UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105

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MARE ISLAND
SSIC NO. 5090.3.A

January 31, 2008

Mr. Michael Bloom
Dept of the Navy
Base Realignment and Closure
Program Management Office
1455 Frazee Road, Suite 900
San Diego, CA 92108-4301

RE: Responses to Comments on 2002 Draft Final Investigation Area A2 Former North Building Ways Area Remedial Investigation, Former Mare Island Naval Shipyard, Vallejo California, 2002

Dear Mr Bloom:

EPA has reviewed the latest version of Navy's responses to regulatory agency comments on the 2002 Remedial Investigation for the Former North Building Ways. We have the following remaining comments:

Comments on the Human Health Risk Assessment:

1. It is unclear whether the vapor intrusion pathway has been adequately characterized or discussed to comply with the new requirements of California Assembly Bill 422 which mandate "*that the exposure assessment of any health or ecological risk assessment prepared in conjunction with a response action taken or approved pursuant to the California Superfund Act include the development of reasonable maximum estimates of exposure to volatile organic compounds that may enter structures that are on the site or that are proposed to be constructed on the site and may cause exposure due to accumulation of those volatile organic compounds in the indoor air of those structures.*" AB 422 (attached) went into affect on January 1, 2008.

2. The HHRA makes statements that future residential or sensitive uses of the property are unlikely, however the most recent early transfer negotiations have indicated that the property may be redeveloped as residential, classrooms, dormitories and a hospital. The HHRA needs to take these potential exposure scenarios into account. Statements that residential or sensitive future land use are not likely should be removed from the risk assessment.

Comments on the Ecological Risk Assessment:

The 2002 draft final Remedial Investigation for Area A2 North Building Ways is no longer adequate to describe the ecological risk at the Area. The investigation of Area H1 has provided a more comprehensive description of the risk present in this type of area and must now become the template for Area A2. The following are the major items which need revision:

1. The ERAs for the upland and wetland habitats must be revised to include a broader selection of ecological receptors and their exposure factors. The current draft includes risk calculated only for the salt marsh harvest mouse for the tidal wetland and the gray fox and Northern Harrier for the upland area. This should be expanded to include trophic levels represented by the Western meadowlark, California vole, and ornate shrew for the upland area and the killdeer, breeding and non-breeding mallard, and great blue heron for the tidal wetland. If recent surveys confirm that the California clapper rail and black rail are still present, they should be included as well for the tidal wetlands.

2. Updated toxicity reference values (TRVs) and benchmarks should be used.

3. The issue of a connection between surface water on the Area A2 and the Strait needs to be reviewed. Based on a recent site visit by the State, it appears there is a direct connection which should be assessed for eco risk in the new draft.

In addition, in response to the Navy Response to Comments provided by EPA on this draft, we reiterate again that this document should include all relevant materials for review rather than referencing the draft Onshore and Offshore ERAs which were not accepted by the State. This document must be a stand alone document."

If you have any questions, please contact me at (415) 972-3150.

Sincerely,

Carolyn d'Almeida
Remedial Project Manager

cc: Chip Gribble, DTSC
Brian Thompson, RWQCB

enclosure

Assembly Bill No. 422

CHAPTER 597

An act to amend Section 25356.1.5 of the Health and Safety Code, and to add Section 13304.2 to the Water Code, relating to hazardous substances.

[Approved by Governor October 13, 2007. Filed with Secretary of State October 13, 2007.]

LEGISLATIVE COUNSEL'S DIGEST

AB 422, Hancock. Hazardous substances: water quality.

(1) Existing law, the Carpenter-Presley-Tanner Hazardous Substance Account Act (California Superfund Act) imposes liability for hazardous substance removal or remedial actions and requires the Department of Toxic Substances Control to adopt, by regulation, criteria for the selection and for the priority ranking of hazardous substance release sites for removal or remedial action under the act. The California Superfund Act excludes releases of petroleum from that act. The California Superfund Act requires any response action taken or approved under that act to meet certain requirements with regard to, among other things, the preparation of the health or ecological risk assessment. The act requires the exposure assessment of that risk assessment to meet specified requirements, including the development of reasonable maximum estimates of exposure for both current land use conditions and reasonably foreseeable future land use conditions at the site.

