Supplemental Response to CEC Data Request A96

Amended Application for Certification
for
HYDROGEN ENERGY CALIFORNIA
(08-AFC-8A)
Kern County, California

November 2012

DATA REQUEST

A96. Please provide any known hazardous materials accidental release history at similar facilities that utilize the same or similar chemical or engineering processes.

SUPPLEMENTAL RESPONSE

In response to Data Request A96, docketed on October 22, 2012, the Applicant provided Table A96-1, which listed accidental releases of hazardous materials from facilities that use or store chemicals in a similar manner to HECA. Supplemental Table A96-1 provides information for molten sulfur and nitric acid. As previously stated in the Applicant's response to Data Request A96, it must be understood that the HECA Project is unique and does not share many similarities to the processes and facilities presented in Table A96-1 or Supplemental Table A96-1.

TABLE

Supplemental Table A96-1 Hazardous Material Releases

Supplemental Table A96-1
Hazardous Material Releases

Chemical Unit	Location	Date	Release	Summary	Comments[1]
Molten Sulfur	Delaware, LA (Mannan, 2005)	February 10, 2002	1,000 tons	Spill led to a fire at the tank site.	The HECA project will mitigate the potential for sulfur fires by storing only degassed sulfur (see Comment 1 below).
Molten Sulfur	Claymont, DE (Mannan, 2005)	January 11, 2002	Up to 2,000 tons	30-year-old tank spilled and started a fire.	The HECA project will mitigate the potential for sulfur fires by storing only degassed sulfur (see Comment 1 below).
Molten Sulfur	Medicine Hat, AB, Canada (Mannan, 2005)	December 4, 2002		Freight train derailed, spilling molten sulfur and catching fire.	The HECA project will mitigate the potential for sulfur fires by transporting only degassed sulfur (see Comment 1 below).
Molten Sulfur	Kawasaki, Japan (Mannan, 2005)	December 1995	14,000 tons	Receiving of molten sulfur was stopped at the storage tank of a refinery because its level gauge did not function. A fire started and sulfur burned when inspection of the gauge was being carried out with the calibration chamber at the upper side of the tank open.	See Comment 1 below.
Molten Sulfur	Gold River, BC, Canada (CCOHS, 1987)	August 8, 1987		Recovery boiler tube leak caused a mill shutdown. Deceased was in the process of shutting a valve beneath a molten sulfur storage tank when the bottom cone section of the tank fell out, covering him in molten sulfur and sweeping him off the catwalk platform to the ground approximately 12 feet below.	There is insufficient information to draw appropriate conclusions.

Supplemental Table A96-1
Hazardous Material Releases (Continued)

Chemical Unit	Location	Date	Release	Summary	Comments[1]
Sulfur	Western Cape Province, South Africa (Batterman, 1998)	December 16, 1995	14,000 tons	A series of fires spread rapidly by strong and persistent winds ignited a sulfur pile.	HECA will address noted deficiencies in the emergency plans, including lack of communication and coordination in the response, fire hydrants with insufficient capacity, and inadequate and untimely communication with adjacent and affected communities.
Molten Sulfur	Delaware, LA (CSB CIRC, 2002)	February 18, 2002	1,000 tons	Molten sulfur spilled from a storage tank. Between 100 and 200 pounds flowed into a cooling water trench; no environmental damage reported.	There is insufficient information to draw appropriate conclusions.
Sulfur	Lille, France (AP, 2009)	March 21, 2009		A fire broke out at a chemical factory, resulting in a release of sulfur dioxide.	There is insufficient information to draw appropriate conclusions.
Sulfur	Chembur, India (Fireworld, 2002)	February 11, 2002		A fire broke out in the high chimney of a sulfur removal plant at an electric company.	There is insufficient information to draw appropriate conclusions.
Sulfur	Paradip, India (Fireworld, 2002)	March 18, 2002		A fire at a chemical plant warehouse storing about 15,000 tons of sulfur.	There is insufficient information to draw appropriate conclusions.
Sulfur	Mosul, Iraq (ENR, 2003)	June 25, 2003		A sulfur plant caught fire. The suspected cause is arson.	This is not applicable to the HECA project.
Sulfur	Pasco, WA (KNDO, 2008)	December 9, 2008		Fire broke out inside a sulfur bin at the Wilbur Ellis Fertilizer plant when a front end bucket loader scraped against a wall, creating a spark and igniting sulfur dust.	

