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APR 20 2010

Dr. Kevin F. Riley
Chief Deputy Director of Policy & Programs
California Department of Public Health
1500 Capitol Avenue
Sacramento, California 95814

Dear Dr. Riley:

Subject: CALIFORNIA DEPARTMENT OF PUBLIC HEALTH PROCESS,
CRITERIA, AND TIMELINE FOR RELEASE MANAGEMENT OF THE
HUNTERS POINT SHIPYARD'S RADIONUCLIDE CONTAMINATION
SITES MARCH 23, 2010

Thank you for providing the California Department of Public Health's (CDPH) proposed process, criteria and timeline for release of the Hunters Point Shipyard's (HPS) radionuclide contamination sites to the Department of the Navy (DON) at the March 24, 2010 meeting. The DON was encouraged hearing CDPH's Environmental Management Branch (EMB) and Radiological Health Branch (RHB) are committed to working together to provide consolidated regulatory guidance. For clarification, it is also DON's understanding that DPH is deferring to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) process for radiological sites undergoing CERCLA clean-up in California. Based on CDPH's proposal, however, it appears CDPH is proposing procedures and criteria that will potentially conflict with the CERCLA remedies selected by DON and EPA to address radionuclides, in particular with CERCLA "containment remedies" at certain sites (aka "restricted release"). While DON appreciates the progress, there are many questions and clarifications that remain to be resolved. CDPH's proposal is included as Attachment 1 for reference.

The process, criteria, and timelines described in Section 1 of your presentation summary document (summary document) dated March 23 appear to be reasonable. However, with this timeline it should be noted that excavated sewer survey units will be backfilled before CDPH analytical results are available and the DON would not be able to reopen the excavation for the purpose of sample collection. If additional comments are received on final Survey Unit Project Reports (SUPRs), DON will respond to those comments in the Remedial Action Completion Report (RACR) in accordance with the Federal Facilities Agreement (FFA).

Although the number and location of samples that CDPH is requesting for confirmation samples in Section 2 of the summary document proposal appear to be manageable, the purpose and process of the confirmation sampling remains unclear. The DON currently has a quality assurance program using independent analysis to confirm that action levels are met during cleanup. With stakeholder agreement, DON is willing to discuss how our current quality assurance program can be modified to meet CDPH's objectives. If a different laboratory is proposed, DON would request the laboratory have proper accreditation. In addition, if CDPH has any issues with DON's current laboratory procedures, process, or data quality, DON would like to resolve those concerns immediately.

DON has no issue with the activities CDPH proposed for building and structures to achieve unrestricted release as detailed in Section 3 of the summary document and appreciated the timely efforts expended by EMB for unrestricted release of buildings at Hunters Point Shipyard (HPS).

Section 4 of the subject document describes CDPH performance radiation surface scans which appear to be a primary element of CDPH's proposal. The purpose, procedure, and screening levels identified need further clarification specifically with respect to the proposed scanning of the entire HPS facility (excluding buildings) whether or not identified as radiologically-impacted. The DON has conducted a Historical Radiological Assessment (HRA) to identify potentially radiologically impacted areas. It is unclear how site-wide radiation surface scans fit into the CERCLA process and if CDPH intends to re-evaluate sites previously closed under CERCLA. A Standard Operating Procedure (SOP) procedure for the surface scans would also provide further clarification to ensure data is accurate and reproducible and would account for the physiographic complexity of the site. In addition, the levels proposed for the scan in subsection 4.c appear to be inconsistent with CERCLA as they are below the current CERCLA action level for the ongoing removal and remedial at Hunters Point. Below is a list of issues needing additional clarification:

- Verification that the surface scans will be performed using the RS-700 Mobile Radiation Monitoring System manufactured by Radiation Solutions, Inc. with explanation of the type of vehicle that will be used with the system.
- A Standard Operating Procedure (SOP) procedure for use of the RS-700 to include specifications for operations of the system along with clarification on how the system can be applied for multiple radionuclides of concern in different media as well as minimal detectable activities for each radionuclide.

- Explanation of how background and standard deviations have been predetermined for HPS and what scanning values will be used for the various radionuclides of concern at the site or if Ra-226 will be the only radionuclide of concern in the surface scans.
- Explanation of why the levels proposed for the scan in subsection 4.c of the summary document were chosen. They appear to be inconsistent with CERCLA as they are below the current action level approved by CDPH for the ongoing removal and remedial actions at HPS.
- A sample map showing representation of activity at all three levels with different color representations than yellow and red.
- An explanation of what will be done if elevated readings are identified during the scan survey and if these readings will be investigated by CDPH using hand-held instruments.
- An explanation of the mapping process, and the intended distribution.
- Clarification on the timeline for the scan surveys of all of HPS, if it will be done all at once or as sites or parcels are cleared, and if it is contingent upon receipt of EPA's certification of the CERCLA process.

