DEPARTMENT OF ENVIRONMENTAL SERVICES
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IN REPLY REFER TO:
RH 12-020

July 9, 2012

Mr. Gary Hooser, Director
State of Hawaii
Office of Environmental Quality Control
235 South Beretania Street, Suite 702
Honolulu, Hawaii 96813

Dear Mr. Hooser:

Subject: Final Environmental Assessment (EA) for Solid Waste-to-Energy Truck Receiving Station, Sewage Sludge

The Department of Environmental Services (ENV) reviewed the Final Environmental Assessment (EA) for the subject project. The department has determined that this project has no significant impact during the 30-day public comment period which ended on May 23, 2012. Please publish notice in the next available Office of Environmental Quality Control (OEQC) Environmental Notice.

We have enclosed a completed OEQC Publication Form, one (1) copy of the document in pdf format on a cd, and one (1) hardcopy of the EA. Please contact Ahmad Sadri at 808-768-5453 or e-mail him at asadri@honolulu.gov, if you have any questions.

Sincerely,

Timothy E. Steinberger, P.E.
Director

Enclosures

Project Name: SOLID WASTE TO ENERGY TRUCK RECEIVING STATION FOR SEWAGE SLUDGE

Publication Form
The Environmental Notice
Office of Environmental Quality Control

Instructions: Please submit one hardcopy of the document along a with determination letter from the agency. On a compact disk, put an electronic copy of this publication form in MS Word and a PDF of the EA or EIS. Please make sure that your PDF documents are ADA compliant. Mahalo.

Applicable Law:	**HRS Ch. 343**
Type of Document:	**Final Environmental Assessment**
Island:	**Oahu**
District:	**Ewa**
TMK:	**9-1-026-030 H-POWER**
Permits Required:	**State Department of Health Solid Waste and Air permits**
Applicant or Proposing Agency:	**ENV-Refuse-HPOWER**
Address	91-174 Hanua St. Kapolei, HI 96707
Contact & Phone	Stephen F. Langham, PE; 808-768-5455
Approving Agency/ Accepting Authority:	**City and County of Honolulu Environmental Services Department (ENV)**
Address	1000 Uluohia St. Suite 308 Kapolei HI 96707
Contact & Phone	Timothy E. Steinberger, PE; 808-768-3486
Consultant:	**Same as Proposing Agency**

Project Summary: The Solid Waste to Energy Truck Receiving Station for Sewage Sludge is proposed to provide the H-POWER Expansion Project the ability to accept and process dewatered sewage sludge for final disposal. The truck receiving station will be located on the H-POWER site and consists of a receiving bin, pumps, and distribution header for the transfer of sludge into the boiler at H-POWER Expansion.

The proposed action will comply with all permits that have been secured for the H-POWER Expansion Project. The project will not change emission requirements and will employ the Maximum Achievable Control Technology (MACT compliance) as exists in the industry for control of air emissions and hazardous air pollutants as required by the Clean Air Act. Odor control systems will be utilized to manage odors form the sludge receiving, storage and processing.

Traffic and roadway impacts will be minimal with only slightly increased traffic counts.
There are no further impacts including cultural, noise, visual, socioeconomic, solid waste, energy or human health that do not already exist.

Based on the significance criteria set forth in HAR, Title 11, Chapter 200, Environmental Impact Statement Rules, the proposed action is not anticipated to result in significant environmental impacts. In fact, the proposed action is anticipated to result in significant benefits, including increased landfill diversion and energy recovery.

The determination for the proposed project is a Finding of No Significant Impact (FONSI).

FINAL ENVIRONMENTAL ASSESSMENT

SOLID WASTE TO ENERGY
TRUCK RECEIVING STATION FOR SEWAGE SLUDGE

Campbell Industrial Park, Kapolei, Hawaii

Proposing Agency:

City and County of Honolulu
Department of Environmental Services
Refuse Division
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

July 2012

Draft and Final Environmental Assessment Checklist

FOR OEQC USE ONLY
Date Received:
Date of Publication:
Draft EA Comment Deadline:
Draft EA Place in Public Library:

Project Name: SOLID WASTE TO ENERGY TRUCK RECEIVING STATION FOR SEWAGE SLUDGE

Draft Environmental Assessment

Conditions Which Triggered Ch. 343, HRS, EIS Law. Check All That Apply:

Applicable sections (check all that apply):

_x_ use of state or county lands or funds
___ use of conservation district lands
___ use within shoreline setback area
___ use of historic site or district
___ use of land in the Waikiki district
___ amendment to county general plan
___ reclassification of conservation lands
___ construction or modification of helicopter facilities
_x_ wastewater facility, waste-to-energy facility, landfill, oil refinery, or power-generating facility

Content Requirements; Draft EA (see Sec. 11-200-10 thru 13, HAR)

_x_ Agency submittal letter and anticipated determination
_x_ Identification of applicant or proposing agency
_x_ Identification of approving agency
_x_ Identification of agencies, citizen groups, and individuals consulted in making the assessment
_x_ General description of the action's technical, economic, social, and environmental characteristics; time frame; funding source
_x_ Summary description of the affected environment, including suitable and adequate regional, location and site maps such as Flood Insurance Rate Maps, Floodway Boundary Maps, or United States Geological Survey topographic maps
_x_ Impacts to cultural practices and resources, past and current (Act 50, 2000)
_x_ Identification and summary of impacts and proposed mitigation measures
_x_ Alternatives considered
_x_ Discussion of findings and reasons supporting the agency anticipated determination
_x_ List of all required permits and approvals (State, federal, county), if any
_x_ Written comments and responses to the comments under the early consultation under HAR 1 1-200-9(a)(1), 1 1-200-9(b)(1), or 11-200-15.

Final Environmental Assessment
Finding of No Significant Impact (FONSI)

_x_ Agency submittal letter
_x_ Agency determination
_x_ Discussion of findings and reasons supporting the agency determination
_x_ Written comments and responses to the comments under the statutorily prescribed public review periods

NOTES ON FORMAT USED TO DEPICT REVISIONS

The following notation has been used to depict substantive differences between this document and the Draft Environmental Assessment:

- Insertions are noted by a <u>double underline</u>;
- Deletions are noted with a ~~strike through~~.

In order to maintain legibility, formatting changes (such as revised headers and footers), updates to the table of contents with new page numbers and cross references, changes to the publication date, revisions to the title page to reflect the fact that the document is a “Final” EA, rather than a “Draft” EA, and other non-substantive changes are not marked.

Table of Contents

Table of Figures and Tables

SUMMARY

1.	APPLICANT:	City and County of Honolulu Environmental Services Department Refuse Division 1000 Uluohia Street, Suite 201 Kapolei, HI 96707
2.	APPROVING AGENCY	City and County of Honolulu Environmental Services Department 1000 Uluohia Street, Suite 308 Kapolei, HI 96707
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Honolulu, HI 96840-0001

Neighborhood Board #34
Makakilo-Kapolei
George Yamamoto
92-1539 Aliinui Dr.
Kapolei, HI 96707

5.	TAX MAP KEY NUMBERS:	(1)9-1-026-030 H-POWER
6.	PROPERTY OWNER:	City and County of Honolulu
7.	LAND USE CLASSIFICATION:	I-2 Intensive Industrial
8.	SPECIAL DESIGNATION:	None

Summary Project Description

The Solid Waste to Energy Truck Receiving Station for Sewage Sludge is proposed to provide the H-POWER Expansion Project the ability to accept and process dewatered sewage sludge from all wastewater treatment plants for final disposal.

The truck receiving station will be located on the H-POWER site as shown in Figure S1 and consists of a receiving bin, pumps, and distribution header for the transfer of sludge into the boiler at H-POWER Expansion. Sludge is loaded onto roll-off bins at the treatment plants and trucked to the receiving station. Solids are discharged into the receiving station bin from the tipping floor. Pumps below the bin transfer the sludge directly into the boiler. Pumping rate is controlled to maintain an appropriate mix of solid waste and sludge.

The ability to accept and dispose of sewage sludge at H-POWER will provide the City and County of Honolulu with necessary redundancy considering that the No Action Alternative would leave the City at risk for sludge disposal when the landfill is not available and at risk for anaerobic digestion failure at Sand Island WWTP.

The proposed action will comply with all permits that have been secured for the H-POWER Expansion Project, including the Solid Waste Management Permit and the Covered Source/PSD Air Permit, both issued by the State Department of Health. The Expansion Project was the subject of a recently approved Final Environmental Impact Statement filed with the State of Hawaii Office of Environmental Quality Control on May 23, 2009. The project will not change emission requirements and will employ the Maximum Achievable Control Technology (MACT compliance) as exists in the industry for control of air emissions and hazardous air pollutants as required by the Clean Air Act. Odor control systems will be utilized to manage odors form the sludge receiving, storage and processing. Measures include control of odor releases through air management systems and the use of odor control systems.

Traffic and roadway impacts will be minimal with only slightly increased traffic counts. There are no further impacts including cultural, noise, visual, socioeconomic, solid waste, energy or human health that do not already exist.

Based on the significance criteria set forth in HAR, Title 11, Chapter 200, Environmental Impact Statement Rules, the proposed action is not anticipated to result in significant environmental impacts. In fact, the proposed action is anticipated to result in significant benefits, including increased landfill diversion and energy recovery.

The recommended ~~preliminary~~ determination for the proposed project is a Finding of No Significant Impact (FONSI).

Figure S1: Proposed Receiving Station Layout

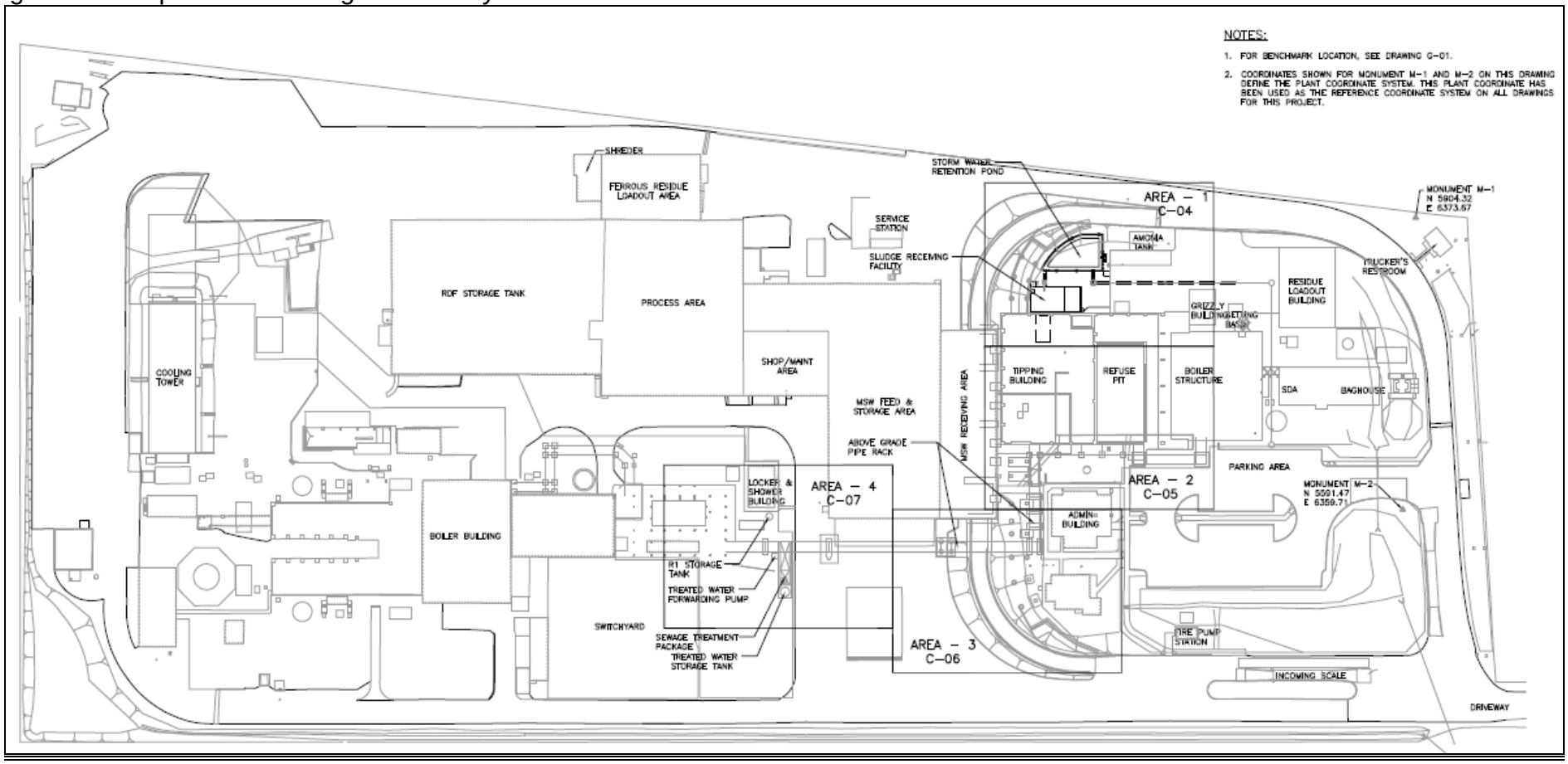
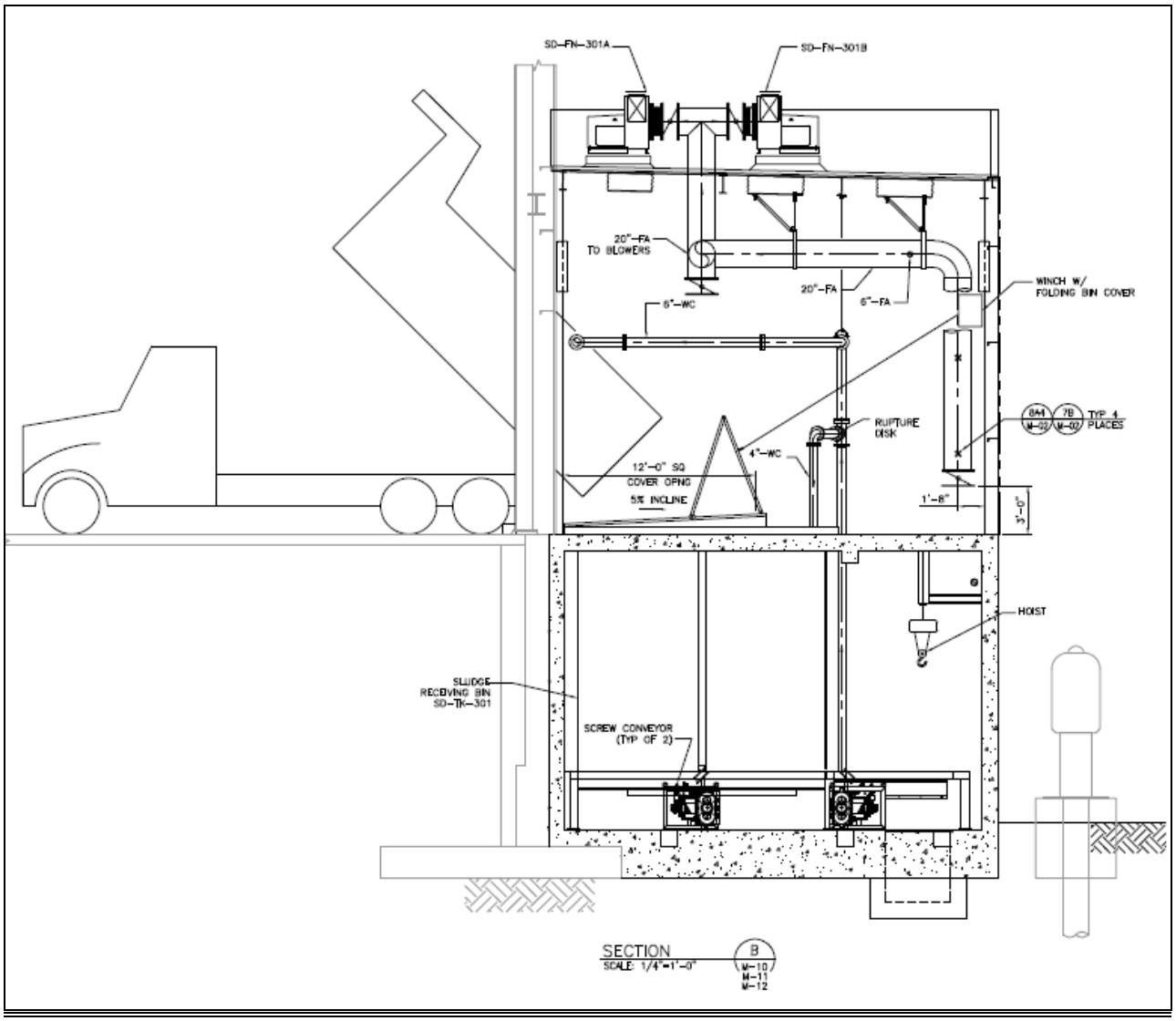


Figure S2: Proposed Receiving Station Side View



Section 1 - General Description

1.1 Technical Characteristics

The H-POWER Expansion Facility is a large mass burn Municipal Waste Combustor (MWC) unit that is being added to the existing H-POWER Facility. The H-POWER Expansion unit will process Municipal Solid Waste (MSW), as-received, and will have the ability to process certain other solid wastes including municipal ~~raw and~~ dewatered sludge (sludge) from all wastewater treatment plants. Due to the low heating value of sludge and the boiler design, receiving sludge at H-POWER will not significantly impact the operations and volumes of municipal solid waste (MSW) anticipated to be processed at H-POWER. Under normal operations, H-POWER would serve as a backup to the existing disposal options (see Section 5 Alternatives Analysis). H-POWER would receive undigested (raw) dewatered sludge only in an emergency situation.

The MSW will be stored in a three day capacity storage pit and will be charged by two large refuse cranes into the mass-burn unit feed chute. Sludge will be processed at a rate up to ten percent of the thermal capacity utilizing a separate delivery, storage and charging means as noted below. The sludge will be injected into the refuse feed chute through a series of injection nozzles just prior to where the MSW is introduced to the charging ram and combustion grate. The sludge injection nozzles will be controlled with a valved system to allow the sludge to be blended throughout the feed chute and introduced in a manner that will allow for complete burnout of the sludge. In this manner, the feed rate will be controlled and sludge will be distributed allowing for more stable and consistent operation.

The MSW and sludge will be charged together onto the combustion grate by the charging ram. The ram will allow metered control of the feedstock for a consistent heat release. The grate system is a Martin reverse reciprocating inclined grate with drying, combustion, and burn out zones. In total, five combustion zones are provided each with its own underfire combustion air control system. As the mixed MSW and sludge moves down the inclined grate, movable grate bars push the solid waste backward and upward promoting through mixing and exposure of the material to the combustion air resulting in very complete burnout to ash and residuals. The remaining ash and residuals are held on the grate by the clinker roll. As the clinker roll slowly turns, the ash and residue fall into one of two ash extractor quench basins. Hydraulic rams push the quenched ash and residue out of the basins up dewatering inclined chutes where the material will drop onto the residue conveyor. The recoverable metal will be separated from the ash in the residue system.

The hot flue gas products of combustion will rise in the furnace and boiler producing steam from the energy released. The steam will be used to drive a steam turbine generator to produce electricity.

The flue gas will first be controlled for nitrogen oxide emissions (NOx) utilizing Covanta's VLN™ system within the boiler. After the gases pass through the economizer they will enter into a three head rotary atomizer spray dryer absorber (SDA) where lime slurry will quench the gases and allow lime to react with sulfur dioxide (SO2), hydrogen chloride (HCl), hydrogen fluoride (HF), and other trace acid gases. The spent lime and reaction products will be carried in the flue gas with the fly ash to the H-POWER Expansion facility baghouse or fabric filter. The baghouse is a large pulse jet particulate collection device that will capture and remove the particulate and spent SDA reaction products from the flue gas stream. Activated carbon injection will be used to control mercury and certain organic compounds such as dioxins and furans (dioxins). The activated carbon is injected into the flue gas stream as a fine powder and the mercury and dioxins are absorbed onto the surface of the carbon particles. The carbon particles are then captured in the baghouse, effectively controlling these emissions.

In order to accommodate sludge processing at H-POWER Expansion, as noted in the Truck Receiving Station description below, a sludge pumping and feed control system is needed to deliver the sludge to the unit. No other significant equipment changes are required for the facility.

Combustion of sludge may impact the uncontrolled emissions slightly. Since the quantity of sludge is limited to ten percent of the mass throughput at 30% solids, these impacts are manageable for the existing air pollution control (APC) devices. NO_x emissions might increase slightly. This may mean a slight increase in aqueous ammonia consumption but within the design of the existing system. Historically municipal sludge has had some heavy metals such as mercury. Due to better general knowledge and management practices at facilities such as dental, medical, and auto repair facilities heavy metals levels in sludge have generally decreased. The activated carbon injection system is sized to allow for any anticipated impacts. Slight impacts to the acid gas emissions (SO_2 or HCl) and particulate emissions also are within the operation range of the APC systems provided. The H-POWER Expansion unit will still achieve the emission performance required under current regulations and its permit.

Truck Receiving Station

The truck receiving station for sewage sludge consists of a receiving bin, pumps, and distribution header for the transfer of dewatered municipal wastewater sludge into the boiler at H-POWER Expansion. Dewatered sludge is loaded onto roll-off bins at the treatment plants and trucked to the receiving station. Solids are discharged into the receiving station bin from the tipping floor. Pumps below the bin transfer the sludge

directly into the boiler. Pumping rate is controlled to maintain an appropriate mix of solid waste and sludge.

The receiving station bin and pumps as selected for H-POWER Expansion are manufactured and provided by Schwing Bioset. The station consists of the following:

1. Receiving storage bin: carbon steel, ¼" plate, 15' wide x 16' long x 15' sidewall height. All steel will be coated with epoxy paint. The bin will be shop fabricated and fitted, then broken down for shipment. On-site erection requires field welding and painting.

   The receiving bin is top equipped with a bar screen spaced 12" on center located approximately 1' below the top of the bin sidewall. The grating prevents large objects from falling onto the live bottom augers and pumps.

   The top of the bin is covered with a hydraulically actuated bi-fold door and hatch for odor containment.

2. The live bottom below the storage bin consists of twin auger screw feeders designed to convey sludge from the bin into the piston pumps.

   The augers are powered by a hydraulic unit, Model 110L with a 30 gallon fluid reservoir and 10 hp gear pump.

3. The two KSP 12V(HD)L piston pumps are hydraulically driven, twin-cylinder, reciprocating piston type specifically designed to pump sewage sludge. Each pump has a flow capacity of 25 gpm at 1000 psi. The pumps connect to the discharge pipe with a 6" 600 lb flange. Sludge flow is calculated using the cylinder filling efficiency and stroke count. Instantaneous pumping rate is reported in gpm and the total accumulated pumped volume for the previous 24 hours is reported in gallons.

   Two hydraulic power units, Model 440L, have a 115 gallon fluid reservoir and a 60 hp gear pump.

4. Because of the high pressures associated with sludge pumping, two pipeline lubrication systems are installed in the pipeline to the boiler. Water injected at multiple points around the pipeline form a boundary layer that reduces the friction and the discharge pressure on the pumps. The systems consist of a high pressure triplex plunger pump (2 hp) that delivers 66 gal/hr (adjustable) at 1200 psi.

5. The discharge pipeline is carbon steel with 600 lb flanges.

6. A manifold at the boiler distributes the sludge at multiple points. Full port Class 600 trunnion mounted ball valves are rated for 1200 psi working pressure. Electric actuators control the distribution of sludge with one valve being open at all times. Manual hand wheel operators can be used in an emergency to close any of the valves.

The receiving station is located on the ground outside of the tipping floor on the east side of the building, see Figure 1. The top of the receiving bin is flush with the tipping floor. Installation will require an opening in the wall of the tipping floor with a rollup door. Installation will also require reconfigure of the storm water retention pond to the east with the same storage volume. Power and water for the receiving station are located in the same general area.

