January 31, 2014

APPLICANT: LUMINANT GENERATION COMPANY, LLC.

APPLICATION: UNITED STATES – ADVANCED PRESSURIZED WATER REACTOR

SUBJECT: SUMMARY OF NOVEMBER 13, 2013, PUBLIC TELECONFERENCE WITH LUMINANT GENERATION COMPANY, LLC. TO DISCUSS THE GROUND WATER MODELLING APPROACH, BORIC ACID TANK FAILURE AND SURFACE WATER ANALYSIS FOR THE COMANCHE PEAK NUCLEAR POWER PLANT, COMBINED LICENSE APPLICATION, CHAPTER 2, SECTION 2.4, "HYDROLOGIC ENGINEERING"

On Wednesday, November 13, 2013, the U.S. Nuclear Regulatory Commission (NRC) held a Category I public teleconference with Luminant Generation Company LLC, (Luminant). During this teleconference, Luminant discussed its ground water analysis. The meeting was noticed on October 30, 2013, and is available through both the NRC public meeting website and the Agencywide Documents Access and Management System (ADAMS) under accession number ML13302B195. The meeting notice included the meeting agenda. The list of attendees is included as an enclosure to this summary.

The primary focus of the teleconference was for Luminant to present results of recent calculations made in its response to an earlier discussion with the NRC staff. After opening remarks and the introduction of attendees, Luminant discussed three presentations. The first presentation entitled "Groundwater Modeling Approach," can be found in ADAMS under accession number ML13330B657. The second presentation entitled "Boric Acid Tank Failure Analysis, RESRAD-OFFSITE Model," can be found in ADAMS under accession number ML13330B656. The last presentation entitled "CPNPP, Units 3 and 4, Surface Water Analysis, RAI 139 Supplement S03," can be found in ADAMS under accession number ML13330B658. Maximum groundwater level is simulated based on infiltration from extreme precipitation. Discussion by the NRC staff focused on possibly non-conservative input parameters including: insufficient modeled contribution of water from upland areas; lack of consideration of existing groundwater levels that currently exceed predicted levels; lack of infiltration from surface water into backfill in the model; the closeness and underestimation of model boundary heads in upland areas, which may bias calculated groundwater levels downward; and the potential overestimation of the downward vertical leakage that is included in the model.

The routes, distances and rate of movement of potential horizontal and vertical groundwater contamination pathways were defined by means of particle tracking coupled to MODFLOW groundwater flow models. Pathway characteristics determined from the modeling, and sorption coefficients determined from onsite shallow unconsolidated regolith materials, were used in

RESRAD-OFFSITE models to calculate radionuclide concentrations for the tank failure scenarios. The NRC staff discussed that sorption coefficient for the regolith would potentially be too high, and not conservative, compared to the fractured bedrock pathways that were simulated.

Luminant discussed its conceptual model of contamination resulting from rupture of the boric acid tank, the source assumed in the analysis of groundwater contaminant transport (Presentation 2). Horizontal and vertical pathways were modeled using RESRAD-OFFSITE. The modeling evaluated contaminant concentrations in a hypothetical well located at depth in the Twin Mountains Formation before groundwater reaches the Squaw Creek Reservoir (SCR). Modeling results indicate that no radionuclides would exceed applicable limits in the hypothetical wells. Discussion by the NRC staff focused on: (1) the need to predict contaminant concentrations in shallow groundwater and the SCR, to which contaminated shallow groundwater is likely to discharge following a tank failure; and (2) the need to carefully evaluate and validate the assumptions used in RESRAD-OFFSITE vertical-pathway simulations.

Luminant discussed how it had addressed earlier questions by the staff regarding its analysis of surface runoff and potential flooding (Presentation 3). Compared to previous calculations, Luminant increased the value of Manning's roughness coefficient "n" by 50 percent, which would produce higher and thus more conservative calculated water levels. Also addressed in the new calculations were slight changes in drainage areas within the site; the presence of an additional stormwater basin, identified as Drainage Pond C; and minor changes to the model that had insignificant impacts on calculated water levels.

The NRC staff asked about the significance of calculated water surface elevation exceeding the yard grade of 822 ft. elevation in the Unit 3 Southeast Channel. Luminant explained that this occurs only near the upstream end of the channel, and is not adjacent to any safety-related structures; flooding would affect only a parking area and is considered of little significance.

Please direct any inquires to me at 301-415-0493, or via e-mail at Tarun.Roy@nrc.gov.

