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June 9, 2004

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Re: Riverside Energy Resource Center Project (04-SPPE-01) –
CURE Data Requests, Set Two (Nos. 13-15)

Dear Messrs. Tateosian and Lincoln:

California Unions for Reliable Energy (CURE) submits this second set of data requests to the applicant for the Riverside Energy Resources Center Project pursuant to Title 20, section 1716(b), of the California Code of Regulations. The requested information is necessary to: (1) more fully understand the project; (2) assess whether the project will be constructed and operated in compliance with LORS; (3) assess whether the project will result in significant environmental impacts; (4) assess whether the project will be constructed and operated in a safe, efficient and reliable manner; and (5) assess potential mitigation measures.

Pursuant to section 1716(f) of the Energy Commission's regulations, written responses to these requests are due within 30 days. If you are unable to provide or object to providing the requested information by the due date, you must send a written notice of your objection(s) and/or inability to respond, together with a statement of reasons, to Commissioners Pfannenstiel and Geesman and to CURE within 10 days.

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Please note that we will be sending more data requests in the near future. Recognizing the expedited nature of these proceedings and in the interest of providing the applicant as much time as possible to respond to each of our requests, we are sending our requests to you as we complete them.

Please contact us if you have any questions. Thank you for your cooperation with this request.

Sincerely,

Suma Peesapati

SP:bh
Attachment

**Riverside Energy Resource Center Project
(Docket No. 04-SPPE-01)
CURE DATA REQUESTS SET 2
(Nos. 13 – 15)**

PUBLIC HEALTH

13. AQUEOUS AMMONIA HAZARD ASSESSMENT

Background

The applicant prepared an aqueous ammonia hazard assessment resulting from a loss of containment incident for 12,000 gallons of 19% aqueous ammonia (SPPE Application, Section 6.8.3, pp. 220 – 223). This analysis concluded that such an incident would result in offsite ammonia concentrations above 200 ppm (the only specified level of concern included in the SPPE Application) extending to about 300 meters from the release point. The SPPE concluded that there are no sensitive or residential receptors within this 300-meter distance, and that there are only several small businesses within this radius (SPPE Application, pp. 221 – 222).

The SPPE Application aqueous ammonia hazard assessment was prepared with the EPA RMP*Comp model, version 1.07 (SPPE, p. 221). RMP*Comp is a very simple program, which uses a “look-up” table approach to determine exposure distances. For aqueous ammonia, RMP*Comp accesses a previously prepared data table, and depending on release rate (in pounds per minute) and dispersion type (rural or urban), returns a distance to the level of concern. RMP*Comp includes only one ammonia level of concern, 200 ppm, and is only applicable to meteorological conditions of F stability class and wind speed of 1.5 meters per second.¹ The applicant’s use of RMP*Comp does not allow for assessment of distances to other levels of concern for ammonia, such as the IDLH of 300 ppm, or the CEC significance value of 75 ppm.

The RMP*Comp model can be downloaded from the U.S. EPA website. At this location, there is also a list of “RMP*Comp Frequently-Asked Questions,” including an answer to why RMP*Comp provides different answers than other models, such as ALOHA:

¹ U.S. Environmental Protection Agency, Risk Management Program Guidance for Offsite Consequence Analysis, EPA 550-B-99-009, April 1999.
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The results you obtain using RMP*Comp may not closely match the results you obtain running the same release scenario in a more sophisticated air dispersion model such as ALOHA or DEGADIS. That's because of a fundamental difference in purpose between those models and RMP*Comp. RMP*Comp is a planning tool, designed to help you to easily identify high-priority hazards at your facility. It makes simple, generalized calculations. In contrast, models like ALOHA and DEGADIS are intended to give you as accurate an estimate as possible of the extent and location of the area that might be placed at risk by a particular chemical release. They account for many more of the factors that influence the dispersion of a hazardous chemical. (For this reason, when you need to make decisions during an actual response, use models like ALOHA or DEGADIS, not RMP*Comp.)²

In this case, the choice of the dispersion model has a significant impact on the results of the offsite consequence analysis. Applying the same chemical, meteorological, and source data as presented in the SPPE Application, we modeled the downwind impacts using ALOHA. A comparison of the RMP*Comp and ALOHA predicted endpoint distances are presented in the following table:

Model	Distance to 2000 ppm (m)	Distance to IDLH of 300 ppm (m)	Distance to EPA/CalARP TE of 200 ppm (m)	Distance to CEC Significance Value of 75 ppm (m)
RMP*Comp	Not Calculated	Not Calculated	300	Not Calculated
ALOHA	161	462	577	1000

The NOAA ALOHA model predicts that offsite ammonia concentrations of 200 ppm will occur at distances almost twice the value presented in the SPPE. In addition, ALOHA calculates that the CEC significance level of 75 ppm will extend one kilometer from the ammonia tank location. At this distance, numerous sensitive and public locations will be placed at risk.

