

**SUMMARY OF PUBLIC COMMENTS RECEIVED
ON THE DRAFT AIR PERMIT AMENDMENT FOR
HU HONUA BIOENERGY, LLC
BIOENERGY FACILITY
LOCATED AT: 28-283 SUGAR MILL ROAD, PEPEEKEO, HAWAII
Comment Period: March 14, 2014 to May 9, 2014**

I. OVERVIEW

Pursuant to Hawaii Administrative Rules, Chapter 11-60.1, a public comment period was held from March 14, 2014 to May 9, 2014. The purpose was to solicit public comments on the Draft Permit Amendment to Covered Source Permit (CSP) No. 0724-01-C.

During the public comment period, the Department of Health (hereinafter referred to as "DOH" or the "Department") received comments from three (3) commenters. The Department also received one (1) request for a public hearing on the draft permit amendment. The Department determined that a public hearing on the draft permit amendment would not have aided the Department in making a final decision on the draft permit amendment and therefore a public hearing was not held.

Section II of this document describes the revisions made to the draft permit amendment and the addendum to the permit review summary based on the public comments received. Section III of this document presents the public comments and the Department's responses pertaining to the draft permit amendment and the addendum to the permit review summary. Section IV of this document presents comments that are considered out of scope of the draft permit amendment and the addendum to the permit review summary and the Department's responses.

II. REVISIONS TO THE DRAFT PERMIT AMENDMENT AND THE ADDENDUM TO THE PERMIT REVIEW SUMMARY

There were no revisions made to the draft permit amendment or to the addendum to the permit review summary as a result of the public comments.

III. RESPONSE TO COMMENTS

The public comments were reviewed and categorized in Section III as follows:

Dual Range Monitor for CEMS
Data Sources for Emission Factors
Malfunction and Upset Conditions
Exemption of Startup and Shutdown from Emission Limits

Dual Range Monitor for CEMS

- EPA suggested a dual range monitor be required to provide CEMS during startup periods (when emissions are orders of magnitude higher) as well as during steady state operational conditions (as well as during upset conditions). The revised CSP is silent as to the type of monitor required and whether CEMS data will be generated during startup, shutdown and upset conditions.

Response:

The CO and NO_x CEMS are each required to be equipped with a dual range monitor as specified in Attachment II, Special Conditions Nos. E.8 and E.9 of CSP No. 0724-01-C. The CEMS will be recording data on a continuous basis including during startup, shutdown, and malfunctions or upset conditions as specified in the draft permit amendment for Attachment II, Special Condition No. E.14.

Data Sources for Emission Factors

- The permit provides, in numerous individual sections, that the applicant may pick and choose from the data it uses in emissions calculations. (i.e., E.14.a.iv; E.14.b; E.15.a; E.15.b.iv; E.15.c; E.15.d). This permit flexibility allows the applicant to pick and choose the most extreme factor that enables the greatest emissions. The permit should require that the most stringent factors be used when the applicant is given a choice of such factors.

Response:

The permit allows the permittee to use other applicable data sources besides EPA's AP-42 for emissions calculations, since AP-42 may not provide emission factor data for some pollutants or other emission factors were deemed more current and/or more representative.

Malfunctions and Upset Conditions

- The State has failed to quantify or estimate for PTE for upset and malfunction emissions. These will likely cause the source to exceed 250 TPY emissions thresholds.
- With these additional emissions, the facility exceeds the 250/25 tpy thresholds and should be classified as a major PSD source. The materials posted to the DOH website do not provide any quantification of these emissions, precluding meaningful or technical public comment.

Response:

The draft permit amendment revises Attachment II, Special Conditions Nos. C.6 and C.7 by including periods of boiler malfunction or upset conditions in the total emissions of CO, NO_x, and HAPs from the facility.

The Department did not estimate the emissions from malfunction or upset conditions in its permit application analysis since there is no default value for estimating emissions from malfunction or upset conditions.

Exemption of Startup and Shutdown from Emission Limits

- EPA's order clearly directs DOH to provide their claimed legal basis for exempting Startup and Shutdown emissions from emissions limitations. Page 1 of the addendum, Special Condition No. C.2 excepts Startup and Shutdown emissions from those emissions limits that otherwise apply "at all times." DOH offers no legal justification or the basis and authority for this exemption other than, potentially, the summary references to Hawaii's BACT "significant levels."