1.2 Odor Control

Some odors will be released when the bin doors are open and trucks unload the sludge into the bin. Unloading should require less than 15 minutes per truck. The storage bin doors will be closed except during the period when trucks unload into the top of the bin. There will be an odor control system that will draw air from the sewage sludge building and from the sewage sludge receiving bin. After this air is scrubbed through bio-towers it will be exhausted into the atmosphere.

1.3 Traffic and Roadways

For this EA, only traffic impacts from the H1 Freeway Exit to onto the H-POWER site were considered. A separate environmental review, conducted by the Environmental Services Department (ENV) is considering island-wide traffic impacts of transporting sludge from wastewater treatment plants to their ultimate disposal location. The impact of sludge processing on traffic and roadways from the freeway exit to the site is very minimal. The Final Environmental Impact Statement for the H-POWER Expansion demonstrated that the incremental impacts for the H-POWER Expansion were limited. Truck growth was projected to be fifteen percent and would not significantly degrade the level of service (LOS). Sludge processing is expected to only increase traffic by ten (on a peak day) or fewer trucks per day. This is a very small increase in the number of trucks. No additional facility operators and thus no additional cars are anticipated. On site the addition of another inbound scale and planned additional inbound traffic lanes will improve traffic flow. These improvements are expected to more than offset the potential impacts of the extra traffic and maneuvering required on the Expansion tipping floor.

1.4 Funding/Source

The estimated capital budget for the project is $10M. The City and County of Honolulu has programmed the construction funds in the ~~proposed~~ approved FY-2013 Capital Improvements budget.

Section 2 – Summary Description of Existing Environment

2.1 Description of the Property

The Project is proposed to occur on the existing H-POWER parcel. That site consists of 24.635 acres (1,073,100 ft^2) of industrially zoned and developed property situated within the James Campbell Industrial Park, JCIP, in Kapolei and is included in the Long Range Master Plan for the Kapolei area. Figure 2.1-1 depicts both the Master Plan and the JCIP. The parcel's Tax Map Key number is # (1)9-1-026:030, and is marked "PF" on Figure 2.1-1. Figure 2.1-3 depicts the site location on a USGS topographic map and shows the major roadways in the vicinity of the existing H-POWER facility. Due to the site's existing industrial nature, there are no designated environmental site constraints on the parcel. Additional detailed information on the site is presented within this EA.

2.2 Surrounding Land Uses and Zoning

Figure 2.2-1 is an aerial photograph showing the existing industrial nature of the site and the surroundings within 1-mile of the H-POWER site. As can be seen from the aerial photograph, the surrounding land uses are predominantly industrial in nature. To better illustrate the occupants of neighboring parcels, Table 2.2-1 identifies surrounding land uses and their direction relative to H-POWER.

Table 2.2-1: Neighboring JCIP Lots and their Direction Relative to Parcel 30

Direction Relative to Parcel 30	Neighbor
North	Chevron, HECO
South	AES
East	HECO
West	City and County of Honolulu

The JCIP, and most of the area within 1 mile of the site, is zoned 1-2 Intensive Industrial, as shown on Figure 2.1-1. ~~Under Chapter 21 - Land Use Ordinance (LUO), waste disposal and processing are allowed under a Conditional Use Permit - minor and subject to the Specific Use Development Standards identified in Article 5 of the Ordinance. Although the H-POWER facility is an existing use, alterations, additions, or modifications require a permit.~~

The H-POWER facility and the proposed project are consistent with both the existing and proposed Ewa Development Plan (Ewa DP), which may be viewed at the following web page:
http://www.honoluludpp.org/planning/DevSust_Ewa.asp.

H-POWER and the proposed project are also consistent with the Department of Hawaiian Homelands Kapolei Regional Plan (DHHL KRP), which may be viewed at the following web page: http://hawaii.gov/dhhl/publications/regional-plans/o-ahu-regional-plans. The section “Infrastructure - Energy” on Page 19 of the DHHL KRP describes DHHL’s private and public renewable energy partnerships in the Kapolei/Kalaeloa region, including a biomass to biofuels project in Campbell Industrial Park.

The proposed modification to the facility would provide another option to the recycling of sewage sludge and diversion from landfills. The Ewa DP and DHHL KRP support these efforts.

H-POWER will comply with ~~the requirements of the Conditional Use Permit, as well as other~~ federal, state, and local permits and approvals. Each of the required permits and approvals is addressed in this EA.

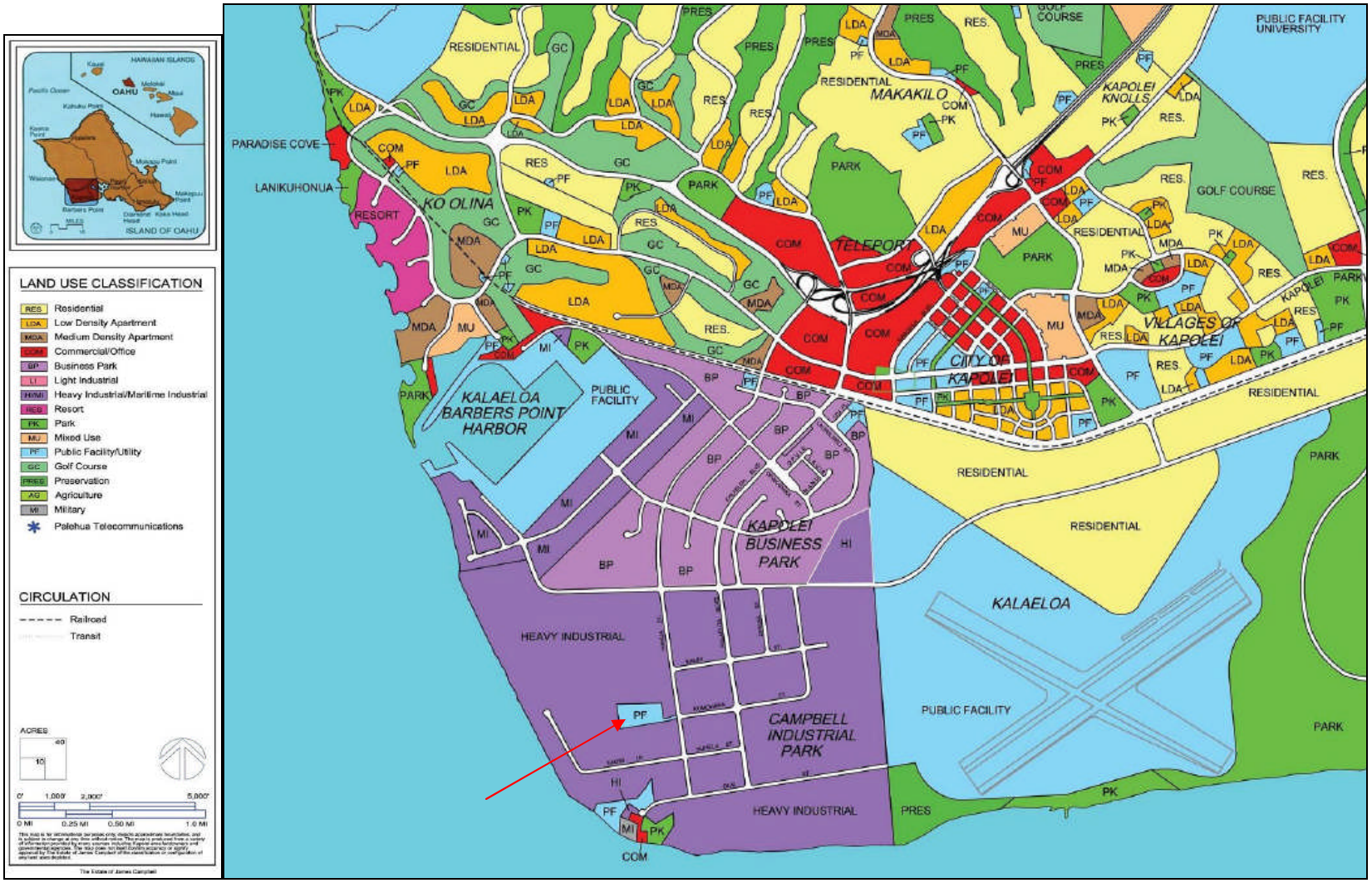


Figure 2.1-1: Long-Range Master Plan for the Kapolei Area (http://www.kapolei.com/master_plan.cfm)

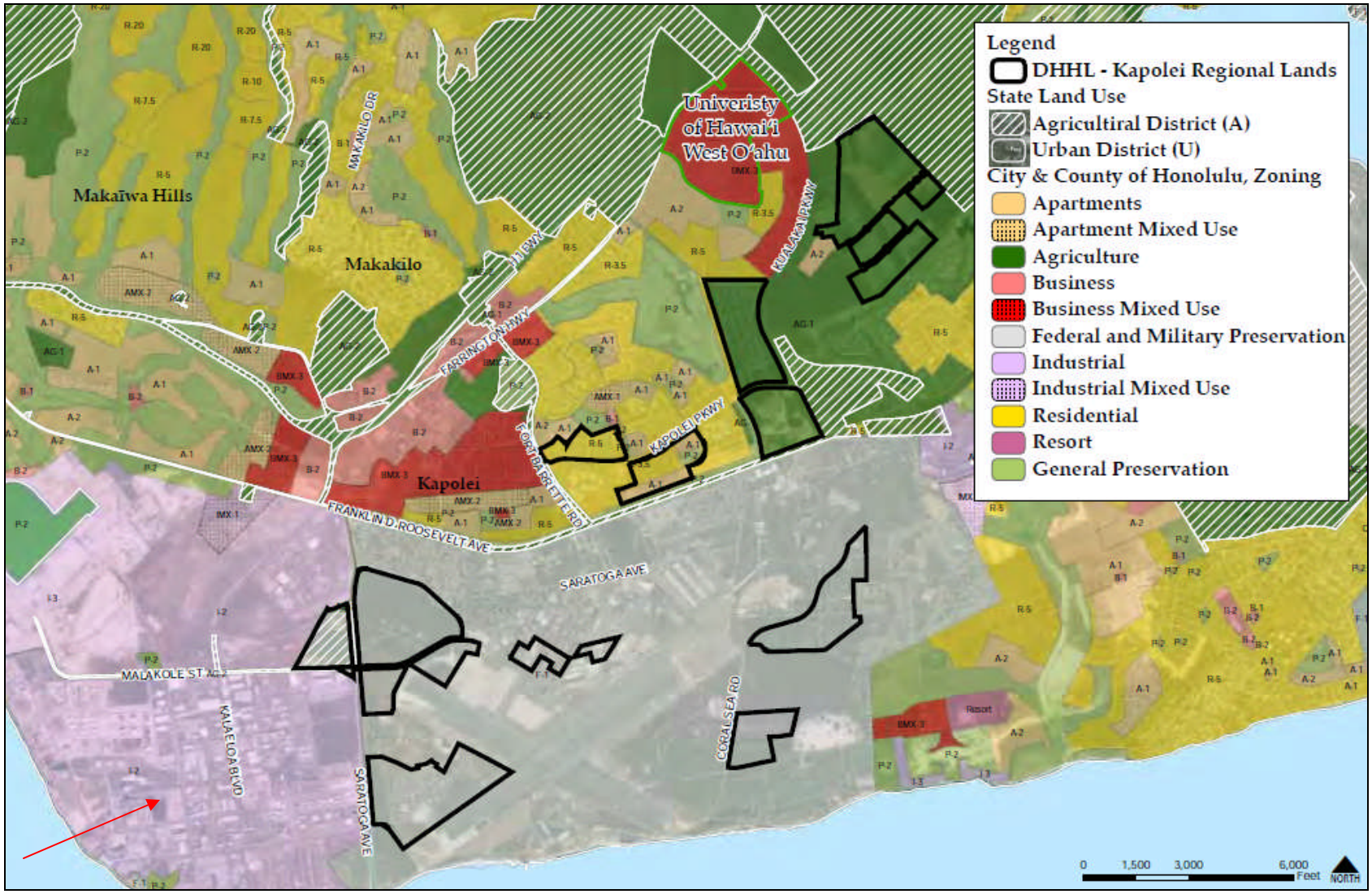


Figure 2.1-2: Department of Hawaiian Homelands Kapolei Regional Lands

Figure 2.1-3: USGS Topographic Map (UTM NAD83, Zone N, 2000)

Figure 2.2-1: Satellite imagery of JCIP area

2.3 Existing Conditions - Geology and Soils

This section discusses the existing geologic environment. Baseline conditions are presented in the context of prior site work that has impacted original conditions on Parcel 30.

The Hawaiian Islands are the exposed parts of the Hawaiian Ridge, a large volcanic mountain range extending northwestward across the central Pacific Ocean (USGS 1999). The island of O'ahu is the eroded remnant of two volcanoes – the older Waianae Volcano in the west and the larger Koolau Volcano in the east. Clastic sedimentary deposits, which primarily are alluvium derived from erosion of the volcanic rocks, have accumulated on the flanks of the island. In some places, the clastic sediments are interbedded with coralline limestone that formed as reef deposits in shallow marine waters. O'ahu has larger areas of sedimentary deposits than any other Hawaiian island and these deposits contain coralline limestone in coastal areas (USGS 1999).

Parcel 30 is situated within the JCIP in Kapolei, Hawaii. This area is underlain by the 'Ewa Plain, which is an emerged coral-algae limestone reef formed during the Pleistocene period when the ocean level was at higher elevation (C.E. Maguire 1986). The 'Ewa Plain extends from sea level at the coastline to approximately 3 to 5 miles inland. Figure 2.3-1, excerpted from a 1986 geotechnical report by C.E. Maguire, presents the extent of the emerged reef deposits on the island of O'ahu and specifically in the project area. The following local and site specific information is in large measure excerpted from that 1986 final geotechnical report conducted for H-POWER facility.

The local geology is typical of mid-Pacific volcanic islands in that the central volcanic core is surrounded and sometimes overlain by a coastal plain of interbedded marine sediments, alluvium, and coral reef formations. In the area of the proposed Bioconversion Facility site, on the basis of a projected dip slope of 5 degrees from the volcanic formation, this overlying coastal plain is estimated to be 600 to 800 feet thick (C.E. Maguire 1986). The coral reef deposits on-site in 1986 (pre-construction of H-POWER) were typical of those found throughout the Barbers Point area. The surficial layer typically consists of corals, calcareous algae, cemented beach sand, and cemented mixtures of coralline sand, gravel and coral fragments often termed "coral rock". This coral rock often contains cavities of various sizes and at various depths. The ground surface topography is termed "shallow karst" topography marked by small sink holes generally 0.5 to 3.0 feet in diameter and from approximately 3 to 10 feet deep, which have been dissolved out of the limestone by fresh rain water (C.E. Maguire 1986).

Soil throughout the area, and underlying Parcel 30, is classified as Coral Outcrop by the United States Department of Agriculture (USDA) Soil Conservation Service (USDA SCS 1965). This soils data is mapped on Figure 2.3-2.

Prior to construction of the existing H-POWER facility, vegetation was cleared and grubbed in preparation for a proposed refinery project in 1969. Many of the site sinkholes in the area were loosely filled during the site clearing of 1969. In 1985 H-POWER was constructed in accordance with the site preparation and foundation recommendations developed by the geotechnical consultant, C.E. Maguire. Site preparation included initial site subgrade preparation, consisting of clearing, grubbing and stripping of soft silty organic topsoil from the site. Site preparation also consisted of repairing surface cavities and leveling the site. A systematic probing, breakdown and grouting of below surface voids proceeded where cavities were identified. General surface cavity repair was conducted. Proof rolling (with 100 ton vehicles) to detect cavities or weak areas was also conducted in roadways, important equipment areas and footing areas. In areas where excavation was required, heavy equipment was used, but blasting was not permitted due to possible damage to structures supporting coral rock. Thus extensive geologic excavation and the addition of structural fill and construction components have changed much of the native conditions once found on the H-POWER site and increased the site's suitability for construction.

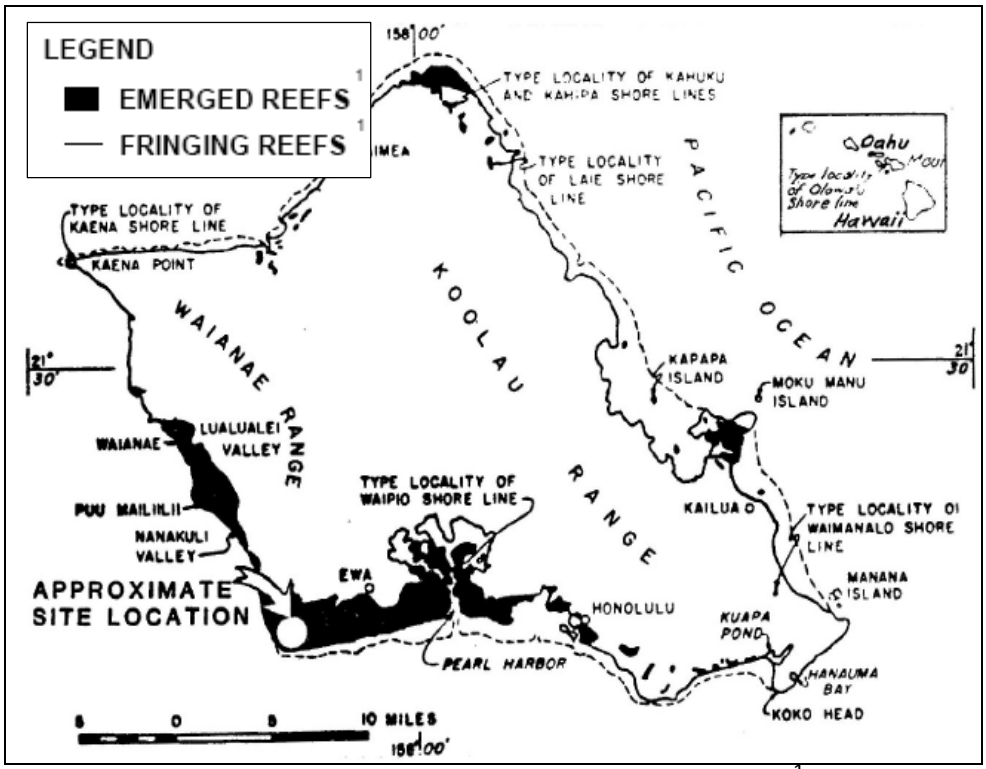
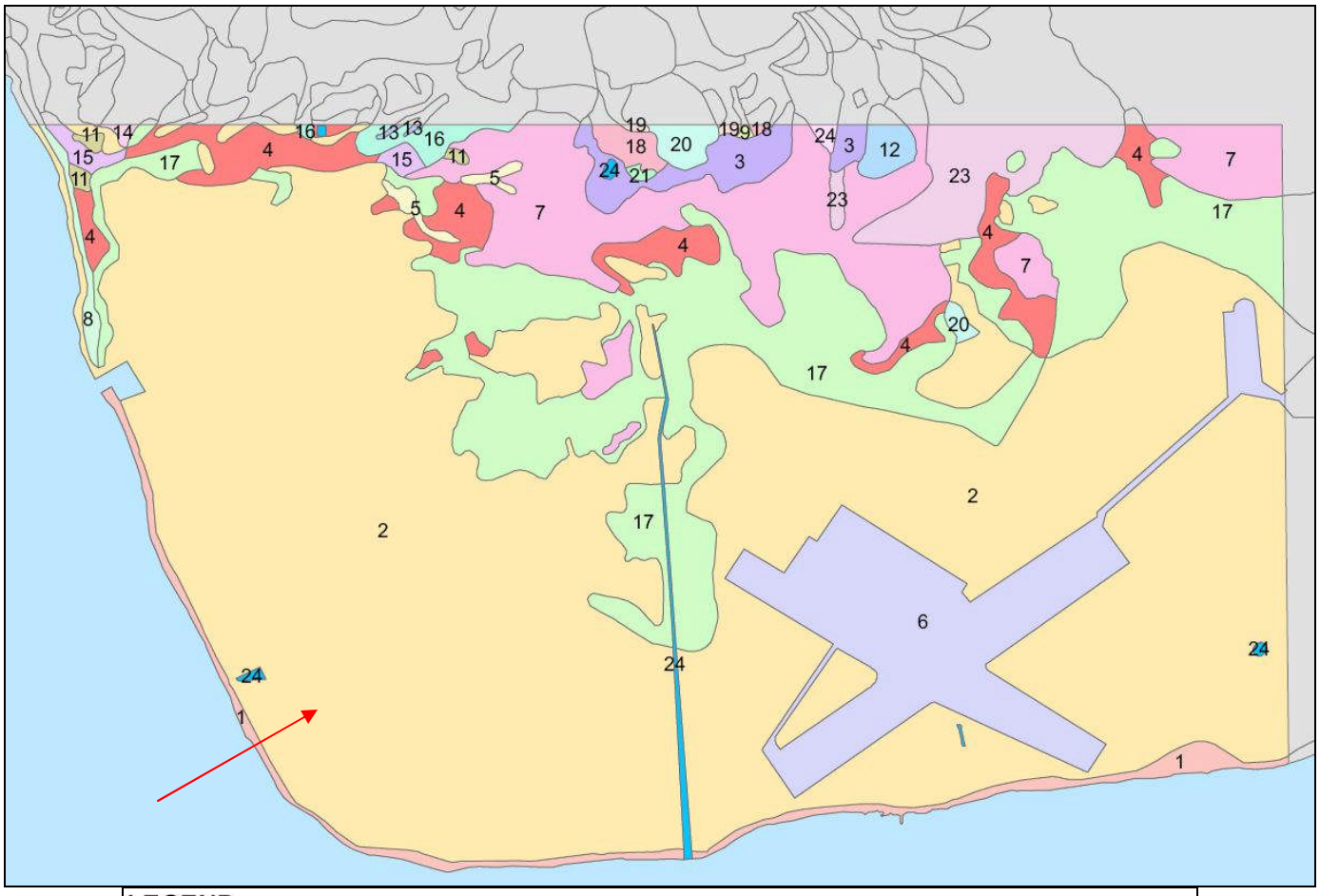


Figure 2.3-1: Emerged and Fringing Reefs of Oahu, [1]From "Geology of the Hawaiian Islands" (Stearns, 1969)



LEGEND

	NAME
1	BEACHES
2	CORAL OUTCROP
3	EWA SILTY CLAY LOAM, 3 TO 6 PERCENT SLOPES
4	EWA SILTY CLAY LOAM, MODERATELY SHALLOW, 0 TO 2 PERCENT SLOPES
5	EWA SILTY CLAY LOAM, MODERATELY SHALLOW, 2 TO 6 PERCENT SLOPES
6	FILL LAND, MIXED
7	HONOULIULI CLAY, 0 TO 2 PERCENT SLOPES
8	JAUCAS SAND, 0 TO 15 PERCENT SLOPES
9	KAWAIHAPAI CLAY LOAM, 0 TO 2 PERCENT SLOPES
10	KEAAU CLAY, 0 TO 2 PERCENT SLOPES
11	KEAAU STONY CLAY, 2 TO 6 PERCENT SLOPES
12	LAHAINA SILTY CLAY, 7 TO 15 PERCENT SLOPES, SEVERELY ERODED
13	LUALUALEI CLAY, 0 TO 2 PERCENT SLOPES
14	LUALUALEI EXTREMELY STONY CLAY, 3 TO 35 PERCENT SLOPES
15	LUALUALEI STONY CLAY, 0 TO 2 PERCENT SLOPES
16	LUALUALEI STONY CLAY, 2 TO 6 PERCENT SLOPES
17	MAMALA STONY SILTY CLAY LOAM, 0 TO 12 PERCENT SLOPES
18	MOLOKAI SILTY CLAY LOAM, 15 TO 25 PERCENT SLOPES
19	MOLOKAI SILTY CLAY LOAM, 7 TO 15 PERCENT SLOPES
20	QUARRY
21	STONY STEEP LAND
22	WAIALUA SILTY CLAY, 0 TO 3 PERCENT SLOPES
23	WAIALUA STONY SILTY CLAY, 3 TO 8 PERCENT SLOPES
24	WATER > 40 ACRES

Figure 2.3-2: Generalized Soils (Soils Conservation Service, 1996; downloaded from Hawaii DPP, prepared by AMEC, 2008)

2.4 Geologic Hazards

This Section identifies and analyzes the potential geologic hazards within O'ahu and more specifically, the JCIP. There are four potential geologic hazards in this region that are evaluated below:

- Subsidence, Settlement and Karst
- Seismic Ground Shaking (earthquake)
- Volcanic Activity
- Tsunami

Subsidence and Settlement

As noted in Section 2.3, Existing Conditions - Geology and Soils, the principal geologic hazard in the region consists of the "shallow karst" topography of this region. It is marked by small sink holes generally 0.5 to 3.0 feet in diameter and from approximately 3 to 10 feet deep, which have been dissolved out of the limestone by fresh rain water. Though previously cleared and grubbed, this shallow karst topography requires special construction measures to ensure the stability of foundations and to increase the load bearing capacity of the local soils. Engineering will ensure that the design and preparation of the site is appropriate and will prepare a geotechnical analysis if necessary.

