#### Comment 1 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: jeffrey Last Name: hahn

Email Address: jhahn@covantaenergy.com

Affiliation: Covanta Energy

Subject: Two comments from Covanta Energy on 95125(g)(2) & 95103 (c)(2)

Comment:

Doug Thompson and Pam Burmich:

I certainly appreciate your consideration of Covanta's and IEP's comments on your initial draft GHG regulations issued in August. I have two quick comments about the current October review draft:

1. In 95125 (g) (2) "Emissions shall not be based on O2 concentrations" is stated. I would like you to consider the attached special study Covanta conducted during our annual permit-required RATA at Burney Mountain Power biomass facility: Avogadro calculated the CO2 concentrations from the O2 CEMS concentrations using 40CFR60 Appendix A Method 19 and compared it to their CARB Independent Testing Contractor CO2 reference CEMS; the calculated CO2 passed the RATA requirements.

Would you please reconsider the language in 95125 (g) (2) to allow O2 CEMS if it can pass RATA as in the above special test?

2. In 95103 (c) (2) "Triennial Schedule" is stated that only "pure" biomass electric generating facilities may use this triennial schedule. Why was the word "pure" used here? Is an MSW electric generating facility > 10 MW subject to an annual schedule as in 95103 (c) (1)? And was this your intent?

Thank you for your attention to these details and please contact me if I can add any additional information or answer any further questions.

Jeffrey L. Hahn, PE, BCEE, QEP

Director, Environmental

#### COVANTA

ENERGY

for a cleaner world

Covanta Energy Corporation

876 Mt. View Dr, Lafayette, CA 94549

925.284.2006 Fax: 925.284.2284 Cell: 201.723.6447

www.CovantaHolding.com

Attachment: 'www.arb.ca.gov/lists/ghg2007/1-bmp\_2007\_co2\_calc\_rata\_from\_o2\_cem.pdf'

Original File Name: BMP 2007 CO2 calc RATA from O2 CEM.pdf

Date and Time Comment Was Submitted: 2007-10-25 19:37:18

#### Comment 2 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Russ Last Name: Bennett

Email Address: rbennett@ci.redding.ca.us

Affiliation: Redding Power

Subject: Request for Clarification, Section 95111 (c) (1)

Comment:

Our facility has one gas turbine/generator that is subject to 40 CFR 75, and several other turbine/generators and boilers that are not. The language in Section 95111 (c) (1) requires facilities that are subject to 40 CFR 75 to report their Part 75 CO2 emissions. It is not possible to report Part 75 CO2 emissions at the facility level. We can only report Part 75 CO2 emissions for the turbine generator that is subject to this regulation. The language in Section 95111 (c) (1) should be written so that it is clear the requirement to report Part 75 emissions apply at the unit level for those units subject to 40 CFR 75, and not the facility level.

Attachment: "

Original File Name:

Date and Time Comment Was Submitted: 2007-10-29 11:26:56

#### Comment 3 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Russ Last Name: Bennett

Email Address: rbennett@ci.redding.ca.us

Affiliation: Redding Power

Subject: Request for Clarification, Section 95111 (a) (4)

Comment:

Our facility has a steam turbine that is supplied steam from two boilers and from a Heat Recovery Steam Generator that is on the exhaust of one of our gas turbine/generators. It does not make sense to apply Section 95112 to the boilers and turbine/generators because Section 95112 requires emissions to be distributed between thermal energy production and electrical production. The thermal energy production from the HRSG and boilers are used to generate electricity. Could Section 95111 (a) (4) and the related definitions for "cogeneration system" and "cogeneration facility" be clarified so that they do not apply to our facility.

Attachment: "

Original File Name:

Date and Time Comment Was Submitted: 2007-10-29 12:34:38

#### Comment 4 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: David Last Name: Armstrong

Email Address: armstrong3@llnl.gov

Affiliation: Lawrence Livermore National Laboratory

Subject: October 19, 2007 Draft Mandatory Reporting of GHG Emissions

Comment:

Request changing Section 95101 "Applicability" as follows:

- 1. Change subsection (b)(8) from "Operators of other facilities..." to "Operators of other industrial facilities..."
- 2. Change subsection (c) to add a new item: "(5) Sources that are solely used for comfort heating."

Rationale: The staff report for the subject rulemaking states on page 4 that, "under the proposed regulation, the facilities that are required to annually report their GHG emissions include...industrial sources that emit over 25,000 metric tonnes per year of CO2." However in the draft subsection (b)(8), the word "industrial" was omitted. There are some non-industrial facilities that may exceed the reporting threshold based on emissions from comfort heating. Hospitals and schools have already been excluded for this reason, but there are other facilities that should be excluded for the same reason. Also in this regard, please note on page 14 of the staff report, Section 5, "Defining a "Facility" and an "Operator", which states

"...unspecified sources such as residential heating and cooling would not be included."  $\,$ 

Attachment: "

Original File Name:

Date and Time Comment Was Submitted: 2007-11-09 15:58:49

#### Comment 5 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Bob Last Name: Ellery

Email Address: bellery@spi-ind.com Affiliation: Sierra Pacific Industries

Subject: mandatory Reporting for Biomass Cogeneration Facilities

Comment:

Sierra Pacific Industries owns and operates 5 cogeneration facilities that combust solid biomass. Several co-fire with fossil fuels for start-up, shutdown or malfunction operating periods only. We would like to confirm that our facilities would report under proposed Section 95111 because we combust biomass rather than Section 95112 because we are a cogeneration facility. Section 95112 seems to be focused on the combustion of fossil fuel.

Attachment: "

Original File Name:

Date and Time Comment Was Submitted: 2007-11-12 15:47:40

## Comment 6 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Bruce

Last Name: Falkenhagen

Email Address: Non-web submitted comment

Affiliation:

Subject: Energy Enterprise

Comment:

Please see attached.

Attachment: 'www.arb.ca.gov/lists/ghg2007/13-07123com0001.pdf'

Original File Name: 07123com0001.pdf

Date and Time Comment Was Submitted: 2007-11-13 10:42:53

# Comment 7 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

This comment was posted then deleted because it was unrelated to the Board item or it was a duplicate.

## Comment 8 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Bill Last Name: Buchan

Email Address: buchan@mktpotential.com Affiliation: Altivity Packaging Cogen

Subject: B. Buchan Comments

Comment:

Please see attached.

Attachment: 'www.arb.ca.gov/lists/ghg2007/15-buchan.pdf'

Original File Name: Buchan.pdf

Date and Time Comment Was Submitted: 2007-11-14 11:45:38

## Comment 9 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Gregory Last Name: Knapp

Email Address: gknapp@txi.com Affiliation: CCMEC / PCA

Subject: California Cement Industry GHG Mandatory Reporting

Comment:

Please review the attached comments and call Greg Knapp, (760) 245-5321 ext 319 with any questions.

Attachment: 'www.arb.ca.gov/lists/ghg2007/16-ccmec\_ghg\_reporting\_\_comments\_nov19\_2007.pdf'

Original File Name: CCMEC\_GHG\_Reporting \_Comments\_Nov19\_2007.pdf

Date and Time Comment Was Submitted: 2007-11-19 11:19:23

#### Comment 10 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Rob Last Name: Neenan

Email Address: rob@clfp.com

Affiliation: CA League of Food Processors

Subject: Comments re: Mandatory Reporting of GHG Emissions

Comment:

Enclosed is a copy of final comments prepared by the California League of Food Processors regarding ARB's proposed mandatory greenhouse gas emissions reporting requirements.

Attachment: 'www.arb.ca.gov/lists/ghg2007/17-clfp\_final\_comments\_re\_mandatory\_reporting\_requirements.doc'

Original File Name: CLFP FINAL COMMENTS RE MANDATORY REPORTING REQUIREMENTS.doc

Date and Time Comment Was Submitted: 2007-11-19 13:15:33

#### Comment 11 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Taylor Last Name: Miller

Email Address: tmiller@sempra.com

Affiliation: Sempra Energy

Subject: Mandatory Reporting Regulations

Comment:

Please see comment letter attached.