DON was encouraged to learn that transferees can initiate the license exemption process prior to conveyance. However, there is a concern that criteria provided in Section 5 of the subject document indicate that CERCLA remedies may be questioned or reopened by CDPH. As written, they seem to indicate that BRAC transferees could be required by CDPH to conduct further CERCLA remediation through conditions imposed by CDPH in license exemption decisions. Of particular concern are subsections 5.a.5, 5.a.7 and 5.a.8 where DON sees potential conflict with CERCLA. Clarification of these issues is critical to the Navy.

In so much as DON is encouraged by the dialogue, it is clear there are still some significant issues to resolve at the radiological sites in California. Now that DON has had an opportunity to evaluate your proposal, we look forward to discussing these issues in further detail. If you have any questions or comments, please call Mr. Lawrence Lansdale at (619) 532-0961 or me at (619) 532-0994.

Sincerely,


Laura Duchnak
Director

Attachment 1: CDPH proposal for Process, Criteria, and Timeline for Release
Management of the Hunters Point Shipyard's Radionuclide Contamination Sites March
23, 2010

Copy to:
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California Department of Public Health

Process, Criteria, and Timeline for Release Management of the Hunters Point Shipyard's Radionuclide Contamination Sites March 23, 2010

Preface:

The California Department of Public Health (CDPH) maintains two separate roles relating to the Hunters Point Shipyard (HPS) radionuclide contamination. Its first role is that of an advisor or consultant to the Department of Toxic Substances Control (DTSC). In this role, CDPH reviews historical documents, site conceptual models, work plans, sampling and survey data, and final status surveys for sites where unrestricted release is intended at military bases. CDPH provides this technical and scientific consultation of the radiologic materials cleanup of Department of Defense (DoD) facilities intended to be transferred to civilian uses. CDPH advised DTSC on criteria and acceptable cleanup levels for transfer.

The second role of CDPH is regulatory once the facility is transferred from federal to state and local responsibility. Depending upon the remediation process and level of residual radiation, CDPH may have no future regulatory oversight, may require a license for radioactive materials that specify monitoring and safety assurances, or may require a license exemption that defines allowable activities and uses on the site to ensure public health and safety.

This document provides the specific process, criteria, and maximum timelines for transfer of HPS property from the Navy to the City of San Francisco.

Process, Criteria, Timelines:

- 1. Steps remaining to recommend unrestricted release on the sewer and storm drain project:**
 - a. Acquisition of confirmation samples from the Navy or their contractors.
 - CDPH is ready to receive soil samples from the Navy or its contractors and CDPH will maintain chain-of-custody for the samples throughout the process.
 - b. Analysis of confirmation samples by CDPH.
 - The analysis of the samples will take 60 working days from the point of receipt of samples to the date of final CDPH laboratory reports.
 - c. Review of CDPH/Navy analysis data and development of CDPH report.
 - 10 working days.
 - d. Report submittal to DTSC.

- 10 working days.
- e. Survey Unit Project Reports (SUPR) revised based on submitted comments.
- Timeframe determined by the Navy.

Task	Duration (working days)
Acquisition of confirmation samples	ready to receive
CDPH laboratory analysis of confirmation samples	60
Data analysis review and completion of report	10
Report submittal to DTSC	10
Total	80

2. CDPH requests the following types and numbers of confirmation soil samples:

- a. For Building Sites 114 and 142 (buildings were removed)
- CDPH requests five of the Navy’s samples for analysis by CDPH.
- b. For sewer and storm drain trenches that have been backfilled after sewer and storm drain removal and additional remediation
- CDPH requests 30 of the Navy’s samples for analysis. These samples are to be selected from existing Quality Assurance/Quality Control (QA/QC) samples starting with QA/QC samples from Parcel D-2 and Parcel B.
- c. For sewer and storm drain trenches that have not yet been excavated
- CDPH requests 60 split samples from the Navy from final status surveys. These split samples will be randomly selected by the Navy and CDPH will coordinate with the Navy or their contractors on the timeframe for collecting these samples.

Purpose/rationale for CDPH’s request for confirmation sampling

- Confirmation sampling provides due diligence and answers specific questions regarding the analytical method.
- Confirm that the project action levels have been met in soil samples collected at the site.
- Verify that analysis results provided by the Navy and their offsite laboratory are reproducible by independent analysis by CDPH. For this, CDPH laboratory will

analyze samples by both 186 keV and 609 keV daughter in-growth methodologies and compare the results with the Navy's offsite and onsite laboratory results.

- Provide CDPH with independent results to support decisions for concurrence on unrestricted release.

3. CDPH activities at HPS buildings and structures proposed for unrestricted release:

- CDPH will continue to complete confirmation surveys normally consisting of static alpha and beta measurements and in some instances wipe sample collection commensurate with survey units and access to building.
 - **Purpose and Timeframe**
 - Static measurements and wipe samples provide due diligence and answer specific questions regarding the site or analytical method.
 - Surveys will address confidence in conceptual site model and in data produced, and the nature and extent of contamination.
 - CDPH has an on-going process and is ready to meet workload objectives as building and structures are cleared by DoD.
 - To ensure reasonable effort to eliminate radiological contamination has been made.
- CDPH has already recommended unrestricted release on the following building sites:
 - 146 – February 2010
 - 401 – October 2009
 - 408 - August 2009
 - 439 – August 2009
 - 813 – April 2008
 - 819 – April 2008
 - 113A and 366 being prepared for recommendation of unrestricted release