Seismic Ground Shaking

~~The entire island of O'ahu is considered to be in Earthquake Hazard Zone 2A of the Uniform Building Code (UBC) seismic provisions (USGS 2001). This corresponds to a value of 0.075g to 0.15g, where g is gravitational force. The UBC seismic provisions contain six seismic zones, ranging from 0 (no chance of severe earthquake occurrence in a 50-year interval) to 4 (10 percent chance of severe earthquake occurrence in a 50-year interval).~~

The proposed action will be constructed in accordance with the construction standards and seismic provisions of the International Building Code (IBC). ~~UBC for Hazard Zone 2A.~~

The project area has about a 9% chance of a severe earthquake (magnitude 6.0 or greater) in a 50-year interval. This probability was calculated using the online USGS 2002 Earthquake Probability Mapping Tool for zip code 96707. The 2009 Mapping Tool does not include the State of Hawaii.

Volcanic Activity

The island of O'ahu was formed by two volcanoes, the Waianae Range on the west side of the island and the Koolau Range on the east. Both of these volcanoes are now extinct. The Waianae Range is approximately 2.95 to 3.8 million years old and the Koolau Range is approximately 1.8 to 2.7 million years old (Keinle and Wood 1990). However, there has been volcanic activity on the island of O'ahu since these two volcanoes have gone extinct. The Honolulu Volcanic Series consisted of over 30 separate eruptions ranging from approximately 850,000 to 32,000 years ago (Abbott et. al. 1983). Although there has not been any volcanic activity on the island of O'ahu for over 30,000 years, there is a very slight possibility of future volcanic activity on O'ahu.

Tsunami

As quoted from the Honolulu City and County, Department of Emergency Management web site:

> Tsunamis (pronounced tsoo-nah'-mee), or seismic sea waves, potentially the most catastrophic of all ocean waves, are generated by tectonic displacement--for example, volcanism, landslides, or earthquakes--of the seafloor, which in turn cause a sudden displacement of the water above and the formation of a small group of water waves having wavelength equal to the water depth (up to several thousand meters) at the point of origin. These waves can travel radially outward for thousands of kilometers while retaining substantial energy. Their speed--characteristic of gravity waves in shallow water and thus equal to the square root of gD, where g is the gravitational constant and D is the depth--is generally about 500 km/h (300 mph), and their periods range from 5 to 60 minutes. In the open ocean their amplitude is usually less than 1 m (3.3 ft); thus tsunamis often go unnoticed by ships at sea. In very shallow water, however, they undergo the same type of increase in amplitude as swell approaching a beach. The resultant waves can be devastating to low-lying coastal areas; the 37-m (120-ft.) waves from the 1883 Krakatoa eruption, for example, killed 36,000 people.
>
> The characteristics of tsunamis as they approach shore are greatly affected by wave refraction over the local bathymetry. Tsunami-producing earthquakes usually exceed 6.5 on the Richter scale, and most tsunamis occur in the Pacific Ocean because of the seismic activity around its perimeter. A tsunami warning system for the Pacific Ocean has been established; it consists of strategically placed seismic stations and a communications network. (Department of Emergency Management, 2009)

Figure 2.4-1 depicts the Department of Emergency Management's Tsunami Evacuation Zone for Kahe Point to 'Ewa Beach. The evacuation zone does not include Parcel 30.

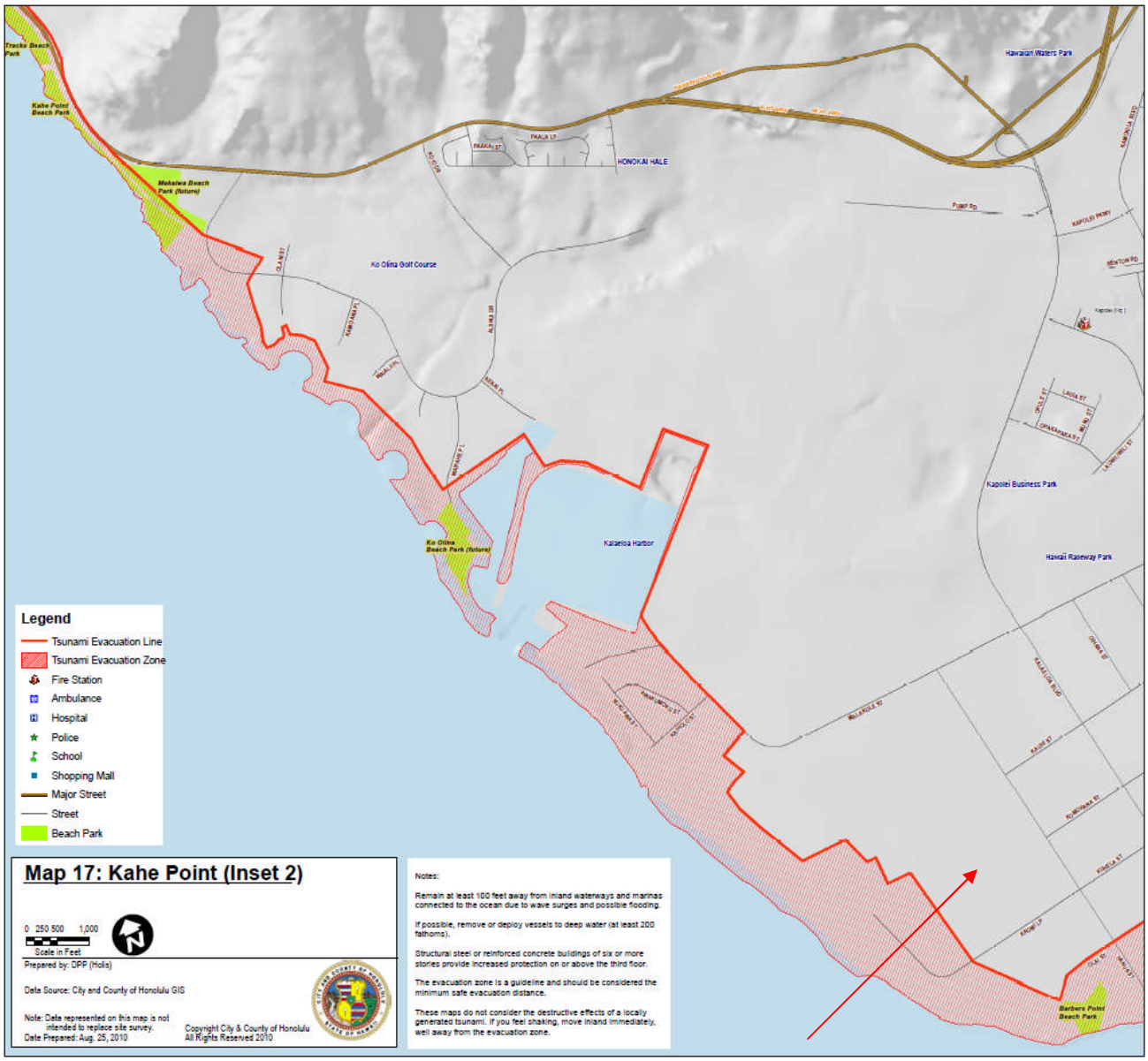


Figure 2.4-1: Tsunami Evacuation Zones

2.5 Climate and Air Quality

This section discusses the existing climate and air quality of Parcel 30 and the potential impacts of the proposed action.

According to the National Weather Service (NWS) Forecast Office in Honolulu, the climate of Hawaii is characterized by mild temperatures throughout the year, moderate humidity, persistence of northeasterly trade winds, infrequent severe storms but significant differences in rainfall amounts within short distances. When the northeasterly trade winds are weak, onshore, thermally driven sea breeze flows can develop on the normally leeward shores of O'ahu. The resulting southerly winds are referred to as "Kona winds".

The presence of mountains is important as they can obstruct and deflect the prevailing winds directions, and produce local drainage flows at night and upslope flows during the day. The importance of these local flows diminishes rapidly with distance from significant terrain objects. Due to the distance from the mountains, the wind conditions in the vicinity of the JCIP are dominated by the northeast trade winds and to a lesser extent, the southwest Kona winds.

Wind Direction and Speed

From October 1, 1992 through September 30, 1993 a meteorological tower within JCIP gathered the hourly weather data at several levels. Figure 2.5-1 illustrates the windrose generated from the data collected during this period. Figure 2.5-1 illustrates that the prevailing wind is dominated by the northeasterly trade winds. In addition, these data also show that the average wind speed is approximately 3.78 m/s at 10 meters.

Rainfall

The rainfall recorded at the JCIP meteorological tower from October 1, 1992 through September 30, 1993 was 13.5 inches. The average rainfall recorded at the Honolulu NWS station over the 30-year period from 1971-2000 is 18.29 inches.

Temperature

The mean monthly temperature recorded at the JCIP station between October 1992 and September 1993 ranged from 70.16 degrees Fahrenheit to 78.3 degrees Fahrenheit, with an average of 74.6 degrees Fahrenheit. This compares well with the average monthly temperature recorded at the Honolulu NWS station between the 30-year period from 1961-1990, which is 77.2 degrees Fahrenheit.

Air Quality

The area in the vicinity of JCIP is in attainment with the National Ambient Air Quality Standards (NAAQS) and the State Ambient Air Quality Standards (SAAQS) for the criteria air pollutants. Table 2.5-1 summarizes the maximum measured ambient air concentrations of criteria pollutants on O'ahu ambient air monitoring stations in 2006. Table 2.5-1 shows that, in general, the air quality on O'ahu is excellent.

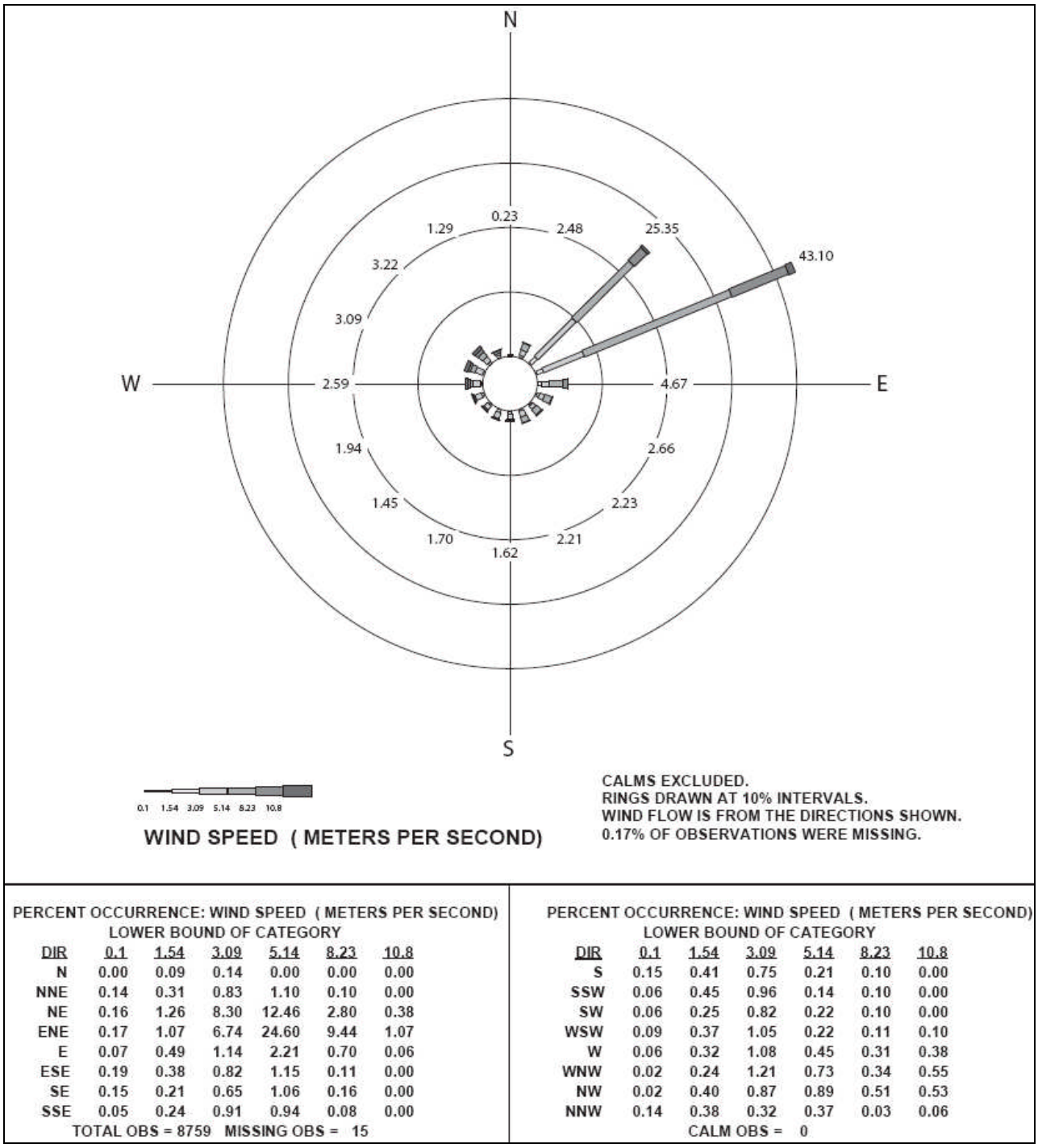
Impacts and Mitigation

The flue gas produced from sludge combustion, along with all flue gas produced from combustion of municipal solid waste, will first be controlled for nitrogen oxide emissions (NOx) utilizing Covanta's VLN™ system within the boiler. After the gases pass through the economizer they will enter into a three head rotary atomizer spray dryer absorber (SDA) where lime slurry will quench the gases and allow lime to react with sulfur dioxide (SO2), hydrogen chloride (HCl), hydrogen fluoride (HF), and other trace acid gases. The spent lime and reaction products will be carried in the flue gas with the fly ash to the H-POWER Expansion facility baghouse or fabric filter. The baghouse is a large pulse jet particulate collection device that will capture and remove the particulate and spent SDA reaction products from the flue gas stream. Activated carbon injection will be used to control mercury and certain organic compounds such as dioxins and furans (dioxins). The activated carbon is injected into the flue gas stream as a fine powder and the mercury and dioxins are absorbed onto the surface of the carbon particles. The carbon particles are then captured in the baghouse, effectively controlling these emissions.

Combustion of sludge may impact the uncontrolled emissions slightly. Since the quantity of sludge is limited to ten percent of the mass throughput at 30% solids, these impacts are manageable for the existing air pollution control (APC) devices. NO_x emissions might increase slightly. This may mean a slight increase in aqueous ammonia consumption but within the design of the existing system. Historically municipal sludge has had some heavy metals such as mercury. Due to better general knowledge and management practices at facilities such as dental, medical, and auto repair facilities heavy metals levels in sludge have generally decreased. The activated carbon injection system is sized to allow for any anticipated impacts. Slight impacts to the acid gas emissions (SO2 or HCl) and particulate emissions also are within the operation range of the APC systems provided. The H-POWER Expansion unit will still achieve the emission performance required under current regulations and its permit.

Some odors will be released when the bin doors are open and trucks unload the sludge into the bin. Unloading should require less than 15 minutes per truck. The storage bin doors will be closed except during the period when trucks unload

into the top of the bin. There will be an odor control system that will draw air from the sewage sludge building and from the sewage sludge receiving bin. After this air is scrubbed through bio-towers it will be exhausted into the atmosphere.



PERCENT OCCURRENCE: WIND SPEED (METERS PER SECOND)
LOWER BOUND OF CATEGORY

DIR	0.1	1.54	3.09	5.14	8.23	10.8
N	0.00	0.09	0.14	0.00	0.00	0.00
NNE	0.14	0.31	0.83	1.10	0.10	0.00
NE	0.16	1.26	8.30	12.46	2.80	0.38
ENE	0.17	1.07	6.74	24.60	9.44	1.07
E	0.07	0.49	1.14	2.21	0.70	0.06
ESE	0.19	0.38	0.82	1.15	0.11	0.00
SE	0.15	0.21	0.65	1.06	0.16	0.00
SSE	0.05	0.24	0.91	0.94	0.08	0.00

TOTAL OBS = 8759 MISSING OBS = 15

PERCENT OCCURRENCE: WIND SPEED (METERS PER SECOND)
LOWER BOUND OF CATEGORY

DIR	0.1	1.54	3.09	5.14	8.23	10.8
S	0.15	0.41	0.75	0.21	0.10	0.00
SSW	0.06	0.45	0.96	0.14	0.10	0.00
SW	0.06	0.25	0.82	0.22	0.10	0.00
WSW	0.09	0.37	1.05	0.22	0.11	0.10
W	0.06	0.32	1.08	0.45	0.31	0.38
WNW	0.02	0.24	1.21	0.73	0.34	0.55
NW	0.02	0.40	0.87	0.89	0.51	0.53
NNW	0.14	0.38	0.32	0.37	0.03	0.06

CALM OBS = 0

Figure 2.5-1: Joint Frequency Distribution for Raw Data File 64 M CIP (Prepared by AMEC, 2008)

Table 2.5-1: Air Quality Data – O'ahu 2006 (prepared by AMEC)

Pollutant	Averaging Period	Maximum Concentration (ug/m^3)	Lesser of NAAQS/ SAAQS (ug/m^3)	% of Standard	HDOH Monitoring Station
SO_2	3-Hr	62	1,300	5%	Makaiwa
SO_2	24-Hr	17	365	5%	Makaiwa
SO_2	Annual	5	80	6%	Kapolei
PM_{10}	24-Hr	59	150	39%	Kapolei
PM_{10}	Annual[1]	16	50	32%	Kapolei
$PM_{2.5}$	24-Hr	9	35	26%	Kapolei[2]
$PM_{2.5}$	Annual	4	15	27%	Kapolei
NO_2	Annual	9	70	13%	Kapolei
CO	1-Hr	1596	5,000	32%	Kapolei
CO	8-Hr	1183	10,000	12%	Kapolei
O_3	8Hr	83	157	53%	Sand Island
Lead	quarterly	NA [3]	1.5[4]	NA	NA

[1] The annual NAAQS has been revoked by USEPA.
[2] Maximum 24-hr concentration was flagged by HDOH as being elevated due to New Year's fireworks. Second highest value is shown.
[3] Ambient air monitoring for lead in Hawaii was discontinued in October 1997 with USEPA approval.
[4] USEPA signed the final rule to lower the lead NAAQS to 0.15 ug/m3 on a rolling 3-month basis on October 15, 2008. However, the final rule is not effective until 60 days after publication in the Federal Register.

2.6 Surface Water

Baseline Surface Water Conditions

Surface waters for the Island of O'ahu are classified by water quality standards established under Hawaii Administrative Rules, Title 11, Chapter 54 (HAR 11-54). The regulations categorize all State waters as either marine or inland. It is also important to note that "State Waters", as defined by section 342D-1, HRS, exclude "…drainage ditches, ponds, and reservoirs required as part of a water pollution control system…" Figure 2.6-1 provides a broad overview map of the Water Quality Standards for the island. As can be seen from Figure 2.6-1, Parcel 30 is located within the defined hydrographic area IV and has an Inland (Water) Classification of Class 2. Class 1 waters are more heavily restricted, and it is the objective that Class 1 waters remain in their natural state as nearly as possible. The objective of Class 2 waters is defined as follows: "The objective of Class 2 waters is to protect their use for recreational purposes, the support and propagation of aquatic life, agricultural and industrial water supplies, shipping, and navigation. The uses to be protected in this class of waters are all uses compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters" (HAR 11-54-3).

Figure 2.6-1 also depicts the Marine Classifications and shows that Parcel 30 is located most proximate to Class A marine waters. Class AA marine waters are more heavily restricted, and it is the objective that these waters remain in their natural pristine state as nearly as possible. The objective of Class A waters is defined as follows: "It is the objective of Class A waters that their use for recreational purposes and aesthetic enjoyment be protected. Any other use shall be permitted as long as it is compatible with the protection and propagation of fish, shellfish, and wildlife, and with recreation in and on these waters" (HAR 11-54-3).

As noted earlier (Section 2.3), Parcel 30 is located on what is commonly referred to as the 'Ewa Plain, an emerged coral-algae reef formed during the Pleistocene period when the ocean was at a higher level. The 'Ewa Plain today is one of the driest areas on O'ahu, so dry that it has commonly been characterized as "barren" and "desolate" and even referred to as a desert (Pacific Consultant Services Inc (PCSI), 2008). Site specific water resources are addressed below.

Proposed Action Site Surface Waters

As shown previously in Figure 2.1-3, there are no perennial or intermittent streams, tidal channels or springs located on Parcel 30. The H-POWER site is roughly 24.6 acres in size, or 1,071,576 square feet. Of that, approximately one-

third, 357,192 square feet is not paved. The remaining area, 714,384 square feet consists of impervious surface area.

Other than the Pacific Ocean, the nearest surface waters are industrial holding ponds and industrial park drainage canals. These consist of: (1) A drainage canal abutting the southeast corner of the H-POWER site that extends south to the Pacific Ocean; (2) drainage canals that exist proximate to the Kaomi Loop bend, that drain to the Pacific Ocean; and (3) nearby holding ponds situated on the industrial Chevron property. Each of these surface waters can be seen on the previously provided Figure 2.1-3.

The proposed action's waste handling operations will take place indoors as described in Section 1 "General Description" to minimize exposure to the elements and for good housekeeping practice. H-POWER personnel are trained in Spill Prevention Countermeasure and Control annually which increases their awareness on the necessity to be careful in handling liquid materials around the proposed action.

The following section presents the system of pollution prevention measures that the H-POWER Expansion Project has been utilizing to (1) minimize pollutants in the project's stormwater discharges, (2) assure compliance with the terms and conditions of both construction and operational NPDES permits, and (3) attenuate peak stormwater runoff discharge rates.

Both structural and non-structural controls will be outlined. A brief summary of some of the controls and practices anticipated during construction, and upon completion, is provided below.

Construction Stormwater Management

To prevent sedimentation and erosion, one of the first steps in the construction process will be the installation of siltation barriers around the limit of work. The barriers will act as a boundary for the limit of work, minimizing intrusion into areas outside the construction zone. In addition, the barriers will collect sediment that may be transported from the construction area and will prevent sediment from leaving the site. The sedimentation barriers and absorbent material will remain in place throughout the construction effort. Routine inspections will be undertaken to ensure that their integrity is maintained, and to remove accumulated sediments following storm events. Details with regard to erosion and sediment control measures undertaken during construction will be included in the Construction Stormwater Pollution Control Plan (SWPCP) which will be prepared prior to construction. This document will outline the measures that will be followed to ensure minimal impact on water quality throughout the construction effort. These measures will remain in place until the site is stabilized.