Attachment: 'www.arb.ca.gov/lists/ghg2007/18-sempra\_energy\_\_comments\_on\_mandatory\_reporting\_reg\_\_11\_19.pdf'

Original File Name: Sempra Energy comments on mandatory reporting reg 11 19.pdf

Date and Time Comment Was Submitted: 2007-11-20 09:39:13

## Comment 12 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Karin Last Name: Ritter

Email Address: ritterk@api.org

Affiliation: API

Subject: Public Hearing to Consider Adoption of a Regulation for the Mandatory Reporting of

GHG Emi Comment:

Attached are API's comments on CARB's Adoption of a Regulation for the Mandatory Reporting of Greenhouse Gas Emissions.

Attachment: 'www.arb.ca.gov/lists/ghg2007/19-api\_ab32comments\_board-dfinal\_26nov07.pdf'

Original File Name: API\_AB32Comments\_Board-dFinal\_26NOV07.pdf

Date and Time Comment Was Submitted: 2007-11-26 13:08:59

## Comment 13 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: John Last Name: Busterud

Email Address: JWBb@pge.com

Affiliation: Pacific Gas & Electric Company

Subject: PG&E's Comments on Draft Regulation for Mandatory Reporting of GHG Emissions

Comment:

Please see attached comment letter.

Please copy meredith.klein@pillsburylaw.com on acknowledgement of receipt of comment letter. Thank you very much.

Attachment: 'www.arb.ca.gov/lists/ghg2007/20-carb\_reporting\_regs\_comments\_outline.pdf'

Original File Name: CARB Reporting Regs Comments Outline.pdf

Date and Time Comment Was Submitted: 2007-11-26 14:50:12

## Comment 14 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Timothy Last Name: Suen

Email Address: twsuen@gmail.com

Affiliation:

Subject: Carbon Tax

Comment:

Will California consider implementing a carbon tax? If not, why not? This has all the benefits of reporting greenhouse emissions (the amount of greenhouse gases is directly reflected in the price), provides financial incentives for both innovation and good consumer choices, and avoids the bureaucracy that would be required for reporting emissions.

Attachment: "

Original File Name:

Date and Time Comment Was Submitted: 2007-11-26 17:37:15

## Comment 15 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Devra Last Name: Wang

Email Address: dwang@nrdc.org

Affiliation: Natural Resources Defense Council

Subject: Support for mandatory reporting requirements under AB 32

Comment:

Attached please find comments in support of the mandatory reporting requirements under AB 32 from ten environmental organizations.

Attachment: 'www.arb.ca.gov/lists/ghg2007/22-mandatory\_reporting\_comments\_final.pdf'

Original File Name: mandatory reporting comments final.pdf

Date and Time Comment Was Submitted: 2007-11-26 20:51:18

## Comment 16 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Cathy Last Name: Karlstad

Email Address: Cathy.Karlstad@sce.com Affiliation: Southern California Edison

Subject: Regulation re: Mandatory Reporting of GHG Emissions

Comment:

Please see attached letter comments.

Attachment: 'www.arb.ca.gov/lists/ghg2007/23-sce\_comments\_regarding\_regulation\_for\_the\_mandatory\_reporting\_of\_ghg\_emissions.pdf'

Original File Name: SCE Comments Regarding Regulation for the Mandatory Reporting of GHG Emissions.pdf

Date and Time Comment Was Submitted: 2007-11-27 16:47:10

## Comment 17 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Ray Last Name: Yee

Email Address: Non-web submitted comment

Affiliation: PPG

Subject: PPG Industies

Comment:

Please see attached.

Attachment: 'www.arb.ca.gov/lists/ghg2007/24-07123com0001.pdf'

Original File Name: 07123com0001.pdf

Date and Time Comment Was Submitted: 2007-11-28 14:28:21

## Comment 18 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Elizabeth Last Name: Hadley

Email Address: ehadley@reupower.com Affiliation: Redding Electric Utility

Subject: COMMENTS OF REDDING ELECTRIC UTILITY ON THE PROPOSED

REGULATION FOR MANDATORY REPORTING

Comment:

Please see the attached file, "COMMENTS OF REDDING ELECTRIC UTILITY ON THE PROPOSED REGULATION FOR MANDATORY REPORTING OF GREENHOUSE GAS EMISSIONS PURSUANT TO THE CALIFORNIA GLOBAL WARMING SOLUTIONS ACT OF 2006".

Thank you.

Elizabeth Hadley

Attachment: 'www.arb.ca.gov/lists/ghg2007/25-redding\_electric\_utility\_mandatory\_reporting\_comments\_11\_28\_08.pdf'

Original File Name: REDDING ELECTRIC UTILITY Mandatory Reporting Comments 11\_28\_08.pdf

Date and Time Comment Was Submitted: 2007-11-28 16:41:41

## Comment 19 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Leif Last Name: Hockstad

Email Address: Hockstad.Leif@epamail.epa.gov

Affiliation: U.S. EPA

Subject: U.S. EPA Comments on Proposed GHG Mandatory Reporting Regulation

Comment:

EPA comments attached

Attachment: 'www.arb.ca.gov/lists/ghg2007/26-epa\_comments\_on\_carb\_ghg\_rulemaking\_nov-27-07.doc'

Original File Name: EPA Comments on CARB GHG Rulemaking\_Nov-27-07.doc

Date and Time Comment Was Submitted: 2007-11-29 13:03:10

## Comment 20 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: David Last Name: Campbell

Email Address: davidc@sjr.com

Affiliation: San Joaquin Refining Company

Subject: San Joaquin Refining Company - Comments on GHG Reporting Regulation

Comment:

Mr. Shulock, I, as well as Chad Tuttle and Jerry Frost from Kern Oil & Refining, met with Doug Thompson and Byard Mosher of your Staff on Nov. 19th. As a follow up to that meeting, I have attached San Joaquin Refining comments/ information requests.

Please feel free to call me if you have questions or need additional information.
Sincerely,
David Campbell
Environmental Manager
San Joaquin Refining Company, Inc.

Attachment: 'www.arb.ca.gov/lists/ghg2007/27-sjr\_comments.doc'

Original File Name: SJR Comments.doc

Date and Time Comment Was Submitted: 2007-11-29 13:07:03

#### Comment 21 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Julia Last Name: May

Email Address: jmay@sbcglobal.net

Affiliation: Communities for a Better Environment

Subject: Communities for a Better Environment - GHG Reporting Comments Comment:

Dear Sirs -- I understand that ARB is planning one more draft of the AB32 Mandatory Reporting regulations before the public hearing next week. Attached is a short comment letter identifying key changes we are urging for the regulation. We urge you to address these issues. Thanks for your consideration.

Julia May Senior Scientist Communities for a Better Environment

Attached are the additional attachments for our November 28, 2007 CBE comment, including the powerpoint we submitted at the June hearing and our August comment letter.

Attachment: 'www.arb.ca.gov/lists/ghg2007/28-cbe\_ghg\_reg\_comments.zip'

Original File Name: CBE GHG Reg Comments.zip

Date and Time Comment Was Submitted: 2007-11-29 13:31:59

## Comment 22 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Jim Last Name: Merriam

Email Address: James\_N\_Merriam@Praxair.com

Affiliation: Praxair

Subject: Praxair Comments on Mandatory GHG Reporting Regulation

Comment:

Mr. Thompson:

Attached are Praxair's comments associated with the proposed regulation for Mandatory Reporting of Greenhouse Gas Emissions. We also will be submitting hard copies of these comments.

Should you have any questions, please do not hesitate to contact me or Dave Copeland.

Thank you.

Jim

Jim Merriam
Praxair Inc.
Director, Corporate Environmental Services

Attachment: 'www.arb.ca.gov/lists/ghg2007/29-praxairab32greenhousegasreportingcommentsfinal112907.doc'

Original File Name: PraxairAB32GreenhouseGasReportingCommentsfinal112907.doc

Date and Time Comment Was Submitted: 2007-11-29 13:58:26

## Comment 23 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Cathy

Last Name: Reheis-Boyd

Email Address: joey@wspa.org

Affiliation:

Subject: AB32 Mandatory Reporting Comments from WSPA

Comment:

Per Cathy Reheis-Boyd, please see attached comments.

