units 1, 2 and 3 so that the excavations are excluded.
19. Appendix F; Sampling and Analysis Plan, SAP Worksheet #6: Communication Pathways, page 17, SAP Changes in the Field, "The Project Chemist is responsible for documenting field changes related to sampling and for informing or seeking approval from the Navy QAO." Since this is a radiological and not a chemical Data Gaps Investigation; and bearing in mind

Activity: Review *DRAFTWORK PLAN Data Gaps Investigation at Installation Restoration Site 31 Former Naval Station Treasure Island San Francisco, California*. Issued January 6, 2016

February 23, 2015

page 5 of 5

CDPH-EMB's documented concerns regarding field changes, please explain how having a Project Chemist best addresses the state's concerns.

20. Appendix F; Sampling and Analysis Plan, SAP Worksheet #10: Problem Definition, Data Gaps, page 28, paragraph two, sentence two, "The exposed sidewalls will then be visually inspected for debris by a registered geologist, 20 percent of the excavated surfaces will be gamma surveyed, and samples will be collected from the exposed sidewalls and analyzed for radiological contamination." Please see comment number eleven.
21. Appendix F; SAP Worksheet #11: Project Quality Objectives/Systematic Planning Process Statements, Step 2 Identify the Goal of the Study, page 29, bullet number three, "Do the sampling results support a conclusion that concentrations of 226Ra from the project area are at levels, which result in a maximum potential dose of less than 12 millirem per year? Please see comment number ten.
22. Attachment 1, Chain of Custody, Project Name/Location, "TI Wood Stave Storm Line Removal And FSS". Please correct.
23. Attachment 1, SAMPLE COLLECTION LOG: PROJECT NAME, "Removal and Final Status Survey of Wood Stave Storm Line". Please correct.