Response:

The Department has revised the permit review summary (permit record) to address EPA's comment regarding the emission limit exemption that applies during startup and shutdown as provided in the Addendum to the Review Summary for CSP No. 0724-01-C, Application No. 0724-01.

IV. RESPONSE TO OUT OF SCOPE COMMENTS

The public comments were reviewed and categorized in Section IV as follows:

Public Participation
Prevention of Significant Deterioration
Startups and Shutdowns
Restart of Permitting Condition
Wood Fuel Moisture Content
Best Available Control Technology (BACT)
PM₁₀ and PM_{2.5} Emissions
Greenhouse Gases and PSD Tailoring Rule
EPA's Order Granting in Part and Denying in Part Petition for Objection to Permit for Petition No. IX-2011-1

Public Participation

- HAR §11-60.1-99 establishes the Department's regulations and procedures for public participation in CSP proceedings under the Clean Air Act. HAR §11-60.1-99(b)(4)(B) requires that the Department shall give notice of a public comment period to "persons on a mailing list developed by the director". Federal Title V operating permit requirements contain a similar requirement, (40 Code of Federal Regulations §70.7(h)(1) ("to persons on a mailing list developed by the permitting authority"). Based on prior mailings by CAB to PPHE and its council concerning this source and PPHE's singular role in triggering the EPA Objection and the instant permit revisions, PPHE's belief it would receive notice of the public comment period was reasonable.
- As noted *infra*, PPHE has not been informed or noticed concerning DOH actions on the instant permit revisions, despite its central role in their refinement and review. DOH undertook revisions to the CSP in partial response to EPA's prior comments dated 6/30/11, but did not recirculate the CSP for public comment or provide a statement of basis explaining which changes were made and which were not in response to EPA's comments. DOH has not sought to include the public in this process, but instead has narrowly viewed its obligations of providing for public engagement in the Title V process and not taken steps to engage the affected community or promote public participation in this process.
- Since DOH has been unable to articulate its rationale in materials available to the public, it should do so in public, and allow questions and respond to those questions from the public at a public hearing.
- While this office and PPHE appreciate and acknowledge the extension granted by DOH, it is far preferable to seek to effectively engage the public as part of the process, not as an afterthought. This is a continuing duty. Given the complexity of the permit and the multiple

revisions that are serially themselves modified, DOH should provide online access to the history of documents. Neither the DOH Notice and website (<http://health.hawaii.gov/cab/public-notice/>) nor the documents themselves clearly identify what version of previous documents are being revised or provide reference or access to them. DOH's draft permits from earlier notices lack dates or identifiers, so comment on the proposed notice requires integration to documents are not readily available or cross referenced in the notice, to the detriment of the public's involvement.

- By this letter, PPHE formally requests that all persons that have submitted written comments to the State of Hawaii objecting to the Hu Honua facility or questioning the adequacy of permit condition be placed on a mailing list and be notified by mail or email regarding proposed and final actions affecting this facility. This request specifically requests inclusion of this office on such list.
- Despite this, the state has maintained a series of barriers to information. This office contacted DOH staff and requested the Statement of Basis for immediate rulemaking as well as the Statement of Basis for the prior revisions to the Hu Honua CSP that followed EPA's comments of June 30, 2011. Rather than providing the documents, PPHE was given the DOH website and directed to find a form on that website to make a formal written request to inspect specific documents. DOH staff knew exactly what commenter requested, but rather than make the documents available, chose to give the run around. As staff knows, PPHE's council is not located in Hawaii, and access to documents is challenging. Rather than making documents available, DOH effectively blocked timely access to necessary documents. These actions rendered the public's ability to respond and substantively comment on the proposed revisions impracticable.
- PPHE questions whether the State is interested or willing to give proper consideration to public issues concerning this project. PPHE and others have made attempts for a number of years to raise concerns and only to be blocked, stymied and thwarted whenever possible. The State has abdicated its duty to provide for the public's participation in Clean Air Act programs and appears indifferent to the public health consequences of authorizing projects that will materially pollute Hawaii air quality and cause health impacts and suffering to its citizenry.