Post-Development Stormwater Management

An Operational SWPCP will be required for the project and will comply with stormwater quality standards. Once construction is finished and site stabilization is completed, the temporary construction siltation barriers will be removed. Stormwater runoff associated with the construction activity of the proposed Facility will require coverage under a General Permit for the entire acreage to be affected by these temporary construction impacts. A Notice of Intent (NOI) for coverage under the General Permit will be submitted for construction activities. This NOI will also include a construction site best management practices plan, timetables and nature of the activities proposed, and calculated stormwater runoff quantities for the affected area(s). The contents of the NOI will satisfy the requirements for the General Permit and will describe the measures that will minimize discharge of pollutants via storm water.

Designated Surface Water Resource Areas

A review of known or designated surface water features and coastal constraints was conducted, to determine proximity to potential resources of concern. These included coastal constraints as well as designated floodplains. Figure 2.6-2 depicts these designated areas with respect to Parcel 30.

Coastal Constraint Areas

Surface water constraints on O‘ahu are shown on Figure 2.6-2 and are regulated by a variety of state and local agencies. The following is a brief summary of these designated coastal resource areas proximate to Parcel 30.

Coastal Zone

The entire Island of O‘ahu is classified as within the Coastal Zone, as footnoted on Figure 2.6-2, with the exception of regulatory exemptions for federally owned lands. Though not mapped, Parcel 30 is within the Coastal Zone. The Hawaii Coastal Zone Management (CZM) Program (under the Department of Business, Economic Development & Tourism’s Office of Planning) conducts CZM federal consistency review for certain types of projects.

Shoreline Setback Line

Parcel 30 is not within the Designated Shoreline Setback line, or the Shoreline Buffer Zone Line (Figure 2.6-2). The Designated Shoreline Setback and Buffer Zone Lines are each situated west of Kaomi Loop. The City and County of Honolulu DPP regulates activities within the Shoreline Setback Line.

Tsunami Evacuation Zone

As described in Section 2.4, tsunamis pose a risk to many coastal areas on O‘ahu. Figure 2.4-1, shown previously, depicts the evacuation zone identified for this area of O‘ahu. The evacuation zones, developed by the National Oceanic and Atmospheric Administration (NOAA) in partnership with the State of Hawai'i Civil Defense, do not include Parcel 30.

Floodplains

Parcel 30 is located outside of designated Special Flood Areas. Figure 2.6-2 depicts mapped Flood Area (DPP, 2004). A review of the most recent Federal Emergency Management Area (FEMA) Flood Insurance Rate Map (FIRM) was also conducted (FEMA 2008). The FIRM maps were not available in hard copy or electronic format. However, no change from the DPP electronic map data was observed in the project area. A copy of the 2004 FIRM is provided in Figure 2.6-3. Parcel 30 is outside of the designated Flood Hazard Zones. As shown on Figure 2.6-2 and confirmed on the FIRM map, the closest designated Flood Hazard Area is situated west of Kaomi Loop along the coast and is designated Zone AE, which is a flood insurance rate zone that correspond to the 1-percent annual chance floodplains that are determined in the Flood Insurance Study; mandatory flood insurance purchase requirements apply. According to the FIRM map, Parcel 30 is located in Flood Zone D, which is a zone where flood hazards are undetermined, but possible. The Flood Insurance Program does not have any regulations for developments within Flood Zone D.

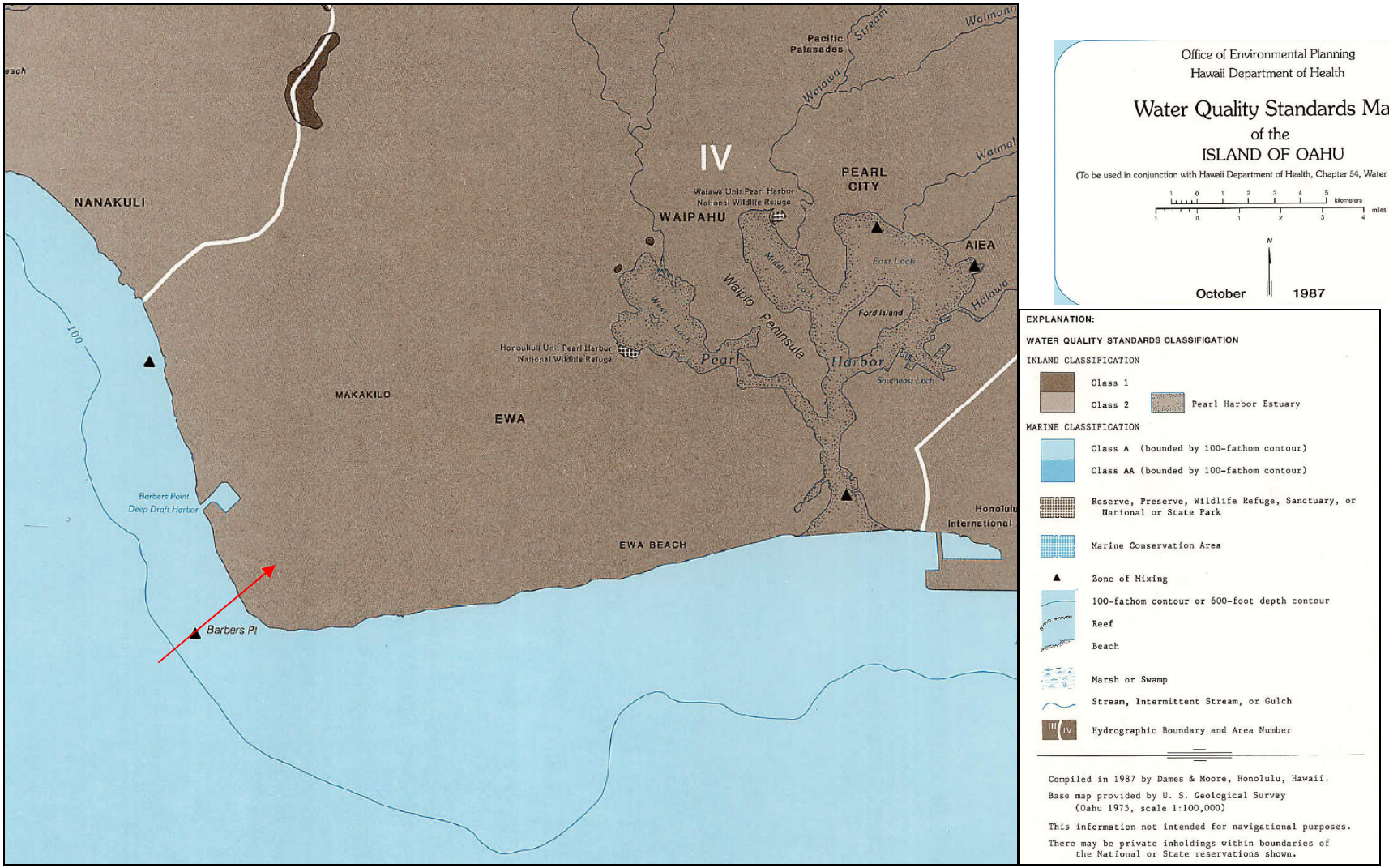


Figure 2.6-1: Water Quality Standards (State Department of Health, Clean Water Branch)

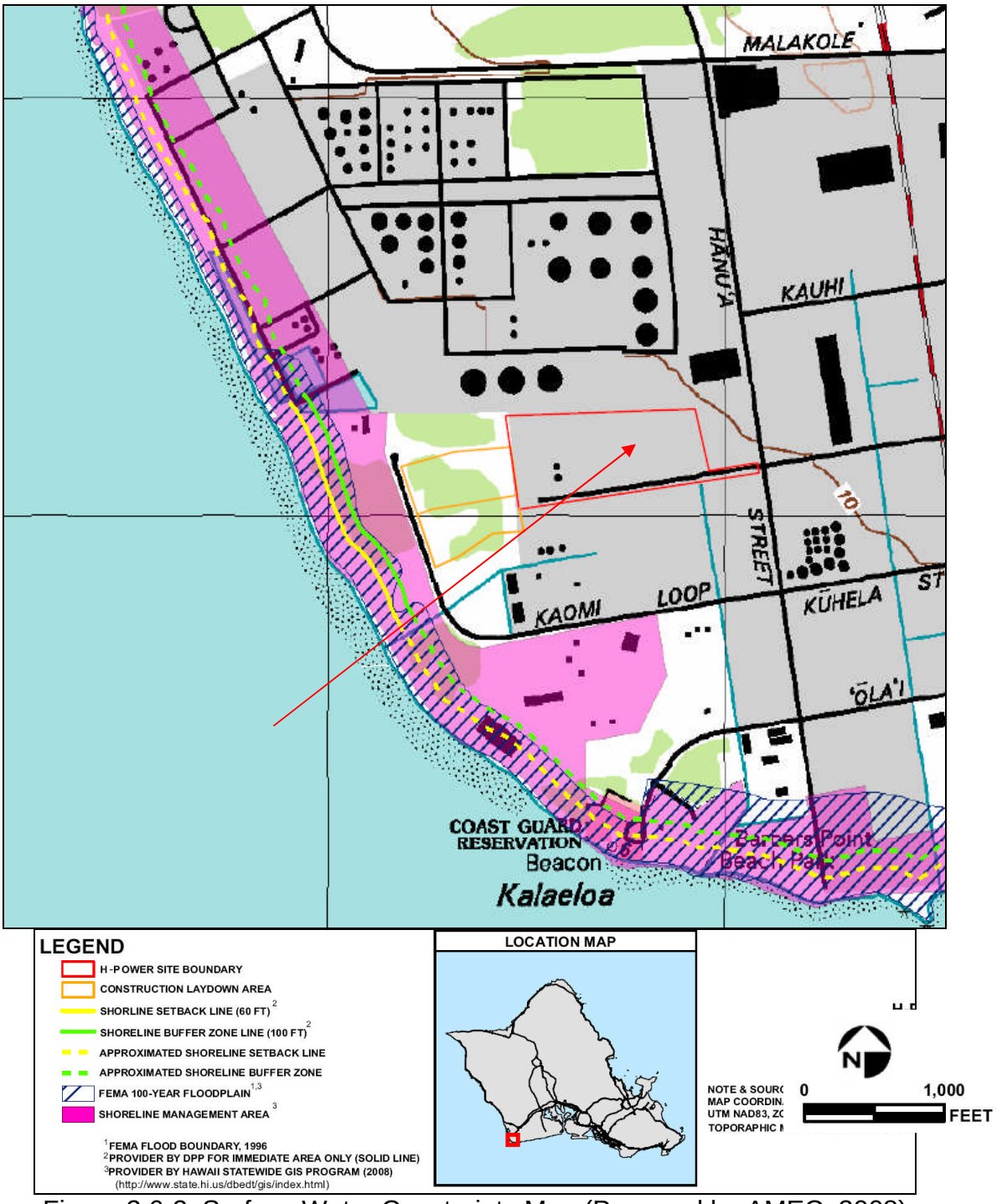


Figure 2.6-2: Surface Water Constraints Map (Prepared by AMEC, 2008)

Figure 2.6-3: Flood Insurance Rate Map (FIRM) Effective 1/19/2011

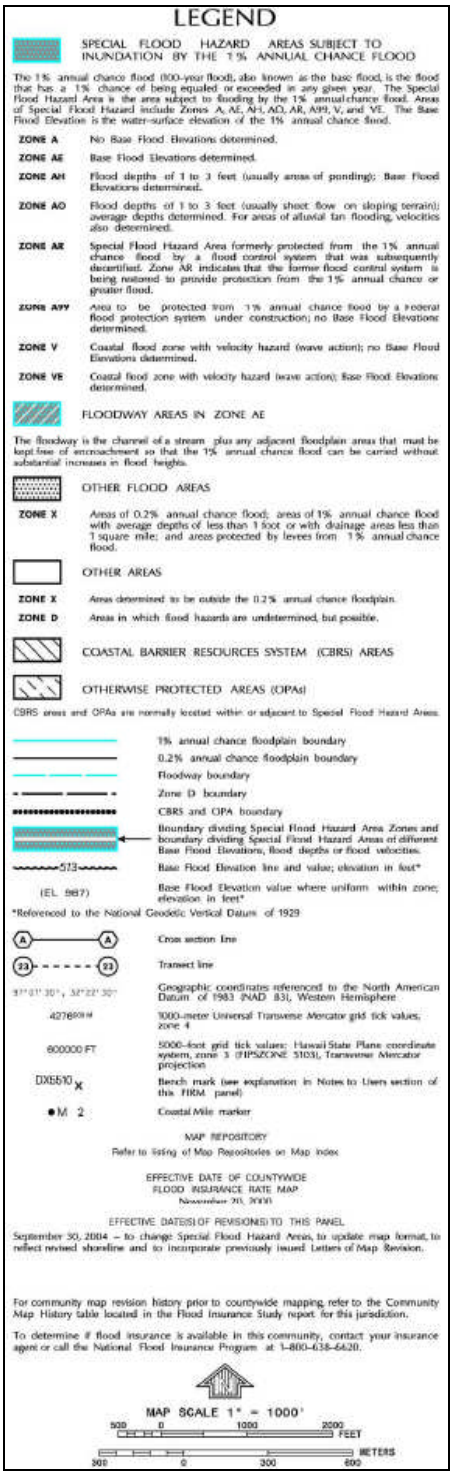


Figure 2.6-3 Legend

2.7 Groundwater

Baseline Conditions

Groundwater is a key resource for the island of O‘ahu. Of the total freshwater used on O‘ahu, 326 Mgal/d is from ground water and 71 Mgal/d is from surface water. Most of the groundwater on the island of O‘ahu is derived from extensive volcanic aquifers of thin-bedded basalts in central and southern O‘ahu. These aquifers are unconfined and though often at great depth (600-1,000 ft) are essentially “surficial” aquifers and therefore vulnerable to contamination (USGS 1998). As a result, water resource protection and management is important on O‘ahu.

Parcel 30 is located within the ‘Ewa (Limestone) Caprock Aquifer. The ‘Ewa limestone aquifer is a brackish to saline groundwater body that exists as a thin basal lens in the permeable coralline reef deposits that comprise the ‘Ewa Plain. Figure 2.7-1 depicts aquifers, the ‘Ewa Caprock zone, and Parcel 30.

Consistent with the goals of protecting water resources, groundwater governance in Hawaii is split into two distinct aspects: (1) Groundwater withdrawals and (2) injection wells. Groundwater withdrawals, stream diversions and water use are regulated under the State Water Code and its implementing rules. The Commission on Water Resource Management (CWRM), Department of Land and Natural Resources (DLNR) manages the designation and regulation of Water Management Areas, water withdrawals and well construction activities. Groundwater injection wells, typically used for disposal of cooling waters, are governed by rules administered by HDOH.

The permitting of underground injection wells on O‘ahu is also affected by the location of the wells. Figure 2.7-2 shows that in coastal regions where waters can be saline at depth, the underlying aquifers may not be considered a drinking water source and though permit limitations are imposed, wells may be permitted.

Construction Impacts & Mitigation

Potential effects of the construction of the proposed Facility upon groundwater resources are very limited. Construction activities will not involve the use of substantial amounts of chemicals or other potential contaminants, so the potential for impact to groundwater would be limited to contamination from a leak or accidental spill of fuel or lubricants from construction vehicles or equipment. Oil absorbent pads and/or mats will be available at the construction site for use in the event of a spill or leak from construction equipment, and it is not anticipated that significant groundwater impacts would result from construction operations.

All construction activities will occur in compliance with the H-POWER Expansion project construction SWPCP.

The proposed action will utilize existing H-POWER Expansion project footings. Thus, no signification impact from construction operations would occur.

Operational Impacts & Mitigation

The proposed action will not require any additional water use.

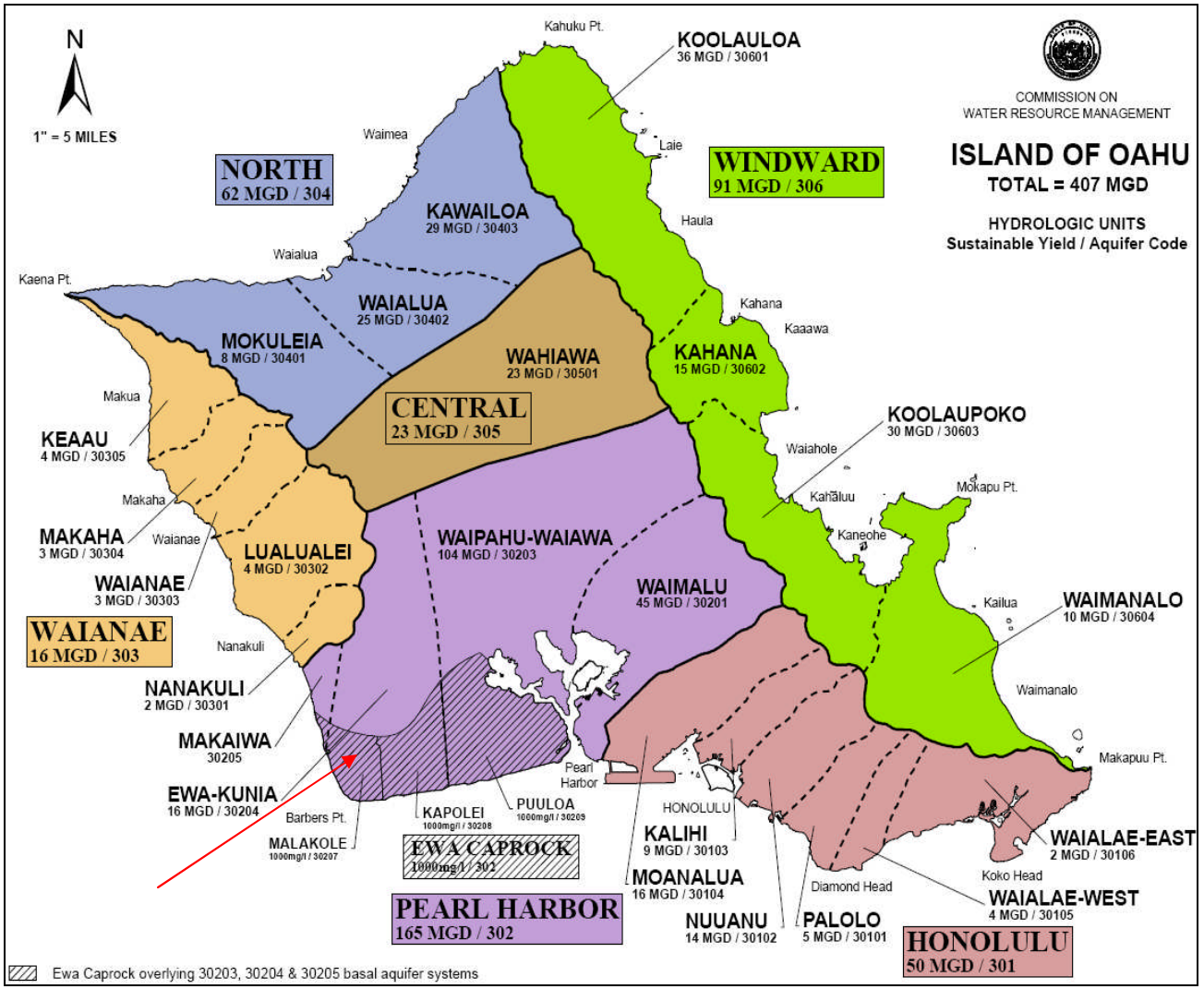


Figure 2.7-1: Aquifers

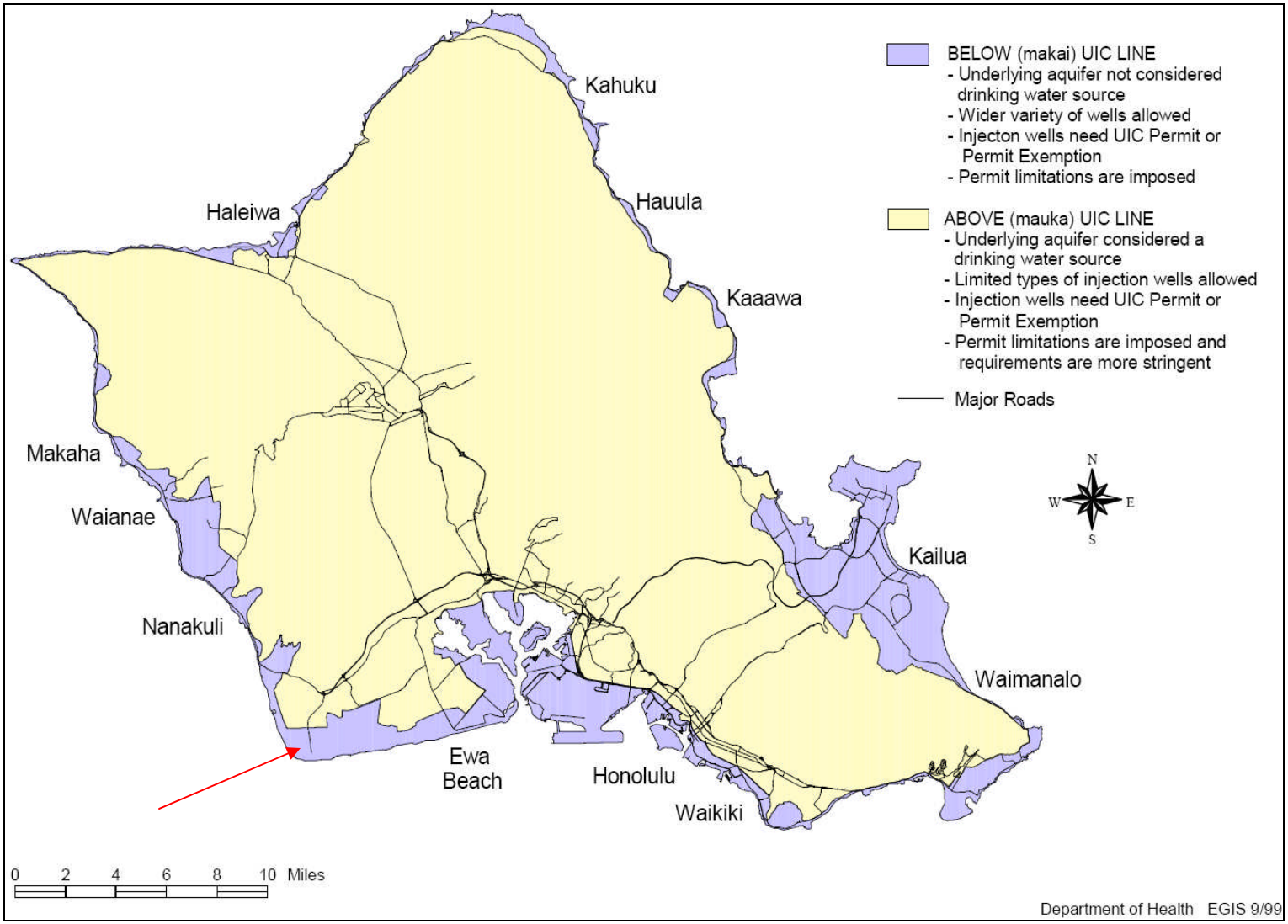


Figure 2.7-2: Underground Injection Control Areas

2.8 Biological Resources

This section discusses the existing biologic environment in and around Parcel 30. Baseline conditions, including resource areas of concern and special status species, are identified and the potential impacts of the proposed action are presented. Mitigation measures, such as stormwater controls and use of buffer areas, are evaluated.

