

Public Report

**Response to the Agency for Toxic Substances and Disease
Registry's *Public Health Assessment for Naval Air Station
Alameda (a/k/a Naval Supply Center, Alameda Annex), Alameda,
Alameda County, California***

**By Arc Ecology
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Overview

Arc Ecology is a non-profit, public interest agency that has been working on the sustainable redevelopment of closed military bases since 1987. Arc Ecology has been working with the Alameda community for ten years by providing technical assistance on issues of toxic remediation, affordable housing, community-based economic development, and environmental enhancement. As a member of the Restoration Advisory Board (RAB) at the former Naval Air Station Alameda (Alameda Point), Arc Ecology has been closely following the investigation and remediation activities at Alameda Point since the cleanup began. During this time, Arc Ecology has been working with interested members of the community to achieve a cleanup of the base that meets the standards of the citizens of Alameda and is protective of the health of current and future users.

Arc Ecology reviewed the public health assessment for the former Naval Air Station Alameda prepared by the Agency for Toxic Substances and Disease Registry, dated February 11, 2004. Overall, we were disappointed with the quality of report that was generated after spending nearly four years on the assessment. The general impression one receives from reading the document is that there is no threat to human health posed by Alameda Point. For those of us who have been working on the remediation of this National Priorities List site for many years, it is hard to understand how ATSDR comes to this conclusion. If the true purpose of the document is to address acute and immediate risks to populations that are likely to be exposed to the contamination, then conclusions about future use and health risks should not be drawn.

We agree that it is important to provide current residents and frequent visitors of the facility with an adequate assessment of the risks to their immediate health. However, the conclusions that an average layperson would draw after reading this report is that the base is safe for reuse. Those of us more intimately involved in the cleanup who know of the extent of contamination on the site (including the melting pot of contaminants in both of the facility landfills, the thousands of gallons of petroleum wastes in the soil and groundwater, the presence of dense non-aqueous phase liquids (DNAPL) in several locations, the myriad of sites with high levels of volatile organic compounds) would be disappointed if the intent of the report were to conclude that there is no risk to human health from the contamination at Alameda Point.

General Comments

Sources of information –

According to the report, the agency gathered information and comments from the people who live or work near the site. It is unclear with whom ATSDR conducted interviews during this assessment, besides the Navy. None of the community members of the RAB that we spoke with were contacted during this process. An adequate assessment would involve interviews with the citizens that are intimately involved in the cleanup.

Addition of most recent information –

It is our understanding that the report was written using the most current information available at the time. Since then, however, several substantial changes have occurred to the Installation Restoration (IR) program at Alameda Point. In order to have a truly accurate, useful document, the next iteration of the document should include this information. For example, since the report was written, several new IR sites have been added. These should be included in the discussion on Remedial and Regulatory History.

Follow up from past consultations –

The report mentions on page 11 that a health consultation was conducted in 1992 to review indoor air data in Marina Village Housing Area and that the levels of benzene that were detected posed a public health threat for people living in these homes. As a result, annual indoor sampling was recommended to ensure that levels were not increasing. To the best of our knowledge, ATSDR has not followed up with the Navy to determine whether or not this type of sampling occurred. The RAB has been requesting this type of sampling for well over a year and the results of such a study, if it's been conducted, have not yet been presented. If there is a risk from inhalation of benzene and other volatile or semi-volatile organic compounds to people living in Marina Village Housing, this need to be addressed. The potential risk was identified 12 years ago and as far as we know, nothing has been done to mitigate the risks. This is a substantial oversight.

Underplaying risk –

The language used in the document is frustrating, as it seems to attempt to downplay any potential health risks. While it is understandable that the agency is trying to prevent any reactionary responses, misrepresenting the risks is equally dangerous. For example, on page 11, in reference to the results of the 1992 health consultation that was conducted, the report states, "ATSDR concluded that, except for benzene, the levels of contaminants detected do not represent a public health threat for people living in these homes. ATSDR also recommended annual indoor air sampling to ensure that contaminant levels are not increasing (ATSDR 1992)." The risks from the benzene, which are noted as an aside as being at levels that pose a risk to human health, are not even discussed. This conclusion reads as though there was no risk at the time but a potential for one in the future, which is not the case.

Demographics –

The demographics data presented on page 12 are incomplete. It states that according to the 2000 Census, of the 72,000 residents in Alameda, 57% are Caucasian, and 6% are African-American. No mention is made of the remaining 37%.

Exposure Evaluations –

The exposure evaluation section for some areas are much more thorough and explicit than others. For example, the exposure evaluation for indoor air in Marina Village Housing and North Housing is much more comprehensive than that provided for the PAH contaminated soil in West Housing. It is unclear why the EPA Region IX Preliminary Remediation Goals (PRGs) were not included in the dose comparison. Since PRGs are the most commonly referenced cleanup goals used at Alameda Point, it would be helpful

if a comparison were provided showing how the effects levels used by ATSDR to determine risk compare to those used by the Navy and the EPA.

Effects of exposure to multiple contaminants -

The report only takes into account the affects from single contaminant exposures. No mention is made of the risks associated with exposure to multiple contaminants. While this data is still emerging, there are many studies that indicate that exposure to multiple contaminants, at much lower levels, can have an adverse affect on human health. The report should include a discussion about the possible affects from multiple contaminants, since most of the exposure at these sites is to more than one contaminant.

