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

May 10, 2011

Mr. Peter Galloway
U.S. Army Corps of Engineers
Honolulu District
Regulatory Branch (CEPOH-EC-R)
Building 230
Fort Shafter, HI 96858-5440

Subject: Draft Environmental Impact Statement for the Proposed Honolulu Seawater Air Conditioning Project, Honolulu, Hawaii. (CEQ# 20110078)

Dear Mr. Galloway:

The U.S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Proposed Honolulu Seawater Air Conditioning Project (Project) pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and Section 309 of the Clean Air Act. Our comments were also prepared under the authority of, and in accordance with, Sections 303, 316, and 402 of the Clean Water Act (CWA), and the provisions of the Federal Guidelines promulgated at 40 CFR 230 under Section 404(b)(1) of the Clean Water Act (CWA).

EPA strongly supports innovative, energy saving technologies, provided that they are suitably located to minimize adverse environmental impacts. Using energy efficient technologies, such as seawater air conditioning (SWAC) for district cooling needs, can help the nation meet its energy requirements while reducing greenhouse gas emissions; however, as proposed, this project would achieve energy-reducing benefits while also causing adverse environmental impacts. EPA would like to work with the Corps to refine the proposed project to avoid the unnecessary environmental tradeoffs further described below and in the attached detailed comments.

We have rated the DEIS EO-2, Environmental Objections – Insufficient Information (see enclosed EPA Rating Definitions), because the Preferred Alternative potentially violates CWA Sections 303(c), 316 (a), and 402 which include requirements for the protection of water quality. Specifically, the project may result in further degradation of already impaired waters, due to the significant load of nutrients and difference in temperature of the discharge at the return pipe outlet. Our rating is also based on the Preferred Alternative's intake velocity and lack of screening, which may violate CWA Section 316(b), which includes requirements to reduce the impingement and entrainment of species at the intake.

The basis for our rating is discussed further in the enclosed detailed comments. The detailed comments also include our concerns about the magnitude of the project impacts involving waters of the United States (WUS), biological resources, habitat, floodplain, hazardous materials from construction, and public health.

EPA appreciates the opportunity to review this DEIS. We also appreciate the Corps' coordination with us prior to and during our review, including meetings, phone calls and a site visit on August 8, 2010. When the FEIS is released, please send one hard copy and three electronic copies to the address above (mail code: CED-2). If you have any questions, please contact me at (415) 972-3521, or have your staff contact James Munson, the lead reviewer for this project. James can be reached at (415) 972-3800 or munson.james@epa.gov.

Sincerely,

Cheryl Bailey for:

Enrique Manzanilla, Director
Communities and Ecosystems Division

Enclosures:
Summary of EPA Rating Definitions
Detailed Comments
Cc:

Gary L. Gill
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Hawaii Department of Health
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EPA DETAILED COMMENTS ON THE DRAFT ENVIRONMENTAL IMPACT STATEMENT (DEIS) FOR THE PROPOSED HONOLULU SEAWATER AIR CONDITIONING PROJECT, HONOLULU, HAWAII. (CEQ# 20110078) May 10, 2001

Impacts to Waters of the United States and Water Quality

Clean Water Act Section 303(c)-(d) and 316(a)

Nutrients

The DEIS contains an insufficient analysis of whether and how the Preferred Project Alternative will meet Hawaii's water quality standards for nutrients. Mamala Bay is currently listed under Clean Water Act Section 303(d) as impaired for total nitrogen and chlorophyll-a: http://hawaii.gov/health/environmental/env-planning/wqm/303dpcfinal.pdf and http://hawaii.gov/health/environmental/env-planning/wqm/2006_Integrated_Report/2006_Chapter_IV_Assessment_of_Waters.pdf. The DEIS does not address this listed impairment in the context of potential National Pollutant Discharge Elimination System (NPDES) permitting. Section 3.7.4.3 of the DEIS states the ambient concentrations of nitrate nitrogen at the ~1,700 ft. deep intake are nearly 3 times the water quality standard, and these nutrient-rich waters will be discharged through the return pipe into more shallow (~135 ft deep) waters of Mamala Bay. The FEIS should fully evaluate the ambient concentrations of nutrients at the discharge location as compared to Hawaii's water quality standards and how the proposed discharge will interact with the discharge from the Sand Island wastewater treatment plant. As the Preferred Project Alternative proposes a new discharge to an impaired waterbody and will require an NPDES permit for this discharge, the Final Environmental Impact Statement (FEIS) should consider and analyze the requirements of federal regulations at 40 CFR 122.4(i), which provide, in part, that: "No permit may be issued... to a new source or a new discharger, if the discharge from its construction or operation will cause or contribute to the violation of water quality standards." We recommend that the FEIS also consider the 9th Circuit federal appeals court decision in *Friends of Pinto Creek vs. USEPA*(504 F.3rd 1007, 9th Circuit 2007), as the opinion discusses potential limitations on issuance of NPDES permits for discharges to impaired waters.