Response:

The Department regulates and monitors air pollution sources. The Clean Air Branch is responsible for air pollution control in the state. It conducts engineering analysis and permitting, performs monitoring and investigations, and enforces the federal and state air pollution regulations. The procedures implemented to process the initial covered source permit and the draft permit amendment including the public participation proceedings were in accordance with the applicable state and federal regulations including Hawaii Administrative Rules, Chapter 11-60.1 and 40 CFR Part 70. The Department made available to the public the Administrative Record, consisting of the draft permit amendment, the addendum to the permit review summary, and non-confidential supporting materials from the applicant. The Administrative Record was available for viewing at the District Health offices in Kona and Hilo, and on the Department's website. The 30-day public comment period was extended from 4/14/14 to 5/9/14 upon discovery that the Department did not notify all persons on a public notice mailing list of the public notice.

The Department determined after reviewing the comments submitted during the public comment period that a public hearing on the draft permit amendment would not have aided the

Department in making a final decision on the draft permit amendment and therefore a public hearing was not held.

The Department needs to remain impartial in its processing of permit applications and therefore cannot generate a mailing list and notify only those commenters who had objected to the Hu Honua facility or questioned the adequacy of a permit condition. In accordance with Hawaii Administrative Rules, Sections 11-60.1-99 and 11-60.1-100, commenters on the draft permit amendment will be notified of the final permit decision.

The Department is required to comply with the Uniform Information Practices Act (UIPA) as administered by the Office of Information Practices (OIP), which developed the Request to Access a Government Record form. Therefore, it is the Department' standard practice to require a commenter to fill out the form before processing a requisition for government records.

Prevention of Significant Deterioration

- The table from Document 2 when calculations are converted to (tpy), tons per year, SO₂ and VOC exceed the limits to "Minor Source" classification. Figures in Table 3-3 of the original application show 39.2 tpy for both SO₂ and VOC. Correct calculations for these data are 49.9 tpy, levels that trigger a "Major Source" classification.
- Also of significance in your department's evaluation of the emission of air pollutants, is data presented for CO and NO_x: Calculated data for CO is 314 tpy and NO_x, 267 tpy. These data are for regular operating periods. In the letter to Mr. Sylvia (cited above), Mr. Stuart Yamada addressed [emission levels are NOT to exceed 250 tpy]. CO and NO_x under normal operating conditions total 586.6 tpy: This is 56% above the acceptable limit! Factor in the special conditions, the levels will be much higher.
- The State picked and chose the lowest possible emissions factors for nearly every step of its analysis, including emission factors for criteria and HAPs that are not achievable in practice.
- The State has condoned an unenforceable synthetic minor permit by simply imposing an emissions limit of just below 250 TPY criteria pollutant and/or 25 TPY HAPs based on unrealistic emissions factors and an initial assumption of zero (or not more than 3.6 tons CO) projected boiler Startup and Shutdown emissions. This is the gravamen of PPHE's petition, and EPA's objection establishes that the State must provide a complete and defensible set of emission factors and projected emissions that define the PTE. Since this source is mistakenly categorized as a minor source, it will be allowed one or more years of excessive air pollution before the error is demonstrated based on emissions monitoring data (if at all), with downwind communities experiencing excessive air pollution and concomitant health effects.
- DOH appears willing to leave the emissions limit and quantification of projected emissions from boiler Startup and Shutdown blank (zero) for initial permitting, impose the plantwide limit of something less than 250 TPY for CO and other criteria pollutants, then require CEMS or source testing of Startup and Shutdown episodes to fill in the blanks.
- Construction and operation of the facility will entail the use of heavy duty, diesel powered equipment whose criteria and HAP emissions should be included in the source's PTE for PSD classification purposes.

Response:

For the correct annual emission rate calculations of SO₂, VOC, CO, and NO_x, the permitted heat input limit for fuel of 2,800,000 MMBtu/yr needs to be used in the calculations, it is not based on 8760 hours per year operation. The permit specifies in Attachment II, Special Condition No. D.1.a.iii., that "The combined fuel usage of wood fuel and biodiesel (S15) shall not exceed a maximum of 2,800,000 MMBtu per rolling twelve-month (12-month) period."

The draft permit amendment revises Attachment II, Special Conditions Nos. C.6 and C.7 by including periods of boiler malfunction or upset conditions in the total emissions of CO, NO_x, and HAPs from the facility. Also, CO, NO_x, and HAPs emissions from the 836 kW emergency biodiesel engine generator are to be included in the total emissions of CO, NO_x, and HAPs from the facility. Therefore, in Attachment II, Special Conditions Nos. C.6 and C.7, the total facility emissions includes periods of boiler startups, shutdowns, and malfunction or upset conditions and emissions from the 836 kW emergency biodiesel engine generator, and are taken into account towards the applicable threshold limits.

