



Alan C. Lloyd, Ph.D.  
Agency Secretary  
Cal/EPA



## Department of Toxic Substances Control

700 Heinz Avenue, Suite 200  
Berkeley, California 94710-2721

N00236.002292  
ALAMEDA POINT  
SSIC NO. 5090.3



Arnold Schwarzenegger  
Governor

December 29, 2005

Mr. Thomas L. Macchiarella, Code BPMOW.TLM  
Department of The Navy  
Base Realignment and Closure Program Management Office West  
1455 Frazee Road, Suite 900  
San Diego, CA 92108-4310

### **DRAFT PROPOSED PLANS, IR SITE 14, FORMER FIRE FIGHTER TRAINING AREA, ALAMEDA POINT, ALAMEDA, CALIFORNIA**

Dear Mr. Macchiarella:

The Department of Toxic Substances Control (DTSC) has reviewed the draft Proposed Plan (PP) for Installation Restoration (IR) Site 14, dated October 2005, in conjunction with 1) the response to comments (RTC) contained as Appendix F of the Final Supplement to the Feasibility Study (FS) Report for Site 14, dated August 8, 2005 and 2) Draft Compilation of Outstanding Solid Waste Management Unit (SWMU) Evaluation Report (SWMU report), dated November 29, 2005. Our comments are as follows:

- 1. Need for Further Action for Soil:** Shallow soil collected 2 to 3 feet below ground surface near the plume center was found to contain approximately 2 mg/kg of tetrachloroethene (PCE). This is almost three orders of magnitude higher than the soil screening level established for PCE (0.0003 mg/kg), suggesting a likely continuing source of volatile organic contaminants (VOCs) to groundwater. DTSC appreciates that the Navy address this by stating in the RTC that the remedial alternative chosen for IR Site 14 will address the presence of chlorinated VOCs in soil (see page F-6 of the RTC). This intent is, however, not communicated in the PP. In fact, page 1 of the PP states, "The proposed plan includes .... no further action for soil. Please resolve this discrepancy.
- 2. SWMU Evaluation:** DTSC has completed the SWMU review for IR Site 14. Below are our comments.

GAP 11: DTSC concurs with no further evaluation (NFE) at Generator Accumulation Point (GAP) 11 on the basis that 1) the storage was on concrete, 2) GAP 11 supported small arms cleaning operation at Building 26 which can be reasonably assumed to be small in scale, and 3) soil and groundwater samples

collected in the vicinity does not suggest that GAP 11 is a potential source of groundwater contamination.

GAP 9: DTSC recommends further evaluation of GAP 9 based on 1) GAP 9 was the waste accumulation point for a heavy equipment and vehicle maintenance shop (Building 528). The operation can be reasonably assumed to be sizable. 2) the RCRA Facility Assessment (RFA) concluded that GAP 9 exhibited a high potential for releases because it was outdoor, on sandy soil, and without secondary containment. Stains were visible during the RFA inspection. 3) Sampling performed during previous investigations was insufficient to evaluate GAP 9 as a potential source. Soil samples were either collected right on the surface (GAP 9B-1, 9B-2, 9B-3, 9B-4) or not analyzed for VOCs (S14-DGS-DP14, -DP15). DTSC requests that soil and groundwater samples are collected directly beneath GAP 9 as part of the remedial design.

WD-528: DTSC concurs with NFE at WD-528 on the basis that subsurface soil and groundwater samples collected directly beneath and in the immediate vicinity of WD-528 do not suggest WD-528 to be a potential source.

