PROPOSED

Covered Source Permit Review Summary (Renewal)

Application No.: Renewal Application No. 0239-03

Permit No.: 0239-01-C

Applicant: Hawaiian Electric Company, Inc. (HECO)

Facility: Waiau Generating Station
Located at: Pearl City, Oahu
UTM: Zone 4, 607,337m E; 2,365,837m N (Old Hawaiian)

Mailing Address: Hawaiian Electric Company, Inc.
Waiau Generating Station
P.O. Box 2750
Honolulu, HI 96840-0001

Responsible Official: Dan V. Giovanni
Manager, Generation Department
Hawaiian Electric Company, Inc.
(808) 543-4236

Point of Contact: Karin Kimura
Environmental Department
Hawaiian Electric Company, Inc.
(808) 543-4522

Application Date: August 13, 2010
Additional information dated December 21, 2012 and February 13, 2013

Proposed Project:

The Standard Industrial Classification Code (SICC) for this facility is 4911 - *Electric Services.*

This facility operates six (6) boilers and two (2) CTs for the production of electricity for sale. The fuel is stored in several on-site petroleum storage tanks. However, the storage tanks are considered an insignificant activity because of size or amount of air emissions due to the fuel's low vapor pressure. The fuel is piped in from Campbell Industrial Park via underground fuel lines.

Although all of the boilers and CTs normally operate intermittently, they will be assumed to operate simultaneously for 8,760 hr/yr at maximum capacity. None of the combustion units have any air pollution controls. Boiler unit nos. 3, 4, 5 and 6 are cycling units, whereas boiler unit nos. 7 and 8 are baseload units. For the combustion turbines, unit nos. 9 and 10 are peaking units used for quick starts. The boilers may be fired on fuel oil No. 6 and diesel fuel oil No. 2, and specification (spec) used oil. For ignition, boiler unit nos. 3 to 6 use propane while unit nos. 7 and 8 use diesel fuel oil No. 2. The combustion turbines (CTs) use diesel fuel oil

No. 2 for ignition and regular fuel. The permittee has requested to modify the quantity of spec used oil allowed to burn in the boilers from not more than 20,000 gallons to 50,000 gallons in any rolling twelve (12) month period.

This facility is located adjacent to Pearl Harbor, on the Island of Oahu, and has a base elevation of approximately 12' above sea level. The terrain is flat in the surrounding area of the facility. However, there is a hill to the north of the facility that has a gradual slope.

This facility is a major covered source based on the annual emissions of criteria pollutants (specifically NO_X, SO_2, VOC, and PM) exceeding 100 tons per year for each individual pollutant. This source is also a major HAPs source since cumulative Hazardous Air Pollutant (HAP) emissions are greater than 25 tons per year and nickel compounds is the individual HAP that exceeds ten (10) tons per year.

A check for $3,000.00 has been processed for a Renewal of a Major Covered Source Permit Application. CSP No. 0239-01-C issued August 15, 2006 will be superseded in its entirety upon issuance of this renewal.

Equipment:

Unit No.	Description (power outputs are nominal and the units are situated from west to east)
3	49 MW Babcock and Wilcox Boiler (576 MMBtu/hr, serial no. RB-43, built in 1947)
4	49 MW Babcock and Wilcox Boiler (585 MMBtu/hr, serial no. RB-92, built in 1950)
5	57 MW Babcock and Wilcox Boiler, 633 MMBtu/hr, (serial no. RB-324, built in 1958)
6	58 MW Babcock and Wilcox Boiler, 637 MMBtu/hr, (serial no. RB-328, built in 1961)
8	92 MW Combustion Engineering Boiler (923 MMBtu/hr, serial no. 20694, built in 1967)
7	92 MW Combustion Engineering Boiler (922 MMBtu/hr, serial no. 20177, built in 1965)
10	50 MW General Electric MS7000 Combustion Turbine (682 MMBtu/hr, serial no. 217725, built in 1973)
9	52 MW General Electric MS7000 Combustion Turbine (691 MMBtu/hr, serial no. 217724, built in 1973)

Note: The boilers may be fired on fuel oil No. 6 and diesel fuel oil No. 2, and specification (spec) used oil. For ignition, boiler unit nos. 3 to 6 use propane while unit nos. 7 and 8 use diesel fuel oil No. 2. The combustion turbines (CTs) use diesel fuel oil No. 2 for ignition and regular fuel.

