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TREASURE ISLAND
SSIC NO. 5090.3.A



Arnold Schwarzenegger
Governor

July 17, 2006

Mr. Jim Whitcomb
Remedial Project Manager
Department of the Navy
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Program Management Office West
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REVISED ENGINEERING EVALUATION AND COST ANALYSIS SOLID WASTE DISPOSAL AREAS, INSTALLATION RESTORATION SITE 12, OLD BUNKER AREA, NAVAL STATION TREASURE ISLAND, SAN FRANCISCO, CALIFORNIA

Dear Mr. Whitcomb:

The Department of Toxic Substances Control (DTSC) staff have reviewed the Revised Engineering Evaluation and Cost Analysis (EE/CA) Solid Waste Disposal Areas (SWDAs) for Installation Restoration (IR) Site 12 dated June 12, 2006. The stated purpose of the EE/CA is to develop, compare, and evaluate removal action alternatives for a planned nontime-critical removal action for constituents of concern identified in the SWDAs. The EE/CA states that the planned removal action is intended to be consistent with the final remedy for IR Site 12 and that the final remedy will be selected through the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) process.

Below are DTSC's comments on the Revised Site 12 EE/CA. Also, as this revised EE/CA is very similar to the draft EE/CA published in September 2002, we are resubmitting Mr. Brian Davis' original comment memorandum, dated October 15, 2002, and request that the Navy consider all relevant comments when making changes to the next draft of the EE/CA.

General Comments

1. In evaluating the revised EE/CA DTSC staff noted that the scope has been modified significantly as it is now limited to the SWDAs, whereas the original was

intended to address Site 12 in its entirety, including all backyards and common areas both within and outside the SWDAs. DTSC understands that the Navy modified the scope in order to expedite the cleanup of the known SWDAs and that additional investigations completed since 2002 have demonstrated that the nature and extent of contamination in the SWDAs is significantly different than the remainder of Site 12. However, the revised EE/CA retains much of the original language from the 2002 EE/CA, which supported the need for a remedial action for all of Site 12, and leaves the reader with the impression that the areas outside of the SWDAs could contain contaminants at levels and volumes similar to the SWDAs. DTSC does not believe this to be the case and agreed to limit the scope of the EE/CA, to the known SWDAs, because contaminant issues outside the SWDAs appear to be of less concern and do not represent a serious threat to human health or the environment that warrants an immediate response.

The language in question from the 2002 EE/CA, that supported the need for a removal action throughout Site 12, is most prevalent in Sections 1 and 2 of the revised EE/CA but additional language can also be found throughout the document. DTSC strongly recommends that the Navy evaluate the language used to support a remedial action in the SWDAs and eliminate language that suggests that contamination issues outside the SWDAs are similar to those within the SWDAs. Please see our specific comments below for examples of the language in question.

2. To allow for the evaluation of the alternatives proposed in the EE/CA as potential final remedies, context for the selection of a final remedy needs to be provided. Specifically, the Navy needs to discuss how the EE/CA comports with the overall CERCLA process at Site 12, what the planned future uses of the site are and how those future uses factored into the generation of the proposed EE/CA alternatives. DTSC understands that the site has been and will likely be used for residential purposes for some years into the future but no statement about the certainty of this use or the anticipated duration is provided. To adequately evaluate the alternatives presented, DTSC needs some assurance about the future use of the site and an understanding of the agreements reached with the City of San Francisco regarding the management of the site, and specifically, the enforcement of any necessary institutional controls. Without a clear understanding of future use and how the site will be managed after transfer, DTSC is unable to assess the potential effectiveness of the alternatives proposed or recommend a preferred alternative.

DTSC also understands that the Navy does not intend to issue a second draft of the EE/CA and that the Navy is planning to respond to all comments made on the EE/CA in the forthcoming action memorandum. DTSC is not in favor of this

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approach as we believe that significant changes to the document are necessary that will warrant an additional review before being distributed for public review.