Attachment: 'www.arb.ca.gov/lists/ghg2007/30-ab32\_mandatory\_report\_final\_\_113007.doc'

Original File Name: AB32 Mandatory Report Final, 113007.doc

Date and Time Comment Was Submitted: 2007-11-30 08:11:23

## Comment 24 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Barbara Last Name: McBride

Email Address: bmcbride@calpine.com

Affiliation:

Subject: Calpine comments on Mandatory Reporting of GHG

Comment:

Please see attached comments for the Mandatory reporting of Greenhouse Gas Emissions by Calpine.

Thanks,
Barbara McBride
Director, Environmental, Health and Safety
Calpine Corporation

Attachment: 'www.arb.ca.gov/lists/ghg2007/31-calpine113007.pdf'

Original File Name: Calpine113007.pdf

Date and Time Comment Was Submitted: 2007-11-30 14:15:34

#### Comment 25 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Bruce Last Name: McLaughlin

Email Address: mclaughlin@braunlegal.com Affiliation: California Municipal Utilities Assoc

Subject: Comments on Mandatory Reporting NOPA

Comment:

Mr. Richard Bode Chief, Emission Inventory Branch Air Resources Board 1001 I Street, CA 95814

Please find attached the Comments of the California Municipal Utilities Associatoin on the Mandatory GHG Reporting NOPA.

Attachment: 'www.arb.ca.gov/lists/ghg2007/32-cmua\_comments\_on\_mandatory\_reporting\_nopa.pdf'

Original File Name: CMUA Comments on Mandatory Reporting NOPA.pdf

Date and Time Comment Was Submitted: 2007-11-30 14:35:01

## Comment 26 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Jerry Last Name: Frost

Email Address: jfrost@kernoil.com

Affiliation: Kern Oil and Refining Company

Subject: Small Refiners Alternative Monitoring of Refinery Fuel Gas

Comment:

SUBJECT: Small Refiners Alternative Monitoring of Refinery Fuel

Gas

Proposed Mandatory Reporting of GHG Emissions

Dear Mr. Shulock:

Kern Oil & Refining Co. (Kern) appreciated the opportunity to meet with Doug Thompson and Byard Mosher of your Staff on November 19, 2007. In follow up to that meeting, Kern is supplying additional information requested with regards to the monitoring of refinery fuel gas.

[See Attachment]

Attachment: 'www.arb.ca.gov/lists/ghg2007/33-kern commentdraft mandatory reporting regs 112707.doc'

Original File Name: Kern CommentDraft Mandatory Reporting Regs 112707.doc

Date and Time Comment Was Submitted: 2007-11-30 15:51:03

## Comment 27 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Terry Last Name: Erlewine

Email Address: terlewine@swc.org Affiliation: State Water Contractors

Subject: State Water Contractor Comments on Mandatory Reporting of Greenhouse Gas

Emissions Comment:

A copy of the letter we are mailing to the Clerk of the Board is attached.

Attachment: 'www.arb.ca.gov/lists/ghg2007/34-113007carbmandatoryghgrpting\_swccomments.pdf'

Original File Name: 113007CARBMandatoryGHGRpting SWCComments.pdf

Date and Time Comment Was Submitted: 2007-11-30 16:04:19

## Comment 28 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Koji

Last Name: Kawamura

Email Address: kawamura@wapa.gov

Affiliation: DOE - Western Area Power Administation

Subject: Federal DOE Reporting of Power GHG Emissions

Comment:

See attachment regarding collection of Power Sector GHG data from the Federal Department of Energy Western Area Power  $\,$ 

Administration.

Attachment: 'www.arb.ca.gov/lists/ghg2007/35-doe\_westernareapowerghg\_comment.pdf'

Original File Name: DOE WesternAreaPowerGHG Comment.pdf

Date and Time Comment Was Submitted: 2007-12-03 09:00:52

#### Comment 29 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Monica Last Name: Tully

Email Address: monica\_tully@raytheon.com

Affiliation: Raytheon - SAS

Subject: Clarification regarding HSCS 42871

Comment:

In Health and Safety Code Section 42871 (b) states the following:

(b) It is the intent of the Legislature that emissions registered and verified in accordance with this chapter prior to January 1, 2008, receive appropriate consideration under any future international, federal, or state regulatory scheme relating to greenhouse gas emissions.

Has ARB staff given any consideration to defining "appropriate consideration" and how this will affect CCAR members who have voluntarily put forth a good faith effort to have their emissions verified but are unable to meet the 12/31/2007 deadline?

Staff should consider defining a timeline for those members who are able to have emissions verified within a 30 or 60 days, of the 12/31/2007 deadline, to be included in the "appropriate consideration".

Attachment: "

Original File Name:

Date and Time Comment Was Submitted: 2007-12-03 12:07:45

## Comment 30 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Natasha Last Name: Meskal

Email Address: nmeskal@ecotek.com

Affiliation: Ecotek

Subject: Mandatory Reporting of Greenhouse Gas Emissions

Comment:

Please see the attached comments.

Sincerely,

Attachment: 'www.arb.ca.gov/lists/ghg2007/37-ecotek\_comments\_on\_mandatory\_ghg\_reporting.pdf'

Original File Name: Ecotek Comments on Mandatory GHG Reporting.pdf

Date and Time Comment Was Submitted: 2007-12-03 13:04:05

# Comment 31 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

This comment was posted then deleted because it was unrelated to the Board item or it was a duplicate.

#### Comment 32 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: John Last Name: Shideler

Email Address: Shideler@nsf-isr.org

Affiliation: NSF-ISR (NSF) International Strategic

Subject: Comments on Verification Component of GHG Reporting Regulation

Comment:

See attached document for specific comments on the proposed GHG regulation for mandatory reporting.

Attachment: 'www.arb.ca.gov/lists/ghg2007/39-nsfcommentsproposedrule2007-11-30.pdf'

Original File Name: NSFcommentsProposedRule2007-11-30.pdf

Date and Time Comment Was Submitted: 2007-12-03 14:52:03

## Comment 33 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Jerry Last Name: Frost

Email Address: jfrost@kernoil.com

Affiliation: Kern Oil & Refining Company

Subject: Small Refinery Cost Estimate

Comment:

Program cost estimate for small refinery

Attachment: 'www.arb.ca.gov/lists/ghg2007/40-kern\_oil\_cost\_questionnaire.doc'

Original File Name: Kern Oil Cost questionnaire.doc

Date and Time Comment Was Submitted: 2007-12-03 14:55:34

## Comment 34 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: K. Kelly Last Name: McKenzie

Email Address: Non-web submitted comment

Affiliation:

Subject: NUMMI

Comment:

Please see attached.

Attachment: 'www.arb.ca.gov/lists/ghg2007/42-ghg2007com0001.pdf'

Original File Name: ghg2007com0001.pdf

Date and Time Comment Was Submitted: 2007-12-04 10:01:59

## Comment 35 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Daniel Last Name: Hunter

Email Address: dan.hunter@conocophillips.com

Affiliation:

Subject: Comments on mandatory reporting of greenhouse gasses

Comment:

Attached are the comments of ConocoPhillips

Attachment: 'www.arb.ca.gov/lists/ghg2007/43-ab32\_comments.doc'

Original File Name: AB32 comments.doc

Date and Time Comment Was Submitted: 2007-12-04 10:06:20

## Comment 36 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Emily Last Name: Coyner

Email Address: ecoyner@lime.org Affiliation: National Lime Association

Subject: Comments on Proposed AB32 Mandatory GHG Reporting Regulation

Comment:

Please find attached the National Lime Association's comments on Proposed AB32 Mandatory GHG Reporting Regulation.