Existing Conditions - Biological Resources

Parcel 30 is located in what is commonly referred to as the ‘Ewa Plain. The ‘Ewa plain is characterized as:

> A semiarid region of intense sunshine, warm tradewinds, and sparse rainfall. At the western end of the plain these conditions are all the more accentuated. Except for a few coastal marshlands and other favored localities, the vegetation is typically xeric and, where undisturbed by modern developments, is dominated by hardy exotics (Davis 1990a).

Figure 2.8-1 depicts National Wetland Inventory (NWI) data for the region surrounding Parcel 30. As shown on that figure, no onsite resources are identified. An initial biological resource site reconnaissance survey of Parcel 30 was conducted by an AMEC biologist during November 9 – 11, 2004. A confirmation biological survey was conducted by an AMEC biologist on August 27, 2008 to update the findings of the initial survey for the H-POWER Expansion EIS. Findings from the August 2008 survey were in agreement with the findings from the November 2004 survey. A list of plant species observed is presented in Table 2.8-1.

Survey Methodology

Methodology for the November 2004 survey included a pedestrian survey of the H-POWER facility perimeter and open lawn areas and transects through Parcels 33-35. Due to limited site access, perimeter-only survey of a fenced enclosure (endangered plant preservation area) within Parcels 33 and 34 was also conducted in the November 2004 survey.

The methodology for the August 2008 survey was modified from the 2004 survey since the vegetation throughout Parcels 33-35 had become more dense (over 12 feet tall in the fenced enclosures and typically at least four feet tall outside the enclosures). A pedestrian survey was conducted of perimeter and open lawn areas of Parcel 30. For Parcels 33-35, bordering access roads and transects were also surveyed in open areas around the perimeter. Dense surrounding

vegetation provided only limited access to the fenced enclosures within parcels 33-35. When openings in the vegetation permitted, the perimeter of the fenced enclosure was surveyed.

The majority of the H-POWER site consists of developed infrastructure (e.g., concrete parking lots, asphalt roads, buildings, ancillary facilities, etc.). Undeveloped areas consist of manicured lawns with ornamental trees and shrubs. Figure 2.8-2 depicts the extent of development in the early 1990's.

Flora

The open lawn areas of the H-POWER facility area consists of introduced and ornamental vegetation, including Bermuda grass (*Cynodon dactylon*), monkey pod trees (*Samanea saman*), autograph trees (*Clusia rosea*), *Hibiscus sp*., and milo trees (*Thespesia populnea*). Other plant species included coconut trees (*Cocos nucifera*)*, beach naupaka* (*Scaevola* sericea), and yellow oleander (*Cascabela thevetia*).

Fauna

Animals currently found in the area include feral cats and a variety of other non-native species wildlife such as mongoose, mice, and rats. Bird species observed included: zebra doves (*Geopelia striata*), spotted doves (*Streptopelia chinensis*), sharp-tailed sandpipers (*Calidris acuminata*), mynah birds (*Acridotheres tristis*), feral chickens (*Gallus gallus*), red vented bulbuls (*Pycnonotus cafer*), common waxbills (*Estrilda astrild*), and cattle egrets (*Bubulcus ibis*). These animal species are transient over much of the 24.6 acres of the facility. Additionally, the ornamental trees and bushes may serve as nesting sites for various bird species.

Special Status Species

Flora and Invertebrate Fauna

On October 8, 2004, the U.S. Fish and Wildlife Service (USFWS) replied to a letter requesting a list of rare, threatened, or endangered species, and significant natural communities that may be affected by the proposed H-POWER Expansion. The USFWS list included one endangered plant, *Achyranthes splendens var. rotundata*, as occurring in Parcels 33-35 (USFWS 2004a). This species is a low shrub varying in height from 1½ to 6½ feet. Three locations within Parcels 33-35 have been fenced and are currently protected as plant preservation areas. Due to limited site access, only the perimeters of the three fenced enclosures were surveyed during the November 2004 biological site reconnaissance. When the dense surrounding vegetation occasionally permitted access, the perimeters of the fenced enclosures were surveyed in August 2008.

The enclosures within Parcels 33-35 are maintained annually. Maintenance consists of clearing invasive species and protecting native or endangered species. According to Mr. Shad Kane, the enclosures within Parcels 33-35 shelters the last naturally occurring populations of the endangered plant, *Achyranthes splendens var. rotundata*. Mr. Kane is actively involved in community affairs in the ‘Ewa area and manages the plant sanctuaries on Parcels 32-33 and 33-34 for the City. He was hired by the City to assist in the preparation of a habitat preservation plan and the establishment of “wild sites” for the endangered species contained within the sanctuaries. Mr. Kane also shared his observation that condensation from precipitation and runoff that collects in the sinkholes within the plant preservation enclosures appears to support the *Achyranthes* populations, especially during the drier summer months.

Additionally, prior communication on July 20, 2004 with USFWS (USFWS 2004b) indicated that the endangered plant *Chamaesyce skottsberegi var. skottsbergii* is known from the surrounding area. The July 2004 correspondence also indicated that an invertebrate species of concern, *Lyropupa perlonga*, is thought to be present in an area adjacent to the project site, though a specific location was not identified, and no individuals of this species were observed during the November 2004 and August 2008 site reconnaissance surveys.

Vertebrate Fauna

The shoreline, estuarine, and freshwater areas associated with Pearl Harbor are known habitat for four species of endemic waterfowl which are listed by both federal government and by the State of Hawaii as endangered species: the Hawaiian moorhen (*Gallinula chloropus sandvicensis*), the Hawaiian coot (*Fulica americana alai*) the Hawaiian duck (*Anas wyvilliana*) and the Hawaiian stilt (*Himantopus mexicanus knudseni*) [50 CFR Part 17]. Previous sightings of three of these four species (Hawaiian coot, Hawaiian moorhen and Hawaiian stilt) have been documented in the vicinity of the project area (USFWS 2004a). Population levels of these endangered waterfowl have been severely reduced primarily because of the loss of wetland habitat. Other threats to these species include predation by introduced mammals, invasion of wetlands by alien plants and fish, hybridization, disease, and possibly environmental contaminants (USFWS 1994). No endangered waterfowl species were observed during the November 2004 and August 2008 site reconnaissance surveys.

Two additional species of birds, listed as threatened or endangered by the State of Hawaii, but not listed by the federal government, are found in the vicinity of Pearl Harbor. These two species include the state-threatened white tern (*Gygis alba rothschildi*), a diminutive, arborealnesting seabird which can be seen around Pearl Harbor, and the state-endangered Hawaiian owl (*Asio flammeus sandwichensis*) an endemic race of the crepuscular, ground-nesting shorteared

owl). Neither of these species was encountered during the November 2004 and August 2008 site reconnaissance surveys.

Impacts and Mitigation

Though not likely to occur due to the existing dryland habitat and industrial nature of the site, construction workers are to be trained to suspend construction activities if transient bird species of concern are encountered at or near the site. A biologist will conduct the initial training and provide a short information packet so that workers are familiar with (1) the endangered Hawaiian coot or alae keokeo (Fulica alai), (2) the Hawaiian gallinule or alae ula (*Gallinule chloropus sandvicensis*), and (3) the black-necked stilt or aeo (*Himantopus mexicanus knudsenii*). Workers will be instructed to notify their supervisor who will contact an on-call biologist for confirmation. If confirmed, the biologist will contact the Pacific Islands Fish and Wildlife Office. In the event that the on-call biologist is unavailable the construction supervisor will be provided with the contact information and will be instructed to contact the Pacific Islands Fish and Wildlife Office directly.

The lack of wetland habitat onsite minimizes the potential for impacts to waterfowl species due to lack of proper habitat. Silt fencing and petroleum abatement measures will surround the construction areas.

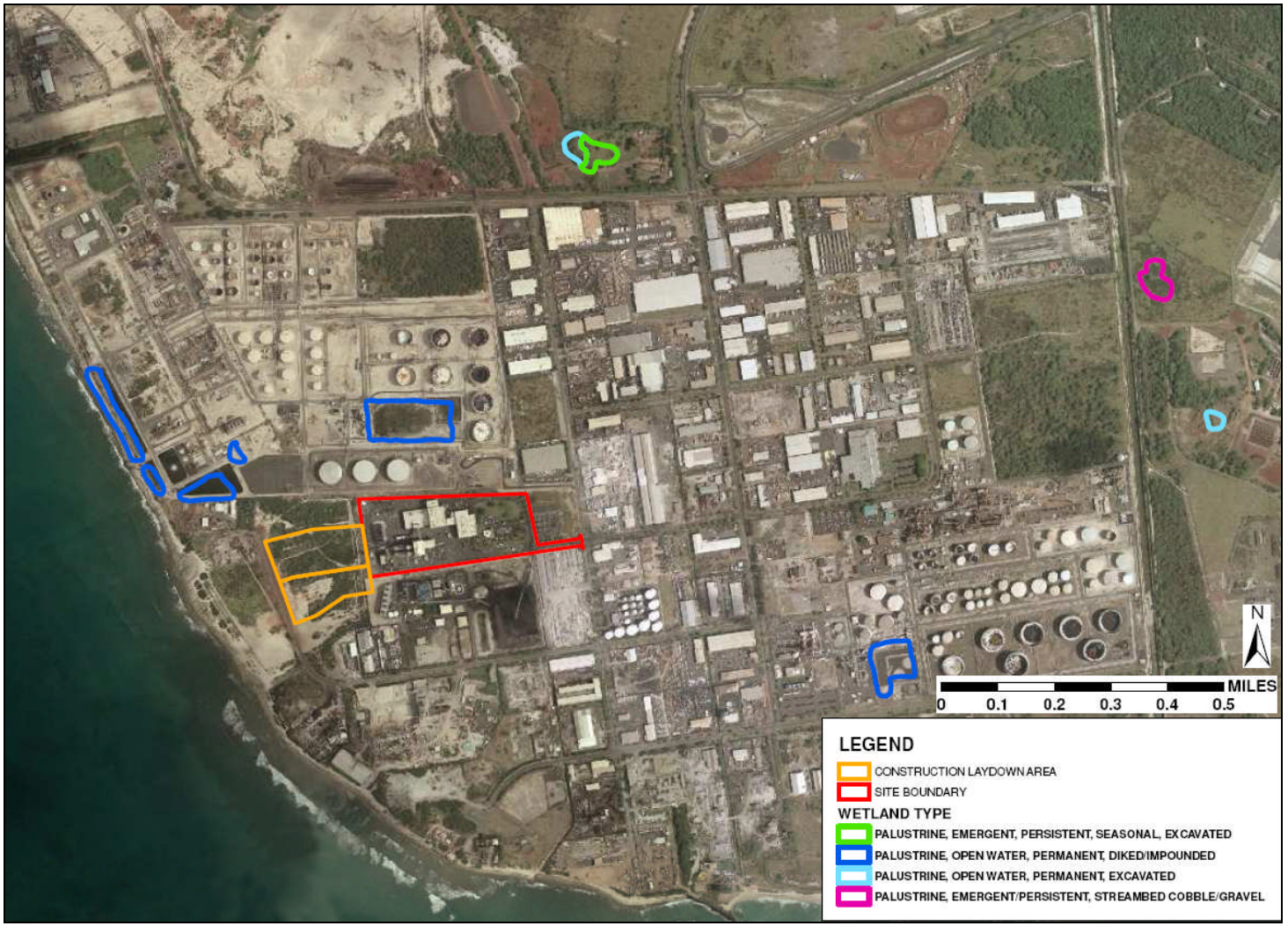


Figure 2.8-1: National Wetlands Inventory (Prepared by AMEC, 2008)

Table 2.8-1 Plant Species Observed or Known to Occur on Parcels 30 and 33-35
(November 2004 Biological Reconnaissance Survey)

Plant Species	Common Names	Family	Status
Asystasia gangetica	Chinese violet	Acanthaceae	non-native
Sesuvium portulacastrum	akulikuli; sea purlane	Aizoaceae	indigenous; common
Achyranthes splendens var. rotundata	--	Amaranthaceae	endemic; endangered
Amaranthus spinosus	spiny amaranth	Amaranthaceae	non-native
Amaranthus viridis	slender amaranth	Amaranthaceae	non-native
Cascabela thevetia	yellow oleander; be-still tree	Apocynaceae	non-native
Schefflera actinophylla	octopus tree	Araliaceae	non-native
Cocos nucifera	coconut tree; niu	Arecaceae	non-native
Bidens alba	beggar's tick	Asteraceae	non-native
Pluchea indica	Indian pluchea; Indian fleabane	Asteraceae	non-native
Pluchea symphytifolia	sourbush	Asteraceae	non-native
Tridax procumbens	coat buttons	Asteraceae	non-native
Verbesina encelioides	golden crown-beard	Asteraceae	non-native
Batis maritima	pickleweed; salt wort	Bataceae	non-native
Heliotropium curassavicum	seaside heliotrope; kipukai; nena	Boraginaceae	indigenous; common
Heliotropium procumbens	--	Boraginaceae	non-native
Opuntia ficus-indica	prickly pear cactus; panini	Cactaceae	non-native
Capparis sandwichiana	maiapilo; pilo; pua pilo	Capparaceae	endemic, vulnerable
Atriplex semibaccata	Australian saltbush	Chenopodiaceae	non-native
Clusia rosea	autograph tree	Clusiaceae	non-native
Ipomea cairica	ivy-leaved morning glory; koali ai	Convolvulaceae	non-native
Momordica charantia	balsam pear; bitter gourd	Cucurbitaceae	non-native
Chamaesyce hirta	garden spurge	Euphorbiaceae	non-native
Acacia fernesiana	klu	Fabaceae	non-native
Alysicarpus vaginalis	alysicarpus	Fabaceae	non-native
Desmanthus virgatus	slender mimosa; virgate mimosa	Fabaceae	non-native
Leucaena leucocephala	haole koa; koa haole; wild tamarind	Fabaceae	non-native
Mimosa pudica	sensitive plant; sleeping grass	Fabaceae	non-native
Prosopis pallida	kiawe; mesquite	Fabaceae	non-native

Table 2.8-1 Plant Species Observed or Known to Occur on Parcels 30 and 33-35
(November 2004 Biological Reconnaissance Survey)

Plant Species	Common Names	Family	Status
Samanea saman	monkeypod tree	Fabaceae	non-native
Scaevola sericea	beach naupaka; naupaka kahakai	Goodeniaceae	non-native
Abutilon grandifolium	hairy abutilon	Malvaceae	non-native
Sida fallax	ilima	Malvaceae	indigenous, common
Myoporum sandwicense	naio; naeo; naieo; bastard sandalwood	Myoporaceae	indigenous; common
Boerhavia coccinea	--	Nyctaginaceae	non-native
Oxalis corniculata	wood sorrel; 'ihi' ai	Oxalidaceae	non-native
Passiflora foetida	love-in-a-mist; wild passionfruit; pohapoha	Passifloraceae	non-native
Brachiaria subquadripara	--	Poaceae	non-native
Cenchrus ciliaris	buffel grass	Poaceae	non-native
Chloris barbata	swollen finger grass; mau'u lei	Poaceae	non-native
Cynodon dactylon	Bermuda grass; manienie	Poaceae	non-native
Dactyloctenium aegyptium	beach wiregrass	Poaceae	non-native
Eleusine indica	goose grass; manienie ali'i	Poaceae	non-native
Sporobolus diander	Indian dropseed	Poaceae	non-native
Lycopersicon pimpinellifolium	cherry tomato	Solanaceae	non-native
Nicotiana glauca	tree tobacco; Indian tobacco; makahala	Solanaceae	non-native
Waltheria indica	uhaloa	Sterculiaceae	indigenous; common

Figure 2.8-2: Aerial Photograph (Early 1990's)

Section 3 - Cultural Impacts

ASSESSMENT OF THE EXISTING HUMAN ENVIRONMENT, POTENTIAL IMPACTS, AND MITIGATIVE MEASURES

This chapter describes the existing human environment in the area of the proposed action that would potentially be affected. Because the human environment can be regional in nature, regional issues are addressed where necessary to establish an appropriate perspective on the human environment.

This chapter also assesses the environmental consequences to the human environment that may result from the proposed action. Potential temporary and permanent impacts are described and evaluated and mitigation measures that would eliminate and/or reduce potential adverse impacts are identified.

3.1 Archaeological and Cultural Resources

Pacific Consulting Services, Inc. (PCSI) undertook an archaeological and cultural impact assessment study in support of the proposed H-POWER Expansion Project. PCSI, a Honolulu-based consulting firm offering professional archaeology services, evaluated both the H-POWER site, consisting of 24.635 acres of industrially zoned land and designated by Tax Map Key (TMK) number 9-1-026:030, and the adjacent parcels, 9-1-026:033, 9-1-026:034, and 9-1-026:035, consisting of vacant land and totaling an additional 22.86 acres. The proposed action will take place on Parcel 30. The PCSI analysis, provided in Appendix A, included an evaluation of baseline (existing) and potentially existing resources, as well as an assessment of the effect that the H-POWER Expansion Project might have upon archaeological or cultural resources. This section summarizes the results of that study that are applicable to the proposed action. Standards and guidelines for archaeological and cultural resource assessments are presented, baseline conditions described, anticipated impacts are evaluated and the potential for mitigation discussed.

Standards and Guidelines for Archaeological and Cultural Resource Assessments

Various local and federal agencies have established guidelines and standards for assessing archaeological and cultural impacts. The applicable guidelines and standards are summarized below:

National Historic Preservation Act

The National Historic Preservation Act (NHPA) was passed in 1966 which, in the words of the Act, the Federal Government's role would be to "provide leadership" for preservation, "contribute to" and "give maximum encouragement" to preservation, and

"foster conditions under which our modern society and our prehistoric and historic resources can exist in productive harmony."

To achieve this, NHPA and related legislation sought a partnership among the Federal Government and the States that would capitalize on the strengths of each. The Federal experience in studying, managing, and using historic resources, would provide funding assistance, basic technical knowledge and tools, and a broad national perspective on America's heritage.

The States, through State Historic Preservation Officers appointed by the Governor of each State, would provide matching funds, a designated State office, and a statewide preservation program tailored to State and local needs and designed to support and promote State and local historic preservation interests and priorities. In Hawaii the State Historic Preservation Office is referred to as the State Historic Preservation Division (SHPD).

State Historic Preservation Division

The Hawaii SHPD issued draft guidelines for the preparation of archaeological studies in December 2002 and the requirements for certain archaeological assessments are described in Chapters 13-275 and 13-276 of the Hawaii Administrative Rules. Section 13-275 (a) 5(A) states that:

> An archaeological assessment shall include the information on the property and the survey methodology as set forth in subsections 13-276-5(a) and (c), as well as a brief background section discussing the former land use and types of sites that might have been previously present.

The archaeological assessment that was undertaken follows the draft guidelines issued by SHPD and the Hawaii Administrative Rules.

State Office of Environmental Quality Control

The State OEQC publishes Guidelines for Assessing Cultural Impact, which are designed to comply with the requirements of Chapter 343 HRS as amended in 2000 and approved by the Governor as Act 50 that same year. The archaeological assessment that was undertaken follows these guidelines.

3.2 Study Methodology and Scope

The study methodology and scope of the work conducted included the following:

- Archival background research on the culture history and previous land uses of the project area;

- Literature review of previous archaeological studies within and surrounding the proposed action site
- Verbal and written consultation with the Office of Hawaiian Affairs (OHA);
- Interviews with community members recommended by the State Historic Preservation Division; and
- Reconnaissance survey of parcels 30 and 33-35 to determine the presence/absence of cultural resources

An archaeological reconnaissance survey and follow-up test excavations of possible historic sites of Parcel 30 were undertaken as part of the environmental review process for H-POWER in 1983-84 (Ahlo and Hommon 1983; Hommon and Ahlo 1984). No historic properties were found at that time. Human remains were found during construction of H-POWER, in 1986. However, there is little or no possibility that more burials might be found during the construction phase of the proposed action, as additional excavation work is not necessary. Nonetheless, the proposed action site will be monitored as part of the H-POWER Expansion Project.

The results of the site reconnaissance of parcels 30 and 33-35 and cultural resource investigations form the basis of the summary of existing conditions that follows in Section 3.3 below.

3.3 Existing Conditions - Archeological and Cultural Resources

In discussing existing conditions for archaeological and cultural resources, it is important to understand that much of the evaluation must focus on resource potential and oral history. Though some information about identified resources does exist, often, existing conditions are defined on the basis of resources suspected to have existed or on the basis of those potentially remaining at a given location. The project area is located on what is commonly known today as the ‘Ewa Plain, a vast expanse of land that is part of an emerged Pleistocene age coral reef that was subsequently covered to varying depths with a mantle of marine sediments, alluvium and a shallow calcareous soil mantle, except for a few places on or near the shoreline where the reef surface is still exposed. The surface of the reef is pock-marked with solution cavities or “sinkholes” of widely varying sizes. The soil survey map for O‘ahu shows the project area as coral outcrop (Foote et al. 1972)

Archaeological Resources

As noted above, Parcel 30 - the H-POWER site – is heavily industrialized and has undergone extensive ground disturbance at depth during construction of the original H-POWER facility. Though archaeological resources are therefore not likely, the fact that human remains were found during construction of the facility in 1986 indicates that however remote, there is a possibility that more burials may exist nearby. However, there is little or no possibility that more burials might be found during the construction phase of the proposed action, as additional excavation work is not necessary.

Nonetheless, the proposed action site will be monitored as part of the H-POWER Expansion Project.

A brief reconnaissance of the proposed location of the H-POWER Expansion Project was conducted on August 13, 2008. This location, immediately east (mauka) of the existing H-POWER plant, includes the plant's existing parking lot and adjacent landscaped lawn areas While the karst landscape of the 'Ewa Plain no longer exists in the H-POWER Expansion Project site, Burial Site 6684 is located nearby.

Cultural Resources

The cultural impact assessment for this project involved: (1) a literature search prior to the archaeological field assessment to determine the presence/absence of Traditional Cultural Properties; (2) verbal and written consultation with the Office of Hawaiian Affairs (OHA), and (3) field interviews with two individuals from the Kapeolei area, Ms. Lynette ("Auntie Nettie") Tiffany and Mr. Shad Kane, who were recommended by Muffet Jourdane (Assistant O'ahu Archaeologist) and Nathan Napoka (History and Culture Branch Chief) of the State Historic Preservation Division (SHPD). Auntie Nettie, who is employed by the Estate of James Campbell, is the supervisor (kahu) for Lanikuhonua. She is also a member of the O'ahu Island Burial Council.

The site visit with Auntie Nettie and Shad Kane took place on November 16, 2004. After an initial meeting in the office of Colin Jones, which included an overview of the proposed project and examination of the aerial photographs showing recent changes to the project area, Mr. Rodney Smith (Covanta) accompanied PCSI to the site of the re-interred burial.

Following a brief discussion about the burial, Mr. Kane took PCSI into the plant sanctuary on Parcels 33-34, which contains Achyranthes splenden var. rotundata, naio (Myoporum sandwicense) and various other plants. Mr. Kane noted the presence of an endemic shrimp ('ōpae'ula) in the brackish water located in the sinkholes within the enclosure. According to Mr. Kane, the sinkholes fill up with water after heavy rains. There are two species of 'ōpae'ula (Halocaridina rubra and Metabetaeus lohena). It is unclear which of the two species occur in these particular sinkholes. The 'ōpae'ula was used in traditional times as bait for 'ōpelu fishing (Pukui and Elbert 1986:291). Mr. Kane expressed a concern that the 'ōpae'ula population could be adversely affected by contaminants entering the water table, depending on what kinds of equipment and supplies will be temporarily placed in the laydown area. Both Mr. Kane and Auntie Nettie emphasized the importance of preserving more sinkholes in the Kalaeloa area and other areas because of the native plants, human remains, and other evidence of past human uses that are often found in and around them. The sinkholes, which once numbered in the thousands and formed part of a vast natural and cultural landscape in the Kalaeloa area, are now restricted to a small number of undeveloped or undisturbed properties. The sinkholes contained within the two plant enclosures and in the kiawe thicket in Parcel 35 represent some of the last remaining examples of this landscape in

the local area. Auntie Nettie and Mr. Kane also expressed a concern that more attention be given to protecting the shoreline area across the road from the proposed laydown area.