Specific Comments

1. Page ES-1, Executive Summary, Removal Action Objectives

The protection of future utility or construction workers needs to be fully evaluated and listed as one of the removal action objectives. It should also be noted that pets will utilize the backyards and common areas and may engage in activities that could lead to contaminant exposures, both to themselves and residents.

2. Page ES-2, Executive Summary, Removal Action Alternatives

The five alternatives listed in this section will either provide for the removal of soil or capping of contaminants in place. However, none of the alternatives include a description of the corresponding institutional controls (ICs) that may be necessary if contaminants are left in place, whether at depth, beneath hardscaping or under buildings.

DTSC believes that ICs will likely be a component of any of the listed alternatives and that when ICs are proposed, supporting justification for their use needs to be presented so the reader can evaluate how effective they may be at ensuring the adequate future management of the contaminants being left in place. At a minimum, a description of how the ICs will be designed and managed needs to be presented in the EE/CA. As Site 12 will likely be transferred to the City of San Francisco (City), the Navy needs to describe the specific agreements reached with the City on the future management of ICs and include a detailed description of how the Navy and/or City intends to enforce them for the duration of their use.

Please also discuss whether alternatives 3 and 4 will include the removal of soil beneath existing utility lines.

3. Page ES-3, Executive Summary, Comparative Analysis of Removal Action Alternatives

In addition to residents, the comparative analysis needs to include an evaluation of utility workers who may be conducting maintenance or construction of new utilities in the future.

4. Page 1-3, Section 1.3, Description of the Site History and Conceptual Model

This section states that Navy operations resulted in the release of contaminants to the surface soils in Site 12. It should also be noted that contaminants have been detected in the known SWDAs at depths exceeding fifteen feet.

5. Page 1-3, Section 1.4, Site Characterization Outside of the Solid Waste Disposal Areas

This section discusses site characterization issues outside of the known SWDAs, which is not the main focus of the revised EE/CA, and should be modified to reflect, in summary fashion, what is generally known about the contaminant issues outside the known solid waste disposal areas.

The first paragraph of this section states that the most recent investigation in Site 12 was conducted in March 2002, which is not accurate. Please update this and other sections of the document to reflect the most recent investigation that involved trenching throughout the common areas in Site 12. Also, DTSC's copy of Appendix B did not include all of the hardcopy figures (B1- B8).

The second paragraph of this section states that *"additional investigations revealed areas with elevated lead and TPH contamination and that potential risk from TPH is considered to be low and will be further evaluated in the RI Report."* This statement implies that lead could be located throughout Site 12 and that it may be present at levels that are unsafe for current residents. DTSC suggest that this statement be modified and some context provided so that the reader is not left with the impression that not enough is understood about the configuration of lead and the corresponding risk to residents.

The third paragraph of this section states that *"Based on the investigations conducted before 1999, the contamination was localized and the number and location of samples was adequate to characterize the contamination."* This statement is both misleading and confusing and should either be removed or fully explained so that the reader can understand what point the Navy is trying to make (i.e., where was the contamination localized and how was it determined that the number and location of samples was adequate to characterize the contamination?). And the last sentence of this paragraph, *"Since no information regarding the release of PCBs was known, the discovery of the PCB release was unexpected"*, implies that the discovery of a release was not expected, which is not accurate. The purpose of investigating a storage yard or any site where

materials were stored or handled, is to determine whether past activities resulted in a release to the environment. And as storage yards typically handle both solid and liquid materials, the discovery of some type of a release was not unexpected by DTSC staff.

The seventh full paragraph of this section states "*In the areas outside of the SWDA's, the location(s) or presence of hazardous materials cannot be reliably predicted.*" While its true that contaminants may be encountered throughout the common areas in Site 12, it is not accurate to suggest that contaminants may be found at concentrations and volumes similar to those found in the known SWDAs.