Attachment: 'www.arb.ca.gov/lists/ghg2007/44-commentltrcalghgdec2007.pdf'

Original File Name: CommentltrCalGHGDec2007.pdf

Date and Time Comment Was Submitted: 2007-12-04 11:21:10

### Comment 37 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Holly Last Name: Cronin

Email Address: hcronin@water.ca.gov Affiliation: Department of Water Resources

Subject: DWR Comments on the Regulation for the Mandatory Reporting of Greenhouse Gas

Emissions Comment:

The Department of Water Resources (DWR) is pleased to take this opportunity to make recommendations on the California Air Resources Board (ARB) staff's proposed Mandatory Greenhouse Gas (GHG) Reporting Regulation, which is being developed pursuant to the California Global Warming Solutions Act of 2006.

If you have any questions, please contact me.

Holly B. Cronin, Senior HEP Utilities Engineer Strategic Power Planning Branch State Water Project Operations Division California Department of Water Resources P. O. Box 219000, 3310 El Camino Ave, LL-90 Sacramento, CA 95821

Phone: (916) 574-0708, Fax: (916) 574-0660

Email: hcronin@water.ca.gov

Attachment: 'www.arb.ca.gov/lists/ghg2007/45-proposed\_mandatory\_ghg\_reporting\_regulation\_dwr\_comments\_20071204.doc'

Original File Name: Proposed Mandatory GHG Reporting Regulation DWR Comments 20071204.doc

Date and Time Comment Was Submitted: 2007-12-04 11:25:50

## Comment 38 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: ANTOHNY Last Name: POCENGAL

Email Address: POCENGAL\_ANTHONY@SOLARTURBINES.COM

Affiliation:

Subject: MANDATORY REPORTING REG COMMENTS

Comment:

Comments attached.

Attachment: 'www.arb.ca.gov/lists/ghg2007/46-mandatory\_reporting\_comments.pdf'

Original File Name: Mandatory Reporting comments.pdf

Date and Time Comment Was Submitted: 2007-12-04 12:34:12

## Comment 39 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Joseph Last Name: Heinzmann

Email Address: jheinzmann@fce.com

Affiliation: FuelCell Energy

Subject: Reporting for Onsite Biomass and Natural Gas Fired Combined Heat and Power

Applications Comment:

FuelCell Energy (FCE) appreciates the opportunity to offer input to the California Air Resources Board (CARB) on the Draft Regulation on Mandatory GHG Reporting that was released by the ARB staff on October 19, 2007, and discussed during the public workshop on October 31, 2007.

FuelCell Energy has been activly deploying highly efficient and ultra clean fuel cells to private and public facilities within the State of California, North America, Europe and Asia. There are currently nearly 20 MWs of FuelCell Energy's high temperature molten carbonate based fuel cells operating or under contract in California. Typically these facilities are less than 2 MWs in size but interest and the favorable economics of larger deployment of this beneficial technology is growing.

By deploying FuelCell Energy Combined Heat and Power (FCE-CHP) systems at load centers throughout the state we can raise the total system efficiency first by the inherent higher electrical conversion efficiencies of a high temperature fuel cell, secondly by removing the line losses required to transmit the electricity to the facility and finally compound the CO2 savings by using the waste heat to offload the boilers that are operating at facilities. These onsite FCE-CHP systems actually reduce local emissions since the fuel cells themselves are Ultra Clean and the boilers are burning less fuel.

FuelCell Energy has been proud to work with municipal waste water facilities throughout the state deploying fuel cells at waste water facilities. These installations are producing up to 40% more ultra clean renewable kwhrs from the same amount of digester gas compared to standard combustion technologies.

Additionally, FuelCell Energy has been honored to be actively engaged with the food and beverage industry in our state in an effort to reduce operating costs, maintain industry competitiveness, and create a sustainable business environment by introducing a waste to energy model where in the facility's typical waste is used in an onsite digester to reduce disposal costs and the associated emissions. The digester gas is fed back to the fuel cell which then produces ultra clean and efficient renewable energy in the form of electricity and heat for the facility's process. This closed loop ultra clean and highly efficient system is the sustainable model that must be supported and credited wherever possible.

Based on the above FuelCell Energy requests the following changes be made to the reporting quidelines

- Generating facilities reporting size should be raised from 1 MW or greater to 12 MWs or greater recognizing the greater good distributed generation brings to our states electrical needs
- Biogas utilization should be credited with a CO2 sink factor recognizing the inherent renewable and sustainability aspect of investing in the development and utilization of this fuel
- ullet Facilities who have invested in onsite generation should have a CO2 credit due to the reduction of line losses and the associated CO2 emissions

Respectfully, Joe Heinzmann FuelCell Energy

Attachment: "

Original File Name:

Date and Time Comment Was Submitted: 2007-12-04 12:49:01

## Comment 40 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Diana Last Name: Mahmud

Email Address: dmahmud@mwdh2o.com

Affiliation: Metropolitan Water District of So. Cal.

Subject: Comments re AB 32

Comment:

Please accept these comments re AB 32.

Thank you.

Attachment: 'www.arb.ca.gov/lists/ghg2007/48-cackett\_letter\_re\_ghg.pdf'

Original File Name: Cackett Letter re GHG.pdf

Date and Time Comment Was Submitted: 2007-12-04 15:37:17

## Comment 41 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Keith Last Name: Adams

Email Address: adamskb@airproducts.com Affiliation: Air Products and Chemicals

Subject: Comments regarding Mandatory GHG Reporting

Comment:

Air Products comments submitted via an attached document.

Attachment: 'www.arb.ca.gov/lists/ghg2007/49-air\_products\_general\_comments\_oct\_19\_proposal\_mandatory\_ghg\_reporting.doc'

Original File Name: Air Products General Comments - Oct 19 Proposal Mandatory GHG Reporting.doc

Date and Time Comment Was Submitted: 2007-12-05 07:17:53

## Comment 42 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Donald Last Name: Brookhyser

Email Address: deb@a-klaw.com

Affiliation:

Subject: Comments on reporting regulaiton

Comment:

Attached are comments on the regulation for mandatory reporting, filed by the Energy Producers and Users Coalition and the Cogeneration Association of California.

Attachment: 'www.arb.ca.gov/lists/ghg2007/50-12\_5\_epuc-cac\_comments\_on\_carb\_draft\_reporting\_protocols.doc'

Original File Name: 12 5 EPUC-CAC Comments on CARB draft reporting protocols.doc

Date and Time Comment Was Submitted: 2007-12-05 10:26:39

## Comment 43 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: William Last Name: Westerfield

Email Address: www@eslawfirm.com Affiliation: Ellison Schneider & Harris

Subject: Comments of Sierra Pacific Power Company

Comment:

On behalf of Sierra Pacific Power Company, the following are comments to the "Staff Report: Initial Statement Of Reasons For Rulemaking - Proposed Regulation For Mandatory Reporting Of Greenhouse Gas Emissions Pursuant To The California Global Warming Solutions Act Of 2006 (Assembly Bill 32)".

Attachment: 'www.arb.ca.gov/lists/ghg2007/51-071205\_sppc\_comments\_carbreportingregulation\_fin.pdf'

Original File Name: 071205\_SPPC\_Comments\_CARBReportingRegulation\_fin.pdf

Date and Time Comment Was Submitted: 2007-12-05 11:02:45

## Comment 44 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Jim Last Name: Sandoval

Email Address: jim.sandoval@ch2m.com

Affiliation: Bay Area Clean Water Agencies--AIR Comm.

Subject: Mandatory Reporting comments--reporting dates & biomass

Comment:

The Air Issues and Regulations (AIR) Committee of the Bay Area Clean Water Agencies (BACWA) is a coalition of San Francisco Bay Area Publicly Owned Treatment Works (POTWs) working cooperatively to address air quality issues. The AIR Committee has 18 member agencies, including large metropolitan facilities such as East Bay Municipal Utility District, the City and County of San Francisco, Central Contra Costa Sanitary District, and the City of San Jose. Together, AIR Committee member agencies treat over ninety percent of the municipal wastewater in the Bay Area.