Air Pollution Controls:

None of the equipment at this facility use “add-on” air pollution control devices.

Applicable Requirements:

Hawaii Administrative Rules (HAR)

Title 11, Chapter 11-59	Ambient Air Quality Standards
Title 11, Chapter 11-60.1	Air Pollution Control
Subchapter 1	General Requirements
Subchapter 2	General Prohibitions
11-60.1-31	Applicability
11-60.1-32	Opacity Requirements
11-60.1-38	Sulfur Oxides from Fuel Combustion
Subchapter 5	Covered Sources
Subchapter 6	Fees for Covered Sources, Noncovered sources, and Agricultural Burning
11-60.1-111	Definitions
11-60.1-112	General Fee Provisions for Covered Sources
11-60.1-113	Application Fees for Covered Sources
11-60.1-114	Annual Fees for Covered Sources
Subchapter 9	Hazardous Air Pollutants

Federal Requirements

40 CFR Part 63 – National Emission Standards for Hazardous Air Pollutants for Source Categories (Maximum Achievable Control Technologies (MACT) Standards)

Subpart UUUUU, National Emission Standards for Hazardous Air Pollutants: Coal- and Oil-Fired Electric Utility Steam Generating Units is an applicable requirement. Existing sources must comply with 40 CFR Part 63, Subpart UUUUU no later than April 16, 2015.

Non-Applicable Requirements:

Hawaii Administrative Rules (HAR)

Title 11, Chapter 11-60.1	Air Pollution Control
Subchapter 7	Prevention of Significant Deterioration
Subchapter 8	Standards of Performance for New Stationary Sources (NSPS)

Federal Requirements

40 CFR Part 52.21 - Prevention of Significant Deterioration (PSD) of Air Quality review is not applicable since there is no proposed modification or reconstruction for this existing facility that would increase emissions.

40 CFR Part 60 - New Source Performance Standards (NSPS) is not applicable since the boilers were installed prior to promulgation of NSPS and the combustion turbines were in service prior to October 3, 1977 (40 CFR 60.330(b)). The tanks are exempt from Subpart K, Ka,

and Kb, since all of the petroleum storage tanks store fuel with true vapor pressures less than 3.5 kPa.

40 CFR Part 61 - National Emission Standard for Hazardous Air Pollutants (NESHAPS) is not applicable since there is no standard for nickel.

40 CFR Part 63 - Maximum Achievable Control Technology (MACT), Subparts DDDDD - NESHAPS for Industrial, Commercial, and Institutional Boilers and Process Heaters; and YYYY - NESHAPS for Stationary Combustion Turbines, are not applicable. Pursuant to 40 CFR §63.7491(c), the boilers are not subject to the subpart because they are electric utility steam generating units (EUSGUs). Pursuant to 40 CFR §63.6090(b)(4), the existing CTs do not have to meet the requirements of the subpart.

Alternate Operating Scenarios (AOS):

1. Ability to switch to alternate fuels for the boilers and CTs.

2. Fuel additives to inhibit corrosion, control biological growth, improve combustion, improve lubricity, or other reasons.

Insignificant Activities/Exemptions:

Basis for Exemption	Description
HAR §11-60.1-82(f)(1)	Storage tanks are exempt due to the size being less than 40,000 gallons include the following: 4,700 gal diesel fuel oil No. 2 (igniter, fixed roof); 1,600 gal diesel fuel oil No. 2 (Solar diesel engine gen., fixed roof); Two (2) 4,700 gal lube oil (Tanks #71 & 72, fixed roof); Two (2) 3,948 gal lube oil (Tanks #51 & #52, fixed roof); Two (2) 2,307 gal lube oil (Tanks #31 & #32, fixed roof); Two (2) 2,227 gal lube oil (Tanks #41 & #42, fixed roof); 250 gal diesel fuel oil No. 2 (fire pump, horizontal); 8,000 gal gasoline (underground); and 2,000 gal diesel fuel oil No. 2 (vehicle fuel tank)
HAR §11-60.1-82(f)(2)	There occasionally may be fuel burning equipment with a heat input capacity less than one MMBtu/hr.
HAR §11-60.1-82(f)(5)	One (1) 750 kW Solar diesel engine generator; one (1) 800 kW Caterpillar diesel engine generator (to temporarily replace the 750 kW Solar diesel engine generator); two (2) 115 kW Onan propane fired electric generators; one (1) 230 kW Cummins DSHAD diesel engine generator (will replace the 115 kW Onan propane fired electric generator); and one (1) 230 kW Cummins DSHAD diesel engine generator (will replace the 140 kW Onan propane fired electric generator).
HAR §11-60.1-82(f)(7)	There are VOC storage tanks which are exempt due to the low vapor pressure of the fuel they store and they individually emit