3. **Lateral Extent of PCE in Shallow Soil and Groundwater**: DTSC requests that the lateral extent of PCE in shallow soil as referenced above is delineated as part of the remedial design so that recontamination of the groundwater due to remaining soil sources will not occur. DTSC also requests that the extent of contamination in shallow groundwater immediately upgradient of well M101-A is confirmed as part of the remedial design.
4. **Vertical Extent of Groundwater Contamination**: DTSC disagrees that the vertical extent of groundwater contamination has been delineated in the hot spot at IR Site 14. It is unclear upon what data the targeted depth interval for remediation is based. DTSC is concerned that if the targeted depth interval is not sufficiently defined, post-remediation recontamination of the shallow groundwater may occur. DTSC requests that depth-discrete groundwater sampling is performed in the hot spot as part of the remedial design.
5. **Maximum Contaminant Levels (MCLs) as Applicable or Relevant and Appropriate Requirements (ARARs)**: DTSC concurs with the United States Environmental Protection Agency (USEPA) that MCLs should be included as ARARs for IR Site 14 because of the Class II aquifer determination. However, given the proposed re-use and the proximity to the Oakland Inner Harbor, DTSC is willing to consider non-MCLs cleanup goal and will defer to USEPA on this issue.

6. **Vinyl Chloride as the only COC:** As noted in the comment letter dated April 29, 2005, DTSC was unable to concur that vinyl chloride was the only chemical of concern (COC) because, among a variety of concerns, the recent groundwater monitoring data were not provided. The Navy has since included the monitoring data in the final supplemental FS but declines to reconsider the appropriateness of COC identification.

Based on the review of the monitoring data (Appendix E to Final Supplemental FS), DTSC has concluded that: 1) vinyl chloride may not be considered the only COC, and 2) all COCs originally identified in the remedial investigation (RI) should continue to be regarded as COCs for IR Site 14. Our rationale is as follows:

- Under most circumstances COC identification should be based on the complete site characterization data set (i.e. RI data). Recent groundwater monitoring data should be used to affirm or supplement, but not exclude or replace, the RI data.
  - Three out of five wells selected for the monitoring (M14-01, M14-02, M112-A) are located outside of the plume boundary and therefore are irrelevant to the COC identification.
  - Groundwater contaminant concentrations reported in the final FS supplement (e.g. page ES-3) were generated by averaging the data from all five wells, including the three wells located outside of the plume. This introduces obvious bias and is therefore inappropriate.
  - Constituents such as tetrachloroethene (PCE), trichloroethene (TCE), and 1,2-dichloroethene (1,2-DCE) are dropped out of the COC list because their concentration levels after averaging were "below" the maximum contaminant levels (MCLs). This is misleading.
7. **Remedial Action Objectives (RAOs):** The development of RAOs should take into account all COCs identified in the RI. Please revise the RAOs accordingly. It is our opinion that while RAOs should be established for all COCs, the need for sampling the COCs can actually be limited to a suite of indicator chemicals to reduce the analytical costs.
  8. **Time Required to Reach RAOs:** Page 6 of the PP states, "The ICs would remain in place until the RAO has been achieved ..... which would require 6 years (1 year for active treatment, 3 years for performance monitoring, and 2 years of post-remediation monitoring)." Please note DTSC measures the success of remediation (i.e. achieving the RAOs) with a series of clearly defined performance standards. Timetables such as the one suggested here are inherently hypothetical because they involve numerous assumptions. This uncertainty should be clearly conveyed in the PP.

9. **Performance Standards:** The PP should point out that the Record of Decision (ROD) will specify the following performance standards to ensure success of the remediation:

- Shut down criteria, which will establish the target concentrations upon which the in-situ chemical oxidation (ISCO) treatment system can be turned off and monitored natural attenuation (MNA) can commence. The criteria should include: 1) target concentrations for both groundwater and saturated soil media (e.g. 95 to 99 % reduction from the pre-treatment concentration levels) and 2) the time interval allowed to reach the target concentrations,
- End point determination of success, which considers rebounds of contaminants and specifies a time interval that should be allowed before declaring the RAOs are met.
- Contingency for failure, which establishes the criteria for restarting the treatment system after a certain period of unsuccessful attenuation

10. **Remediation Areas:** Please provide a map showing the proposed remediation areas in the PP.

11. **Institutional Controls (ICs):** ICs prohibiting extraction of groundwater for all uses into perpetuity will have to be put in place if the RAO is developed solely based on the inhalation exposure pathway. The only exception to this prohibition is groundwater extraction incidental to construction activities. In that case, measures pursuant to the groundwater management plan developed as part of the ICs will have to be followed.