A thorough antidegradation analysis will be necessary before a decision can be made to permit this discharge. Mamala Bay would be provided tier 1 protection for nutrients under Hawaii's anti-degradation policy (HAR 11-54-1.1), which requires that existing uses be maintained and protected and prohibits further degradation of already impaired waters. The FEIS should evaluate additional discharge alternatives to address these concerns about the ability of the preferred project alternative to comply with water quality standards and NPDES permitting requirements. For example, the FEIS could evaluate alternative discharge locations that would ensure that the discharge does not contribute to further degradation of Mamala Bay.

As it would appear difficult or impossible to permit a new discharge of nutrient-rich water into a waterbody already impaired by high nutrient levels, the FEIS should provide a more thorough analysis of this issue and analysis of additional discharge alternatives.

Temperature

The DEIS does not address whether nor how the Preferred Project Alternative would meet Hawaii's water quality standards for temperature. Hawaii's water quality standards for open coastal waters, found in Section 11-54 of Hawaii's Administrative Rules, require that temperature not vary more than one degree Celsius from ambient conditions. The difference between the lowest return discharge temperature and ambient temperature is estimated to be 13 degrees Celsius. This large change in temperature would not meet water quality standards and the discharger would need to provide information to comply with CWA Section 316(a) in order to be permitted for this discharge under CWA Section 402 (NPDES). The FEIS should fully evaluate how the Preferred Project Alternative would address the impact of the temperature change on the water quality of Mamala Bay and how the project would meet temperature water quality standards.

Toxic Pollutants

The DEIS fails to consider the potential discharge of toxic pollutants from the return pipe. The FEIS should examine possible sources of toxics from the cooling process, (including the piping, pumps, and use of any antifouling agents), and how the discharge would comply with Hawaii's water quality standards (HAR 11-54).

Recommendations:

The FEIS should include an alternative to the return pipe discharge location and depth that would avoid the discharge of nutrients that would further impair the water quality of Mamala Bay.

The FEIS should describe, in detail, the project's compliance with Clean Water Act Section 303(c) and Hawaii's antidegradation policy.

The FEIS should analyze the specifics of the *Friends of Pinto Creek vs. USEPA* opinion and its potential implications for the proposed project.

The FEIS should evaluate how the proposed discharge will interact with the discharge from the Sand Island wastewater treatment plant.

The FEIS should fully evaluate the impact of the discharge-induced temperature change on Mamala Bay, and how the project would comply with Hawaii's water quality standards or the CWA 316(a) requirements.

The FEIS should include an analysis of potential sources of toxic chemicals from the cooling process.

<u>Clean Water Act Section 316(b)</u>

Although the DEIS considers the requirements of Clean Water Act Section 316(b), (page: 3-128), it fails to adequately address how the Preferred Project Alternative would comply with the requirements for a new facility, described in 40 CFR 125.84 through 40 CFR 125.89.

