DOCKET
09-AFC-6
DATE MAY 14 2010
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May 14, 2010

Alan Solomon
Project Manager
California Energy Commission
1516 Ninth Street
Sacramento, CA 95814

RE: **Blythe Solar Power Project, Docket No. 09-AFC-6**
Responses to Questions from the April 28, 29 and May 7, 2010 CEC Workshops
Operation Phase Fire Protection
Technical Areas: Worker Safety/Hazardous Materials

Dear Mr. Solomon:

Attached please find the following response to questions generated at the April 28, 29, and May 7, 2010 CEC Workshops for the Blythe Solar Power Project. Additional responses to follow.

If you have any questions on this submittal, please feel free to contact me directly.

Sincerely,

Alice Harron
Senior Director, Development

Solar Millennium LLC
1625 Shattuck Avenue, Suite 270
Berkeley, CA 94709-4611
tel (1) 510-524-4517
fax (1) 510-524-5516
Info@SolarMillennium.com
http://www.SolarMillennium.com

BLYTHE SOLAR POWER PROJECT (09-AFC-6)
APRIL 28, 29 & May 7, 2010 CEC WORKSHOP REQUESTS

Date: May 14, 2010

At the Staff Assessment Workshops on April 28-29, 2010, several requests for information were made by Dr. Alvin Greenberg to clarify his analysis on Worker Safety and Hazardous Materials. In addition, several items were requested at the Soil & Water Workshop on May 7, 2010. The following materials are provided to address these requests.

Technical Areas: Worker Safety and Hazardous Materials

WORKSHOP REQUEST-2

Information Required:

Clarify the Applicant's plans for fire protection equipment and prevention onsite during operation.

Response:

Operations - Fire Protection and Prevention Program

Fire protection at the BSPP during operations will include measures relating to safeguarding human life, preventing personnel injury, preserving property, and minimizing downtime due to fire or explosion. Fire protection measures will include fire prevention methods to prevent the inception of fires. Of concern are adequate exits, fire-safe construction, reduction of ignition sources, control of fuel sources, and proper maintenance of fire water supply and sprinkler systems.

Fire suppression facilities will be designed by a Fire Protection Engineer and fire protection equipment will be installed and maintained in accordance with applicable NFPA standards and recommendations. Project facilities also will be designed and operated in conformance with Uniform Fire Code requirements for safe storage, dispensing, use, and handling of hazardous materials, as well as meeting state and local requirements for preparation of hazardous materials release plans and inventories.

An important consideration is that all systems and equipment at the plant will undergo extensive evaluation for operating safety, reliability, and hazard identification. Fire protection and detection systems are incorporated into the plant design. Hazards are eliminated through careful design and when dealing with chemicals, energy, or other normal operating hazards, protection and detection are built into the systems. For instance, smoke, heat, and flame detectors will be included into the critical plant control systems. Automatic deluge and sprinkler systems are included in occupied areas like the control room. Flow valves, isolation valves and other prevention measures are incorporated to contain and control qualities of exposure in the solar field areas. A Fire Risk Evaluation Plan (FREP) will be created that identifies and addresses the design criteria specific to fire protection systems and codes.

Administrative controls, like inspection, observation, and periodic testing will be used to ensure that abnormal conditions are eliminated or identified before they create potential risk or exposure. Operators conduct routine frequent rounds to inspect piping, valves and systems to identify and minimize leaks. Equipment is periodically tested to ensure automatic operation of detection and fire protection equipment and systems.

The operations phase Fire Prevention Plan will include:

- Scope, purpose, and applicability
- Identification of potential fire hazards
- Description and training and proper handling and storage of potential fire hazards
- Identification of potential ignition sources
- Control and training in the means to control potential ignition sources
- Identification and training of persons responsible for equipment and systems maintenance
- Identification of the locations and training in the use of the types of portable fire extinguishers
- Description of the automatic sprinkler fire suppression system
- Description and training of operators in the firewater system, including firewater/service water tank, firewater loop piping, electric and diesel engine-powered pumps
- Description and training in use of the foam trucks
- Identification of the local fire department, including contact information
- Training of operations personnel in fire fighting
- Description of the housekeeping procedures
- Description of the recordkeeping requirements.

Operations - Fire Protection System

Fire protection systems are provided to limit personnel injury, property loss, and downtime resulting from a fire. The systems include a fire protection water system, portable fire extinguishers and a foam agent. Firewater pumps, hydrant locations as well as on-site fire water piping will be designed in accordance with the local design standards and NFPA standards not limited to NFPA 850, 24 and 13. The fire protection system will be designed and certified by a California registered fire protection engineer.

The Project's fire protection water system will be supplied from a one (1) million gallon firewater/service water storage tank in each power block area. One (1) electric motor and one (1) diesel fueled engine backup firewater pump will deliver water at 5000 gpm to the fire protection loop piping. A smaller electric motor-driven jockey pump will maintain pressure in the piping network.

Fire water will be supplied from a fire water piping network about each power block. The piping will be configured in loops such that failure in any section of the loop can be quickly isolated so as not to interrupt water flow to other sections of the loops. Sectional valves will be fire rated and listed valves with post indicators. Fire hydrants will be placed at intervals throughout the area and will be supplied by the loop. Hose stations and hose cabinets will be placed as required.