We understand that the goals of the proposed Mandatory Reporting Staff Report are to 1) begin reporting the most significant GHG emissions, 2) use rigorous and consistent emission accounting methods, 3) provide verification of reported emissions data, and 4) use the standards and protocols of the California Climate Action Registry (CCAR) to the extent feasible and appropriate. The proposed Mandatory Reporting may potentially have a large impact on our member organizations. Therefore, we have reviewed the proposed Staff Report, and have summarized our concerns, as follows:

- 1) In general, we are concerned that the proposed report may not set clear dates for reporting deadlines. As currently written in the proposed report the reporting dates for ARB (April 1, June 1) do not match with CCAR (August 31). This discrepancy makes reporting to two separate state agencies more cumbersome. For further continuity and ease in the reporting process, the reporting dates for CARB and CCAR should align.
- 2) Mandatory Reporting may not give enough precedence to the biological ("biomass"/"biogenic") portion of air emissions. As most of our member agencies are producers of biomass or biologically formed materials, we would like to comment on the reporting of biomass-derived emissions. Of particular importance is the differentiation of GHG emissions (whether biomass or fossil fuel). We ask that a clearer distinction be made in the reporting between biomass and fossil-fuel derived emissions to minimize any possibility of accounting confusion when mandated emissions reduction and cap and trade programs take effect.

We appreciate the opportunity to comment on these draft regulations and look forward to working with you as this regulation takes shape. Please contact Jim Sandoval at (831) 425-7142 or Meghan Hartman at (510) 587-7547 of CH2M HILL with any questions related to these comments. Thank you for your consideration.

Air Issues and Regulations Committee Bay Area Clean Water Agencies P.O. Box 24055, MS 702 Oakland, CA 94623

Attachment: "

Original File Name:

Date and Time Comment Was Submitted: 2007-12-05 11:09:01

## Comment 45 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Mike Last Name: Polyniak

Email Address: mkpe@earthlink.net

Affiliation: MKP Env & TRC Operating Co

Subject: COMMENTS IN RESPONSE TO OCTOBER 31, 2007 WORKSHOP

Comment:

Good Morning Mr. Bode;

Attached, for your consideration, are comments that have been prepared in response to the October 31, 2007 Workshop.

A signed, hard copy on company letterhead will follow.

Best Regards,

Mike Polyniak MKP Environmental

Attachment: 'www.arb.ca.gov/lists/ghg2007/53-ab\_32\_workshop\_comment\_letter\_031207.doc'

Original File Name: AB 32 Workshop COMMENT LETTER 031207.doc

Date and Time Comment Was Submitted: 2007-12-05 11:59:08

## Comment 46 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Gregory Last Name: Klatt

Email Address: klatt@energyattorney.com

Affiliation: Douglass & Liddell

Subject: AReM Comments on GHG Reporting Regualtions

Comment:

Comments of the Alliance for Retail Enegy Markets on the California Air Resources Board Staff Report entitled "Proposed Regulation for Mandatory Reporting of Greenhouse Gas Emissions Pursuant to the California Global Warming Solutions Act of 2006 (Assembly Bill 32)"

Attachment: 'www.arb.ca.gov/lists/ghg2007/54-12-05-07\_arem\_comments\_on\_carb\_report\_final.pdf'

Original File Name: 12-05-07 AReM Comments on CARB Report - FINAL.pdf

Date and Time Comment Was Submitted: 2007-12-05 12:00:41

## Comment 47 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Robert Last Name: Callahan

Email Address: robert.callahan@calchamber.com

Affiliation:

Subject: Comments on CARB's Draft Mandatory Reporting Regulation

Comment:

Please see the attached document from the AB 32 Implementation Group regarding the proposed adoption of regulations for the mandatory reporting of greenhouse gas emissions. Thank you.

Robert Callahan
AB 32 Implementation Group

Attachment: 'www.arb.ca.gov/lists/ghg2007/55-ab\_32\_ig\_mandatory\_reporting\_letter\_final.doc'

Original File Name: AB 32 IG Mandatory Reporting Letter Final.doc

Date and Time Comment Was Submitted: 2007-12-05 13:23:40

## Comment 48 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Lorraine Last Name: Gershman

Email Address: lorraine\_gershman@americanchemistry.com

Affiliation: ACC

Subject: ACC comments on CA GHG registry proposal

Comment:

See attached comments.

Attachment: 'www.arb.ca.gov/lists/ghg2007/56-final\_acc\_comments\_on\_ca\_registry\_12.05.07.pdf'

Original File Name: FINAL ACC comments on CA registry 12.05.07.pdf

Date and Time Comment Was Submitted: 2007-12-05 14:40:36

## Comment 49 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Don Last Name: Wolfe

Email Address: dvwolfe@bpa.gov

Affiliation: Bonneville Power Administration

Subject: Comments on Proposed GHG Reporting Regulation

Comment:

See attached file

Attachment: 'www.arb.ca.gov/lists/ghg2007/57-ca\_air\_resources\_board\_letter\_and\_attachment.pdf'

Original File Name: CA Air Resources Board Letter and Attachment.pdf

Date and Time Comment Was Submitted: 2007-12-05 15:30:02

## Comment 50 for Greenhouse Gas Mandatory Reporting (ghg2007) - 45 Day.

First Name: Jane Last Name: Luckhardt

Email Address: jluckhardt@downeybrand.com

Affiliation:

Subject: SMUD comments on GHG2007

Comment:

Please see attached.

Attachment: 'www.arb.ca.gov/lists/ghg2007/65-50x\_smud.pdf'

Original File Name: 50x SMUD.pdf

Date and Time Comment Was Submitted: 2008-02-19 16:30:37

## Comment 1 for Greenhouse Gas Mandatory Reporting (ghg2007). (At Hearing)

First Name: Gregory A. Last Name: Knapp

Email Address: Non-web submitted comment

Affiliation:

Subject: California Cement Manufacturers Environmental Coalition

Comment:

please see attached

Attachment: www.arb.ca.gov/lists/ghg2007/58-document.pdf

Original File Name: Document.pdf

Date and Time Comment Was Submitted: 2007-12-19 11:30:32

## Comment 2 for Greenhouse Gas Mandatory Reporting (ghg2007). (At Hearing)

First Name: Susie Last Name: Berlin

Email Address: Non-web submitted comment

Affiliation:

Subject: McCarthy & Berlin

Comment:

please see attached

Attachment: www.arb.ca.gov/lists/ghg2007/59-document0004.pdf

Original File Name: Document0004.pdf

Date and Time Comment Was Submitted: 2007-12-19 11:34:13

## Comment 3 for Greenhouse Gas Mandatory Reporting (ghg2007). (At Hearing)

First Name: Eric Last Name: Little

Email Address: Non-web submitted comment

Affiliation:

Subject: Southern California Edison

Comment:

please see attached

Attachment: www.arb.ca.gov/lists/ghg2007/60-document0005.pdf

Original File Name: Document0005.pdf

Date and Time Comment Was Submitted: 2007-12-19 11:37:09

## Comment 4 for Greenhouse Gas Mandatory Reporting (ghg2007). (At Hearing)

First Name: Terry Last Name: Erlewine

Email Address: Non-web submitted comment

Affiliation:

Subject: State Water Contractors

Comment:

please see attached

Attachment: www.arb.ca.gov/lists/ghg2007/61-document0006.pdf

Original File Name: Document0006.pdf

Date and Time Comment Was Submitted: 2007-12-19 11:40:42

# Comment 5 for Greenhouse Gas Mandatory Reporting (ghg2007). (At Hearing)

This comment was posted then deleted because it was unrelated to the Board item or it was a duplicate.