Specific Comments on Site Assessments

West Housing Area –

- There is no reference given for the data presented in the first paragraph of the Public Health Implications on page 24: "...the highest reported TEQ [toxic equivalency concentrations] was 26 ppm; the next highest TEQ was just under 6 ppm. Further, PAH concentrations in most samples (97%) were detected below the health-based action level of 1 ppm." A reference to the data set was used to develop these statements should be included in the report.
- The final paragraph of the Public Health Implications (page 24) states that the highest detected PAH in Alameda soils was fluoranthene at a concentration of 26 ppm. It is unclear whether this the highest concentration detected in all of Alameda or if it the highest detected PAH in the West Housing Area. The location of this sample and at what depth was it was discovered should be clarified.
- For certain sites, the report explains that the agency focused on the surface soil (top 6 inches) because ATSDR believes that this is the soil with which people most frequently come in contact (e.g., lead contaminated soil in parcels 79, 98, 105, 106, and 107). It is unclear what depths of soil were considered in the risk evaluations for the West Housing Area.
- The conclusion is drawn that people exposed to elevated levels of PAHs in West Housing area soils are not likely to result in adverse health effects. It is unclear whether this conclusion is based on the levels of contamination detected before or after the removal action conducted in 2003. It seems as though the conclusion is drawn based on pre-removal action data, implying that the time-critical removal action conducted by the Navy was unnecessary. This is rather disconcerting as it is quite contradictory to the conclusions drawn by the Navy and the regulatory agencies.
- It is stated in the foreword that health impacts to children and high-risk groups are given special consideration in assessing the health effects. Was special attention given to the population of West Housing residents that are living with compromised immune systems?

Marina Village and North Housing Areas –

- In the description of North Housing on page 27, the report states that Coast Guard residents are prohibited from growing vegetables. This is not correct.

According to the packet of information given to incoming residents, gardening is encouraged. Arc Ecology suggests requesting a copy from the Coast Guard and adjusting this section of the document, as necessary.

- It is frustrating to see the highest levels of VOCs in indoor air written off as fumes from airplane glue and paint. While it is true that these substances contain VOCs, we cannot automatically assume that they were the cause for the high levels that were detected in these homes. Sound science would recommend another round of sampling to conduct a comparison.
- The paragraph on page 30 that discussed the comparison of indoor air measurements to those estimated using a model is very unclear. The reviewer has read it several times and remains unclear as to whether the levels that were measured were above or below the levels that were estimated using a model. This paragraph should be revised.
- Comparison of contaminants to indoor air, pages 30-31: The report states that the levels of the various contaminants that were detected were usually above levels commonly found in indoor air but “below concentrations that could cause adverse health effects.” Considering the ever-evolving nature of toxicology, it would be better stated that concentrations are below levels known to cause adverse health effects. Indeed, new reports on the toxicology of TCE (trichloroethylene) are showing that it may be hundreds of times more toxic than initially thought. Furthermore, these levels are for single contaminant exposures and they do not address the issue of chemical mixtures.
- Exposure evaluation, Marina Village, page 32: The information presented here about the potential adverse health effects from the levels of VOCs detected in Marina Village in 1992 contradicts the information presented on page 11 about the same. It is unclear whether or not the levels of benzene detected at that time were high enough to pose a potential health risk. This needs to be clarified.
- Exposure evaluation, Kollman Circle, page 34: The side bar entitled “Why are these VOCs [volatile organic compounds] in my home?” is inappropriate in this discussion. We agree that it is important for people to understand that many common household products contain potentially harmful VOCs. However, to imply that all of the VOCs detected in these homes could have been from household products is absurd for homes that are directly above a groundwater plume of benzene, naphthalene and MTBE. Considering the fact that MTBE, which is only commonly found in gasoline, was also detected in the homes, it seems likely that it is volatilizing from the groundwater into indoor air. Nowhere in the report does it explain this. Again, we appreciate the importance of putting the risk into context and we are fortunate that thus far, levels detected in indoor air appear to be relatively low. We are also happy to see that another round of sampling has been recommended.

Estuary Park –

- Public Health Implications, page 40: The report states, “Future residential activities, including construction activities, gardening or other activities that

- involve digging, are also not expected to occur because the Navy instituted remedial measures in 2001 and 2002. These remedial measures need to be explained further along with how they will prevent the listed activities.
- It is unclear whether the data used in this evaluation was from before or after the removal action that was conducted here by the Navy (See bullet 4 under West Housing Area.)

Seaplane Lagoon –

The conclusion that adverse affects are not likely to result from eating fish caught from Seaplane Lagoon is in direct contradiction with all reports written by California state agencies regarding eating fish from San Francisco Bay, assuming the “standard daily ingestion rate and standard body weight” used are similar. According to the latest sport fish consumption advisory guide published by the California Office of Environmental Health Hazards, a 70kg adult should eat no more than two meals per month of San Francisco Bay sport fish. A meal for a 70kg adult is defined as 8 ounces, or 227 grams. It also recommends that women who are pregnant or may become pregnant, nursing mothers, and children under age six should not eat more than one meal of fish per month. It is unclear how ATSDR came to the conclusion that people eating 126 grams of fish a day from this area would experience no adverse health effects.