6. Page 1-5, Section 1.5, Potential Threats to Human Health From Site Contaminants

This section describes contaminants (i.e., Lead, PCBs and Dioxins) as being present in near-surface soils which may leave the reader with the impression that no contaminants exist in deeper soils. To avoid leaving the reader with an inaccurate perception of where contaminants exist, please indicate that contaminants are known to exist at the surface and to depths of at least four feet below ground surface in the SWDAs.

This section also implies that dioxin and methane action levels may not be based on a residential exposure scenario. Please explain why the proposed action levels are appropriate for a residential setting and also clearly state how the Navy intends to achieve the cleanup standard for methane when conducting the removal action.

Sections 1.5.1 through 1.5.3 discuss the contaminants encountered in the SWDAs but also states that these same contaminants are scattered, to a lesser extent, in the areas outside of the SWDAs. This leaves the reader with the impression that the contaminant boundaries within the SWDAs are not well defined and that lead, PAHs and dioxin's are potentially located throughout the remainder of Site 12 at volumes and concentrations similar to the SWDAs. Please clarify.

7. Page 2-1, Section 2.1.1, Site Location and Historic Operations

This section identifies the known SWDAs in Site 12, including Bigelow Court, but nowhere in the document is it made clear that the planned removal action is intended to address the contamination in Bigelow Court. Please amend this and

other appropriate sections of the report to clearly indicate which SWDAs will be addressed under the revised EE/CA. If the Navy does not intend to address the SWDA in Bigelow Court under the revised EE/CA, then an explanation justifying its omission should be provided.

The second paragraph states that Site 12 is an area consisting of grassy lawns, paved roads and residential housing units with backyards. Fenced backyards do exist for the 1100, 1200 and 1300 series housing but not the 1400 series. These units simply have backdoors that open onto grassy common areas.

The fourth paragraph states that aerial photographs were used to identify debris disposal areas on the island and that site investigations were then performed to confirm or deny the presence of debris or specific chemicals of concern. Please specify which investigations the Navy is referring to, what the results were and how they were used in the preparation of the EE/CA. This paragraph also mentions an extension of the storage yard but does not describe the location of the extension. Please describe the location of the storage yard extension and include a figure that depicts its boundaries.

The fifth paragraph states that EPA identified a "waste" incinerator in the 1231/1233 SWDA and the residue from the incinerator was likely scattered throughout the area prior to construction of the housing. To avoid leaving the reader with the wrong impression, please be more specific when describing the type of an incinerator that operated in this area. It is DTSC's understanding that the incinerator was used for paper documents only and not hazardous wastes such as petroleum products or other discarded materials from on-base maintenance or construction activities.

The sixth and seventh paragraphs of this section describe historical features in Site 12 (debris mounds and a large dark area) without thoroughly discussing their relevance. Please further discuss these features and provide the basis for not further evaluating these potential areas of concern. Please also provide any and all figures or photographs that depict their locations in Site 12.

The eight paragraph states that *"During the grading, some of the solid waste material around the bunkers likely was spread over a moderately larger local area."* Again, this statement could leave the reader with the impression that contaminants could be spread throughout Site 12 at concentrations and volumes similar to those known to exist within the SWDAs. Please clarify.

8. Page 2-4, Section 2.2.1, Previous Investigations

1999 – Please see comment number five above.

2001 – Please discuss the results of the VOC contamination near Building 1323 and why it is no longer a concern.

9. Page 2-7, Section 2.2.2, Previous Removal Actions

This section states that dioxins were removed as a part of the removal action at Buildings 1207 and 1209 but that they were not detected above the US EPA Preliminary Remediation Goals (PRGs). Is this correct? DTSC believes that dioxins have been detected at concentrations exceeding the US EPA PRGs near Buildings 1207/1209.

The second paragraph suggest that Building 1133 is currently within a SWDA and that there may be contamination present at unsafe levels. To avoid confusing the reader, please provide some context about the location of Building 1133 and its relationship to the known contamination in SWDA A&B.

