



California Department of Public Health
MEMORANDUM

DATE: November 23, 2015

TO: Remedios Sunga
Project Manager
Brownfields and Environmental Restoration
Program - Berkeley Office - Department of
Toxic Substances Control
700 Heinz Avenue
Berkeley, CA 94710-2721

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

SUBJECT: Review *DRAFT WORK PLAN Removal and Final Status Survey of Historic Avenue "N" Wood Stave Pipe*, Former Naval Station Treasure Island San Francisco, California; issued October 14, 2015; received October 28, 2015; along with the *DRAFT SAMPLING AND ANALYSIS PLAN*, issued October 23, 2015 and received October 28, 2015.

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 Removal and Final Status Survey of Historic Avenue "N" Wood Stave Pipe*, Former Naval Station Treasure Island San Francisco, California; issued October 14, 2015; received October 15, 2015; along with the *DRAFT SAMPLING AND ANALYSIS PLAN*, issued October 23, 2015 and received October 28, 2015. 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 *DRAFT WORK PLAN Removal and Final Status Survey of Historic Avenue "N" Wood Stave Pipe*, Former Naval Station Treasure Island San Francisco, California. Issued October 14, 2015 and *DRAFT SAMPLING AND ANALYSIS PLAN*, issued October 23, 2015.

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The Environmental Management Branch (EMB) of the California Department of Public Health (CDPH) appreciates the opportunity to review the submitted document, *DRAFT WORK PLAN Removal and Final Status Survey of Historic Avenue "N" Wood Stave Pipe*, Former Naval Station Treasure Island San Francisco, California; issued October 14, 2015; received October 15, 2015; along with the *DRAFT SAMPLING AND ANALYSIS PLAN*, issued October 23, 2015.

General Comments:

1. CDPH-EMB understands the need of a derived concentration guideline level (DCGL) for developing the "work plan", including the design of survey/sampling, the selection of appropriate instrument for use, and the instrument sensitivity required for determining the cleanup parameters. 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, EMB requires a final status survey report that compares the distribution of data from the excavation site 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. This memorandum constitutes CDPH-EMB's review of the, "*DRAFT WORK PLAN Removal and Final Status Survey of Historic Avenue "N" Wood Stave Pipe*, Former Naval Station Treasure Island San Francisco, California", issued October 14, 2015 and received October 15, 2015; and its' companion *DRAFT SAMPLING AND ANALYSIS PLAN* (SAP) which was issued separately on October 23. Please ensure that all future documents presented to CDPH-EMB are complete when issued.
3. There appears to be two concurrent standards broached by the Department of Navy (DON) in this document for what constitutes the release criteria. In one instance, the standard appears to be, Section 3.3 Anticipated Waste Streams, page 3-3, paragraph one, sentence two, "If screened soil meets the 12 millirem per year criterion for unrestricted release described in Section 3.2, it will be reused for backfill within the wood stave pipe trench." Whereas in another instance, Section 4.1 Radiological Criteria, page 4.1, paragraph two, sentence seven, "Therefore, the screening criterion inclusive of the background for 226Ra in soil is defined as 1.69 pCi/g. Sample results exceeding the soil screening criterion will be considered to be radiologically contaminated, and associated soil will be managed as LLRW." Please be consistent throughout the document.

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Specific Comments:

4. Section 3.2 Project Objective, page 3-2, Paragraph two, bullet one, "CDPH Environmental Management Branch (EMB) concurs with the findings of a final status survey (FSS) report that the CDPH regulatory requirement of "reasonable effort" is met by demonstrating that residual 226Ra levels are at or below the U.S. Environmental Protection Agency (EPA) dose limit of 12 millirem per year (EPA, 2014)." CDPH-EMB does not concur with this statement. CDPH-EMB utilizes Section 30256 in Title 17 of the California Code of Regulations (17 CCR 30256) and not a dose limit to render a decision to concur with an unrestricted release.

As noted above in comment one, CDPH-EMB acknowledges the utility of employing DCGL(s) and recognizes that EPA dose limits may be a part of developing DCGL(s) but CDPH-EMB cannot concur with a dose limit. Please revise the statement appropriately.

5. Section 3.3 Anticipated Waste Streams, page 3-3, paragraph one, sentence two, "If screened soil meets the 12 millirem per year criterion for unrestricted release described in Section 3.2, it will be reused for backfill within the wood stave pipe trench." Please refer to comments 1 and 4 above.
6. Section 4.1 Radiological Criteria, page 4-1, paragraph three, sentence two, "Analytical results from the SU will be compared with a dose-based criterion, which will demonstrate that the potential dose to a receptor from residual radioactivity within the SU meets federal dose standards." Please see comment number one.
7. Section 4.2.2 Final Status Survey Report, page 4-2, paragraph one, sentence four, "Data analysis methods may include calculation and comparison of statistical quantities, including statistical comparison to background, review of data distributions, and spatial assessment and mapping of radiological data to identify outliers." CDPH-EMB believes the data analysis methods listed above to be crucial to support radiological characterization and free release of the project area. Please see comment number one.
8. Section 6.3.3 Removal of Current Drainage and Overburden Soil, page 6-4, paragraph four, sentence two, "In-process gamma scans will be performed during excavation of the overburden material and on stockpiled overburden soil

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to confirm that radiation levels are consistent with background." Will this confirmation be based on instrument gamma count rate measurement investigation levels (ILs)? Please clarify.

9. Section 6.3.5 Pipe Removal, page 6-5, sentence two, "Specific methods used to characterize the pipe and its contents will depend on its condition following removal, but will likely consist of gamma scanning surveys and material sampling per typical material and equipment release protocol". CDPH-EMB appreciates the difficulty in planning surveys for materials currently buried. Will the survey methods selected be documented? Will the document be shared with CDPH-EMB prior to its implementation? Please explain.
10. 6.3.6 Final Excavation, page 6-6, paragraph one, sentence four, "If the additional 6 inches removed from the sidewalls and excavation bottom meet radiological criteria, then the excavation itself will be concluded to meet radiological criteria." Please see comments one and seven. Additionally, CDPH-EMB expects a MARSSIM survey of the excavation sidewalls and of the excavation bottom.
11. Section 7.3 Survey Instrumentation, page 7-2, paragraph three, sentence one, "Prior to use of the radiological survey instruments, calibration verification, physical 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 at the conclusion of the final day of survey, each instrument passes the same checks detailed above so as to document, "book end", proper functioning of the instrument at the end of the survey.
12. SAP Worksheet #11: Project Quality Objectives/Systematic Planning Process Statements, page 29, Step 2, Identify the Goal of the Study, bullet number five, "Do the sampling results support a conclusion that concentrations of 226Ra from the project area meet federal standards for radiological release?" Please see comment number one.
13. SAP Worksheet #11: Project Quality Objectives/Systematic Planning Process Statements, page 31, Step 5, Develop the Analytic Approach, bullet one, "If the results of the survey meet federal standards for radiological release, then the data will be used to support a conclusion that the site meets the conditions for unrestricted radiological release." Please see comment number one.