Sincerely,

/RA William Ward for/

Tarun Roy, Project Manager
Licensing Branch 2
Division of New Reactor Licensing
Office of New Reactors

Docket No. 52-034 and 52-035

Enclosure:
List of attendees

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Tarun Roy, Project Manager
Licensing Branch 2
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OFFICE	DNRL/LB2: PM	DNRL/LB2: LA*	DNRL/LB2: PM
NAME	Troy (WWard for)	CMurphy	WWard
DATE	01/31/2014	01/30/2014	01/31/2014

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LIST OF ATTENDEES

U.S. Nuclear Regulatory Commission
Public Teleconference held on November 13, 2013

NAME	AFFILIATION
Stephen Monarque	Nuclear Regulatory Commission
Tarun Roy	Nuclear Regulatory Commission
Mark McBride	Nuclear Regulatory Commission
Kenneth Erwin	Nuclear Regulatory Commission
Brennan Smith	Oak Ridge National Laboratories
Ryan Walters	Mitsubishi Nuclear Energy Systems
Glenn Goodson	Mitsubishi Nuclear Energy Systems
Mory Diane	Mitsubishi Nuclear Energy Systems
Kaname Shibato	Mitsubishi Nuclear Energy Systems
Frostie White	Mitsubishi Nuclear Energy Systems
Michael Melton	Mitsubishi Nuclear Energy Systems
Diane Yeager	LBG
James Beach	LBG
Dave O'Rourke	LBG
Rich Hendricks	URS
Stacy Burgess	Enercon
John Huggins	Enercon
Joe Mancinelli	Enercon
Tom Schutzer	Enercon
Anu Gaur	Enercon
Caitlin Current	Enercon
Dennis McGraine	Enercon
Randall Lantz	Enercon
Julie Turrentine	Enercon
Todd Brautigam	Enercon

Enclosure

NAME	AFFILIATION
Rafael Gramatges	URS
Rich Hendricks	URS
Donald Woodlan	Luminant
Todd Evans	Luminant
Bob Reible	Luminant
John Conly	Luminant

cc:

Certrec Corporation
4150 International Plaza, Suite 820
Fort Worth, TX 76109

Director
Division of Compliance & Inspection
Bureau of Radiation Control
Texas Department of State Health Services
1100 West 49th Street
Austin, TX 78756-3189

Email

acpasswater@aol.com (Al Passwater)
APH@NEI.org (Adrian Heymer)
awc@nei.org (Anne W. Cottingham)
bfine@co.hood.tx.us (Brian Fine)
cindy@seedcoalition.org (Cindy)
ck_paulson@mnes-us.com (Keith Paulson)
cp34update@certrec.com (CPNPP LRS)
CumminWE@Westinghouse.com (Edward W. Cummins)
cwaltman@roe.com (C. Waltman)
david.lewis@pillsburylaw.com (David Lewis)
derrell.mccravey@co.somervell.tx.us (Somervell County Chief Deputy Derrell McCravey)
donald.woodlan@luminant.com (Donald Woodlan)
ed.burns@earthlink.net (Ed Burns)
eliza.seedcoalition@gmail.com (Elza Brown)
Fred.Madden@luminant.com (Fred Madden)
gedgar@morganlewis.com (George Edgar)
JCaldwell@luminant.com (Jan Caldwell)
jeff.simmons@energyfutureholdings.com (Jeff Simmons)
John.Conly@luminant.com (John Conly)
joseph_tapia@mnes-us.com (Joseph Tapia)
jrund@morganlewis.com (Jonathan Rund)
karen@seedcoalition.org (Karen Hadden)
KSutton@morganlewis.com (Kathryn M. Sutton)
kwaugh@impact-net.org (Kenneth O. Waugh)
lchandler@morganlewis.com (Lawrence J. Chandler)
lon.burnam@house.state.tx.us (Lon Burnam)
maria.webb@pillsburylaw.com (Maria Webb)
masanori_onozuka@mnes-us.com (Masanori Onozuka)
matias.travieso-diaz@pillsburylaw.com (Matias Travieso-Diaz)
media@nei.org (Scott Peterson)
mjohnson@citizen.org (Matt Johnson)
MSF@nei.org (Marvin Fertel)
nirsnet@nirs.org (Michael Mariotte)
Nuclaw@mindspring.com (Robert Temple)
patriciaL.campbell@ge.com (Patricia L. Campbell)
paul.gaukler@pillsburylaw.com (Paul Gaukler)
Paul@beyondnuclear.org (Paul Gunter)
pbessette@morganlewis.com (Paul Bessette)
plarimore@talisman-intl.com (Patty Larimore)
rbird1@luminant.com (Bobby Bird)
rdeeds@co.hood.tx.us (Hood County Sheriff Roger Deeds)
RJB@NEI.org (Russell Bell)
sabinski@suddenlink.net (Steve A. Bennett)

COL - Comanche Peak Mailing List

sfrantz@morganlewis.com (Stephen P. Frantz)
stephan.moen@ge.com (Stephan Moen)
tmatthews@morganlewis.com (T. Matthews)
Vanessa.quinn@dhs.gov (Vanessa Quinn)
Wanda.K.Marshall@dom.com (Wanda K. Marshall)