Specifically, the FEIS should describe how the proposed project would comply with either Track I or Track II. Track I requires reducing the intake flow to a level commensurate with a closed-cycle recirculating water system and designing the intake to a maximum through-screen design intake velocity of 0.5 ft/second. Track II requires the project to demonstrate that the technologies employed will reduce the level of adverse environmental impact from the cooling water intake structure to a comparable level to that achieved by implementing Track I. Based on the DEIS, we assume the proposed project will have to comply with Track II. The proposed project velocity of 5 ft/second, the lack of intake screen, and the limited analysis of ecological impacts of the intake system raise concerns about whether the project would comply with the requirements of CWA Section 316(b) Track II. A complete Track II analysis requires a comprehensive demonstration study, a proposal for information collection, a source water biological study, an evaluation of potential cooling water intake structure effects, and a verification monitoring plan (40 CFR 125.86(c)(2)). These studies are required in addition to the general application information requirements of 40 CFR 122.21(r) for facilities with cooling water intakes, which include source water physical data, cooling water intake structure data, and a source water baseline biological characterization.

Recommendation:

The FEIS should provide additional analysis to demonstrate compliance with either Track I or Track II of the CWA Section 316(b) requirements. If Track II is chosen, the FEIS should fully describe the results of the required Track II studies described above.

For further assistance with issues pertaining to Clean Water Act Sections 303(c) and (d), 316(a) and 316(b), please contact Elizabeth Sablad in, EPA Region 9's NPDES Permits Office. Elizabeth can be reached at (415) 972-3044, or by email at sablad.elizabeth@epa.gov.

Clean Water Act (CWA) Section 404, Rivers and Harbors Act

The DEIS provides limited documentation to support future CWA and Rivers and Harbors Act (RHA) permitting for the seawater intake and outfall pipelines. CWA Section 404 permit coverage may be required for construction of the breakout point/receiving pit and for the piles and concrete collars needed to secure the pipelines (page ES-4, nearly 0.5 acre in total fill area). Assembly and installation of the pipelines may also require authorization under RHA Section 10 for work in navigable waters. Additional information will be needed to support permit applications to the Army Corps of Engineers, including more comprehensive aquatic resource surveys and impact assessment data, and an analysis of alternatives designed to minimize impacts.

The marine biological assessments cited in the DEIS are do not sufficiently describe aquatic resources, particularly the potential occurrence of mesophotic coral reef ecosystems (deep, low light ecosystems composed of coral, semi-precious coral, algae, and invertebrates), given the proposed pipeline depths of > 40 m where mesophotic coral reef ecosystems may occur. Of equal concern is the lack of biological data presented for the staging area at Keehi Lagoon. Divers surveyed the area off Kakaako in 2005, but the DEIS only quotes a study (Grigg 1995) reporting major historical changes in the composition of coral communities and their occurrence in Mamala Bay. Similarly, the deep-water survey by the Hawai'i Undersea Research

Laboratory, referenced on page 3-308, presents only a list of organisms, without sufficient habitat description or quantification. The FEIS should describe the more recent survey data and include current mapping of habitat types, and quantitative data on coral cover, density, size, condition, and species. Similarly, the description of impacts to corals on pages 3-110 and 3-111 is inappropriate because it considers only the area directly covered by living coral heads and, therefore, underestimates the extent of coral reef habitat. It is more biologically relevant to consider the density of coral and the area of coral habitat because complex structures surrounding coral heads are used for feeding, foraging, and reproduction by marine organisms.

With regard to project alternatives, two similar intake/outfall pipeline alignments were analyzed along with a no action alternative. A range of construction methods were also considered, including micro tunneling and trenching. The DEIS considered only one design for the breakout point/receiving pit, involving digging and filling a 1,200 sq ft area within steel sheet piles that extend about 10 feet above the seafloor (page: 2-7). The DEIS also indicates that the breakout point would be sited in 31 ft deep sand channels for both alternatives. Avoidance of coral reef is poorly substantiated, and the DEIS lacks habitat maps and quantitative biological descriptions of the proposed breakout points. A broader range of alternatives that more clearly demonstrate impact avoidance may be necessary for CWA purposes.

Finally, indirect impacts to the marine environment are insufficiently addressed by the DEIS. Although direct fill impacts at the breakout point and the pipeline piles and collars total less than 1 acre, increased turbidity and physical disturbance to soft and hard sea bottoms during installation of pipelines, anchors, moorings, and anchor lines from construction vessels should also be evaluated. Discharge of drilling fluid at the breakout point, and leaks through the seafloor shoreward of the breakout also have the potential to indirectly affect marine life. These impacts should be discussed and mitigated where appropriate.