## Comment 6 for Greenhouse Gas Mandatory Reporting (ghg2007). (At Hearing)

First Name: H. David Last Name: Nahai

Email Address: Non-web submitted comment

Affiliation:

Subject: Department od Water and Power

Comment:

please see attached

Attachment: www.arb.ca.gov/lists/ghg2007/63-document0008.pdf

Original File Name: Document0008.pdf

Date and Time Comment Was Submitted: 2007-12-19 14:11:42

## Comment 7 for Greenhouse Gas Mandatory Reporting (ghg2007). (At Hearing)

First Name: Mark Last Name: Ross

Email Address: Non-web submitted comment

Affiliation:

Subject: Bay Area Air Quality Management District

Comment:

Please see attached.

Attachment: www.arb.ca.gov/lists/ghg2007/64-ghg20070001.pdf

Original File Name: ghg20070001.pdf

Date and Time Comment Was Submitted: 2008-01-30 16:35:38

## Comment 1 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: jeffrey Last Name: hahn

Email Address: jhahn@covantaenergy.com

Affiliation: covanta energy

Subject: 95102 (a) (199)

Comment:

the definition of VOC should also exclude ethane, as per the definition of VOC used by the APCD's & AQMD's.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-05-15 20:31:07

### Comment 2 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: David L. Last Name: Hagen

Email Address: hagendl@verizon.net

Affiliation:

Subject: Comments to Appendix A, ARB Compendium of Emissions Factors... Comment:

Re: Appendix A to the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions - Comments by David L. Hagen, May 17, 2008 61485 CR 13, Goshen IN 46526

#### 1 Exclude Biomass Use

The prescriptions for reporting biomass fuels in this document appear onerous and heavy handed. They act in direct opposition to the intent of the legislation to promote sustainable energy use. Recommend deleting ALL reporting of biomass, or at least excluding

ALL biomass use less then 25,000 metric tons/year. E.g., on page A-32 (2), exclude biomass.

On p A-27 (9), is  $\pm 5\%$  appropriate for biomass and landfill gas? Varying moisture content and variations in land fill gas can give heating value variations far higher than this. Both are nominally renewable resources and nominally do not contribute to increasing atmospheric CO2 on a steady state basis. E.g., on pages A-103 (2) and (3). It would appear important to evaluate the fossil fuel based carbon dioxide and exclude the biomass based carbon dioxide.

2 Uncertainty goals rather than prescription
The document focuses on prescription rather than on the end goal of the desired "accuracy" or uncertainty. Recommend specifying a desired long term uncertainty goal as a function of size and fossil vs biomass. Then let operators select frequency based on the stability of their instrumentation and feedstock. E.g., AlO1. Annual measurements may be overkill for highly stable operations and equipment. Conversely highly variable operations and poor quality equipment may require more frequent adjustments and calibration.

#### 3 Staged verification:

The mandated prescription requiring all operators to obtain verification during the same period with gaps of two years in between will result in an onerous boom/bust work and profit cycle for verification operators. Recommend the example set in the Senate of 1/3 of locations being tested in each year of a three year cycle. Allow operators to select which year to verify on a first come first serve basis.

#### 4 Fuel & biomass testing

The rigid testing procedure to evaluate fuel value appears heavy handed and without reference to the overall uncertainty desired. Recommend specifying a desired uncertainty, and allow operators

select the frequency of testing according to their fuel variability

and their relative size. E.g., allow small operators to use standard fuel values or only test occasionally. Allow operators to

accumulate samples that are then tested on a less frequent basis.  ${\tt E.g.}$  every quarterly, semi annually or annually for smaller operators.

5 Size: 25,000 vs 2,500 metric tons

Per ARB resolution 07-54, "3. Annual reporting of GHG emissions . .sources that emit over 25,000 metric tonnes (sic) per year of CO2 from stationary source combustion is necessary to include the most significant California GHG emissions sources." There are numerous references to 2,500 metric tons. Recommend correcting all

these to 25,000 metric tons unless otherwise authorized by the  $\overline{\text{ARB}}$ 

or by clear uncertainty guidelines in emissions reporting.

Detailed recommendations & corrections:

6 Appendix A-3 unit Re: "Tonnes (metric)". In the United States the correct term is metric ton. See: "Metric System of Measurement: Interpretation of the International System of Units for the United States", Federal Register notice of July 28, 1998, 63 F.R. 40333. See: NIST SP-811, Guide for Use of SI Units, Barry N. Taylor, 1995.

7 Appendix A-3 Unit Conversions. Re Btu conversion factors. There are at least five Btu definitions. Specify the temperature or type

of Btu being specified.

8 Appendix A-3 Unit Conversions. Correct "Kilograms" to "kilogram", "Kilometer" to "kilometer", "Kgf" to "kgf", etc. Add "(Mg)" after "Megagrams".

9 Appendix A-5 Section 4. Specify the time frame for the quantity threshold. E.g "25,000 metric ton/year threshold" and "2,500 metric ton/year threshold".

10 Table 3. Correct "Kg" to "kg".

11 Appendix A-8. Re: significant units in fuel type. All fuels show two significant figures while Municipal Solid Waste is listed

to five significant figures and is yet one of the most variable. Change to 91 kg CO2/MMBtu.

12 Appendix A-4 95102 Definitions (a) (1) "Accuracy".

Accuracy is an informal term. If you wish quantitative results, this should be changed to "Uncertainty". See NIST publications relating to Uncertainty.

"Uncertainty of Measurement Results from NIST"

"Guidelines for Evaluating and Expressing the Uncertainty of NIST Measurement Results"

See Book: Measurement Uncertainty, 3rd Edition

Measurement Uncertainty: Methods and Applications, Fourth Edition Ronald H. Dieck, (2006) ISA, ISBN: 1556179154

13 A-5 (11) Add conversion to liters.

 $14\ \text{A--5}\ (17)\ \text{Add}$  note that there are four other definitions of Btu.

15 A-5 (83) Include "bitumen, shale oil."

16 A-14 (105) Correct "pressure" to "potential difference". Add "One Watt is the power equal to one joule of energy per second." 17 A-15 (115) Correct "Metric tonne" to standard US usage of "metric ton". Correct throughout the document and appendix.

See: "Metric System of Measurement: Interpretation of the International System of Units for the United States", Federal Register notice of July 28, 1998, 63 F.R. 40333 NIST SP-811, Guide for Use of SI Units, Barry N. Taylor, 1995. 18 A-22 (181) 760 mm is incorrect with 60 deg. F. Correct STP definition to read: "Standard conditions" or "Standard Temperature and Pressure", unless otherwise designated, refer to the USA customary value per the American Gas Association (herein "STP(68)") of: "a temperature of 15.6 degrees Celsius (68 degrees Fahrenheit) at a pressure of one atmosphere (101.325 kPa)." Some citations refer to the Compressed Gas Institute value (herein "STP(60)") of: "a temperature of 20 degrees Celsius (60 degrees Fahrenheit) at a pressure of 762 mm (30") mercury." (E.g., designate on page A-97 etc.) 19 A-26 (6). Specify the time frame. E.g., "20,000 metric tons/year". 20 A-27 (9). "Accuracy" (as noted above) is not used for quantitative measures. Correct to "uncertainty". See "uncertainty guidelines" at NIST.gov. 21 A-62 95112. Include "cooling" or Combined Cooling, Heat, and Power."

Attachment: www.arb.ca.gov/lists/ghg2007/67-5-comments.appendix.a.by.d.l.hagen.may.17.2008.pdf

Original File Name: 5-comments.appendix.a.by.d.l.hagen.may.17.2008.pdf

Date and Time Comment Was Submitted: 2008-05-20 10:28:03

### Comment 3 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Thierry Sam Last Name: Tamers

Email Address: ttamers@betalabservices.com

Affiliation: Beta Analytic Inc

Subject: First sentence in section 95125(h)(2) is not clear.

Comment:

Dear Sir / Madam:

We would like to bring to your attention the following sentence in Section 95125(h)(2) that might lead to some confusion in its interpretation:

"The operator that combusts fuels or fuel mixtures that are at least 5 percent biomass by weight and not pure biomass, except waste-derived fuels that are less than 30 percent biomass by weight of total fuels combusted for the report year, shall determine the biomass-derived portion of CO2 emissions using ASTM D6866-06a as specified in this article."