Supplemental Table A96-1
Hazardous Material Releases (Continued)

Chemical Unit	Location	Date	Release	Summary	Comments[1]
Molten Sulfur	Pine River, BC, Canada (NEB, 2001)	September 9, 2000		A flange on a valve failed on a sulfur pipeline. The molten sulfur leak contacted the mineral insulated heat tracing, starting a fire.	
Nitric Acid	Clifton, NJ (AP, 2012)	May 8, 2012		A construction worker fell from the roof into a tank filled with nitric acid at a metal tube manufacturing plant called Swepco Tube Company.	In this incident, it appears that either the project was using an open tank, or a manhole was open during the time of the incident. HECA will not employ such a design for the project.
Nitric Acid	Italy (FACTS Database, 1988)	1988		An explosion occurred during the unloading of nitric acid from a road tanker. The operator accidentally emptied the nitric acid into a tank containing formic acid. A rapid exothermic reaction led to an explosion.	The HECA project will not have tanker loading or unloading facilities for nitric acid.
Nitric Acid	Baltimore, MD (OSHA, 2006)	May 6, 2006		Back pressure built up during an unloading operation from a rail car into an over-the-road tanker truck. Nitric acid began to leak at the hose connection; a mist of nitric acid was released into the air, and was inhaled by employees.	The HECA project will not have tanker loading or unloading facilities for nitric acid.

Supplemental Table A96-1
Hazardous Material Releases (Continued)

Chemical Unit	Location	Date	Release	Summary	Comments[1]
Nitric Acid	Oshkosh, WI (OSHA, 2002)	April 24, 2002		Employees accidentally unloaded liquid hydrogen chloride into nitric acid bulk storage. They noticed the mistake after delivering about 1,000 gallons. About 2 hours later, noxious fumes became noticeable from the tank vent and scrubber.	The HECA project will not have tanker loading or unloading facilities for nitric acid.
Nitric Acid	LG Epitaxy (OSHA, 1997)	April 26, 1997		A maintenance technician mistakenly added alcohol to a nitric acid and hydrofluoric acid mixture, resulting in the spray and release of toxic gases.	HECA will not be performing this task or using these chemicals.

Notes:

[1] Where sulfur fires are indicated, it is not stated how the sulfur was ignited. Sulfur is normally stored at temperatures below the auto-ignition and flash-point, so that loss of containment or exposure to air would not necessarily start a fire. In some cases, stored sulfur has significant concentrations of dissolved hydrogen sulfide; and if the storage containment vapor space is a closed system, hydrogen sulfide desorbed from the sulfur would accumulate in the vapor space. In some cases, the generation of iron pyrites in the tank also can cause fires. The HECA project will mitigate the potential for sulfur fires by using a degassing process for product sulfur to remove almost all of the dissolved hydrogen sulfide, and using sweep air in the sulfur storage tank to prevent the formation of iron pyrites and the accumulation of trace residual hydrogen sulfide that could desorb from the sulfur.

HECA = Hydrogen Energy California

References

AP (Associated Press), 2009. *French Authorities Confine Thousands Indoors over Sulphur Leak*. Available online at: http://www.nrcb.gov.ab.ca/Downloads/documentloader.ashx?id=8293.

AP (Associated Press), 2012. *Man Jumps Into Acid Tank To Rescue Stricken Colleague*. May 7. Available online at: http://newyork.cbslocal.com/2012/05/07/man-jumps-into-acid-tank-to-rescue-stricken-colleague/.

Batterman, Stuart A., 1998. *Estimation and Evaluation of Exposures from a Large Sulfur Fire in South Africa*. Environmental and Industrial Health, University of Michigan. August 28. Available online at: http://www.nrcb.gov.ab.ca/Downloads/documentloader.ashx?id=8264.

CCOHS (Canadian Center for Occupational Health and Safety), 1987. *Fatality Report*. Rep. no. 1868. November 1. Available online at: http://ncsp.tamu.edu/reports/CCOHS/Fatality Reports 1868.htm.

CSB CIRC, n.d. February 18, 2002 Delaware Chemical Leak Injures 1. N.p., n.d. Available online at: http://www.acusafe.com/Newsletter/Stories/0202News-MonthlyIncidents.htm.