Recommendations:

The FEIS should consider the need for CWA Section 404 permits for the pipelines and anchor collars and describe how avoidance of corals will be achieved in positioning the pipelines.

The FEIS should analyze alternative sizes and designs for minimizing impacts at the breakout point.

The FEIS should assess the marine resources at the staging area in Keehi Lagoon and discuss the potential for impacts to the marine resources from physical disturbance, anchoring, and chemical discharges during staging.

The FEIS should include quantitative biological assessments of the benthos in the breakout and pipeline sites, including coral density, size, species richness, and condition.

The FEIS should assess the deep benthos to determine if mesophotic coral reef ecosystems occur along the pipeline and if they are likely to be impacted by the cold, high-density water at the diffuser and discharge area.

The FEIS should present benthic photographs or maps to document the avoidance of corals in the evaluations of alternative break out points and pipeline alignments.

The FEIS should include more biologically relevant data (i.e., coral density and habitat area) and delete the calculations for "surface area of live coral cover" (page 3-110). The recommended types of data would provide a more accurate assessment of impacts and represent a more defensible basis for the amount of compensatory mitigation required to replace the lost ecosystem functions.

The FEIS and Corps of Engineers Public Notice should thoroughly describe total direct and indirect impacts to the range of marine habitats and their functions. Compensatory mitigation plans should account for direct and indirect impacts, temporal losses, and the uncertainty of mitigation project success.

The FEIS should describe best management practices to minimize damage from moorings, anchors, and anchor lines during construction. Areas should be designated for moorings and anchors that specifically avoid impacts to corals. Areas of high coral value should be marked with buoys to ensure avoidance of those areas during construction.

The FEIS should describe the potential for leakage or discharge of drilling fluids and their impacts to the marine environment.

The FEIS should discuss how the alternatives analysis complies with Section 404(b)(1) Guidelines that require selection of the least environmentally damaging practicable alternative (LEDPA) for section 404 permitting purposes.

Page ES-7 of the DEIS states that no compensatory mitigation for impacts to aquatic resources is needed because: *"All practicable steps have been taken to avoid and minimize impact to aquatic life"* and *"The pipeline and breakout point structures will provide hard substrate for colonization by corals and other aquatic life."* Although all practicable means of impact avoidance and minimization must be realized prior to pursuing compensatory mitigation, compensation is often necessary for impacts that are unavoidable, and it is premature to presume otherwise. It is also unlikely that coral colonization of concrete and High Density Polyethylene (HDPE) pipes will occur or be adequate compensatory mitigation for lost aquatic habitat functions. Indeed, although the DEIS cites anecdotal observations of pipeline colonization at Natural Energy Laboratory of Hawai'i Authority (NELHA) on Big Island, (page: 3-111), the DEIS also lauds the "biofouling resistance" of this project's HDPE pipe as a desirable property (Section 2.4.2.8). Marine concretes used in construction also customarily contain an antifouling compound. The extrapolation in the DEIS from colonization of artificial reefs to colonization on construction concretes is, therefore, not appropriate.

Recommendations:

The FEIS should include a description of the use of antifouling compounds to clean the intake and outfall pipelines. The prevention and treatment of biofilms and fouling should be described. If chemicals will be used periodically to keep the pipes clean and open, the impacts of these on the marine environment should be described.

The FEIS should thoroughly explore opportunities to provide compensatory mitigation for all foreseeable direct and indirect adverse impacts from the project.

For further assistance with issues pertaining to waters of the U.S., please coordinate with Wendy Wiltse in EPA Region 9's Wetlands Office. Wendy can be reached at (808) 541-2752, or by email at wiltse.wendy@epa.gov.