4. Radiation Surface Scans

To ensure public health stewardship and provide confirmatory characterization of any near surface radiation source(s) CDPH will conduct two surface scans across the entire HPS facility, not including the buildings. The initial scan will be performed before final

remediation and capping, and the second scan after final remediation and capping of the site (before and after the CERCLA final remedy). Instrument-derived mapping information (RS-700 Radiation Mapping Survey) will be provided to the Navy, EPA, DTSC, City of San Francisco, and any requesting member of the public. CDPH will perform the surface scan with two large volume sodium iodide gamma detectors connected to data collection system incorporating a global positioning component to allow for mapping of the collected data on a map overlay of the site.

a. Procedure for Initial Characterization

The following guidelines will be used for the radiation surface scans:

- A walk down by a CDPH Health Physicist will be performed prior to using the RS-700 Radiation Mapping System. This will enable CDPH staff to observe and note variations in the geologic characteristics of the site.
- At the Navy’s scheduling preference and site availability, CDPH will perform the scans at each sub-site area or across the entire HPS property. Sites 7 and 18 and other identified contamination sites where remediation has been achieved will have two scans. Non-impacted radiation sites will not need a second scan.
- Time requirements to complete each activity of the scanning and exemption process determinations is contingent upon Navy completion of site remediation, CDPH access to the site, EPA site certification, and availability of site information needed to develop any license exemption. However, work on several of the CDPH activities can potentially be pursued concurrently, thereby compressing the schedule for the entire process. For the scanning activities and exemption process determination, CDPH determined the following time duration requirements, assuming availability of site access and data submission:

Task	Duration (working days)
Exemption Process Draft Preparation	6
Pre Remediation Survey	14
Pre Remediation Survey Report and Maps	6
Post Remediation Survey	10
Post Remediation Survey Report and Maps	6
Review Exemption Request	10
Total	52

b. Radiation Survey Map Generation

The color labels for the gross counts of the collected data points used by CDPH when generating maps are referenced below. If a generated map indicates high readings, the spectral data from the Radiation Mapping System may be evaluated to determine if the high readings are due to primordial or manmade radioactivity. CDPH will assign a green label (background color) to areas that are elevated but determined to be primordial.

c. Map of Gross Counts (Ra-226) and Results of Scanning Data

Scanning Determinations	CDPH Decisions for License Exemption
Green dots will be used for values less than background plus 0.7 pCi/g for Ra-226. Up to 24 counts per second (2 standard deviations) above background.	If the site history information indicates that no radioactive material was used or stored and no contamination present at the parcel, parcel can be released for unrestricted use.
Yellow dots will be used for values that exceed background plus 0.7 pCi/g up to background plus 1.0 pCi/g for Ra-226. From 24 counts per second to 36 counts per second (3 standard deviations) above background.	The Department may request further investigation before a license exemption is considered or an unrestricted release decision made.
Red dots will be used for values that exceed background plus 1.0 pCi/g for Ra-226. Everything equal to or above 37 counts per second (greater than 3 standard deviations) above background.	Unless the specific area is remediated, a license exemption or radiation control license will be required.

5. License Exemption Criteria

The Department’s license exemption process is found in Title 17, California Code of Regulations, section 30104. These regulations define the conditions for the Department to grant exemptions from the radiation control law when the Department finds no significant hazard to life or property.

a. The license exemption application submitted to CDPH must include the following:

1. Historical site use information involving use and disposal of radioactive materials;

2. Hydrologic and geologic site characterization;
3. Description and estimation of residual contamination and where distributed on site, including volumetric estimates for the entire site delineated within each parcel or survey site location;
4. Current site characterization surveys;
5. Description of alternatives that were considered to eliminate the contamination and why it was determined that some contamination be left at specific locations;
6. Proposed future land use;
7. Institutional controls and remedial design for protective covers or engineered barriers;
8. Description of demarcation layers between original surfaces and remedies/covers;
9. Dose projection, based on the land use scenarios, for future occupants;
10. Exposure scenarios in case of natural disasters (i.e., earthquakes);
11. Environmental impacts;
12. EPA certification of CERCLA requirements being met.

Notes:

- CDPH will utilize a laboratory control sample spiked with Ra-226 that has 1.0 pCi/gm above the background level of the soil matrix that was spiked, which simulates a sample at the project action level.
- CDPH uses the Procedures Manual of the Environmental Measurements Laboratory, HASL 300 28th edition, Volume 1, February 1997, Procedure Ga-01-R. Review and comparison of SRLB laboratory results to HPS results will be performed similar to the Laboratory Analysis, Section 4, in the latest version of HPS SUPR reports submitted with the HPS D-2 RACR.
- As a result of many exchanges of comments from CDPH and follow-up work performed by the Navy, the limitations of the Ra-226 data produced by the on site laboratory is better understood and documented in the Survey Unit Project Report Abstract (SUPRA) document. In addition, EPA has provided a letter to CDPH indicating that they accept the HPS on site laboratory results as meeting the project action levels.