It is presumed that plants that elect to label their fuels as less than 5 percent biomass by weight or waste-fuels as less 30 percent biomass by weight will do so with the knowledge that the entire fuel mix will be classified as a fossil fuel. In our opinion, the first sentence in section 95125(h)(2) is not clear with regard to this point.

There are two possibilities to remedy the ambiguity of the first sentence in section 95125(h)(2). The first possibility is to recommend that the ASTM D6866-06a method be used for all heterogeneous fuel mixtures. As such the sentence could read as follows:

"The operator that combusts fuels or fuel mixtures that contain a mixture of biomass and fossilized materials shall determine the biomass-derived portion of CO2 emissions using ASTM D6866-06a as specified in this article, unless the operator wishes to report all their CO2 emissions as fossil-fuel."

Alternatively, you could elaborate on the first sentence of section 95125(h)(2) with this sentence added to the first sentence:

"...... Operators that combust fuels or fuel mixtures that are less than 5 percent biomass by weight and not pure biomass, or waste-derived fuels that are less than 30 percent biomass by weight of total fuels combusted for the report year, can elect to report all their fuel mix as 100% fossil fuel if they do not determine and report the biomass-derived portion of CO2 emissions of their fuel using ASTM D6866-06a."

Please call or email us if you have any questions regarding this comment.

#### Sincerely,

Thierry Sam Tamers Director

-----

#### North American Facility:

Beta Analytic Inc. 4985 SW 74 Court Miami, Florida 33155 USA ttamers@betalabservices.com www.betalabservices.com Direct: (1) 305-662-7760 Tel: (1) 305-667-5167

European Facility:

Fax: (1) 305-663-0964

Beta Analytic Limited
London Bioscience Innovation Centre
2 Royal College Street
London NW10NH
United Kingdom

Tel: (44) 207 617 7490 Fax: (44) 207 160 5350

### Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-05-29 19:47:18

### Comment 4 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Manuel Last Name: Silva

Email Address: manny.silva@husa.com

Affiliation:

Subject: Source test requirements when not using NO2 defaults

Comment:

The requirement that states if you choose to use your own N20 from your source test, instead of the default, then you must source test annually, is very unfair for the following reasons

- 1.Local air districts like the SJVAPCD already have N20 limits that have to be proven by source testing already. The default for N20 in this case should be what you have to make in that district. In this district the Nox ppm limit is already set at 9ppm. So the default for N20 should be set at what the highest limit is in that district.
- 2. Saying that if you choose your District's limit, that you must then subject your self to annual source testing is going to cost more, the reason being that in this district if you make the limits two years in a row then you can go 36 months before having to test again.
- 3. What is the purpose of the local air district if you are basically saying we will not accept what your district has mandated, and we don't trust your source test data that you paid for.
- 4. Source testing boilers is not cheap, and to require more, when you already have documented results that were approved by the district is beyond me
- 5.Also using a default for N20 or Nox is basically telling industry that all that money you spent on Nox control to get to 9ppm,is null and void unless you submit to the States annual source testing program.
- 6.Bottom line is don't the State have any confidence in the local air districts?and if not then do away with them and just have one agency to report to.
- I have attached the section of this bill I'm talking about below. So all interested parties can read into it, maybe I'm misinterpeting this but using the default N20 has got to give you a higher total, than what you'd get using 9ppm district imposed limit that is already in place.

Copied from the lastest version of the GHG reporting req

The operator may elect to calculate CH4 and N2O emissions using ARB approved source specific emission factors derived from source

tests

conducted at least annually under the supervision of ARB or the local air  $\,$ 

pollution control district or air quality management district. Upon approval of

a source test plan by ARB, the source test procedures in that plan shall be

repeated in future years to update the source specific emission factors  $% \left( 1\right) =\left( 1\right) +\left( 1\right) +\left($ 

A-84

annually. In the absence of source specific emission factors approved by

ARB, the operator shall use the default emission factors provided in  $% \left( 1\right) =\left( 1\right) +\left( 1\right$ 

Appendix A.

(c) Method for Calculating CO2 Emissions from Fuel Combustion Using  $\,$ 

#### Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-05-30 16:26:40

### Comment 5 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: James Last Name: Merriam

Email Address: James\_N\_Merriam@praxair.com

Affiliation: Praxair, Inc.

Subject: AB32 -- GHG Emissions Compilation and Reporting

Comment:

Praxair Comment #1: [Section 95103 -- Reporting Requirements] REQUESTED CHANGE -- Add a sentence to 95103(a), just above 95103(a)(1), stating: Hydrogen Plants using 95114(b)(2) to calculate CO2 emissions shall substitute "fuel and feedstock" wherever the word "fuel" is stated in 95103(a)(8) through (10). REASON FOR CHANGE -- Hydrogen Plant CO2 emissions can be determined by measuring all incoming carbon per 95114(b)(2). Therefore, sections 95103 (a)(8) through (10) concerning missing data, measurement accuracy, and interim data collection need to use "fuel and feedstock" as the parameter applicable to Hydrogen Plants, not just "fuel".

Praxair Comment #2: [Section 95114 -- Hydrogen Plants] REQUESTED CHANGE -- Add a sentence to 95114(a)(3) and also to 95114(a)(4) stating that the carbon contained in the Methane (CH4) calculation results for these sections shall be subtracted from the CO2 calculation result of 95114(b)(2).

REASON FOR CHANGE -- As currently written, the carbon in the entering feedstock and fuel would be double-counted for the portion represented by the Methane calculations. [This change does not greatly affect the facility's CO2 emissions computation, but needs to be made for overall correctness.]

Praxair Comment #3: [Appendix] REQUESTED CHANGE -- Revise Table 6 on Page A-9 of the Appendix to add entries for METHANE, HYDROGEN, and CARBON MONOXIDE. REASON FOR CHANGE -- Hydrogen Plant reformers combust Natural Gas, Methane, Hydrogen, and Carbon Monoxide. Table 6 entries for these fuels need to be included so that the Hydrogen Plant's CH4 and N2O combustion emissions can be calculated. COMMENTS --Although the methane and nitrous oxide emission factors for combusting Methane are likely the same as for Natural Gas, 0.9 and 0.1, the table needs to state this. The methane emission factors for combusting Hydrogen and Carbon Monoxide also need to be listed. For those two fuels, the methane emission factor should be stated as ZERO because they contain no hydrocarbons, and an appropriate nitrous oxide factor is probably 0.1, similar to natural gas. [NOTE -- Hydrogen and Carbon Monoxide burn hotter than Natural Gas, and nitrous oxide emissions decrease as temperature increases, so their N2O factors in the table should be 0.1 or less.]

#### Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-06-04 08:11:57

### Comment 6 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Matthew Last Name: Hodges

Email Address: matt.hodges@valero.com Affiliation: Valero Energy Corporation

Subject: AB32 Mandatory GHG Inventory Rule, comments by Valero Energy

Comment:

Valero appreciates the additional year ARB has provided for monitoring and compliance purposes while the GHG inventory rule development process continues. We support ARB's ongoing efforts to finalize this rule as expediently as possible in a manner satisfactorily to all stakeholders. However, the additional time that has been necessary to reach this consensus has stretched rule development well into 2008, leaving significantly less time for assessing and implementing compliance strategies

We believe it is important for ARB to address the belated publication of this rule and how that has created a need for additional time for the design, purchasing, and installation of some of the required monitoring equipment. It is noted that the rule allows for the manual collection of data to fill the interim, and while we understand ARB's reluctance to further delay any of the compliance deadlines, we recommend that the regulation include a provision to allow alternative calculation protocols to be used in the interim for those reporters who need more time to implement projects. It should be noted that most refineries are reporting annually verified inventories to CCAR according to the CCAR reporting and verification protocols. While these are not identical to the ARB regulations, the resultant inventories are systematically developed using generally accepted, credible, defensible, and verifiable techniques. All or portions of the CCAR inventories should be acceptable as temporary substitutes as needed.