ENR (Engineering News Record), 2003. Sawyer, Tom. *"Engineers Assault Chemical Plant Fire In Iraq."* October 7. Available online at: http://enr.construction.com/news/front2003/archives/030710.asp.

FACTS Database (FACTS Hazardous Materials Accidents Knowledge Base), 1988. *Chemical Accident in Italy with Nitric Acid*. Rep. no. 10257. Available online at: http://www.factsonline.nl/accident/10257/chemical-accident-in-italy-with-nitric-acid.

Fireworld, 2002. Referenced on Acusafe website. Available online at: http://www.acusafe.com/Newsletter/Stories/0202News-MonthlyIncidents.htm. Accessed 2012.

KNDO, 2008. *Sulfur Fire at Fertilizer Plant in Pasco*. December 9. Available online at: http://www.kndo.com/Global/story.asp?S=9494406&nav=menu484_2_10#.

Mannan, Sam, 2005. Lees' Loss Prevention in the Process Industries. 3rd ed. Volume 3 of 3.

NEB (Canadian National Energy Board), 2001. *Reasons for Decision – West Coast Energy Inc.* Rep. no. MH-1-2001. October. Available online at: http://publications.gc.ca/collections/Collection/NE22-1-2001-7E.pdf.

OSHA (Occupational Safety and Health Administration), 1997. *Inspection: 125580779 – Lg Epitaxy, Inc*. Rep. no. 0950612. Occupational Safety and Health Administration, April 30. Available online at: http://www.osha.gov/pls/imis/establishment.inspection_detail?id=125580779. Accessed November 27, 2012.

OSHA (Occupational Safety and Health Administration), 2002. *Inspection* 122016017. Rep. no. 0521100. April 25. Available online at: http://www.osha.gov/pls/imis/establishment.inspection_detail?id=122016017. Accessed November 27, 2012.

OSHA (Occupational Safety and Health Administration), 2006. *202360624 Event: 05/06/2006 Two Employees Are Burned When Nitric Acid Escapes*. Rep. no. 0352420. May 8. Available online at: http://www.osha.gov/pls/imis/establishment.inspection_detail?id=309934909.

BEFORE THE ENERGY RESOURCES CONSERVATION AND DEVELOPMENT
COMMISSION OF THE STATE OF CALIFORNIA
1516 NINTH STREET, SACRAMENTO, CA 95814
1-800-822-6228 – WWW.ENERGY.CA.GOV

AMENDED APPLICATION FOR CERTIFICATION FOR THE HYDROGEN ENERGY CALIFORNIA PROJECT

Docket No. 08-AFC-08A
(Revised 11/20/12)

APPLICANT
SCS Energy, LLC
Marisa Mascaro
30 Monument Square, Suite 235
Concord, MA 01742
mmascaro@scsenergyllc.com

Tiffany Rau
2629 Manhattan Avenue, PMB# 187
Hermosa Beach, CA 90254
trau@heca.com

Hydrogen Energy California, LLC
George Landman
Director of Finance and
Regulatory Affairs
500 Sansome Street, Suite 750
San Francisco, CA 94111
glandman@heca.com

CONSULTANT FOR APPLICANT
URS Corporation
Dale Shileikis, Vice President
Energy Services Manager
Major Environmental Programs
One Montgomery Street, Suite 900
San Francisco, CA 94104-4538
dale_shileikis@urscorp.com

COUNSEL FOR APPLICANT
Latham & Watkins, LLP
Michael J. Carroll
650 Town Center Drive, 20th Fl.
Costa Mesa, CA 92626-1925
michael.carroll@lw.com

INTERESTED AGENCIES
California ISO
e-recipient@caiso.com

Department of Conservation
Office of Governmental and
Environmental Relations
(Department of Oil, Gas &
Geothermal Resources)
Marni Weber
801 K Street, MS 2402
Sacramento, CA 95814-3530
marni.weber@conservation.ca.gov

INTERVENORS
California Unions for Reliable Energy
Thomas A. Enslow
Marc D. Joseph
Adams Broadwell Joseph & Cardozo
520 Capitol Mall, Suite 350
Sacramento, CA 95814
tenslow@adamsbroadwell.com

Association of Irritated Residents
Tom Frantz
30100 Orange Street
Shafter, CA 93263
tfrantz@bak.rr.com