No information on beliefs, cultural practices, or culturally important places within the boundaries of the proposed project area or adjacent areas was provided, except for a story Auntie Nettie related about her mother, Leilani Fernandez, exchanging dried fish and salted meat for ʻōkole hao, a liquor made from ti plants, that was made by a man who lived somewhere nearby. No response was received from OHA to a letter dated October 14, 2004 requesting information on traditional Hawaiian beliefs, cultural practices, and culturally significant sites (now commonly referred to in the Cultural Resource Management (CRM) literature as Traditional Cultural Properties) in or near the proposed project area. A second letter was sent to OHA on August 13, 2008 requesting information concerning traditional cultural practices and places. OHA's response, dated September 4, 2008, requested that burials and plant sanctuaries be protected during Expansion activities and reiterated the elevated potential of additional undiscovered subsurface burial sites existing in the area (Appendix A of H-POWER Expansion Final EIS).

On current evidence, there are no known Traditional Cultural Properties or on-going cultural practices within or near the Area of Potential Effect (APE) based on a review of the pertinent literature for the area and the consultation with Auntie Nettie and Mr. Kane. While it is likely that culturally significant sites did exist at one time within or in close proximity to the H-POWER plant, the nearest (approximately 2.7 miles) known surviving site with cultural significance is Pu'uokapolei, a small cinder cone that is the most prominent landmark on the ʻEwa Plain and the former site of Fort Barrette. In their synthesis of cultural resource studies on the ʻEwa Plain, Tuggle and Tomonari-Tuggle (1997:21) noted that Pu'uokapolei was the sacred center of that part of Oʻahu:

Probably the most important of all traditional locales on the ʻEwa Plain is the hill known as Pu'uokapolei. This volcanic cone at the inland edge of the ʻEwa Plain was the location of a temple, (of unknown affiliation), a residence of the family of the demi-god Kamapua'a, a reference point for solar observation, and a traveller's landmark (McAllister 1933:108; Kamakau 1976:14; Ii 1959:27; Thrum 1907:46).

Additional information on Pu'uokapolei is summarized in Sites of Oʻahu (Sterling and Summers 1978:33-34).

In 2008, follow-up consultation was conducted in the form of contacting Mr. Shad Kane and Ms. Lynette (Auntie Nettie) Tiffany, as well as the Office of Hawaiian Affairs. When Auntie Nettie was contacted, she indicated that she did not have any further concerns regarding the HPOWER project.

3.4 Impacts and Mitigation - Archaeological and Cultural Resources

The proposed action is not expected to have any impacts to known or potential archaeological or cultural resources. Nonetheless, the site will be monitored as part of the H-POWER Expansion Project.

Section 4 – Impacts / Mitigations

4.1 Short Term Impacts

Impacts will occur during the construction period including short term positive impacts to the economy resulting from construction period employment and associated spending for construction equipment and supplies. No long term impact will result including impact to schools or other public services or facilities.

During construction there will also be impact to geology and soils through use of the previously developed offsite construction laydown, staging, parking and fabrication area however this will occur on previously disturbed land appropriately zoned for this purpose and the increased activity will be minor.

Air Quality and noise impacts will occur from construction activities including operation of mobile construction equipment however these impacts will be a minor change to the on-going impacts.

Roadways and Traffic will not be impacted during construction with any significant increase in vehicle traffic. The additional sludge receiving, storage and processing equipment will not require a significant increase in the traffic over the construction period.

Surface water quality could be impacted from construction period run off however an erosion and sedimentation control program will be employed.

Biological Resources will be protected within the established sanctuary areas of the parcels designated for construction laydown.

4.2 Long Term Impacts

There are no long term impacts to air quality and human health through the processing of sludge since there are no changes to the emission limits.

Long term impacts to odor control are expected to be improved by receiving, handling and processing sludge with the system provided rather than disposal at the landfill.

Permanent disturbance has been made to geology and soils in the area where the sludge receiving, storage and processing system will be installed.

No impact will occur to water resources as no additional process water will be required. Storm water will continue to be captured and Best Management Practices are in effect through the facility NPDES General Permit.

No archaeological, historic or cultural impacts are anticipated. Construction phase excavation will be controlled and activities will be interrupted if discoveries are made.

4.3 Construction Period Mitigation

An Erosion and Sedimentation Control program has been established through a NPDES Construction phase permit. Best Management Practices (BMP) will be employed including interception of run off, silt fences/barriers and protection of existing storm water features and devices including catch basins and culverts. Intercepted runoff will be directed to settling ponds if required.

Fencing will be maintained to protect sensitive areas including plant sanctuaries. Water trucks will be utilized to minimize dust as needed.

Construction equipment will be equipped with noise mufflers and emissions control devices as required by law.

Construction parking will be limited to encourage carpooling.

Deliveries will be scheduled to minimize traffic peaks associated with normal shift work within the industrial park. A separate construction entrance has been established to prevent traffic congestion at key intersections.

The construction laydown area has been designed to avoid disturbance of both the established plant sanctuaries including a buffer zone and to avoid to the extent possible the northern parcel where sink holes are known to exist.

4.4 Long Term Mitigation

The project will not change emission requirements and will employ the Maximum Achievable Control Technology (MACT compliance) as exists in the industry for control of air emissions and hazardous air pollutants as required by the Clean Air Act.

Odor control systems will be utilized to manage odors form the sludge receiving, storage and processing. Measures include control of odor releases through air management systems and the use of odor control systems.

Traffic and roadway impacts will be minimal with only slightly increased traffic counts. There are no further impacts including cultural, noise, visual, socioeconomic, solid waste, energy or human health that do not already exist.

Section 5 - Alternatives

5.1 No Action

The No Action Alternative would include on-going use of the landfill for disposal of sludge and pelletizing at Synagro. The quantity of sludge generated from City facilities hauled to the landfill and for reuse are listed in Table 5.1-1. Dewatered sludge from Honouliuli, Waianae, and Kailua wastewater treatment plants are hauled to landfill for disposal. Sludge from the Sand Island is pelletized and used for agricultural purposes, however, a portion of the pellets do not form properly and are taken to the landfill. Excess sludge is dewatered and hauled to the landfill.

Table 5.1-1: Summary of Biosolids Hauling for 2011

Division of Wastewater Treatment and Disposal

Biosolids Production Report - January 1 to December 31, 2011

Facility	Permit Type	Other Plant(s) Processing Sludge	To Other Plants		To Reuse (Composting or Marketing)		To Landfill		Annual Average Percent Solids
			Dry weights		Dry weights		Dry weights		
			Tons	Metric Tons	Tons	Metric Tons	Tons	Metric Tons	
Honouliuli (1)	NPDES	NA					**2,602.6**	**2,361.0**	**26.7%**
Paalaa Kai (2)	UIC	Honouliuli	**14.9**	**13.5**					**1.0%**
Wahiawa (3)	NPDES	Honouliuli	**866.9**	**786.4**					**3.4%**
Waianae (4)	NPDES	NA					**211.8**	**192.1**	**22.9%**
Sand Island (5)	NPDES	NA							
*** Synagro Dewatered**							**45.2**	**41.0**	**29.9%**
*** Synagro Pelletized**					**3,138.3**	**2,847.0**	**593.9**	**538.8**	**89.0%**
for Feasibility Study		Waipahu PS to Honouliuli	**16.8**	**15.3**					
SI Total					**3,138.3**	**2,847.0**	**639.2**	**579.8**	**69.3%**
Kahuku (6)	UIC	Kailua	**87.9**	**79.8**					**0.7%**
Kailua Regional (7)	NPDES	NA					**764.3**	**693.4**	**20.9%**
Laie (8)	NA								
Waimanalo (9)	UIC	Kailua	**95.3**	**86.5**					**1.3%**
Totals					**3,138.3**	**2,847.0**	**4,217.8**	**3,826.3**	
Grand Total (Landfill + Reuse)							**7,356.1**	**6,673.3**	

These are quantities are listed as dry weight solids, the actual weight of solids and water must be determined by dividing the dry weight by the annual average percent solids. For example, the total tons hauled to the landfill from Honouliuli is = 2,602 / 0.267 = 9,745 tons over the 365 days or 27 tons per day.
Anaerobic digestion removes ½ of the volatile solids (80% of the total). Thus 1.8 times more solids are produced as raw sludge.

The No Action Alternative leaves the City at risk for sludge disposal when the landfill is not available and at risk for anaerobic digestion failure at Sand Island WWTP.

Other private or federal wastewater treatment plants generate dewatered sludge that is acceptable for H-POWER. For example, East Honolulu Wastewater Treatment disposed of roughly 800 dry metric tons of dewatered sludge at the Waimanalo Gulch Sanitary Landfill in 2011. The Navy currently operates a sludge composting facility at Barber's Point that processes roughly 2800 dry metric tons of dewatered sludge per year. The sludge is transported from three federally-operated wastewater treatment plants to the facility.

5.2 Landfill

Current Conditions

Currently there is no alternative to the landfill for sewage sludge disposal. On January 13, 2011 stormwater caused the landfill to close and it was not reopened until after January 28. During that time sewage sludge was stockpiled and held until the landfill could reopen.

Alternative 1 Composting Facility

Hawaiian Earth Recycling has proposed to construct an in-vessel composting facility in Waialua. The project will have the capacity of 150,000 tons per year of green waste, food waste, and dewatered sewage sludge to produce a marketable compost product. The composting facility is currently under development and may be able to receive sludge early in 2013.

Providing that sufficient green waste is available, the composting facility will have a capacity of 15,000 to 20,000 tons per year of sewage sludge. Honouliuli, Kailua, and Waianae WWTPs total 7,600 tons per year and, with the landfill out of service, an additional 650 tons per year of dried sludge from Sand Island results in a total of 8,300 tons per year. Therefore, composting could serve as a backup to landfill disposal from these treatment plants and visa versa.

If the pelletizer facility were out of service, the Sand Island WWTP would generate 12,700 tons per year of dewatered sludge. This quantity exceeds the capacity of the composting operation when included with the other plants.

Providing that sufficient green waste is available, the proposed composting facility has the capacity to take the sewage sludge currently being taken to the landfill.

Alternative 2 H-POWER

The sewage sludge currently taken to the landfill could be taken to H-POWER and co-mingled with other waste streams and burned in the boiler. The H-POWER Expansion boiler can accept ~~raw or~~ digested dewatered sludge (or undigested dewatered sludge in an emergency)~~, however, because of the increased fuel value and higher solids concentration, dewatered raw sludge is preferred.~~

The receiving bin and pumps are sized for 90 tons per day and sludge can be processed 24 hours per day at a maximum blending rate of ten percent of the total heat input to the combustion unit which is adequately sized for the sludge from all of the treatment plants.

5.3 Anaerobic Digester at the Sand Island WWTP

There is a single anaerobic digester at the Sand Island WWTP. The digestion process is a critical step preceding pelletizing. The digester is near its capacity and is at risk for foaming. Biological foaming results from overfeeding a digester resulting in operational problems, shutdown of the pelletizing facility, and potential spills. Foaming problems may take weeks to resolve. In addition, the anaerobic digester has no backup and failure of the digester would result in shutdown of the pelletizer and loss of digestion.

A second digester is under design, but will not be completed for 2 to 3 years.

Alternative 1 – Liquid Hauling

Sand Island WWTP currently produces approximately 31.5 tons per day of raw sludge. If the digestion process were to fail, it would take 26 trucks per day to haul the liquid sludge and the total quantity of sludge to be treated exceeds the treatment capacity at Honouliuli, Kailua, and Waianae. This alternative is not practical.

Alternative 2 – Composting

Raw sludge could be dewatered hauled for composting. Composting raw sludge does not create a marketable (EPA Class A Bisolids). The resulting compost would have to be landfilled or burned at H-POWER. Hawaiian Earth was not set up to receive and process raw sludge. This alternative is not viable.

Alternative 3 – H-POWER

Raw sludge could be dewatered and hauled to H-POWER for processing. The plant currently produces about 3,800 tons per year of dry weight solids. The quantity of sludge to be handled varies with the final condition of the sludge:

1. Pelletized - 15 wet tons per day at 68% solids
2. Dewatered and anaerobically – 35 wet tons per day at 30% solids
3. Dewatered raw sludge – 58.5 wet tons per day at 32% solids

Recommended Plan

The H-POWER sewage sludge receiving system serves as a backup to the landfill disposal and potential composting of Honouliuli, Kailua, and Waianae WWTP sludge and provides for complete backup for all of the sludge generated at the Sand Island WWTP. Selection was based on:

1. Capability to receive all of the sludge generated by all facilities;
2. Ability to accept raw and anaerobically dewatered cake as well as dried sludge and pellets;
3. Technical feasibility;
4. Low initial cost; and
5. Completion in 2012.

Section 6 – Findings

6.1 Significance Criteria

Based on the significance criteria set forth in HAR, Title 11, Chapter 200, Environmental Impact Statement Rules, the proposed action is not anticipated to result in significant environmental impacts. The recommended preliminary determination for the proposed project is a Finding of No Significant Impact (FONSI). The findings and reasons supporting this determination are summarized as follows:

1. *Involves an irrevocable commitment to loss or destruction of any natural or cultural resource*

The proposed action will not result in the adverse loss of natural or cultural resources. Given the historical use of the area, and the composition of the underlying soils, historic or archaeological sites are not known to be present at the site. However, in the unlikely event of a discovery of significant cultural, historic or archaeological resources, the SHPD will be immediately notified for appropriate action and treatment. As required, work will be temporarily halted as instructed by SHPD.

2. *Curtails the range of beneficial uses of the environment*

The subject property is zoned for intensive industrial use. The proposed use is consistent with the industrial designation of the site and will be contained entirely within the property. The proposed action does not curtail beneficial uses of the environment.

3. *Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 343, HRS, and any revisions thereof and amendments thereto, court decisions, or executive orders*

The proposed action is consistent with the environmental policies, goals and guidelines expressed in HRS, Chapter 343. Potential sources of adverse impacts have been identified and appropriate measures have been developed to either mitigate or minimize potential impacts to negligible levels.

4. *Substantially affects the economic and social welfare of the community or state*

The operation of the proposed action will be regulated in accordance with County, State and Federal regulations. It is expected to improve the social and economic environment of O'ahu by aiding in the management of sludge by diverting it away from the landfill while beneficially producing energy.

5. *Substantially affects public health*

Factors affecting public health, including odors and air emissions, are expected to be only minimally affected by the proposed action. The sludge receiving vessel will include a biofilter to capture and treat odors. Air emissions are expected to remain well below permitted limits.

6. *Involves substantial secondary impact, such as population changes or effects on public facilities*

The proposed action is expected to have no substantial secondary or indirect impacts such as population changes or effects on public facilities based on the limited scope and scale of the action. The proposed action will however provide an essential service to a region that is experiencing increasing constraints on waste management and disposal facilities.

7. *Involves a substantial degradation of environmental quality*

Impacts to air and water quality, noise levels, natural resources, and land use associated with the planned project are anticipated to be minimal. Mitigation measures will be employed as practicable to minimize potentially negative effects to the environment. The proposed Action does not involve substantial degradation of environmental quality, but in fact improves it through landfill diversion. The receiving vessel includes a biofilter which will capture and treat odors. Beneficial products such as energy will also be produced.

8. *Is individually limited but cumulatively has considerable effect upon the environment or involves a commitment for larger actions.*

The proposed action is not expected to cause adverse cumulative impacts to the environment, nor involves a commitment for larger actions in that all work required will be limited to use of the project site. The proposed action is in accordance with the land use plans and policies of the State and City and County of Honolulu.

9. *Substantially affects a rare, threatened or endangered species*

The proposed action is not expected to cause adverse impacts to any rare, threatened, or endangered species.

10. *Detrimentally affects air or water quality or ambient noise levels*

On a short-term basis, ambient air and noise conditions may be affected by construction activities related to the proposed action, but these are short-term potential impacts and can be controlled by mitigation measures as described in this EA. Once the action is completed, noise in the project vicinity will be allowed to return to conditions consistent

with the surrounding land uses. Erosion control measures and other BMPs will be employed to prevent untreated storm water runoff from construction activities entering State waters. Air quality will be improved compared to landfill disposal through the nature of the process allowing for capture of odors.

11. *Affects or is likely to suffer damage by being located in an environmentally sensitive area such as a flood plain, tsunami zone, erosion-prone area, geologically hazardous land, estuary, fresh water, or coastal waters*

The proposed action site is not located within an environmentally sensitive area.

12. *Substantially affects scenic vistas and viewplanes identified in county or state plans or studies*

The proposed action will not obstruct any significant scenic features and viewplanes due to its elevation and existing similar industrial activities in close proximity to the project site. The proposed action will not substantially affect any existing views from surrounding areas.

13. *Requires substantial energy consumption*

Construction and daily activities associated with the proposed Action will not require substantial amounts of energy. In fact, the action will result in positive energy recovery.

6.2 Findings

In accordance with the provisions set forth in HRS, Chapter 343, and the significance criteria in HAR, Section 11-200-12 of Title 11, Chapter 200, it is anticipated that the proposed Action will have no significant adverse impacts to water quality, air quality, existing utilities, noise levels, social welfare, archaeological sites, or wildlife habitat. All anticipated impacts are expected to be temporary in duration and will not adversely impact the environmental quality of the area. In fact, the proposed Action is expected to have significant benefits such as the production of energy and increased diversion of waste from landfills. It is expected that an Environmental Impact Statement (EIS) will not be required, and that a Finding of No Significant Impact (FONSI) will be issued for this project.

Section 7 – List of Permits / Approvals

The following permits have been secured for the H-POWER Expansion Project:

Approving Agency/Authority	Approval/Permit	Date of Approval	Permit/File Number
Federal Aviation Administration (FAA)	Notice of Construction	29-Jun-11	Study Notice 2010-AWP-947-0E
Hawaii Department of Health (HOOH). Clean Air Branch	Covered Source/PSD Air Permit, Chapter 60.1 of Title 11 of HAR	23-Dec-09	CSP No. 0255-01-C
HDOH, Clean Water Branch	Notice of General Permit Coverage NPDES Construction Stormwater Discharge Permit	29-Jan-10	N/A
HDOH, Indoor and Radiological Health Branch	Construction Noise Permit	1-Aug-09	O 09-177
HDOH, Safe Drinking Water Branch	UIC Permit Modification	25-Feb-11	UO 1376
HDOH, Solid and Hazardous Waste Branch	Solid Waste Management Permit	22-Dec-11	IN-0049-11
DLNR, Commission on Water Resource Management	Groundwater Use Permit Modification	19-Dec-08	WUP No. 863
DLNR, Commission on Water Resource Management	Well Construction /Pump Installation Permit	14-Feb-11	UO 1376A

City and County of Honolulu Department of Planning and Permitting (DPP)	Building Permit	4-Feb-10	BP #652421
~~City and County of Honolulu Department of Planning and Permitting (DPP)~~	~~Conditional Use Permit Modification [Waiver of Land Use Ordinance (LUQ) Sections 21-3:13Q-1(b) [Table 21-3.5], 21-4.60(a), and 21-4.70(b)]~~	~~7-Jul-09~~	~~2009/W-39~~
City and County of Honolulu Department of Planning and Permitting (DPP)	Grading Permit and Drainage Plan Approval	~~12-Nov-09~~ Sept-11	~~GP2009-11-0671~~ GP2011-09-0544

Section 8 – Agencies and Organizations Consulted

Notice of the Draft Environmental Assessment for the Truck Receiving Station for Sludge was published in the Office of Environmental Quality Control Environmental Notice of April 23, 2012. Copies of the Draft Environmental Assessment were mailed to the agencies and organizations listed below. Publication in the Environmental Notice initiated a 30-day public comment period. An asterisk * identifies agencies and organizations that submitted written comments to the Draft Environmental Assessment. Comment letters and responses are found in the Appendix of the Final Environmental Assessment.

State

Dept of Agriculture
*Dept of Accounting and General Serv
Department of Business Economic Development & Tourism
DBEDT – Energy Division
DBEDT – Office of Planning
*Dept of Defense
*Dept of Education
*Dept of Hawaiian Homelands
*Dept of Health
*Dept of Human Services
*Dept of Labor and Industrial Relations
*Dept of Land and Natural Resources
DLNR – Historic Preservation Div
Dept of Transportation
Hawaii Housing Fin. and Dev. Corp.
Office of Hawaiian Affairs
UH Environmental Center

Federal

*US Fish and Wildlife Service

City

*Board of Water Supply
Dept of Community Services
*Dept of Design and Construction
*Dept of Environmental Services
Department of Facility Maintenance

*Department of Planning and Permitting
*Department of Parks and Recreation
*Dept of Transportation Services

Other

Nearest State Library
*Hawaiian Electric Company
Neighborhood Board #34, Chair

Appendix – Comments and Responses

NEIL ABERCROMBIE
GOVERNOR

DEAN H. SEKI
COMPTROLLER

JAN S. GOUVEIA
DEPUTY COMPTROLLER

STATE OF HAWAI'I
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
P.O. BOX 119, HONOLULU, HAWAI'I 96810-0119

APR 27 2012

(P)1088.2

Mr. Stephen F. Langham, P.E.
Energy Recovery Administrator
ENV-Refuse-HPOWER
City and County of Honolulu
91-174 Hanua Street
Kapolei, Hawaii 96707

Dear Mr. Langham:

Subject: Solid Waste to Energy Truck Receiving Station for Sludge
Ewa, Oahu
TMK: (1) 9-1-026: 030

Thank you for the opportunity to provide comments for the subject documents. The subject documents do not impact any of the Department of Accounting and General Services' projects or existing facilities, and we have no comments to offer at this time.

If you have any questions, please call me at 586-0400 or have your staff call Ms. Gayle Takasaki of the Public Works Division at 586-0584.

Sincerely,

DEAN H. SEKI
State Comptroller

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-058

June 23, 2012

Dean H. Seki
Department of Accounting and General Services
State of Hawaii
P.O. Box 119
Honolulu, HI 96810-011

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Dear Mr. Seki,

Thank you for your response regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We thank you for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

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NEIL ABERCROMBIE
GOVERNOR

MAJOR GENERAL DARRYLL D. M. WONG
DIRECTOR OF CIVIL DEFENSE

DOUG MAYNE
VICE DIRECTOR OF CIVIL DEFENSE

PHONE (808) 733-4300
FAX (808) 733-4287

STATE OF HAWAII
DEPARTMENT OF DEFENSE
OFFICE OF THE DIRECTOR OF CIVIL DEFENSE
3949 DIAMOND HEAD ROAD
HONOLULU, HAWAII 96816-4495

May 17, 2012

Mr. Steven F. Langham, PE
Energy Recovery Administrator
ENV-Refuse-HPOWER
917 Hanua Street
Kapolei, Hawaii 96707

Dear Mr. Langham:

Solid Waste to Energy Truck Receiving Station for Sludge
Draft Environmental Assessment (DEA)
TMK: (1)9-1-026-030, Ewa, Oahu

Thank you for the opportunity to comment on this proposed project. After review of the DEA, we have determined that the proposed project area falls within coverage arcs of existing warning sirens.

As acknowledged and restated in the DEA, the proposed parcel is located within an area designated Flood Zone D, which is subject to possible but undetermined flood risks. We strongly recommend the implementation of flood mitigation measures, as appropriate, during the planning and design phases of the development.

If you have any questions, please call Ms. Havinne Okamura, Hazard Mitigation Planner, at (808) 733-4300, extension 556.

Sincerely,

DOUG MAYNE
Vice Director of Civil Defense

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
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DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-048

June 23, 2012

Mr. Douglas Mayne
Vice Director of Civil Defense
State of Hawaii
Department of Defense
Office of the Director of Civil Defense
3949 Diamond Head Rd.
Honolulu, HI 96816-4495

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Dear Mr. Mayne,

Thank you for your response of May 15, 2012 regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge. We will implement appropriate flood mitigation measures during the planning and design phases of the project.