Thank you for the opportunity to comment on this effort. If there are any questions or concerns, please contact me at number above.

Attachment:

Original File Name:

Date and Time Comment Was Submitted: 2008-06-05 07:15:26

## Comment 7 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Anne Last Name: McQueen

Email Address: amcqueen@geomatrix.com

Affiliation: Geomatrix

Subject: Comments on GHG Mandatory Reporting for June 5th

Comment:

See attached file

Attachment: www.arb.ca.gov/lists/ghg2007/73-mr\_letter\_final\_june\_05\_07.pdf

Original File Name: MR letter final June 05 07.pdf

Date and Time Comment Was Submitted: 2008-06-05 13:10:29

## Comment 8 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Cathy Last Name: Karlstad

Email Address: Cathy.Karlstad@sce.com

Affiliation: Southern California Edison Company

Subject: SCE Comments on Modified Reporting Regulation

Comment:

Attached are Southern California Edison Company's comments on the Modified Reporting Regulation.

Attachment: www.arb.ca.gov/lists/ghg2007/74-sce\_comments\_on\_carb\_reporting\_regulation.pdf

Original File Name: SCE Comments on CARB Reporting Regulation.pdf

Date and Time Comment Was Submitted: 2008-06-05 13:33:47

#### Comment 9 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: John Last Name: Busterud

Email Address: jwbb@pge.com

Affiliation: Pacific Gas and Electric Company

Subject: CARB Adoption of Mandatory GHG Reporting Regulations Pursuant to AB32

Comment:

Please see the attached letter to Mary Nichols.

Attachment: www.arb.ca.gov/lists/ghg2007/75-060508\_mary\_nichols\_ltr\_00062396.pdf

Original File Name: 060508\_Mary Nichols ltr\_00062396.pdf

Date and Time Comment Was Submitted: 2008-06-05 14:00:07

## Comment 10 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Tracey Last Name: Drabant

Email Address: traceydrabant@bves.com Affiliation: Bear Valley Electric Service

Subject: BVES Comments on Mandatory Reporting of GHG Emissions

Comment:

Please see attached.

Attachment: www.arb.ca.gov/lists/ghg2007/76-bves\_comments\_mandatory\_ghg\_reporting.pdf

Original File Name: BVES Comments Mandatory GHG Reporting.pdf

Date and Time Comment Was Submitted: 2008-06-05 14:31:56

#### Comment 11 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Cindy Last Name: Parsons

Email Address: cindy.parsons@ladwp.com

Affiliation: LADWP

Subject: Comments on modified GHG reporting regulation

Comment:

 ${\tt LADWP's}$  comments on the modified mandatory GHG reporting regulation are attached.

Attachment: www.arb.ca.gov/lists/ghg2007/77-ladwp\_comments\_on\_mandatory\_reporting\_regulation\_\_6-5-2008\_.pdf

Original File Name: LADWP Comments on Mandatory Reporting Regulation (6-5-2008).pdf

Date and Time Comment Was Submitted: 2008-06-05 15:21:24

## Comment 12 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Don

Last Name: Brookhyser

Email Address: deb@a-klaw.com

Affiliation: EPUC/CAC

Subject: Proposed revisions to reporting protocols

Comment:

Attached are comments of the Energy Producers & Users Coalition and the Cogeneration Association of California on the proposed revisions to the GHG reporting protocols.

Attachment: www.arb.ca.gov/lists/ghg2007/78-6\_05\_08\_epuc-cac\_comments\_on\_revisions\_to\_reporting\_protocols.doc

Original File Name: 6 05 08 EPUC-CAC Comments on revisions to reporting protocols.doc

Date and Time Comment Was Submitted: 2008-06-05 15:48:19

## Comment 13 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Taylor Last Name: Miller

Email Address: tmiller@sempra.com

Affiliation: Sempra Energy

Subject: Comments on May 15, 2008 Notice re: Mandatory Reporting Regulations

Comment:

Please see letter attached.

Attachment: www.arb.ca.gov/lists/ghg2007/79-se\_comment\_on\_arb\_mandatory\_reporting\_regulation\_6\_05\_08.pdf

Original File Name: SE comment on ARB Mandatory Reporting Regulation 6 05 08.pdf

Date and Time Comment Was Submitted: 2008-06-05 16:25:19

## Comment 14 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Barbara Last Name: McBride

Email Address: Non-web submitted comment

Affiliation:

Subject: CALPINE Corporation

Comment:

Please see attached.

Attachment: www.arb.ca.gov/lists/ghg2007/80-calpine\_doc060508.pdf

Original File Name: Calpine\_DOC060508.pdf

Date and Time Comment Was Submitted: 2008-06-06 11:42:05

## Comment 15 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Marina Last Name: Robertson

Email Address: mrobertson@pacenergy.com

Affiliation:

Subject: Pacific Energy Resources LTD

Comment:

Please see attached.

Attachment: www.arb.ca.gov/lists/ghg2007/81-pacific\_energy.pdf

Original File Name: Pacific Energy.pdf

Date and Time Comment Was Submitted: 2008-06-06 13:52:26

# Comment 16 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Natasha Last Name: Meskal

Email Address: Non-web submitted comment

Affiliation:

Subject: ECOTEK Environmental Solutions

Comment:

Please see attached.

Attachment: www.arb.ca.gov/lists/ghg2007/83-5\_5\_08\_comments.pdf

Original File Name: 5\_5\_08 comments.pdf

Date and Time Comment Was Submitted: 2008-06-09 09:25:34

# Comment 17 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-1.

First Name: Cathy

Last Name: Reheis-Boyd

Email Address: cathy@wspa.org

Affiliation:

Subject: Western States Petroleum Association

Comment:

Please see attached.

Attachment: www.arb.ca.gov/lists/ghg2007/84-ab\_32\_inv\_rept\_issues\_060520008.zip

Original File Name: AB 32 Inv Rept Issues 060520008.zip

Date and Time Comment Was Submitted: 2008-06-10 10:40:45

## Comment 1 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-2.

First Name: Taylor Last Name: Miller

Email Address: tmiller@sempra.com

Affiliation: Sempra Energy

Subject: Mandatory Reporting Regulation 15 Day Notice

Comment:

Please see comments attached.

Attachment: www.arb.ca.gov/lists/ghg2007/86-se\_comment\_on\_mandatory\_reporting\_7\_14\_08.pdf

Original File Name: SE comment on Mandatory Reporting 7 14 08.pdf

Date and Time Comment Was Submitted: 2008-07-14 14:58:48

## Comment 2 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-2.

First Name: Fiji Last Name: George

Email Address: fiji.george@elpaso.com

Affiliation: El Paso Corporation

Subject: El Paso's Comments on Mandatory Reporting of Greenhouse Gas Emissions

Comment:

El Paso's comments on Mandatory Reporting of Greenhouse Gas

Emissions

Attachment: www.arb.ca.gov/lists/ghg2007/89-el\_paso\_comments.pdf

Original File Name: El Paso comments.pdf

Date and Time Comment Was Submitted: 2008-07-15 14:59:10

## Comment 3 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-2.

First Name: Catherine Last Name: Reheis-Boyd

Email Address: Non-web submitted comment

Affiliation:

Subject: Western States Petroleum Association

Comment:

Please see attached.

 $Attachment: www.arb.ca.gov/lists/ghg2007/90-wspacomments\_on\_the\_second\_15-day\_package.pdf$ 

Original File Name: WSPAComments on the Second 15-Day Package.pdf

Date and Time Comment Was Submitted: 2008-07-17 09:30:58

## Comment 4 for Greenhouse Gas Mandatory Reporting (ghg2007) - 15-2.

First Name: Keith Last Name: Adams

Email Address: Non-web submitted comment

Affiliation:

Subject: Air Products and Chemicals, Inc.

Comment:

Please see attached.

Attachment: www.arb.ca.gov/lists/ghg2007/91-air\_products\_comments.pdf

Original File Name: Air Products Comments.pdf

Date and Time Comment Was Submitted: 2008-07-17 09:42:09