Project Purpose and Need

The Draft Environmental Impact Statement (DEIS) should clearly identify the underlying purpose and need to which the United States Army Corps of Engineers (Corps), is responding in proposing the alternatives (40 CFR 1502.13). The purpose of the proposed action is typically the specific objectives of the activity, while the need for the proposed action may be to eliminate a broader underlying problem or take advantage of an opportunity. The Purpose and Need for a project should be stated broadly enough to spur identification of a reasonable range of alternatives, regardless of what the future findings of the alternatives analysis may be.

The Purpose and Need in this DEIS states, "As part of its plan to develop a seawater air conditioning (SWAC) system to serve the downtown area of Honolulu, the applicant proposes to construct seawater intake and return pipelines in coastal waters. The purpose and need for the proposed seawater intake and return pipes is to obtain deep, cold seawater from the ocean to chill fresh water that would circulate through the SWAC system and to return the seawater to the ocean after it has passed through onshore SWAC heat exchangers." While this describes the applicant's purpose, it does not explain the underlying need for such a system.

Recommendation:
The purpose and need should be a clear, objective statement of the rationale for the proposed project. We recommend that the DEIS discuss the proposed project in the context of the larger need for energy efficient strategies to meet the air conditioning needs of downtown Honolulu, and the energy savings that it would achieve.

Alternatives Analysis

The DEIS presents only the Preferred Action Alternative 1, Alternative 2, and a No-Action Alternative. EPA believes that the alternatives analysis needs to be expanded in the FEIS to include a full analysis of a reasonable range of alternatives.

CEQ Regulations for implementing NEPA (40 CFR, Parts 1500 - 1508) state that the alternatives section of an EIS should "rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly describe the reasons for their having been eliminated" (40 CFR, part 1502.14). All reasonable alternatives that fulfill the project's purpose and need should be evaluated in detail, including alternatives outside the legal jurisdiction of the Corps (Council on Environmental Quality's (CEQ) Forty

Questions[1], #2a and #2b). The more alternatives considered, the greater the possibility of avoiding significant impacts. *"In determining a reasonable range of alternatives, the focus is on what is "reasonable" rather than on whether the proponent or applicant likes or is itself capable of carrying out a particular alternative. Reasonable alternatives include those that are practical and feasible from the technical and economic standpoint and using common sense, rather than simply desirable from the standpoint of the applicant."* (CEQ Forty Questions, #2a)

Both action alternatives utilize microtunneled methods to place an open ended intake piping offshore to a depth of approximately 1,800 feet with return pipelines discharging at approximately 150 ft. Differences between the two alternatives are limited to the location of the cooling station and corresponding directional changes to piping placement and access points. Both alternatives would result in negative environmental impacts to wildlife, coral reefs, air quality, water quality, floodplain, and Environmental Justice (EJ) communities.

The DEIS describes Alternative 1 as less costly due to the cooling station location at 210 Coral Street. The reason for this is described as "additional costs that would be incurred for waterproofing" Alternative 2's cooling station location in "Flood Zone A" (page: 2-38), the implication being that such costs would not occur for Alternative 1. Contrary to this apparent assumption, both alternative cooling stations are located in Flood Zone AE.

Recommendations:

EPA encourages the Corps to reconsider a full scope of alternatives, including off-site locations, environmentally preferable onsite alternatives, and other modes of energy saving.

The FEIS should include a comprehensive assessment of an extended return seawater diffuser/screened intake alternative. This alternative should require the return pipe to extend to an ocean depth with ambient temperatures equaling the expected outflow temperature. This alternative should include a screened intake pipe, in compliance with the velocity requirements of CWA 316(b). In addition, the alternative should locate the cooling station in non-flood Zone area. The assessment should fully evaluate compliance with CWA 303(c), 303(d), 316(a), 316(b), and 404(b)(1).

The FEIS should include a comprehensive assessment of a double-closed system that would feature a closed-loop circulating system for both the seaward and terrestrial pipelines. This would eliminate negative impacts at both the open intake and terminal points offshore. Other possible advantages could include lower water requirements, reduced operational kill of species and more consistent predictable water temperatures. The use of high-quality water would also minimize the potential for clogged screens, fouled exchangers, and other mechanical failures. A closed-loop system could also be less susceptible to corrosion and biological fouling than an open pipe intake from the ocean. In addition, the alternative should locate the cooling station in a non-flood zone area.