The U.S. EPA clearly states that RMP*Comp is not as accurate as ALOHA, and that it does not assess distances for ammonia endpoints other than 200 ppm. Given this concern, the SPPE Application should revise the aqueous ammonia hazard assessment to address the use of the inappropriate RMP*Comp program.

Data Requests

- 13.a Please provide all evidence that justifies using the RMP*Comp model instead of ALOHA.

² http://yosemite.epa.gov/oswer/ceppoweb.nsf/content/rmp_comp_faq.htm.
1554-015a

- 13.b Please prepare an offsite consequence analysis using ALOHA to replace the existing RMP*Comp assessment.
- 13.c Please provide an explanation as to why other levels of concern, such as the IDLH of 300 ppm or the CEC significance level of 75 ppm were not assessed in the SPPE Application.

14. PROJECT EMISSIONS HEALTH RISK ASSESSMENT

Background

The applicant prepared health risk assessments of project operational and construction emissions (SPPE Application, Section 6.10.10 and Appendix 6.1.J). In addition, we recently received electronic files of the ISCST3 input and output files for the project and construction health risk assessment dispersion modeling. We understand that the Applicant is currently revising the health risk assessment modeling for the RERC Project based on data requests by CEC staff.

Data Requests

- 14.a Please provide, in electronic format, the most recent versions of all HARP input and output files used in the SPPE application health risk assessments.
- 14.b Please provide a log file describing each of the HARP input and output files provided in response to the above data request.
- 14.c The health risk assessment ISCST3 input files RERCCECHRA03.DAT and RERCCECHRA04.DAT contain numerous receptor elevations with a terrain elevation of 0 meters. These same receptor locations were modeled with actual terrain values in the other ISCST3 input files. For example, the property boundary receptor with UTM 11 coordinates 458188.1, 3757851.1 has an elevation of 225.81 meters in other modeling files, while in RERCCECHRA03.DAT and RERCCECHRA04.DAT, the elevation for this location is 0 meters. Please explain this discrepancy.
- 14.d The HARP results in Appendix 6.1.J show a chronic hazard index from construction combustion emissions of 0.0215. The SPPE Application (p. 224), however, lists the values as 0.00215. Please explain this discrepancy.
- 14.e The SPPE Application states: “the model results were divided by 70 to more accurately reflect the impacts of a short-term project” (p. 223). Please verify whether this approach was applied to the chronic non-cancer hazard index calculation.

AIR QUALITY

15. DISPERSION MODELING

Background

The applicant provided ISCST3 input files for project operational emissions. These files included flow-vector specific building dimensions that are used by the ISCST3 model in building downwash calculations.

Data Requests

15.a Please provide, in electronic format, the BPIP (or other applied program) input and output files used to generate the flow-vector specific ISCST3 input file building heights and widths.

STATE OF CALIFORNIA

**Energy Resources Conservation
and Development Commission**

In the Matter of:

The Application for Certification for the
CITY OF RIVERSIDE PUBLIC
UTILITIES RIVERSIDE ENERGY
RESOURCE CENTER

Docket No. 04-SPPE-1

PROOF OF SERVICE

I, Bonnie Heeley, declare that on June 9, 2004, I deposited copies of the attached CURE DATA REQUESTS SET TWO (Nos. 13-15) in the United States mail at South San Francisco, California, with first class postage thereon fully prepaid and addressed to the following:

CALIFORNIA ENERGY
COMMISSION
Attn: Docket No. 04-SPPE-01
DOCKET UNIT MS-4
1516 Ninth Street
Sacramento, CA 95814-5512
(Original + 13 copies)

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I declare under penalty of perjury that the foregoing is true and correct. Executed at South San Francisco, California, on June 9, 2004.

Bonnie Heeley