10. Page 2-9, Section 2.3, Source, Nature and Extent of Contamination

The first sentence of this section states that *“Based on the results of previous and current investigations, chemical- and solid waste-contaminated soil has been identified in the four SWDAs and in other areas of Site 12.”* This again implies that concentrations and volumes of contaminants similar to those known to exist in the SWDAs may be found throughout the rest of Site 12. Please clarify.

The third and fourth paragraphs of this section also contains language that implies that contaminants could be found throughout Site 12 similar to that found in the SWDAs.

It should also be noted that chlordane was routinely detected around building foundations and was likely due to the routine application for termite control.

11. Page 2-11, Section 2.4.4, Risk Screening Evaluation

Each of the bulleted items in this section discusses the contaminants encountered in the SWDAs but also states that these same contaminants are present in and near the SWDAs in surface soils at concentrations above

residential PRGs. This leaves the reader with the impression that the contaminant boundaries within the SWDAs are not well defined and that lead, PAHs and dioxin's are potentially located throughout other areas of Site 12 at volumes and concentrations similar to the SWDAs. Please clarify.

12. Page 2-12, Section 2.4.5, Evaluation of the Protectiveness of a Soil Cover or Hard Physical Barrier

In reviewing Section 2.4.5 and subsequent risk related sections, DTSC staff were unable to determine how the Navy's qualitative evaluation assessed the protectiveness of removing the top 2 feet of soil, the top 4 feet of soil or the placement of a hard physical barrier at the surface. In order to assess the adequacy of the Navy's evaluation and the potential effectiveness of each of the alternatives, a thorough discussion of how the Navy qualitatively ranked the protectiveness of each alternative needs to be presented.

This section also states that risks to utility workers conducting maintenance or construction activities, within the SWDAs, will be evaluated separately in the Site 12 Remedial Investigation Report. Without an understanding of the risk posed by conducting utility work in the SWDAs, DTSC is unable to evaluate the effectiveness of each of the proposed alternatives. To the extent possible, the Navy needs to present the potential risk to future utility workers, both for maintenance and new construction, and evaluate the relative reduction of risk under each of the proposed alternatives.

13. Page 3-1, Section 3.1, Statutory Framework

It may be more accurate to use the word "input" instead of "participation" in the second sentence of the second paragraph of this section.

The fifth paragraph of this section implies that contaminants potentially exist throughout all of Site 12 at concentrations that warrant a removal action. Please clarify.

14. Page 3-2, Section 3.2, Determination of Removal Scope

This section indicates that the removal action is intended to restrict the pathway for residential human exposure to hazardous substances in soil at Site 12. The EE/CA also needs to address the potential exposure of future utility workers.

15. Page 3-2, Section 3.3, Determination of Removal Schedule

As a part of selecting a preferred alternative, DTSC will need to review all comments made on the EE/CA by the public and local, State and Federal regulatory agencies, including the City of San Francisco. This review will enable DTSC to evaluate community and agency acceptance of the proposed alternatives which will then allow for the selection of a preferred alternative. Therefore, DTSC request that the Navy forward all comments made on the EE/CA to DTSC for review shortly after the close of the public comment period.

16. Page 3-6, Section 3.5, Removal Action Objectives

For known lead releases at Naval Station Treasure Island, DTSC has and continues to use the 400 mg/kg cleanup goal as a ceiling value, not as an average concentration.

The protection of utility and construction workers needs to be added to this section.

17. Page 4-1, Section 4.0, Identification and Analysis of Removal Action Alternatives

Please see comment number two above.