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[1]Forty Most Asked Questions Concerning CEQ's NEPA Regulations, 40 CFR Parts 1500-1508, Federal Register, Vol. 46, No. 55, March 23, 1981.

The FEIS should be corrected to reflect that the Alternative 1 cooling station location would be in a flood plain and, thus, require waterproofing the structure up to the regulatory flood elevation and complying with structural requirements.

Biological Resources and Habitat

The DEIS implies that impacts from the project to marine biological resources would be less significant because, "the marine areas in the proposed pipeline corridor are among the most historically degraded coastal habitats in the State" (page 3-98); however, the DEIS fails to establish an adequate assessment of baseline conditions for coral reef and species habitat. Page 3-118 states that, "listed marine mammals that could occur in the project area include the humpback whale, the sperm whale, and the Hawaiian monk seal." Other endangered species in the project area include turtles and coral as well as many other non listed species. EPA is concerned with potential impacts of the proposed project to species and benthic aquatic habitats that may already be stressed. We are particularly concerned with potential entrainment of aquatic species at the intake pipe opening, as well as impacts to coral reefs and biota as a result of changes to water quality from the nutrient-rich, low temperature discharge from the return pipe.

The DEIS fails to clearly demonstrate that an adequate biological survey has been completed for the entire project area including all depths and temporary staging areas. It is not clear whether or not a Biological Opinion has been completed for the proposed project. The FEIS should identify all proposed and listed threatened and endangered species and critical habitat that might occur within the project area; identify and quantify any species or critical habitat might be directly, indirectly, or cumulatively affected by each action alternative; and identify measures that could mitigate impacts to those species and habitats. Emphasis should be placed on the protection and recovery of species, such as those listed on page 470 of the DEIS, according to their status or potential status under the Endangered Species Act (ESA).

Recommendation:
The FEIS should include a comprehensive description of existing benthic and aquatic habitats, including locations of coral reefs in relation to the proposed pipelines, common and protected species that rely on these habitats, and the current chemical, physical and biological conditions that these species depend on.

The FEIS should provide a detailed analysis of potential direct, indirect, and cumulative biological resource impacts that would result from the project alternatives, including destruction of coral reefs, increased sedimentation from construction, degraded water quality, and changes to the food web. Special attention should be given to the potential impacts that could occur due to entrainment of aquatic species, changes in temperature from the return pipe discharge, and impacts to water quality that could occur as a result of pipeline construction, operations and maintenance.

The results of consultation with the United States Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA), if appropriate, regarding threatened or endangered species or critical habitat should be included in the FEIS.

Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994), directs federal agencies to identify and address disproportionately high and adverse human health or environmental effects on minority and low-income populations, allowing those populations a meaningful opportunity to participate in the decision-making process. Guidance[2] by CEQ clarifies the terms "low-income" and "minority population" and describes the factors to consider when evaluating disproportionately high and adverse human health effects. The applicant's preferred Alternative 1 would require "construction between the old landfill and the open drainage culvert" (page: 2-7). The document goes on to say that the "spoil" would be processed at the site. However; DEIS fails to address the fact that the jacking pit location is less than 200 feet away from the Next Steps Homeless Shelter and Reuse Hawaii, which currently reside on the other side of the drainage culvert. Similarly, the jacking pit would be placed in the most west northwest corner of Kaka'ako Waterfront Park, which caters to tourists, families, and amphitheatre events. Furthermore, page 3-42 of the DEIS states: "The region of influence for hazardous and toxic substances is the entire project area and any adjoining area to which spills, leaks or releases could migrate".

Recommendations:

The FEIS should include a commitment to mitigating all adverse impacts to human health. All appropriate environmental, health and safety precautions should be carefully outlined and agreed upon before any construction starts.

The FEIS should assess the potential for disproportionate adverse impacts to minority and low-income populations within the region of influence for hazardous and toxic substances of the project such as the Next Steps Homeless Shelter and the Kaka'ako Waterfront Park. The assessment of the project's impact on minority and low-income populations should reflect coordination with those affected populations.