Kern-Kaweah Chapter
of the Sierra Club
Andrea Issod
Matthew Vespa
85 Second Street, 2nd Floor
San Francisco, CA 94105
andrea.issod@sierraclub.org
matt.vespa@sierraclub.org

INTERVENORS (con't.)
Environmental Defense Fund (EDF)
Timothy O'Connor, Esq.
123 Mission Street, 28th Floor
San Francisco, CA 94105
toconnor@edf.org

Natural Resources Defense Council
George Peridas
111 Sutter Street, 20th Fl.
San Francisco, CA 94104
gperidas@nrdc.org

Kern County Farm Bureau, Inc.
Benjamin McFarland
801 South Mt. Vernon Avenue
Bakersfield, CA 93307
bmcfarland@kerncfb.com

*HECA Neighbors
c/o Chris Romanini
P.O. Box 786
Buttonwillow, CA 93206
roman93311@aol.com

ENERGY COMMISSION – DECISIONMAKERS

KAREN DOUGLAS
Commissioner and Presiding Member
karen.douglas@energy.ca.gov

ANDREW McALLISTER
Commissioner and Associate Member
andrew.mcallister@energy.ca.gov

Raoul Renaud
Hearing Adviser
raoul.renaud@energy.ca.gov

Eileen Allen
Commissioners' Technical
Advisor for Facility Siting
eileen.allen@energy.ca.gov

Galen Lemei
Advisor to Presiding Member
galen.lemei@energy.ca.gov

Jennifer Nelson
Advisor to Presiding Member
jennifer.nelson@energy.ca.gov

David Hungerford
Advisor to Associate Member
david.hungerford@energy.ca.gov

Patrick Saxton
Advisor to Associate Member
patrick.saxton@energy.ca.gov

ENERGY COMMISSION – STAFF

Robert Worl
Project Manager
robert.worl@energy.ca.gov

John Heiser
Associate Project Manager
john.heiser@energy.ca.gov

Lisa DeCarlo
Staff Counsel
lisa.decarlo@energy.ca.gov

ENERGY COMMISSION – PUBLIC ADVISER

Jennifer Jennings
Public Adviser's Office
publicadviser@energy.ca.gov

*Indicates Change

DECLARATION OF SERVICE

I, Dale Shileikis, declare that on November 30, 2012, I served and filed a copy of the attached Supplemental Response to CEC Data Request A96, dated November 2012. This document is accompanied by the most recent Proof of Service list, located on the web page for this project at:
http://www.energy.ca.gov/sitingcases/hydrogen_energy/index.html

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 or Chief Counsel, as appropriate, in the following manner:

(*Check all that Apply*)

For service to all other parties:

X Served electronically to all e-mail addresses on the Proof of Service list;

___ Served by delivering on this date, either personally, or for mailing with the U.S. Postal Service with first-class postage thereon fully prepaid, to the name and address of the person served, for mailing that same day in the ordinary course of business; that the envelope was sealed and placed for collection and mailing on that date to those addresses marked "hard copy required" or where no e-mail address is provided.

AND

For filing with the Docket Unit at the Energy Commission:

X by sending one electronic copy to the e-mail address below (preferred method); OR

___ by depositing an original and 12 paper copies in the mail with the U.S. Postal Service with first class postage thereon fully prepaid, as follows:

CALIFORNIA ENERGY COMMISSION – DOCKET UNIT
Attn: Docket No. 08-AFC-08A
1516 Ninth Street, MS-4
Sacramento, CA 95814-5512
docket@energy.ca.gov

OR, if filing a Petition for Reconsideration of Decision or Order pursuant to Title 20, § 1720:

___ Served by delivering on this date one electronic copy by e-mail, and an original paper copy to the Chief Counsel[1] at the following address, either personally, or for mailing with the U.S. Postal Service with first class postage thereon fully prepaid:

California Energy Commission
Michael J. Levy, Chief Counsel
1516 Ninth Street MS-14
Sacramento, CA 95814
michael.levy@energy.ca.gov

I declare under penalty of perjury under the laws of the State of California that the foregoing is true and correct, that I am employed in the county where this mailing occurred, and that I am over the age of 18 years and not a party to the proceeding.

[1] This Proof of Service form is not appropriate for the use when filing a document with the Chief Counsel under Title 20, sections 1231 (Complaint and Request for Investigation) or 2506 (Petition for Inspection or Copying of Confidential Records). The Public Advisor can answer any questions related to filing under these sections.