less than two (2) tpy of VOC. Also, there may be fugitive equipment leaks from valves, flanges, pump seals and oil/water separators. Fugitive solvent and ammonia emissions also occur during cleaning and maintenance. All of these types of fugitive emissions are infrequent and/or insignificant. The storage tanks include the following:

65,250 bbl LSFO (Tank #1, fixed cone roof);
29,519 bbl LSFO (Tank #3, fixed cone roof);
76,525 bbl LSFO (Tank #4, fixed cone roof);
94,333 bbl LSFO (Tank #5, fixed cone roof);
two (2) 24,156 bbl diesel fuel oil No. 2 (Tanks #1 & #2, fixed cone roof);

Insignificant activities in addition to those listed in subsection (f) are:

Basis for Exemption	Description
HAR §11-60.1-82(g)(2)	Periodically, there are small hand held equipment used for maintenance and testing throughout the facility.
HAR §11-60.1-82(g)(3)	Periodically, laboratory equipment are used for chemical and physical analyses.
HAR §11-60.1-82(g)(4)	There are solvent tanks and containers used for cleaning and maintenance.
HAR §11-60.1-82(g)(6)	There is a 215 hp diesel powered fire pump.
HAR §11-60.1-82(g)(7)	Periodically, the smoke generating systems will be used for fire brigade training.
HAR §11-60.1-82(g)(8)	There are gasoline fired portable industrial equipment less than 25 hp used for maintenance.
HAR §11-60.1-82(g)(9)	There are many maintenance equipment and activities that are not related to the primary business activity.
HAR §11-60.1-82(g)(12)	There are stacks and vents to prevent escape of sewer gases through plumbing traps.
HAR §11-60.1-82(g)(13)	There are consumer use of office equipment and products.

Consolidated Emissions Reporting Rule (CERR):

Consolidated Emissions Reporting Rule (CERR) is applicable because NO_x, SO_x, CO, VOC, and $PM_{10}/PM_{2.5}$ emissions from the facility are greater than reporting levels pursuant to 40 CFR 51, Subpart A.

Table 1 - CERR

Pollutant	Facility Emissions (tpy)	CERR Triggering Levels (tpy)		In-house Reporting Threshold (tpy)
		1-yr Reporting Cycle (Type A Sources)	3-yr Reporting Cycle (Type B Sources)	
VOC	372	≥ 250	≥ 100	≥25
PM/PM_{10}	2,671	n/a	n/a	≥25
$PM_{10}/PM_{2.5}$	2,671	≥ 250	≥ 100	n/a
NO_x	29,741	≥ 2,500	≥ 100	≥25
SO_x	13,041	≥ 2,500	≥ 100	≥25
CO	1,833	≥ 2,500	≥ 1,000	≥250
HAPs (total)	37.4	n/a	n/a	≥5

Note: The facility emissions are taken from **Tables 2 - 7** for the continuous (8,760 hr/yr) operation of the facility.

Also, the DOH's in-house policy is to sum the individual emissions sources and if the sum of an individual pollutant exceeds the threshold limits, then annual emissions reporting is required. Since the in-house threshold limits are exceeded, annual emissions reporting for the facility will be required for in-house recordkeeping purposes. Furthermore, all covered sources are required to submit annual emissions reports to the DOH.

Compliance Assurance Monitoring (CAM):

Compliance Assurance Monitoring (CAM) is to provide a reasonable assurance that compliance is being achieved with large emissions units that rely on air pollution control device equipment to meet an emissions limit or standard. Pursuant to 40 CFR Part 64, for CAM to be applicable, the emissions unit must: (1) be located at a major source; (2) be subject to an emissions limit or standard; (3) use a control device to achieve compliance; (4) have potential pre-control emissions that are greater than the major source level [>100 tpy]; and (5) not otherwise be exempt from CAM. CAM is not applicable since item 3 does not apply.