This bill would require that the exposure assessment of any health or ecological risk assessment prepared in conjunction with a response action taken or approved pursuant to the California Superfund Act include the development of reasonable maximum estimates of exposure to volatile organic compounds that may enter structures that are on the site or that are proposed to be constructed on the site and may cause exposure due to accumulation of those volatile organic compounds in the indoor air of those structures.

(2) Existing law, the Porter-Cologne Water Quality Control Act (water quality control act), requires a person who discharges waste into the waters of the state in violation of waste discharge requirements or other order or prohibition issued by a regional board or the state water board, upon the order of that regional board or the state board, to clean up the waste or to abate the effects of the waste. The act subjects a person who violates a cleanup or abatement order to civil penalties.

This bill would authorize the state board or a regional board to require a person conducting cleanup, abatement, or other remedial action for a brownfield site, as defined, to assess the potential human health or ecological

risks caused or created by the discharge using human health and environmental screening levels or a site-specific assessment of risks.

The bill would provide that this authority applies only to an order issued by the state board or a regional board on or after January 1, 2008, but the bill would allow the state board or a regional board to require a site-specific assessment of human health or ecological risks at a brownfield site that is subject to an order issued before January 1, 2008, pursuant to the water quality control act as it read on December 31, 2007. The bill would provide that if the state board or a regional board requires a site-specific assessment of human health or ecological risks at a brownfield site that is subject to an order issued before January 1, 2008, the state board or a regional board would be required to make a specified determination.

The people of the State of California do enact as follows:

SECTION 1. Section 25356.1.5 of the Health and Safety Code is amended to read:

25356.1.5. (a) Any response action taken or approved pursuant to this chapter shall be based upon, and no less stringent than, all of the following requirements:

(1) The requirements established under federal regulation pursuant to Subpart E of the National Oil and Hazardous Substances Pollution Contingency Plan (40 C.F.R. 300.400 et seq.), as amended.

(2) The regulations established pursuant to Division 7 (commencing with Section 13000) of the Water Code, all applicable water quality control plans adopted pursuant to Section 13170 of the Water Code and Article 3 (commencing with Section 13240) of Chapter 4 of Division 7 of the Water Code, and all applicable state policies for water quality control adopted pursuant to Article 3 (commencing with Section 13140) of Chapter 3 of Division 7 of the Water Code, to the extent that the department or the regional board determines that those regulations, plans, and policies do not require a less stringent level of remediation than the federal regulations specified in paragraph (1) and to the degree that those regulations, plans, and policies do not authorize decisionmaking procedures that may result in less stringent response action requirements than those required by the federal regulations specified in paragraph (1).

(3) Any applicable provisions of this chapter, to the extent those provisions are consistent with the federal regulations specified in paragraph (1) and do not require a less stringent level of remediation than, or decisionmaking procedures that are at variance with, the federal regulations set forth in paragraph (1).

(b) Any health or ecological risk assessment prepared in conjunction with a response action taken or approved pursuant to this chapter shall be based upon Subpart E of the National Oil and Hazardous Substances Pollution Contingency Plan (40 C.F.R. 300.400 et seq.), the policies, guidelines, and practices of the United States Environmental Protection

Agency developed pursuant to the federal act, and the most current sound scientific methods, knowledge, and practices of public health and environmental professionals who are experienced practitioners in the fields of epidemiology, risk assessment, environmental contamination, ecological risk, fate and transport analysis, and toxicology. Risk assessment practices shall include the most current sound scientific methods for data evaluation, exposure assessment, toxicity assessment, and risk characterization, documentation of all assumptions, methods, models, and calculations used in the assessment, and any health risk assessment shall include all of the following:

(1) Evaluation of risks posed by acutely toxic hazardous substances based on levels at which no known or anticipated adverse effects on health will occur, with an adequate margin of safety.

(2) Evaluation of risks posed by carcinogens or other hazardous substances that may cause chronic disease based on a level that does not pose any significant risk to health.

(3) Consideration of possible synergistic effects resulting from exposure to, or interaction with, two or more hazardous substances.

(4) Consideration of the effect of hazardous substances upon subgroups that comprise a meaningful portion of the general population, including, but not limited to, infants, children, pregnant women, the elderly, individuals with a history of serious illness, or other subpopulations, that are identifiable as being at greater risk of adverse health effects due to exposure to hazardous substances than the general population.