The FEIS should commit to a notification plan to disclose to the public the health risk of exposure to hazardous or toxics substances inside the region of influence.

Alternative 2 would avoid construction between the old landfill and the open drainage culvert, but presents the same water quality issues as the Preferred Alternative and would call for the "existing warehouse to be partially or completely demolished" (page: 2-38). This is the same structure that is currently occupied by the Next Steps Homeless Shelter and the Reuse Hawaii a non-profit organization mentioned above. Next Step Homeless Shelter is essential to Hawaii's homeless population and the well-being of the population in general. If this homeless shelter is displaced, it is likely that it will not find another location and more homeless individuals will be on the streets with even less resources than they currently have.

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[2]Environmental Justice Guidance under the National Environmental Policy Act, Appendix A (Guidance for Federal Agencies on Key Terms in Executive Order 12898), CEQ, December 10, 1997.

Children's Environmental Health

EPA recommends that an analysis of impacts to children be included in the EIS if there is a possibility of disproportionate impact on children related to the proposed action. (http://www.epa.gov/compliance/resources/policies/nepa/children-health-risks-pg.pdf). Since children are likely to be present in the vicinity of the micro-tunneling operation beneath the Kaka'ako Waterfront Park, we believe that such a possibility exists with the proposed project.

Environmental contaminants can affect children quite differently than adults, both because children may be more highly exposed to contaminants and because they may be more vulnerable to the toxic effects of contaminants. Children generally eat more food, drink more water, and breathe more air relative to their size than adults do, and, consequently, may be exposed to relatively higher amounts of contaminants. Children's normal activities, such as putting their hands in their mouths or playing on the ground, can result in exposures to contaminants that adults do not face. Lastly, environmental contaminants may affect children disproportionately because their immune defenses are not fully developed and their growing organs are more easily harmed.

Recommendation:
Because this project has the potential to cause exposure of children to contaminants of concern (such as organochlorine pesticides, lead, and other heavy metals) from the micro-tunneling operation beneath the Kaka'ako Waterfront Park, the FEIS should analyze and mitigate any potential impacts to children. The DEIS does not contain sufficiently detailed and specific mitigation measures to ensure that exposures to children will not occur (see page 3-44).

Executive Order 11988: Floodplain Management

Executive Order 11988 Floodplain Management requires federal agencies to avoid, to the extent possible, the long and short-term adverse impacts associated with the occupancy and modification of floodplains. Per the Flood Insurance Rate Map (FIRM), Alternative 1and 2 are in a Zone AE special flood hazard area with an established base flood elevation (BFE) (See FIRM#: 15003C0362G City and County Of Honolulu 1/19/2011). Page 2-38 of the DEIS incorrectly states that Alternative 2 is in a "Flood Zone A (flood fringe district)". Figure 3-9 incorrectly depicts the Alternative 1 pump station area as a Zone X. Similarly, page 3-63 states that "the cooling station and distribution piping would be located within FIRM Zone X", outside the 500 year floodplain. Furthermore, the March 9, 2009 correspondence from the Federal Emergency Management Agency (FEMA) in Appendix J, responding to the Corps' request for comments on the proposed project, presents information that is now outdated in that it reflects a Flood Insurance Rate Map from 2005.

Recommendations:
The FEIS should reflect that the cooling stations of both alternatives are in an AE Flood Zone.

The FEIS should discuss any impacts that the proposed Project may have on the potential

for flooding, as well as the impacts of potential flooding on the proposed Project.

The FEIS should provide a detailed description of the current FEMA floodplain.

The results of current consultation with FEMA, if appropriate, should be included in the FEIS.

For more information regarding floodplain requirements, go to: http://www.fema.gov/plan/prevent/floodplain/nfipkeywords/zone_ve.shtm.

Management of Excavated Materials

Installation of the pipeline, either by microtunneling or trenching, will result in the generation of excavated materials. In the case of microtunneling, the DEIS states that slurry would be transported in lined dump trucks to the contractor's own yard for drying and then disposed of properly, likely at the construction waste landfill. The DEIS does not include a sufficient discussion of the management of solids and slurry nor whether the jacking pits are of sufficient size to handle all drilling fluids. Additionally, the DEIS does not address how all excavated materials from the microtunneling operation would be handled nor the specific disposal location(s) of these materials.