Synthetic Minor:

Synthetic Minor is a facility with operational limitations in order to keep potential emissions lower than major source levels (≥100 tpy of criteria pollutants or ≥10 tpy of individual or 25 tpy of a combination of HAPs). This facility is a major source and therefore is not a synthetic minor.

Prevention of Significant Deterioration (PSD):

PSD is not applicable because this facility is not a *new* major stationary source nor does this application propose any *major modifications* to a major stationary source as defined in 40 CFR 52.21. A *major modification* is defined as a project at an existing major source that will result in a significant and a significant net emissions increase above specified emission thresholds for pollutants subject to regulation.

Best Available Control Technology (BACT):

A Best Available Control Technology (BACT) analysis is required for new or modified sources that have the potential to emit or increase emissions above significant amounts as defined in HAR §11-60.1. Since this is not a new source nor are any modifications proposed that have the potential to cause a significant net increase in air emissions, a BACT analysis is not required.

Major Source/Synthetic Minor Source Applicability:

This facility is classified as a major source.

Project Emissions:

The emission rates (except for SO_2) were calculated using assumed emissions factors (EF) that were based on previous stack test data which are more conservative than the US EPA AP-42 emission factors. SO_2 emission rates were based on mass balance using sulfur content and heating value of the fuel. All emission rates are maximum potential and annual emission rates include operating 8,760 hr/yr.

Table 2
NO_X Emissions

Unit No.	AP-42 EF (lb/MMBtu)	Assumed EF[1] (lb/MMBtu)	Heat Input (MMBtu/hr)	Hourly Emission Rate (lb/hr)	Annual Emission Rate (ton/yr)
3	0.313	1.108	576.0	638.21	2,795
4	0.313	1.108	585.2	648.40	2,840
5	0.313	1.108	633.0	701.36	3,072
6	0.313	1.08	637.4	688.39	3,015
7	0.213	0.7185	921.6	662.17	2,900
8	0.213	0.627	923.2	578.55	2,535
9	0.88	2.094	690.5	1,445.91	6,333
10	0.88	2.094	681.5	1,427.06	6,251
				Total:	29,741

1. Assumed EF > AP-42 EF was provided by the applicant; AP-42 may under estimate the emission rate.

Table 3
SO_2 Emissions

Unit No.	Assumed EF[1] (lb/MMBtu)	Heat Input (MMBtu/hr)	Emission Rate (lb/hr)	Emission Rate (ton/yr)
3	0.53	576.0	305.62	1,339
4	0.53	585.2	310.50	1,360
5	0.53	633.0	335.86	1,471

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Unit No.	Assumed EF[1] (lb/MMBtu)	Heat Input (MMBtu/hr)	Emission Rate (lb/hr)	Emission Rate (ton/yr)
6	0.53	637.4	338.20	1,481
7	0.53	921.6	488.99	2,142
8	0.53	923.2	489.84	2,146
9	0.52	690.5	356.44	1,561
10	0.52	681.5	351.80	1,541
			Total:	13,041

1. Emission factors based on fuel oil no. 6 and 2 (both with mass sulfur balance of 0.5% by weight) for the boilers and combustion turbines respectively.

Table 4
CO Emissions

Unit No.	AP-42 EF (lb/MMBtu)	Assumed EF[1] (lb/MMBtu)	Heat Input (MMBtu/hr)	Emission Rate (lb/hr)	Emission Rate (ton/yr)
3	0.033	0.067	576.0	38.60	169
4	0.033	0.067	585.2	39.21	172
5	0.033	0.067	633.0	42.42	186
6	0.033	0.067	637.4	42.71	187
7	0.033	0.067	921.6	61.76	271
8	0.033	0.067	923.2	61.86	271
9	0.0033	0.0896	690.5	61.86	290
10	0.0033	0.096	681.5	65.42	287
				Total:	1,833

1. Assumed EF > AP-42 EF was provided by the applicant; AP-42 may under estimate the emission rate.

Table 5
PM/PM_{10} Emissions

Unit No.	AP-42 EF (lb/MMBtu)	Assumed EF[1] (lb/MMBtu)	Heat Input (MMBtu/hr)	Emission Rate (lb/hr)	Emission Rate (ton/yr)
3	0.052	0.103	576.0	59.60	261
4	0.052	0.103	585.2	60.55	265
5	0.052	0.103	633.0	65.49	287
6	0.052	0.103	637.4	65.95	289
7	0.052	0.103	921.6	95.35	418
8	0.052	0.103	923.2	95.52	418
9	0.012	0.122	690.5	84.24	369
10	0.012	0.122	681.5	83.14	364
				Total:	2,671