(5) Consideration of exposure and body burden level that alter physiological function or structure in a manner that may significantly increase the risk of illness and of exposure to hazardous substances in all media, including, but not limited to, exposures in drinking water, food, ambient and indoor air, and soil.

(c) If currently available scientific data are insufficient to determine the level of a hazardous substance at which no known or anticipated adverse effects on health will occur, with an adequate margin of safety, or the level that poses no significant risk to public health, the risk assessment prepared in conjunction with a response action taken or approved pursuant to this chapter shall be based on the level that is protective of public health, with an adequate margin of safety. This level shall be based exclusively on public health considerations, shall, to the extent scientific data are available, take into account the factors set forth in paragraphs (1) to (5), inclusive, of subdivision (b), and shall be based on the most current principles, practices, and methods used by public health professionals who are experienced practitioners in the fields of epidemiology, risk assessment, fate and transport analysis, and toxicology.

(d) The exposure assessment of any risk assessment prepared in conjunction with a response action taken or approved pursuant to this chapter shall include the development of reasonable maximum estimates of exposure for both current land use conditions and reasonably foreseeable future land use conditions at the site.

(e) The exposure assessment of any risk assessment prepared in conjunction with a response action taken or approved pursuant to this chapter shall include the development of reasonable maximum estimates of exposure to volatile organic compounds that may enter structures that are on the site or that are proposed to be constructed on the site and may cause exposure due to accumulation of those volatile organic compounds in the indoor air of those structures.

SEC. 2. Section 13304.2 is added to the Water Code, to read:

13304.2. (a) For purposes of this section, "brownfield site" means a real estate parcel or improvements located on the parcel, or both that parcel and the improvements, that is abandoned, idled, or underused, due to environmental contamination and that is proposed to be redeveloped.

(b) The state board or a regional board may require a person conducting cleanup, abatement, or other remedial action pursuant to Section 13304 for a brownfield site to assess the potential human health or ecological risks caused or created by the discharge, using human health and environmental screening levels or a site-specific assessment of risks.

(c) In conducting a site-specific assessment of human health or ecological risks, the discharger shall address all of the following factors to the extent relevant based on site-specific conditions:

(1) An evaluation of risks posed by acutely toxic hazardous substances.

(2) An evaluation of risks posed by carcinogenic or other hazardous substances that may cause chronic disease.

(3) Consideration of possible synergistic effects resulting from exposure to, or interaction with, two or more hazardous substances.

(4) Consideration of the effect of hazardous substances upon subgroups that comprise a meaningful portion of the general population, including, but not limited to, infants, children, pregnant women, or other subpopulations that are identifiable as being at greater risk than the general population of adverse health effects due to exposure to hazardous substances.

(5) Consideration of exposure level and body burden level that alter physiological function or structure in a manner that may significantly increase the risk of illness and of exposure to hazardous substances in all media, including, but not limited to, exposures in drinking water, food, ambient and indoor air, or soil.

(6) The development of reasonable maximum estimates of exposure for both current land use conditions and reasonably foreseeable future land uses at the site.

(7) The development of reasonable maximum estimates of exposure to volatile organic compounds that may enter structures that are on the site or that are proposed to be constructed on the site and that may cause exposure due to accumulation of these volatile organic compounds in the indoor air of those structures.

(d) The state board or a regional board may document its decision to require a site-specific assessment of human health or ecological risks in a letter issued to the discharger pursuant to Section 13267, through amendment

of the cleanup and abatement order issued pursuant to Section 13304, or through other written means that the board deems appropriate.

(e) (1) Except as provided in paragraph (2), this section applies only to an order issued by the state board or a regional board issued pursuant to Section 13304 on or after January 1, 2008.

(2) The state board or a regional board may require a site-specific assessment of human health or ecological risks at a brownfield site that is subject to an order issued before January 1, 2008, only if the state board or a regional board makes a determination that site-specific circumstances demonstrate the need for that assessment. A site-specific assessment pursuant to this paragraph shall be done in accordance with the authority granted to the state board or a regional board pursuant to this division, as it read on December 31, 2007.

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