Recommendations:
The FEIS should identify projected hazardous waste types and volumes, and describe, in detail, how all materials, including solids and slurry from the microtunneling operations, will be handled, stored, transported, and disposed. The applicability of State and federal hazardous waste management requirements should be discussed and the FEIS should document that no excavated material would be stored or disposed of within waters of the United States. The FEIS should also include the name and location of the landfill authorized to handle the types of waste potentially excavated, such as toxics from the old landfill and old utility lines compromised by construction activity.

The FEIS should address potential direct, indirect, and cumulative impacts of hazardous waste from construction of the proposed project. Appropriate mitigation should be evaluated, including measures to minimize the generation of hazardous waste. Alternate industrial processes using less toxic materials should be evaluated as possible mitigation. This could reduce the volume or toxicity of materials requiring management and disposal as hazardous waste.

Air Quality

Although the DEIS states that the construction activities would have a short term impact on air quality, it does not discuss what the specific potential impacts are reasonably expected to be, nor does it specify measures to mitigate air quality impacts. The DEIS notes that "Specific mitigation measures would be established as conditions of construction permits, but typical mitigation measures include watering the exposed surfaces, covering dirt being transported and keeping offsite roadways clean." (p. 3-139)

The explanation of National Ambient Air Quality Standards in Table 3-25 (p. 3-137) is out of date for various air pollutants. This information changes frequently.

Recommendations:
The FEIS should provide a detailed discussion of the potential direct, indirect, and cumulative air quality impacts of the proposed project during and post-construction.

The FEIS should demonstrate that the proposed project would comply with applicable State and Federal air quality regulations, including any permit requirements for the back-up generators and construction equipment.

The FEIS should include the current NAAQS.

The FEIS should describe specific commitments to minimize and mitigate emissions, including any measures that would be required as permit conditions. EPA recommends that the following construction measures be adopted in the FEIS:

Fugitive Dust Source Controls:

- Stabilize open storage piles and disturbed areas by covering and/or applying water or chemical/organic dust palliative where appropriate. This applies to both inactive and active sites, during workdays, weekends, holidays, and windy conditions.
- Install wind fencing and phase grading operations where appropriate, and operate water trucks for stabilization of surfaces under windy conditions.
- When hauling material and operating non-earthmoving equipment, prevent spillage and limit speeds to 15 miles per hour (mph). Limit speed of earth-moving equipment to 10 mph.

Mobile and Stationary Source Controls:

- Reduce use, trips, and unnecessary idling from heavy equipment.
- Maintain and tune engines per manufacturer's specifications to perform at the EPA certification levels and to perform at verified standards applicable to retrofit technologies. Employ periodic, unscheduled inspections to limit unnecessary idling and to ensure that construction equipment is properly maintained, tuned, and modified consistent with established specifications.
- Prohibit any tampering with engines and require continuing adherence to manufacturers recommendations.
- If practicable, lease newer and cleaner equipment that would meet the most stringent of applicable Federal or State Standards.
- Utilize EPA-registered particulate traps and other appropriate controls where suitable to reduce emissions of diesel particulate matter and other pollutants at the construction site.

Administrative controls:

- Identify where implementation of mitigation measures is rejected based on economic infeasibility.

- Prepare an inventory of all equipment prior to construction and identify the suitability of add-on emission controls for each piece of equipment before groundbreaking. (Suitability of control devices is based on: whether there is reduced normal availability of the construction equipment due to increased downtime and/or power output, whether there may be significant damage caused to the construction equipment engine, or whether there may be a significant risk to nearby workers or the public.)
- Utilize cleanest available fuel engines in construction equipment and identify opportunities for electrification. Use low sulfur fuel (diesel with 15 parts per million or less) in engines where alternative fuels such as biodiesel and natural gas are not possible.

For further assistance with issues pertaining to air quality, please contact Dawn Richmond, EPA Air Division. Dawn can be reached at (415) 972-3097, or by email at Richmond.Dawn@epamail.epa.gov.