1. Assumed EF > AP-42 EF was provided by the applicant; AP-42 may under estimate the emission rate.

Table 6
VOC Emissions

Unit No.	AP-42 EF (lb/MMBtu)	Assumed EF[1] (lb/MMBtu)	Heat Input (MMBtu/hr)	Emission Rate (lb/hr)	Emission Rate (ton/yr)
3	0.005	0.0102	576.0	5.87	26
4	0.005	0.0102	585.2	5.96	26
5	0.005	0.0102	633.0	6.45	28
6	0.005	0.0102	637.4	6.49	28
7	0.005	0.0074	921.6	6.81	30
8	0.005	0.0074	923.2	6.82	30
9	0.0004	0.034	690.5	23.48	103
10	0.0004	0.034	681.5	23.17	101
				Total:	372

1. Assumed EF > AP-42 EF was provided by the applicant; AP-42 may under estimate the emission rate.

HAPs emissions were also calculated conservatively since EFs higher than AP-42 were used. The emission factors were taken from US EPA AP-42; EPRI PISCES Air Toxic Database; or 1994 Waiau 7 Test Data. Again, the HAPs emissions were based on operating at maximum potential for 8,760 hr/yr.

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Table 7
HAPs Emissions

Pollutant	Unit 3 (tpy)	Unit 4 (tpy)	Unit 5 (tpy)	Unit 6 (tpy)	Unit 7 (tpy)	Unit 8 (tpy)	Unit 9 (tpy)	Unit 10 (tpy)	Spec Used Oil (tpy)	Total (tpy)
Acetaldehyde	0.00550	0.00559	0.00604	0.00609	0.00880	0.00882	0.0762	0.0752		0.192
Acrolein	--	--	--	--	--	--	0.0238	0.0235		0.0474
Benzene	0.00772	0.00784	0.00848	0.00854	0.0124	0.0124	0.166	0.164		0.388
Formaldehyde	0.0104	0.0106	0.0115	0.0116	0.0167	0.0167	0.847	0.836		1.76
Naphthalene	--	--	--	--	--	--	0.106	0.104		0.21
Phosphorus	0.00671	0.00682	0.00737	0.00743	0.0107	0.0108			ND	0.0498
Toluene	0.0155	0.0157	0.017	0.0171	0.0248	0.0248	0.85	0.839		1.80
Xylene	--	--	--	---	--	--	0.584	0.576		1.16
Antimony	0.012	0.0122	0.0132	0.0133	0.0192	0.0192			ND	0.089
Arsenic	0.00853	0.00866	0.00937	0.00944	0.0136	0.0137	0.0333	0.0328	0.00275	0.132
Beryllium	0.00032	0.00033	0.00035	0.00035	0.00051	0.00051	0.000938	0.000925	ND	0.00424
Cadmium	0.00570	0.00579	0.00627	0.00631	0.00912	0.00914	0.0145	0.0143	0.000233	0.0714
Chromium	0.00103	0.00104	0.00113	0.00114	0.00164	0.00165	0.0333	0.0328	0.0005	0.0742
Cobalt	0.0545	0.0554	0.0599	0.06030	0.0872	0.0873	--	--	0.000005	0.405
Lead	0.0133	0.0135	0.0146	0.0147	0.0213	0.0214	0.0423	0.0418		0.183
Manganese	0.0590	0.06	0.0649	0.0653	0.0945	0.0946	2.39	2.36	0.0017	5.19
Mercury	0.0126	0.0128	0.0138	0.01390	0.02010	0.0201	0.00363	0.00358		0.1
Nickel	3.28	3.33	3.60	3.63	5.25	5.26	0.0139	0.0137	0.000275	24.4
POM/PAH	0.0908	0.0923	0.0998	0.101	0.145	0.146	0.121	0.119		0.915
Selenium	0.00454	0.00461	0.00499	0.00503	0.00727	0.00728	0.0756	0.0746	ND	0.184
1,3-Butadiene							0.0484	0.0478		0.0961
Hydrochloric acid									0.000825	0.000825
Total (tpy)	3.59	3.65	3.94	3.97	5.74	5.75	5.43	5.36	0.00629	37.4

Emission rates for specification used oil based on a fuel limit of 50,000 gallons per year.