We thank the Department of Defense for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

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NEIL ABERCROMBIE
GOVERNOR

KATHRYN S. MATAYOSHI
SUPERINTENDENT

STATE OF HAWAI`I
DEPARTMENT OF EDUCATION
P.O. BOX 2360
HONOLULU, HAWAI`I 96804

OFFICE OF THE SUPERINTENDENT

May 10, 2012

Mr. Stephen F. Langham
ENV-Refuse-HPOWER
91-174 Hanua Street
Kapolei, Hawaii 96707

Dear Mr. Langham:

Subject: Draft Environmental Assessment: Solid Waste to Energy Truck Receiving Station for Sewage Sludge, TMKs (1)9-1-026-030 H-POWER Campbell Industrial Park, Kapolei, Hawaii

The Department of Education (DOE) has reviewed the Draft Environmental Assessment (EA) for the Solid Waste to Energy Truck Receiving Station for Sewage Sludge project.

The DOE has no comment to offer.

Thank you for the opportunity to provide comments. If you have any questions, please call Roy Ikeda of the Facilities Development Branch at 377-8301.

Very truly yours,

Kathryn S. Matayoshi
Superintendent

KSM:jmb

c: Randolph G. Moore, Assistant Superintendent, OSFSS

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
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DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-059

June 23, 2012

Kathryn S. Matayoshi
Superintendent
Department of Education
State of Hawaii
P.O. Box 2360
Honolulu, HI 96804

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Dear Kathryn Matayoshi,

Thank you for your response regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We thank you for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

160-3455 10111
EO1229

NEIL ABERCROMBIE
GOVERNOR
STATE OF HAWAI'I

ALBERT "ALAPAKI" NAHALE-A
CHAIRMAN
HAWAIIAN HOMES COMMISSION

STATE OF HAWAI'I
DEPARTMENT OF HAWAIIAN HOME LANDS
P.O. BOX 1879
HONOLULU, HAWAI'I 96805

May 15, 2012

ENV-Refuse-HPOWER
Attn: Mr. Stephen F. Langham, PE
91-174 Hanua Street
Kapolei, Hawaii 96707

Subject: Request for Comments on a Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge, City and County of Honolulu Division of Refuse Collection and Disposal, TMK: (1)9-1-026:030, Ewa, O'ahu, Hawai'i

Dear Mr. Langham:

Thank you for the opportunity to provide comments on the Draft Environmental Assessment for the Solid Waste to Energy Truck Receiving Station for Sludge project in Campbell Industrial Park. The Department understands that this project's purpose is to provide the H-POWER Expansion Project with the ability to accept and process dewatered sewage sludge for final disposal, and consists of a receiving bin, pumps, and distribution header for the transfer of dewatered municipal wastewater sludge into the boiler at H-POWER Expansion. The ability to accept and dispose of sewage sludge at H-POWER will provide the City and County of Honolulu with necessary redundancy, and odor control and air management systems will be utilized to manage odors from the sludge receiving, storage and processing operations.

As adjacent landowners engaged in our own planning processes, it is our responsibility to engage with other agencies and plan appropriately for the larger region. In addition, it is our priority to ensure that DHHL's plans are as consistent as possible with other plans for the Kapolei and Kalaeloa regions, and to protect our beneficiaries from any mitigatable impacts caused by changes in land uses and intensities on lands adjacent to or near Hawaiian Home lands.

Please consider the following comments on the Draft EA:

1. The Department of Hawaiian Home Lands (DHHL) owns approximately 997 acres in the DHHL Kapolei Regional Plan area, with a total of 2,412 housing units planned, under construction or completed on 375 of those acres. Also in the Kapolei Regional Plan area are 622 acres of nonresidential, potentially income-producing lands, with 67 acres in East Kapolei and 555 acres in Kalaeloa. While the H-Power Plant is on the far western side of Campbell Industrial Park, please include the location of all Hawaiian Homelands developments, both existing and proposed, in your planning for the plant. Development has been occurring rapidly in the area, so please ensure that maps and data reflect the most up to date information. See the website for Hawaiian Home Lands, www.hawaiianhomelands.org, for more information and to download a copy of DHHL Kapolei Regional Plan.

2. Please expand the process of outreach and consultation to include Hawaiian Homelands beneficiaries specifically, whereby at least one community meeting is held in the Kapolei/Kalaeloa region, preferably coordinated with homesteader organizations and the Department of Hawaiian Home Lands, to inform homesteaders of the nature and purpose of the project, with an emphasis on the cultural impact Assessment methodology and results, explanations of all safety and containment measures to be employed during project construction and operation, potential long term improvements to odor control for the landfill, and how Hawaiian Home Lands beneficiaries can provide input into the Draft EA and/or solid waste management planning process.

3. Please provide information on transportation routes for trucks transporting the dewatered sewage sludge to the H-POWER site, and inform DHHL if any of those routes traverse lands owned by DHHL.

We thank you for the opportunity to provide comments on the Draft Environmental Assessment for the Solid Waste to Energy Truck Receiving Station for Sludge. If you have any questions, please contact Nancy McPherson at our Planning Office via email at nancy.m.mcpherson@hawaii.gov or by phone at 808.620.9519.

Aloha and mahalo,

Albert "Alapaki" Nahale-a, Chairman
Hawaiian Homes Commission

Enclosure

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-056

June 23, 2012

Albert "Alapaki" Nahale-a
Chairman
State of Hawaii
Department of Hawaiian Homelands
P.O. Box 1879
Honolulu, HI 96805

Dear Mr. Nahale-a,

Thank you for your response of May 15, 2012 regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

Detailed responses to comments provided:

1) The EA has been revised to refer to the DHHL Kapolei Regional Plan. We believe that the proposed project is consistent with the Plan in that it provides another option to the recycling of sewage sludge and diversion from landfills. The section "Infrastructure - Energy" on Page 19 of the Plan describes DHHL's private and public renewable energy partnerships in the Kapolei/Kalaeloa region, including a biomass to biofuels project in Campbell Industrial Park.

   We would be pleased to partner with DHHL as a public renewable energy partner and we respectfully ask for your consideration as such.

1) Please refer homesteader organizations/communities to the State Office of Environmental Quality Control Guidelines for Assessing Cultural Impacts for their information (available for download at http://oeqc.doh.hawaii.gov/Shared%20Documents/Environmental_

Assessment_PrepKit/Cultural_Impact_Assessments/Guidelines-Assessing-Cultural-Impacts.pdf).

We believe the EA adequately provides detailed information on the nature and purpose of the project, the cultural impact assessment methodology and results, and explanations of all safety and containment measures to be employed during project construction and operation. Discussion on odor control methods at the landfill is beyond the scope of this EA.

Since DHHL properties are not adversely impacted by H-POWER operations, we believe a community meeting is not necessary at this time.

2) Discussion of transportation routes for trucks transporting the dewatered sewage sludge to H-POWER is beyond the scope of this EA. We have revised Section 1.3 for clarification. This EA only considers traffic impacts from the H1 Freeway Exit to onto the H-POWER site. However, the Environmental Services Department (ENV) is conducting a separate environmental review of sludge transportation. Please contact ENV to be included in the outreach and consultation process under that review.

   ENV last conducted Integrated Solid Waste Management Planning (ISWMP) in 2007-2008. The next revision is due for 2018 per State requirements. ENV would be pleased to consult with DHHL at that time.

We thank the Department of Hawaiian Homelands for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

LORETTA J. FUDDY, A.C.S.W., M.P.H.
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
ENVIRONMENTAL MANAGEMENT DIVISION
SOLID AND HAZARDOUS WASTE BRANCH
919 ALA MOANA BOULEVARD, #212
HONOLULU, HAWAII 96814

In reply, please refer to:
EMD/SHWB

May 16, 2012

S5034LO

Mr. Stephen F. Langham, P.E.
Energy Recovery Administrator
City and County of Honolulu
Department of Environmental Services
Division of Refuse Collection and Disposal
1000 Uluohia St., Suite 201
Kapolei, HI 96707

Dear Mr. Langham:

SUBJECT: Draft Environmental Assessment (DEA)
Solid Waste To Energy
Truck Receiving Station for Sewage Sludge

Thank you for the opportunity to review and provide comments on the subject document. Copies of the DEA were forwarded to the Department of Health (DOH) Clean Air Branch (CAB) and the Clean Water Branch (CWB) for their review and comment. The CAB and CWB will forward their comments, if any, under separate cover.

The DOH, Solid Waste Section (SWS) has reviewed the subject document and provides the following comments:

1. The operations plan associated with solid waste management permit IN-0050-05 requires updating to include the proposed receiving station. We do not anticipate that the change will impact the current conditions of your solid waste management permit.

2. Section 5 of the DEA includes a table that lists biosolids hauling tonnages from Honouliuli, Paalaa Kai, Wahiawa, Waianae, Sand Island, Kahuku, Kailua, Laie, and Waimanalo. The 'Recommended Plan' indicates that, "The H-Power sewage sludge receiving system serves as a backup to the landfill disposal and potential composting of Honouliuli, Kailua, and Waianae WWTP sludge and provides for complete backup for all of the sludge generated at the Sand Island WWTP." The

DOH recommends that the EA also allow for the acceptance of sludge from other wastewater treatment plants in order to maximize the flexibility of the backup plans.

Please contact Lane Otsu of the Solid and Hazardous Waste Branch at 586-4226 with any questions or comments.

Sincerely,

for STEVEN Y.K. CHANG, P.E., CHIEF
Solid and Hazardous Waste Branch

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-049

June 23, 2012

Mr. Steven Y.K. Chang, P.E.
Chief Solid and Hazardous Waste Branch
State of Hawaii
Department of Health
Environmental Management Division
919 Ala Moana Blvd. #212
Honolulu, HI 96814

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Dear Mr. Chang,

Thank you for your response of May 16, 2012 regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We have reviewed your comments and provide the following responses:

1. We will update the operations plan associated with solid waste management permit IN-0050-05 to include the proposed receiving station.

2. We have updated the appropriate sections of the EA to allow for the acceptance of sludge from other wastewater treatment plants in order to maximize the flexibility of the backup plans.

We thank the DOH Solid and Hazardous Waste Branch for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

R:\H-POWER\-EXPANSION\5.0 PERMITS\Sludge EA\Comments\20120623 HNL Responces Letters for EA .doc

NEIL ABERCROMBIE
GOVERNOR

PATRICIA McMANAMAN
DIRECTOR

BARBARA A. YAMASHITA
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF HUMAN SERVICES
Benefit, Employment & Support Services Division
820 Mililani Street, Suite 606
Honolulu, Hawaii 96813

April 19, 2012

Refer to 12:0248

Mr. Stephen F. Langham, PE
Energy Recovery Administrator
ENV-Refuse-HPOWER
91-174 Hanua Street
Kapolei, Hawaii 96707

Dear Mr. Langham:

Thank you for your letter dated April 4, 2012 that requests the Department review the Draft Environmental Assessment for the Solid Waste to Energy Truck Receiving Station for Sludge Island and District: Oahu, Ewa, Hawaii. The Director of the Department of Human Services (DHS) has forwarded your letter to me for a response.

After a review of the proposed project, we do not have any recommendations or concerns to approve the project. We, also, do not foresee any impact on any child care services in the community.

If you have any questions or need further information, please contact Ms. Kathy Ochikubo, Child Care Program Specialist, at (808) 586-7058.

Sincerely,

Scott Nakasone

Scott Nakasone
Assistant Division Administrator

c: Patricia McManaman, Director
Timothy E. Steinberger, ENV PE, Director

NEIL ABERCROMBIE
GOVERNOR

PATRICIA McMANAMAN
DIRECTOR

BARBARA A. YAMASHITA
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF HUMAN SERVICES
Benefit, Employment & Support Services Division
820 Mililani Street, Suite 606
Honolulu, Hawaii 96813

April 30, 2012

Refer to 12:0248

Mr. Stephen F. Langham, PE
Energy Recovery Administrator
ENV-Refuse-HPOWER
91-174 Hanua Street
Kapolei, Hawaii 96707

Dear Mr. Langham:

Thank you for your letter dated April 4, 2012, that requests the Department review the Draft Environmental Assessment for the Solid Waste to Energy Truck Receiving Station for Sludge Island and District: Oahu, Ewa, Hawaii. The Director of the Department of Human Services (DHS) has forwarded your letter to me for a response.

After a review of the proposed project, we do not have any recommendations or concerns to approve the project. We, also, do not foresee any impact on any child care services in the community.

If you have any questions or need further information, please contact Ms. Kathy Ochikubo, Child Care Program Specialist, at 586-7058.

Sincerely,

Scott Nakasone
Assistant Division Administrator

c: Patricia McManaman, Director
Timothy E. Steinberger, ENV PE, Director

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

June 23, 2012

IN REPLY REFER TO:
RH-12-060

Scott Nakasone
Assistant Division Administrator
Department of Human Services
State of Hawaii
820 Mililani Street Ste 606
Honolulu, HI 96813

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Dear Mr. Nakasone,

Thank you for your response regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We thank you for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

R:\H-POWER\-EXPANSION\5.0 PERMITS\Sludge EA\Comments\20120623 HNL Responces Letters for EA .doc

NEIL ABERCROMBIE
GOVERNOR

DWIGHT TAKAMINE
DIRECTOR

AUDREY HIDANO
DEPUTY DIRECTOR

STATE OF HAWAII
DEPARTMENT OF LABOR AND INDUSTRIAL RELATIONS
830 PUNCHBOWL STREET, ROOM 321
HONOLULU, HAWAII 96813
www.hawaii.gov/labor
Phone: (808) 586-8844/Fax: (808) 586-9099

May 7, 2012

Mr. Stephen F. Langham, PE
Energy Recovery Administrator
ENV-Refuse-HPOWER
91-174 Hanua St.
Kapolei, HI 96707

Dear Mr. Langham:

This is in response to your request for comments dated April 4, 2012 on the Draft Environmental Assessment for the proposed Solid Waste to Energy Truck Receiving Station for Sludge project located in Ewa, island of Oahu.

The Department of Labor and Industrial Relations has no comments, and we foresee no impact on our existing or proposed programs. Should you have any questions, please call me at (808) 586-8844.

Sincerely,

DWIGHT TAKAMINE
Director

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-061

June 23, 2012

Dwight Takamine
Director
Department of Labor and Industrial Relations
State of Hawaii
830 Punch Bowl Street Rm 321
Honolulu, HI 96813

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Dear Mr. Takamine,

Thank you for your response regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We thank you for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

R:\H-POWER\-EXPANSION\5.0 PERMITS\Sludge EA\Comments\20120623 HNL Responces Letters for EA .doc

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

RECEIVED
2012 MAY 30 P 3:12

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

May 22, 2012

Department of Environmental Services
City and County of Honolulu
Division of Refuse Collection and Disposal
Attn: Stephen F. Langham, PE
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

via email: slangham@honolulu.gov

Dear Mr. Langham:

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Thank you for the opportunity to review and comment on the subject matter. The Department of Land and Natural Resources' (DLNR) Land Division distributed or made available a copy of your report pertaining to the subject matter to DLNR Divisions for their review and comments.

At this time, enclosed are comments from (1) Land Division – Oahu District; (2) Commission on Water Resource Management; and (3) Engineering Division, on the subject matter. No other comments were received as of our suspense date. The State Historic Preservation Division may be responding to you separately. Should you have any questions, please feel free to call Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Sincerely,

Russell Y. Tsuji
Land Administrator

Enclosure(s)

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

April 20, 2012

MEMORANDUM

TO:

DLNR Agencies:
__Div. of Aquatic Resources
__Div. of Boating & Ocean Recreation
_X_Engineering Division
__Div. of Forestry & Wildlife
__Div. of State Parks
_X_Commission on Water Resource Management
_X_Office of Conservation & Coastal Lands
_X_Land Division – Oahu District
Historic Preservation (Request sent directly by Requestor)

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge
LOCATION: Oahu Ewa; (1) 9-1-026-030 H-POWER (per cover letter)
APPLICANT: ENV-Refuse-HPOWER (per cover letter)

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document. Please submit any comments by May 18, 2012.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Attachments

( ) We have no objections.
(✓) We have no comments.
( ) Comments are attached.

Signed: T. Ua
Date: 4/23/2012

BC

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
LAND DIVISION
2012 APR 24 PM 4:17

DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII
2012 APR 30 P 3:24

April 20, 2012

MEMORANDUM

TO:

DLNR Agencies:
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
Historic Preservation (Request sent directly by Requestor)

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge
LOCATION: Oahu, Ewa; (1) 9-1-026-030 H-POWER (per cover letter)
APPLICANT: ENV-Refuse-HPOWER (per cover letter)

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document. Please submit any comments by May 18, 2012.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Attachments

(✓) We have no objections.
( ) We have no comments.
( ) Comments are attached.

Signed: [signature]
Date: 4/27/12

FILE ID: RAD.3583.3
DOC ID: 9240

NEIL ABERCROMBIE
GOVERNOR OF HAWAII

WILLIAM J. AILA, JR.
CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES
COMMISSION ON WATER RESOURCE MANAGEMENT

STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
LAND DIVISION

POST OFFICE BOX 621
HONOLULU, HAWAII 96809

RECEIVED
LAND DIVISION
2012 MAY 18 A 10:49
DEPT. OF LAND & NATURAL RESOURCES
STATE OF HAWAII

'12 APR 20 PM 04:25 ENGINEERING

April 20, 2012

MEMORANDUM

TO: **DLNR Agencies:**
___Div. of Aquatic Resources
___Div. of Boating & Ocean Recreation
_X_ Engineering Division
___Div. of Forestry & Wildlife
___Div. of State Parks
_X_ Commission on Water Resource Management
_X_ Office of Conservation & Coastal Lands
_X_ Land Division – Oahu District
Historic Preservation (Request sent directly by Requestor)

FROM: Russell Y. Tsuji, Land Administrator
SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge
LOCATION: Oahu Ewa; (1) 9-1-026-030 H-POWER (per cover letter)
APPLICANT: ENV-Refuse-HPOWER (per cover letter)

Transmitted for your review and comment on the above-referenced document. We would appreciate your comments on this document. Please submit any comments by May 18, 2012.

If no response is received by this date, we will assume your agency has no comments. If you have any questions about this request, please contact Supervising Land Agent Steve Molmen at 587-0439. Thank you.

Attachments

( ) We have no objections.
( ) We have no comments.
(X) Comments are attached.

Signed:
Date: 5/11/12

DEPARTMENT OF LAND AND NATURAL RESOURCES
ENGINEERING DIVISION

LD/SteveMolmen
REF.:DEASolidWasteEnergyTruckRevngStationSudge
Oahu:891

COMMENTS

(X) **We confirm that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone D The National Flood Insurance Program does not have any regulations for developments within Zone D.**

( ) Please take note that the project site, according to the Flood Insurance Rate Map (FIRM), is located in Zone ___.

( ) Please note that the correct Flood Zone Designation for the project site according to the Flood Insurance Rate Map (FIRM) is ___.

( ) Please note that the project must comply with the rules and regulations of the National Flood Insurance Program (NFIP) presented in Title 44 of the Code of Federal Regulations (44CFR), whenever development within a Special Flood Hazard Area is undertaken. If there are any questions, please contact the State NFIP Coordinator, Ms. Carol Tyau-Beam, of the Department of Land and Natural Resources, Engineering Division at (808) 587-0267.

Please be advised that 44CFR indicates the minimum standards set forth by the NFIP. Your Community's local flood ordinance may prove to be more restrictive and thus take precedence over the minimum NFIP standards. If there are questions regarding the local flood ordinances, please contact the applicable County NFIP Coordinators below:

( ) Mr. Mario Siu Li at (808) 768-8098 or Ms. Ardis Shaw-Kim at (808) 768-8296 of the City and County of Honolulu, Department of Planning and Permitting..

( ) Mr. Frank DeMarco at (808) 961-8042 of the County of Hawaii, Department of Public Works.

( ) Mr. Francis Cerizo at (808) 270-7771 of the County of Maui, Department of Planning.

( ) Ms. Wynne Ushigome at (808) 241-4890 of the County of Kauai, Department of Public Works.

( ) The applicant should include water demands and infrastructure required to meet project needs. Please note that projects within State lands requiring water service from the Honolulu Board of Water Supply system will be required to pay a resource development charge, in addition to Water Facilities Charges for transmission and daily storage.

( ) he applicant should provide the water demands and calculations to the Engineering Division so it can be included in the State Water Projects Plan Update

( ) Additional Comments: _____

( ) Other: _____

Should you have any questions, please call Ms. Suzie S. Agraan of the Planning Branch at 587-0258.

Signed: _____
CARTY S. CHANG, CHIEF ENGINEER

Date: 5/22/12

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-050

June 23, 2012

Mr. Russell Y. Tsuji
Land Administrator
State of Hawaii
Department of Land and Natural Resources
Land Division
PO Box 621
Honolulu, HI 96809

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Dear Mr. Tsuji,

Thank you for your response of May 22, 2012 regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We thank the DLNR Land Division for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

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United States Department of the Interior

RECEIVED
2012

FISH AND WILDLIFE SERVICE

Pacific Islands Fish and Wildlife Office
300 Ala Moana Boulevard, Room 3-122, Box 50088
Honolulu, Hawaii 96850

In Reply Refer To:
2012-TA-0271

MAY 23 2012

Stephen F. Langham
Energy Recovery Administrator
91-174 Hanua Street
Kapolei, Hawaii 96707

Subject: Comments on the Draft Environmental Assessment for the Solid Waste to Energy Truck Receiving Station for Sludge, Oahu

Dear Mr. Langham:

We are in receipt of your letter dated April 4, 2012, received on April 13, 2012, requesting comments on the Draft Environmental Assessment (DEA) for the Solid Waste to Energy Truck Receiving Station for Sewage Sludge project located in Campbell Industrial Park, Kapolei, Oahu. The proposed project will provide the H-POWER Expansion Project the ability to accept and process dewatered sewage sludge for final disposal. The project will be located on a 24-acre H-POWER site and consist of a receiving bin, pumps, and a distribution header for the transfer of sludge into the H-POWER boiler.

We reviewed the proposed project pursuant to the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) and the Migratory Bird Treaty Act [16 U.S.C. 703-712]. Based on the project description and site location we are concerned that the Hawaiian coot (*Fulica alai*), Hawaiian stilt (*Himantopus mexicanus knudseni*), Hawaiian moorhen (*Gallinula chloropus sandvicensis*), and Hawaiian duck (*Anas wyvilliana*) may be attracted to the project site.

It is unclear from the DEA if an open (uncovered) sludge pit, which could serve as an attractant for listed waterbirds, will be created as part of the proposed project. Uncovered, open water attracts migratory and listed waterbirds to areas that they would normally avoid. This type of attraction may result in increased predation pressure from non-native predators such as mongoose, rats and feral dogs and cats. Attraction to a site that has increased predation leads to failed nesting attempts and adult mortality. Failed nesting and adult mortality creates what is referred to as a "population sink" and can result in declines of local waterbird populations. We recommend that any areas with open water be covered. If open water areas will be created the impact to migratory and listed waterbirds should be evaluated in the DEA.

If you have questions regarding these comments, please contact Rachel Rounds, Fish and Wildlife Biologist, Consultation and Technical Assistance Program (phone: 808-792-9400, fax: 808-792-9581).

Sincerely,

Loyal Mehrhoff for,
Field Supervisor

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-051

June 23, 2012

Loyal Mehrhoff
Field Supervisor
United States Department of the Interior
Fish and Wildlife Service
Pacific Island Fish and Wildlife Service Office
300 Ala Moana Blvd. Rm 3-122, Box 50088
Honolulu, HI 96850

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge (Response to Letter 2012-TA-0271)

Dear Loyal Mehrhoff,

Thank you for your response of May 23, 2012 regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

The proposed sludge receiving bin will be enclosed in a covered building and should not attract waterbirds. The pumping of sludge from bin to furnace will also be completely enclosed. We apologize for the confusion. The EA has been revised to add Figure S2 to show the receiving bin in more detail.