18. Page 4-2, Section 4.1, Excavation

This section discusses the various soil removal alternatives and concludes that all of the alternatives would provide adequate long-term protection for a resident or other recreational user. However, alternatives 1 and 3 only provide for the removal of soils in areas where no hardscape exist, which will result in contaminants being left in place at the surface and around utility lines within hardscaped areas. This suggest that future utility work, in hardscaped areas, could result in worker exposures. To address this issue, please discuss the appropriateness of using ICs to manage contaminants left in place, as a component of any alternative, and how they would be designed and managed to protect workers installing or maintaining utilities in the future.

Furthermore, none of the proposed alternatives address the possibility of worker exposure to contaminants if new utility lines are installed at locations not previously remediated. DTSC considers this a likely scenario and believes that it needs to be evaluated and factored into the overall evaluation of the protectiveness of each of the proposed alternatives.

In alternatives 3 and 4, the Navy has proposed excavation down to the mean higher high water (MHHW) instead of four feet below ground surface, as in the EE/CA from 2002. DTSC staff were previously unaware of this proposal and question it's purpose. The Navy has previously conducted removal actions in Site 12 to depths of four feet below ground surface, even in the lowest lying areas where groundwater can be encountered at 2.5 feet below ground surface, and without substantial difficulty (i.e., Bldgs. 1207/1209 and 1133). Without a well substantiated technical reason for not going to 4 feet below ground surface, DTSC is unable to agree that MHHW should be the excavation criteria for alternatives 3 and 4.

This section also indicates that the lateral extent of the common area SWDA excavations would be set by the presence of chemical and physical hazards in the sidewalls, as determined by confirmation sampling. DTSC believes that confirmation samples in the bottom of the excavation are also necessary to determine if contaminants remain above the established action levels. Confirmation results from the bottom of the excavation could then be used to support the boundaries of any necessary institutional controls.

Section 21140 of Title 27, California Code of Regulations is cited by the Navy as the basis for two feet of cover in the common areas within the known solid waste disposal areas. DTSC acknowledges the appropriateness of citing Title 27 as an ARAR for landfill closures but in the case of Site 12, additional justification for the Title 27 guidelines needs to be provided. The Title 27 regulations were designed, in part, to protect the public from coming into contact with residual waste materials at solid waste landfills but it is not clear that they were intended for a residential setting like Site 12. It is also not clear that the Title 27 requirements were designed to address CERCLA constituents, especially when some of the constituents in the SWDAs exceed hazardous waste levels at the ground surface.

In citing Title 27 regulations the Navy omitted other potentially relevant sections that may be appropriate for Site 12, such as the post-closure and maintenance requirements for a final soil cover. Therefore, please include an analysis of the additional Title 27 sections that may be appropriate for addressing Site 12 and further discuss the Navy's basis for proposing a two foot soil cover and how it was determined that it would suffice for the long-term protection of human health.

DTSC also understands that excavation of soils in the SWDAs will involve surveying for radiological sources, however, no discussion of this component

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was found in the EE/CA. To evaluate the Navy's proposal for radiological surveys in the SWDAs, a general description of the anticipated soil surveying process, along with the associated costs, needs to be included in the EE/CA. This will allow the reader to determine if the surveying techniques will satisfy regulatory protocols, how the surveys will be conducted and integrated into the removal actions, and whether there is adequate funding to conduct the surveys. Without this information, DTSC will be unable to assess the overall implementability of each of the proposed alternatives.

If you have any questions regarding this letter or if you would like to arrange a meeting to discuss specific issues, please call me at (510) 540-3763.

Sincerely,

A handwritten signature in black ink that reads "David Rist". The signature is written in a cursive style with a large initial "D".

David Rist
Hazardous Substances Scientist
Office of Military Facilities

Enclosure

cc: See next page.

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cc: Mr. James Ricks (SFD-8-2)
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ENCLOSURE

REVIEW AND COMMENTS FROM BRIAN DAVIS OF
DTSC - SACRAMENTO, CA

DATED 15 OCTOBER 2002

THIS ENCLOSURE WAS NOT RECEIVED IN THE
RESTORATION RECORDS FILE.

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