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Greenhouse Gas (GHG) Emissions:

Mass Greenhouse Gas (GHG) Emissions

Unit No.	Fuel Type	Annual Operating Hours	Heat Input Capacity (MMBtu/hr)	CO_2 Emission Factor [1] (lb/MMBtu)	CO_2 Annual Emissions (ton/yr)	N_2O Emission Factor [1] (lb/MMBtu)	N_2O Annual Emissions (tons/yr)	CH_4 Emission Factor [1] (lb/MMBtu)	CH_4 Annual Emissions (tons/yr)
3	No. 6 Fuel Oil	8,760	576	165.6	417,789	1.32E-03	3.33	6.61E-03	16.68
4	No. 6 Fuel Oil	8,760	585	165.6	424,317	1.32E-03	3.38	6.61E-03	16.94
5	No. 6 Fuel Oil	8,760	633	165.6	459,133	1.32E-03	3.66	6.61E-03	18.33
6	No. 6 Fuel Oil	8,760	637	165.6	462,034	1.32E-03	3.68	6.61E-03	18.44
7	No. 6 Fuel Oil	8,760	922	165.6	668,752	1.32E-03	5.33	6.61E-03	26.69
8	No. 6 Fuel Oil	8,760	923	165.6	669,478	1.32E-03	7.47	6.61E-03	37.39
9	No. 6 Fuel Oil	8,760	690.5	163.1	493,278	1.32E-03	3.99	6.61E-03	19.99
10	No. 6 Fuel Oil	8,760	681.5	163.1	486,849	1.32E-03	3.94	6.61E-03	19.73
Total Annual Greenhouse Gas Emissions					**4,081,629**		**34.78**		**174.19**

[1] 40 CFR Part 98 Subpart C, Table C-1 and Table C-2

CO_2 Equivalent (CO_2e) Emissions

CO_2e (tpy) [1]			
Unit No.	**CO_2**	**N_2O**	**CH_4**
3	417,789	1,032	350
4	424,317	1,048	356
5	459,133	1,135	385
6	462,034	1,142	387
7	668,752	1,652	561
8	669,478	2,315	785
9	493,278	1,238	420
10	486,849	1,221	414
Total Annual CO_2e(tpy) = 4,096,070			

[1] CO_2e calculated using global warming potential (GWP) from 40 CFR Part 98 Subpart A, Table A-1.
GWP: CO_2 = 1, N_2O = 310, CH_4 = 21

Ambient Air Quality Impact Assessment (AAQIA):

Since this is an existing covered source with no significant changes proposed, a new ambient air quality impact assessment is not required. The change in the spec used oil limit to 50,000 gallons per year is not considered significant.

Significant Permit Conditions:

Changes to the permit included revising the specification (spec) used oil requirements, revising the alternate operating scenarios and updating to the latest Department of Health permit language requirements.

The spec used oil changes are needed to: 1) to accept used oil from other units that are owned, operated, or maintained by HECO; 2) to revise the used oil list for consistency with HAR Title 11 Chapter 279, Standards for the Management of Used Oil; 3) to increase the limit of specification used oil that can be burned; 4) to clarify the allowable limit of PCB in specification used oil; 5) for clarification and minimization of redundant conditions; 6) to relocate monitoring and recordkeeping conditions from the Operational and Emission Limitations section the Monitoring and Recordkeeping Requirements section.

The revisions to the alternate operating scenarios requirements are needed to: 1) provide consistency with permit condition language in other HECO CSPs regarding alternate fuels; 2) delete the temporary replacement alternate operating scenario; 3) add authorization to use fuel additives; and 4) to relocate monitoring and recordkeeping conditions from the Operational and Emission Limitations section the Monitoring and Recordkeeping Requirements section.

Conclusion and Recommendation:

In conclusion, it is the Department of Health's determination that the facility will comply with all State and Federal laws, rules, regulations, and standards with regards to air pollution. This determination is based on the application submitted by HECO. Therefore, the renewal of CSP No. 0239-01-C subject to a 30-day public comment period and a 45-day EPA review period is recommended.

Reviewer: Darin Lum
Date: 2/2013