The water supply loop will also supply firewater to a deluge system at each unit transformer, as well as to the HTF expansion tank, circulating pump area, and sprinkler systems at the steam turbine generator, lube oil tank, water treatment area and in the administration building. The fire water piping system will also provide protection to the Shared Facilities Area, specifically the Main Office and Assembly Building.

HTF Fire Suppression:

The Heat Transfer Fluid (HTF) is a eutectic mixture of about 73.5% diphenyl oxide and 26.5% biphenyl. The HTF will freeze at 53.6 degrees Fahrenheit, flammable (flash point) at 230 degrees Fahrenheit, boiling point 494.6 degrees Fahrenheit and auto ignition at 1139 degrees Fahrenheit. Several special measures are required and will be incorporated in the design and operation of the plant to mitigate freezing, fire and contamination risks.

Fire protection for the solar field will be provided by zoned isolation of the HTF header piping in the event of a rupture that results in a fire. HTF fires will be suppressed and extinguished with an adequate foam agent. Two (2) fire fighting foam trucks will be on site and centrally located near the assembly hall.

Fire detection within the solar fields will be identified visually by operations personnel monitoring solar field operations.

Operations personnel will be trained / qualified in fire fighting methods and will be the first responders.

The fire protection panel will be located in each power block control room. Activation of any fire detection device will be annunciated at the panel and will be immediately known to the operators.

STATE OF CALIFORNIA
ENERGY RESOURCES CONSERVATION AND DEVELOPMENT COMMISSION

In the Matter of:
APPLICATION FOR CERTIFICATION
for the *BLYTHE SOLAR POWER PROJECT*

Docket No. 09-AFC-6
PROOF OF SERVICE
(Revised 1/26/2010)

APPLICANT

Alice Harron
Senior Director of Project Development
1625 Shattuck Avenue, Suite 270
Berkeley, CA 94709-1161
harron@solarmillenium.com

Elizabeth Ingram
Developer, Solar Millennium LLC
1625 Shattuck Avenue, Suite 270
Berkeley, CA 94709
ingram@solarmillennium.com

APPLICANT'S CONSULTANT

Carl Lindner
AECOM Project Manager
1220 Avenida Acaso
Camarillo, CA 93012
carl.lindner@aecom.com

Ram Ambatipudi
Chevron Energy Solutions
150 E. Colorado Blvd., Ste 360
Pasadena, CA 91105
rambatipudi@chevron.com

CO-COUNSEL FOR APPLICANT

Scott Galati, Esq.
Galati/Blek, LLP
455 Capitol Mall, Suite 350
Sacramento, CA 95814
sgalati@gb-llp.com

Peter Weiner
Matthew Sanders
Paul, Hastings, Janofsky & Walker LLP
55 2nd Street, Suite 2400-3441
San Francisco, CA 94105
peterweiner@paulhastings.com
matthewsanders@paulhastings.com

INTERESTED AGENCIES

Holly L. Roberts, Project Manager
Bureau of Land Management
Palm Springs-South Coast Field Office
1201 Bird Center Drive Palm Springs, CA 92262
CAPSSolarPalen@blm.gov

California ISO
e-recipient@caiso.com

INTERVENORS

California Unions for Reliable Energy (CURE)
Tanya A. Gulesserian,
Marc D. Joseph
Adams Broadwell Joseph & Cardozo
601 Gateway Boulevard, Suite 1000
South San Francisco, CA 94080
tgulesserian@adamsbroadwell.com

ENERGY COMMISSION

Karen Douglas
Chair and Presiding Member
kldougla@energy.state.ca.us

Robert Weisenmiller
Commissioner and Associate Member
rweisenm@energy.state.ca.us

Raoul Renaud
Hearing Officer
rrenaud@energy.state.ca.us

Alan Solomon
Project Manager
asolomon@energy.state.ca.us

Lisa DeCarlo
Staff Counsel
ldecarlo@energy.state.ca.us

Public Adviser's Office
publicadviser@energy.state.ca.us

DECLARATION OF SERVICE

I, Carl Lindner, declare that on, May 14, 2010, I served and filed copies of the attached Blythe Solar Power Project Materials:

Responses to Questions from the April 28, 29 and May 7, 2010 CEC Workshops –
Operation Phase Fire Protection
Technical Areas: Worker Safety/Hazardous Materials

The original document, filed with the Docket Unit, is accompanied by a copy of the most recent Proof of Service list, located on the web page for this project at:

[http://www.energy.ca.gov/sitingcases/solar_millennium_blythe].

The document has been sent to the other parties in this proceeding (as shown on the Proof of Service list) and to the Commission's Docket Unit, in the following manner:

(C*heck all that Apply*)

For service to all other parties:

__X___ sent electronically to all email addresses on the Proof of Service list;

_____ by personal delivery or by overnight delivery service or depositing in the United States mail at Camarillo, California with postage or fees thereon fully prepaid and addressed as provided on the Proof of Service list above to those addresses **NOT** marked "email preferred."

AND

For filing with the Energy Commission:

__X_ sending an original paper copy and one electronic copy, mailed and emailed respectively, to the address below (preferred method);

OR

_____ depositing in the mail an original and 12 paper copies, along with 13 CDs, as follows:

CALIFORNIA ENERGY COMMISSION
Attn: Docket No. 09-AFC-6
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512

docket@energy.state.ca.us

I declare under penalty of perjury that the foregoing is true and correct.