In the permit application analysis by the Department, emission factors besides the EPA's AP-42 were accepted since they were deemed more current and/or more representative. In certain instances, the use of EPA's AP-42 in calculating emissions would have resulted in less conservative values. For example, the uncontrolled emission factors for VOC (0.017 lb/MMBtu) and SO₂ (0.025 lb/MMBtu) in EPA's AP-42 (Section 1.6 - Wood Residue Combustion In Boilers) are even lower than those in the permit for VOC (0.028 lb/MMBtu) and SO₂ (0.028 lb/MMBtu).

The permit includes emission limits for CO, NO_x, SO₂, PM/PM₁₀, VOC, and HCl. It also requires source performance testing for these pollutants and certain HAPs (Acetaldehyde, Acrolein, Benzene, Dichloromethane, Formaldehyde, Manganese, Naphthalene, Styrene, and Toluene) that would contribute the most toward the major HAP source threshold of 25 tpy. The permit also requires CEMS to monitor the emissions of CO, NO_x, and HCl. With the inclusion of these source performance tests and continuous emissions monitoring, the Department believes that the use of these emission rates were justified in its analysis.

The Department does not regulate diesel powered mobile sources such as trucks, cranes, and forklifts. The applicant did not indicate in their application any other stationary sources that are required to be permitted.

Startups and Shutdowns

- Once the 12 rolling period has elapsed, the facility would be allowed, under the proposed permit, to undergo the pollution-intensive startup process again, with a concomitant pulse of more highly concentrated air pollution, followed by a premature shutdown (before 12 months have elapsed) in an effort to stay below the Major Source threshold. This pattern of operation would violate the work practice standards of Subpart JJJJJ since it would result in excessive numbers of startup and shutdown cycles.
- Operating assumptions as to the number of start ups each year needs to be assessed further by your office.

Response:

The air permit application, and hence the permit, account for the expected number of start-ups in a year. The permit application presents annual emissions that are based upon boiler heat

input rate at normal operations with a ten percent factor added for conservatism. The total annual emissions also include emissions from three (3) startups using biodiesel (footnote (a) under Table 3-3 of the permit application). The air dispersion modeling uses these emissions for the annual average concentration predictions and so the startups are also represented in the air dispersion modeling results. While Hu Hunua plans to stay within the parameters specified in the permit application, Hu Honua will accept a fuel consumption limit of 2,800,000 MMBtu/yr per year burning biomass and biodiesel during normal operations to ensure that plant utilization does not exceed the stated emission levels in the permit application.

Also, as shown in Table 3-2 of the permit application, biodiesel emission factors are lower than the biomass emission factors and the plant will operate at low fire during startup, so startup emissions are expected to meet the mass emission limits specified in the permit conditions. In addition, during a shutdown, emission controls are expected to be operating optimally and so emission limits would not be exceeded during a shutdown.

The Hu Honua contract with HELCO calls for the Hu Honua unit to be base-loaded. It will normally be reduced in load to 10 MW during the minimum load period, but will run 24 hours per day, seven (7) days per week except for scheduled maintenance outages (corresponding to the 3-4 startups/year).

Hu Honua is planning to use pelletized fuel for co-firing at low load conditions to mitigate the need for biodiesel co-firing. In any event, Hu Honua has agreed to the limit of 3,300 gallons of biodiesel per year during startup and a maximum of three (3) hours per startup in the permit.

Restart of Permitting Condition

- The permit must be amended to include an express condition that requires, if the source's emissions materially exceed projected emissions, that the source be immediately shut down and a new major source permit process be initiated as if there were no facility built or permitted.

Response:

The permit requires CO and NO_x from the facility to be calculated on a monthly and rolling twelve-month basis. Any possibility of the 250 tpy limit being exceeded is highly unlikely given that facility emissions are calculated on a monthly basis.

Wood Fuel Moisture Content

- As I commented in my October 2010 to HH's Application, moisture content values of 45% were not backed up with research sources. Protocols were not listed, in addition to small sample sizes.