12. **Petroleum Cleanup:** Although petroleum is excluded and no remedy for petroleum contamination is required under Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), it is appropriate that the PP discusses petroleum contamination and its mitigation at IR Site 14 to provide the community with a better understanding of the site. DTSC recommends that the PP indicates that the Navy will work with California Regional Water Quality Control Board (RWQCB) for the following:

- Appropriate screening criteria and suitable remedial measures to address any residual petroleum contamination left on site (Elevated petroleum concentrations have been reported at various locations at IR Site 14. For example, diesel as high as 2,000 ug/L was detected at a groundwater sample collected at WD-528. Soil collected from GAP 9B-3, on the other hand, showed 27,000 mg/kg of motor oil).
- Proper closure determination of three petroleum-related SWMUs, namely, AOC 357, AST 179, and AST 528.
- Proper closure determination of Petroleum Corrective Action Area 2 (CAA-2)

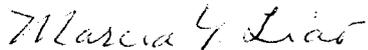
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As stated in DTSC letter dated June 13, 2005, RWQCB is the lead state regulatory agency for petroleum-only cleanup. DTSC, being a support agency to the RWQCB on such cleanup, will work with the RWQCB to ensure that requirements of both Chapter 6.5 and Chapter 6.8 of California Health and Safety Code (HSC) are met.

**13. Impact to Ecological Receptors:** DTSC agrees that the ecological hazard at IR Site 14 is fairly minimal. This is based on the small size of Site 14, the projected future use as recreational area and the ecological risk assessment (ERA) hazard quotients are marginally above 1.0 in most cases. However, fragmenting the area along the Oakland Inner Harbor into geographically separated areas does not present a full picture of any potential ecological hazard. DTSC requests that proper statement is included in the PP and ROD to indicate that area-wide ERA, including Site 14 and the other contiguous areas, will be conducted prior to transfer and remedy at other sites may need to be more aggressive as a result.

Additional comments from DTSC Public Participation Unit will be forwarded under a separate cover. If you have any questions regarding our comments, please do not hesitate to contact me at 510-540-3767 or [mliao@dtsc.ca.gov](mailto:mliao@dtsc.ca.gov).

Sincerely,



Marcia Liao  
Remedial Project Manager  
Office of Military Facilities

Mr. Thomas Macchiarella  
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Cc (via US Mail and email):

Ms. Anna-Marie Cook ([cook.anna-marie@epa.gov](mailto:cook.anna-marie@epa.gov) )  
US Environmental Protection Agency Region IX  
75 Hawthorne Street  
San Francisco, CA 94105

Ms. Judy Huang ([jchuang@waterboards.ca.gov](mailto:jchuang@waterboards.ca.gov) )  
Regional Water Quality Control Board  
1515 Clay St., Suite 1400  
Oakland, CA 94612

Dr. Charlie Huang ([chuang@ospr.dfg.ca.gov](mailto:chuang@ospr.dfg.ca.gov))  
Department of Fish and Game  
1700 K St., Suite 250  
Sacramento, CA 95814

Ms. Elizabeth Johnson ([ejohnson@ci.alameda.ca.us](mailto:ejohnson@ci.alameda.ca.us) )  
950 W. Mall Square, Bldg 1  
Alameda Point  
Alameda, CA 94501

Cc (via email):

Greg Lorton, Navy, [Greg.Lorton@navy.mil](mailto:Greg.Lorton@navy.mil)  
Steven Peck, Navy, [Steven.Peck@navy.mil](mailto:Steven.Peck@navy.mil)  
Peter Russell, Russell Resources, [peter@russellresources.com](mailto:peter@russellresources.com)  
Michelle Dalrymple, DTSC, [mdalrymp@dtsc.ca.gov](mailto:mdalrymp@dtsc.ca.gov)  
Jim Polisini, DTSC, [jpolisin@dtsc.ca.gov](mailto:jpolisin@dtsc.ca.gov)  
Richard Perry, DTSC, [rperry@dtsc.ca.gov](mailto:rperry@dtsc.ca.gov)  
Dot Lofstrom, DTSC, [dlofstro@dtsc.ca.gov](mailto:dlofstro@dtsc.ca.gov)