We thank the US Fish and Wildlife Service for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

R:\H-POWER\-EXPANSION\5.0 PERMITS\Sludge EA\Comments\20120623 HNL Responces Letters for EA .doc

BOARD OF WATER SUPPLY

CITY AND COUNTY OF HONOLULU
630 SOUTH BERETANIA STREET
HONOLULU, HI 96843

May 2, 2012

Mr. Stephen F. Langham, P.E.
Energy Recovery Administrator
ENV-Refuse-HPOWER
91-174 Hanua St.
Kapolei, Hawaii 96707

Dear Mr. Langham:

Subject: Your Letter Dated April 4, 2012 Requesting Comments on the Draft Environmental Assessment for the Solid Waste to Energy Truck Receiving Station for Sludge, TMK: 9-1-26: 30

Thank you for your letter on the proposed truck receiving facility.

The existing water system is adequate to accommodate the proposed truck receiving facility. However, please be advised that this information is based upon current data and, therefore, the Board of Water Supply reserves the right to change any position or information stated herein up until the final approval of the building permit application. The final decision on the availability of water will be confirmed when the building permit application is submitted for approval.

When water is made available, the applicant will be required to pay our Water System Facilities Charges for resource development, transmission and daily storage.

The on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

The proposed project is subject to Board of Water Supply Cross-Connection Control and Backflow Prevention requirements prior to the issuance of the Building Permit Applications.

If you have any questions, please contact Robert Chun at 748-5443.

Very truly yours,

SUSAN UYESUGI
Program Administrator
Customer Care Division

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
TELEPHONE: (808) 768-3486 • FAX: (808) 768-3487 • WEBSITE: http://envhonolulu.org

PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-052

June 23, 2012

Susan Uyesugi
Program Administrator
Customer Care Division
Board of Water Supply
City and County of Honolulu
630 S. Beretania St.
Honolulu HI 96843

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Dear Susan Uyesugi,

Thank you for your response of May 2, 2012 regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We acknowledge that the proposed project is subject to the Board of Water Supply cross-connection control and backflow prevention requirement prior to issuance of the Building Permit Application.

We acknowledge that when water is made available, payment of Water System Facilities Charges is required for resource development, transmission, and daily storage.

We also acknowledge that the on-site fire protection requirements should be coordinated with the Fire Prevention Bureau of the Honolulu Fire Department.

We thank the Board of Water Supply for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

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DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

PETER B. CARLISLE
MAYOR

LORI M.K. KAHIKINA, P.E.
DIRECTOR

CHRIS TAKASHIGE, P.E.
DEPUTY DIRECTOR

May 22, 2012

MEMORANDUM

TO: STEPHEN F. LANGHAM, P.E.
ENERGY RECOVERY ADMINISTRATOR

FROM: LORI M. K. KAHIKINA, P. E., DIRECTOR
for DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT SOLID WASTE TO ENERGY TRUCK RECEIVING STATION FOR SLUDGE ISLAND AND DISTRICT: OAHU EWA TAX MAP KEY: (1) 9-1-026-030 H-POWER

Thank you for inviting us to review the above draft environmental assessment, The Department of Design and Construction does not have any comments to offer at this time.

Should you have any questions, please contact me at ext. 88480.

LMKK:pg(462308)

DEPARTMENT OF DESIGN AND CONSTRUCTION
CITY AND COUNTY OF HONOLULU
650 SOUTH KING STREET, 11TH FLOOR
HONOLULU, HAWAII 96813
Phone: (808) 768-8480 • Fax: (808) 768-4567
Web site: www.honolulu.gov

PETER B. CARLISLE
MAYOR

LORI M. K. KAHIKINA, P.E.
DIRECTOR

CHRIS TAKASHIGE, P.E.
DEPUTY DIRECTOR

WW.P 12-048

May 8, 2012

MEMORANDUM

TO: TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

ATTN: STEPHEN LANGHAM, ENERGY RECOVERY ADMINISTRATOR
ENV-REFUSE-HPOWER

FROM: for LORI M. K. KAHIKINA, P.E., DIRECTOR
DEPARTMENT OF DESIGN AND CONSTRUCTION

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT: SOLID WASTE TO ENERGY TRUCK RECEIVING STATION FOR SEWAGE SLUDGE

The City and County of Honolulu, Department of Design and Construction has reviewed the Draft EA for the subject project and submit our comments on the enclosed forms.

If there are any questions, please call Kim Tanaka at 768-8410.

Enclosure

WASTEWATER DIVISION

NOTE: Architect/Engineer shall return this form, noting action taken.

PLANS/SPECIFICATIONS REVIEW COMMENTS:	Draft	Pre-Fin	Final	Other	
	X				

PROJECT	Draft EA – Solid Waste to Energy Truck Receiving Station for Sewage Sludge: Campbell Industrial Park, Kapolei, Hawaii (April 2012)		
JOB NO.			
CONSULTANT	City & County of Honolulu: Department of Environmental Services, Refuse Division		
PROJ COORD	Stephen F. Langham **revwd by:** Kim	**DATE**	May 2, 2012

ITEM NO. DWG. NO. PAR. NO.	COMMENTS	ACTION TAKEN (If none, state reason why)
Pg. 4	Include in Table of Contents a list of Figures and Tables	✓
Pg. 5	Typo on #2: APPROVING	✓
Pg. 8	The Director for DDC is now Lori Kahikina, not Collins Lam.	✓
Pg. 16, Sec. 2.2	Where is Figure 2.2-3: Zoning?	Changed to 2.2-1
Pg. 16, Sec. 2.2	Typo. "...zoned 1-2 Intensive" should be "zoned I-2 Intensive Industrial"	✓
Figures 2.1-1, 2.1-2 and 2.2-1	It's difficult to tell where Parcel 30 is from the figures. A suggestion may be to turn on the property lines or hatch the area and have an arrow and text (i.e. Project Location or Subject Parcel) pointing to it.	✓
Figure 2.2-1 and Table 2.2-1	Typo in paragraph above table. It's called Table 2.2-2 in paragraph, but the table is labeled as Table 2.2-1. From the aerial figure (Fig. 2.2-1), it's not clear where Parcel 30 is and therefore the table is difficult to relate to the figure. It might be clearer if the property lines were turned on, the subject parcel (H-Power) labeled in Bold on the map, and the adjacent land owners names labeled in their parcels or with a leader pointing to it. This could eliminate the need for a table since the figure will depict the project location and adjacent lands.	✓
Pg. 23	What percent chance of a severe earthquake does Zone 2A have?	✓
Pg. 31, 1st para.	Typo for "Parcel 35". Should be Parcel 30.	✓

WASTEWATER DIVISION		
Pg. 34	Parcel 30 is located in Flood Zone D as shown on FIRM Map No. 15003C0312G, effective date January 19, 2011. For the subject location, the 1/19/11 map is the most current, not the 2008 version. While the entire map cannot be printed or pdf'd, a smaller map called a "FIRMETTE" can be created on FEMA's website. See attached map for example.	✓
Pg. 45, 1st para.	Who is Mr. Kane? He's described on Page 54 in the Cultural Resources paragraph, but referred to on Pg. 45. To prevent confusion, he may need to be introduced earlier.	✓ moved
Pg. 50, Fig. 2.8-2	Figure 2.8-2 is not referred to in the text; therefore it's not clear what this figure is representing.	✓

tional Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

50 0 500 1000

FEET

METERS

NFIP

NATIONAL FLOOD INSURANCE PROGRAM

PANEL 0312G

FIRM

FLOOD INSURANCE RATE MAP

CITY AND COUNTY OF
HONOLULU,
HAWAII

PANEL 312 OF 395

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
HONOLULU, CITY AND COUNTY OF	150001	0312	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
15003C0312G

MAP REVISED
JANUARY 19, 2011

Federal Emergency Management Agency

This s an official copy of a portion of the above referenced flood map. It was extracted using F-MIT On-Line. This map does not reflect changes or amendments which may have been made subsequent to the date on the title block. For the latest product information about National Flood Insurance Program flood maps check the FEMA Flood Map Store at www.msc.fema.gov

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
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PETER B. CARLISLE
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TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-053

June 23, 2012

Lori M. K. Kahikina, P.E.
Director
Department of Design and Construction
City and County of Honolulu
650 S. King St., 11th Floor
Honolulu HI 96813

Dear Lori M. K. Kahikina,

Thank you for your response of May 8, 2012 regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We have made the suggested corrections and clarifications to the document.

We thank the Department of Design and Construction for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

R:\H-POWER\-EXPANSION\5.0 PERMITS\Sludge EA\Comments\20120623 HNL Responces Letters for EA .doc

DEPARTMENT OF PLANNING AND PERMITTING
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PETER B. CARLISLE
MAYOR

DAVID K. TANOUE
DIRECTOR

JIRO A. SUMADA
DEPUTY DIRECTOR

2012/ELOG-752(ry)

May 23, 2012

MEMORANDUM

TO: TIMOTHY E. STEINBERGER, P. E., DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

FROM: for DAVID K. TANOUE, DIRECTOR
DEPARTMENT OF PLANNING AND PERMITTING

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT FOR SOLID WASTE TO ENERGY TRUCK RECEIVING STATION FOR SEWAGE SLUDGE
CAMPBELL INDUSTRIAL PARK
91-174 HANUA STREET, KAPOLEI, HAWAII
TAX MAP KEY: 9-1-026: 30

We have reviewed the subject document and provide comments as follows:

1. Summary Project Description - This section should clearly describe the project's proposed improvements and associated operations as it relates to the Third Combustor Unit Expansion Project (Third Boiler) at the H-POWER waste-to-energy facility. For example, how does the project impact the operations and volumes of municipal solid waste (MSW) anticipated to be processed at the Third Boiler? Does incineration of MSW together with the dewatered sewage sludge employ different procedures for meeting air pollution standards? Does the ash generated from the incineration of dewatered sewage sludge affect Department of Health solid waste permits for Waimanalo Gulch Sanitary Landfill?

   The summary should also disclose that the Third Boiler was the subject of a recent Environmental Impact Statement (EIS). An exhibit, such as a plan drawing, should be added which shows the proposed project in context with the entire H-POWER facility, existing or under construction.

2. Section 1 - General Description - A subsection should be added before Section 1.1 Technical Characteristics, which briefly describes current sewage sludge disposal practices and any adverse impacts associated with these practices on the adjoining communities and the area's environment.

3. Section 7 - List of Permits/Approval - A Conditional Use Permit (CUP) Modification was not required for the H-POWER Expansion Project (see attached Department of Planning and Permitting letter dated March 4, 2009). Reference to the modification should be removed from the list (page 68). Please note that the H-POWER facility is considered a "public use" pursuant to Article 10 of the Land Use Ordinance, and as such, a CUP is no longer required.

4. Based on Figure S1, the proposed 1,325-square foot addition to the Tipping Floor Expansion of the H-POWER facility will not require modification of Zoning Waiver Permit No. 2009/W-39.

5. Include a section on the project's consistency with the policies and guidelines of the Ewa Development Plan (Ewa DP), current and proposed. A copy of the Ewa DP, current and proposed, may be viewed at the following web page:

   http://www.honoluludpp.org/planning/DevSust_Ewa.asp

   The H-POWER facility is consistent with both the existing and proposed Ewa DP. The proposed modification to the facility would provide another option to the recycling of sewage sludge and diversion from landfills. The Ewa DP supports efforts to reduce or divert waste materials from landfilling.

6. When submitting an application for a grading permit, five sets of revised grading plans, addressing modifications to the on-site grading work, should be submitted to the Civil Engineering Branch for review and approval (refer to Job ID No. 2009/CP-124). Any deviations to the approved grading plans without obtaining revision approval from the Department of Planning and Permitting may result in the issuance of a Notice of Violation.

   For your information, Grading Permit GP2009-11-0671 has expired. Please reference the current permit (GP2011-09-0544).

7. Revise Figures 2.1-1, 2.1-2, 2.2-1, 2.3-2, 2.4-1, 2.6-1, 2.6-2, 2.6-3, 2.7-1, and 2.7-2 to clearly indicate the project's location.

8. Section 2.4 - Geologic Hazards - Please reference the International Building Code (IBC) as the Uniform Building Code (UBC) is obsolete.

9. We understand that the project will not generate any wastewater. For you information, the area is not serviced by the municipal sewer system.

If you have any questions, please contact Raymond Young of my staff at 768-8049.

Attachment
DKT:dj
935977

DEPARTMENT OF PLANNING AND PERMITTING
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MUFI HANNEMANN
MAYOR

DAVID K. TANOUE
DIRECTOR

ROBERT M. SUMITOMO
DEPUTY DIRECTOR

2009/ELOG-234 (BLB)

March 4, 2009

Mr. S. Samuel Joshi, PE, QEP
Manager, Environmental Engineering
Covanta Honolulu Resource Recovery Venture
c/o Covanta Energy Corporation
40 Lane Road
Fairfield, New Jersey 07004

Dear Mr. Joshi:

Subject: Draft Environmental Impact Statement
H-Power Third Boiler Expansion Project
91-174 Hanua Street – Campbell Industrial Park
Tax Map Key 9-1-26: 30

This is in response to your request, received January 30, 2009, for comments concerning the Draft Environmental Impact Statement (DEIS) for the subject project.

The project site, as well as the adjoining parcels to be used for construction lay-down (Tax Map Key 9-1-26: 33 and 34), are not located in the Special Management Area (SMA) or the shoreline setback, and will not require an SMA permit or shoreline setback variance.

Please note that the project does not require a modification to Conditional Use Permit (CUP) No. 89/CUP1-17, as stated in Section 3.0, "Required Approvals and Permits," of the DEIS. Since the H-Power facility is now owned and operated by the City, it is thus considered to be a "public use and structure" for purposes of the Land Use Ordinance (LUO); and, as such is a permitted use in all zoning districts. When the CUP had originally been issued, the use was then classified as a "utility installation, Type B," since at that time it had been privately owned and operated.

The project will need to obtain an approved zoning waiver, pursuant to LUO Section 21-2.130(a)(1), for any portion of the project which will exceed the maximum 60-foot zoning height for the site.

Thank you for the opportunity to comment on the DEIS. Please contact Blake La Benz of our staff at 768-8011 for any questions.

Very truly yours,

David K. Tanoue, Director
Department of Planning and Permitting

DKT:fm
cc: Department of Environmental Services
Office of Environmental Quality Control
AMEC Earth & Environmental, Inc.

G:\LandUse\PosseWorkingDirectory\blake\Correspondence\09ELOG-234.doc

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
1000 ULUOHIA STREET, SUITE 308, KAPOLEI, HAWAII 96707
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PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-054

June 23, 2012

David K. Tanoue, Director
Department of Planning and Permitting
City and County of Honolulu
650 S. King St., 7th Floor
Honolulu, HI 96813

Dear Mr. Tanoue,

Thank you for your response of May 23, 2012 regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We have made the suggested corrections and clarifications to the document.

We provide the following detailed responses to your comments:

1) a) We have revised the EA with additional language in Section 1.0 Technical Characteristics clarifying the role of H-POWER in conjunction with the other disposal options. Receiving sludge at H-POWER will not significantly impact the operations and volumes of municipal solid waste (MSW) anticipated to be processed at H-POWER.
b) The Summary Project Description and Section 2.5 Air Quality included language stating that the project will not change emissions requirements and that the existing air pollution control equipment will be used.
c) We have added language disclosing that the Third Boiler was the subject of a recent approved Environmental Impact Statement (EIS), and we have revised Figure S1 to provide a broader view of the proposed project in context with the entire combined H-POWER facility.

2) Section 5 of the EA provides current conditions and a "no action" assessment, which describe current sludge disposal practices and any adverse impacts associated with these practices.

3) We acknowledge that a Conditional Use Permit (CUP) Modification is not required. Section 2.2 and Section 7 have been revised accordingly.

4) We acknowledge that the addition will not require modification of the Zoning Waiver Permit No. 2009/W-39.

5) We have added a paragraph in Section 2.2 describing the project's consistency with the policies and guidelines of the Ewa Development Plan.

6) We acknowledge that when submitting an application for a grading permit, five sets of revised grading plans, addressing modifications to the on-site grading work, should be submitted to the Civil Engineering Branch for review and approval (refer to Job ID No. 2009/CP-124). We acknowledge that any deviations to the approved grading plans without obtaining revision approval from the Department of Planning and Permitting may result in the issuance of a Notice of Violation. We also acknowledge that Grading Permit GP2009-11-0671 has expired and have revised the EA accordingly to reference the current permit GP2011-09-0544.

7) We have added red arrows to the figures to clearly indicate the project's location.

8) We acknowledge that the Uniform Building Code (UBC) is obsolete and have referenced the International Building Code (IBC).

9) We acknowledge that the project area is not serviced by the municipal sewer system.

We thank the Department of Planning and Permitting for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

DEPARTMENT OF PARKS & RECREATION

CITY AND COUNTY OF HONOLULU

1000 Uluohia Street, Suite 309, Kapolei, Hawaii 96707
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PETER B. CARLISLE
MAYOR

GARY B. CABATO
DIRECTOR

ALBERT TUFONO
DEPUTY DIRECTOR

May 3, 2012

TO: TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

FROM: GARY B. CABATO, DIRECTOR

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT
SOLID WASTE TO ENERGY TRUCK RECEIVING STATION FOR SLUDGE – TAX MAP KEY (1) 9-1-026:030 H-POWER

Thank you for the opportunity to review and comment on the Draft Environmental Assessment for the proposed Solid Waste to Energy Truck Receiving Station for Sludge at H-Power.

The Department of Parks and Recreation has no comment as the proposed project will have no impact to any program or facility of the department. You may remove us as a consulted party to the balance of the EIS process.

Should you have any questions, please contact Mr. John Reid, Planner, at 768-3017.

Gary B. Cabato
GARY B. CABATO
Director

GBC:jr
(462337)

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
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PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-062

June 23, 2012

Gary B. Cabato
Director
Department of Parks & Recreation
State of Hawaii
1000 Uluohia Street Ste 309
Kapolei HI 96707

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Dear Mr. Cabato,

Thank you for responding regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We thank you for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

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DEPARTMENT OF TRANSPORTATION SERVICES

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET, 3RD FLOOR
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PETER B. CARLISLE
MAYOR

WAYNE Y. YOSHIOKA
DIRECTOR

KAI NANI KRAUT, P.E.
DEPUTY DIRECTOR

TP4/12-462286R

May 14, 2012

MEMORANDUM

TO: TIMOTHY E. STEINBERGER, P.E., DIRECTOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

ATTENTION: STEPHEN F. LANGHAM, P.E.
ENERGY RECOVERY ADMINISTRATOR
DEPARTMENT OF ENVIRONMENTAL SERVICES

FROM: WAYNE Y. YOSHIOKA, DIRECTOR
DEPARTMENT OF TRANSPORTATION SERVICES

SUBJECT: DRAFT ENVIRONMENTAL ASSESSMENT (DEA); SOLID WASTE TO ENERGY TRUCK RECEIVING STATION FOR SLUDGE

This responds to a letter from Stephen F. Langham, P.E., Energy Recovery Administrator, Department of Environmental Services, dated April 4, 2012, requesting our review and comments regarding this project.

Our Traffic Engineering Division has the following comments:

- The proposed project, according to the DEA, will generate less than ten trucks per day and is not expected to have any significant traffic impacts. However, since approval for the proposed action will be based on permits secured for the H-Power Expansion project, the traffic analysis should more clearly demonstrate that the cumulative trips from the original H-Power Expansion project and this proposed project still yield data that support the original findings of non-significance and no degradation in Level of Service (LOS).

- The additional inbound traffic lane proposed to improve traffic flow should be designed such that adequate circulation and vehicle storage is provided for all vehicles on-site. In addition, while internal traffic circulation is well described, actual driveway access, such as ingress and egress to the site, its dimensions and capacity, etc., is not addressed.

- The report should define a basis for its finding of no significance for short term impacts on surrounding roadways during construction. However, any short term impacts as a result of construction that would require usage of a City street will require a street usage permit.

- Construction employees generally need their vehicles which store working tools at a job site. Restricting parking as a construction mitigation to encourage carpooling might not be feasible.

Thank you for the opportunity to review this matter. Should you have any further questions on the matter, you may contact Michael Murphy of my staff at Local 88359.

WAYNE Y. YOSHIOKA
Director

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PETER B. CARLISLE
MAYOR

TIMOTHY E. STEINBERGER, P.E.
DIRECTOR

MANUEL S. LANUEVO, P.E., LEED AP
DEPUTY DIRECTOR

ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

IN REPLY REFER TO:
RH-12-055

June 23, 2012

Wayne Y. Yoshioka, Director
Department of Transportation Services
City and County of Honolulu
650 S. King St., 3rd Floor
Honolulu, HI 96813

Dear Mr. Yoshioka,

Thank you for your response of May 14, 2012 regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We provide the following detailed responses to your comments:

- We believe that an additional 10 trucks per day on a peak day is insignificant compared to the 300 trucks per day bringing waste to H-POWER. Also, sludge deliveries are considered as backup to landfill and composting options. We propose that the original traffic analysis conducted for the approved H-POWER Expansion Project Environmental Impact Statement is still valid.

- The other traffic parameters are also covered in the Expansion EIS and will not be significantly affected.

- Construction of the sludge improvements is concurrent with that of the latter stages of the H-POWER Expansion. Construction traffic around the site will be low as a result, compared to the peak construction period that is already past. Construction of the sludge improvements will utilize existing construction labor and will not significantly add new workers or trucks. We acknowledge that any short term impacts as a result of construction that would require usage of a City street will require a street usage permit.

- We acknowledge that restricting parking as a construction mitigation to encourage carpooling might not be feasible.

We thank the Department of Transportation Services for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

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Hawaiian Electric Company
Engineering Department
PO Box 2750 • Honolulu, HI 96840

May 24, 2012

Mr. Stephen F. Langham
Energy Recovery Administrator
Department of Environmental Services
Division of Refuse Collection and Disposal
1000 Uluohia Street, Suite 201
Kapolei, Hawaii 96707

Dear Mr. Langham:

Subject: **Solid Waste to Energy Truck Receiving Station for Sludge**
Draft Environmental Assessment
TMK 9-1-026-030 H-POWER
RH-12-019

Thank you for the opportunity to comment on the proposed project. Hawaiian Electric Company has no objections or comments at this time to the proposed project. Should HECO have existing easements and facilities on the subject property, we need continued access for maintenance of our facilities.

We appreciate your efforts to keep us apprised of the subject project in the planning process. As the Solid Waste to Energy Truck Receiving Station project comes to fruition, please continue to keep us informed. Further along in the design, we will be better able to evaluate the effects on our system facilities.

If you have any questions, please call me at 543-7245.

Sincerely,

Rouen Q. W. Liu
Permits Engineer

DEPARTMENT OF ENVIRONMENTAL SERVICES
CITY AND COUNTY OF HONOLULU
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ROSS S. TANIMOTO, P.E.
DEPUTY DIRECTOR

June 23, 2012

IN REPLY REFER TO:
RH-12-063

Rouen Q.W. Liu
Permits Engineer
Hawaiian Electric Company
P.O. Box 2750
Honolulu, HI 96840

SUBJECT: Draft Environmental Assessment, Solid Waste to Energy Truck Receiving Station for Sludge

Dear Mr. Liu,

Thank you for your response regarding the DEA for the Solid Waste to Energy Truck Receiving Station for Sludge.

We thank you for participating in the Environmental Assessment review process.

Sincerely,

Stephen F. Langham, P.E.
Energy Recovery Administrator

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