Response:

Hu Honua had research done on the drying time for eucalyptus and determined that after four (4) weeks of drying time, a 45% moisture content was attained. Hu Honua has incorporated into its fuel supply contracts a requirement for four (4) weeks of field drying time as well as the right to reject any delivery to the plant of fuel containing over 45% moisture. Moisture content of each load of wood received at the plant will be tested twice. It will be field tested with hand-held meters either at the pick-up point or at the receiving station. Each load will also be sampled and tested in the on-site laboratory.

Best Available Control Technology (BACT)

- Nalco ROFA is not BACT. I cited information from the Chemical & Engineering News, 2010 as to BACT. Very likely in the ensuing four years, there is equipment even more efficient in lowering output pollution levels. Your agency must mandate this equipment as the Major Source designation dictates that you do so.

Response:

Hu Honua prepared a top-down BACT analysis for the biomass boiler dated December 2010. BACT is required if emissions exceed the levels defined by HAR §11-60.1-1 as “significant” and is an emissions limitation and not specific equipment.

PM₁₀ and PM_{2.5} Emissions

- It would be prudent for the Clean Air Branch to have HH clarify the level of PM_{2.5} particles that will escape the collection equipment and resubmit correct calculations.

Response:

Table 3-2 of the Hu Honua application for the Initial Covered Source Permit summarizes emission factors, in terms of lb/MMBtu, used to calculate boiler emissions of PM₁₀. For the purposes of the application, it was assumed that PM₁₀ is equal to PM_{2.5}. Realistically PM_{2.5} is a fraction of the total PM₁₀ emissions. Therefore, the assumption made in the application is an overestimate of PM_{2.5} emissions.

Greenhouse Gases and PSD Tailoring Rule

- DOH should require the applicant to quantify the CO₂ emissions from their facility, and apply currently applicable control and mitigation requirements. The facility is expected to generate far in excess of 100,000 TPY CO₂, and thus qualifies as a major source for PSD purposes, regardless of the synthetic minor limitations.

Response:

The PSD and Title V Tailoring rule issued by the EPA on May 13, 2010 establishes Greenhouse Gases (GHG) emissions thresholds for major sources (PSD and Title V) and major modifications (PSD). GHGs will become subject to review under PSD beginning on January 2, 2011. On that date, GHG emissions from projects that have not received permits would be subject to PSD review if: 1) the project is for new stationary source which is a major source for a PSD regulated pollutant other than GHGs and the project has a Potential to Emit (PTE) of 75,000 tons/year or more of CO₂e; or 2) the project is for a new or modified emission unit at an existing source that is “otherwise” subject to PSD review for regulated pollutant other than GHGs and the project would increase CO₂e emissions by 75,000 tons/year.

Beginning July 1, 2011, PSD permitting requirements will extend to include projects that trigger PSD solely for GHGs if the project: 1) is a new stationary source that has a PTE of 100,000 tons/year or more of CO₂e, or 2) is a modification at an existing PSD major source and the project would result in an increase in CO₂e emissions of 75,000 tons/year.

Hu Honua has applied for a permit for a new stationary source, but that source has not triggered PSD review because it is not a major source for a PSD regulated pollutant other than GHG. Thus, this facility does not fall within the first set of permitted sources that are subject to this newly adopted rule. The second phase of this rule has been postponed because on July 1, 2011, the

EPA finalized its deferral for CO₂ emissions from bioenergy and other biogenic sources under PSD and Title V programs for a period of three (3) years.

GHG emissions were calculated and quantified in the review summary for the initial covered source permit. At the time of permit issuance, PSD and Title V permitting requirements were deferred for 3 years for CO₂ emissions from biogenic stationary sources. Subsequent to the DC Circuit vacating EPA's Deferral Rule for biogenic GHG emissions, the Department has not yet been given direction by EPA for sources that were permitted under the Deferral Rule.

EPA's Order Granting in Part and Denying in Part Petition for Objection to Permit for Petition No. IX-2011-1

- The "Addendum to the Review Summary for CSP No. 0724-01-C, Application No. 0724-01" with the information supplied above, indicates that the requirements set forth by EPA, Point a and b, have not been met by the Amendment presented by Hu Honua.

Response:

Only point b needed to be addressed by the Department per EPA's Order Granting in Part and Denying in Part Petition for Objection to Permit for Petition No. IX-2011-1.