

PMComanchePeakPEm Resource

From: Woodlan, Don [Donald.Woodlan@luminant.com]
Sent: Friday, January 04, 2013 9:33 AM
To: Monarque, Stephen; Tiruneh, Nebiyu
Cc: McBride, Mark; Roy, Tarun; ComanchePeakCOL Resource; Conly, John; Evans, Todd; russell_bywater@mnes-us.com; nicholas_kellenberger@mnes-us.com; Bird, Bobby
Subject: 2013-01-04-Woodlan Luminant Presentation Materials for January 8, 2013 call
Attachments: 2013-01-04 January 8 CPNPP NRC Call RESRAD Talking Points.pdf

Attached is the presentation material for the 1/8/13 conference call.

Donald R. Woodlan

Manager, Nuclear Regulatory Affairs

Luminant Power

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From: Monarque, Stephen [<mailto:Stephen.Monarque@nrc.gov>]
Sent: Thursday, January 03, 2013 9:40 AM
To: Tiruneh, Nebiyu; Woodlan, Don
Cc: McBride, Mark; Roy, Tarun; ComanchePeakCOL Resource
Subject: Luminant Presentation Materials for January 8, 2013 call

Don,

Please send your presentation materials to the addressees above. We are requesting to receive this material either today or Friday.

Thanks,

Stephen Monarque
Lead Project Manager
Comanche Peak COL
NRO/DNRL/LB2
301-415-1544

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Received Date: 1/4/2013 9:33:42 AM
From: Woodlan, Don

Created By: Donald.Woodlan@luminant.com

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Comanche Peak RESRAD Talking Points – NRC Conference Call

January 8, 2013

Conceptual Model

- RESRAD-OFFSITE Version 2.6
- Horizontal and vertical pathways
- Pathways defined in CALC-039
- Evaluates radionuclide concentration in hypothetical well (groundwater) prior to SCR

Source Term

- Boric Acid Tank is the limiting tank as it has the largest radionuclide inventory
- 80 percent of tank volume for horizontal (66,000/52,800 gal)
- 0.02 percent of 80 percent of tank volume for vertical (105.6 gal)
- Applicable nuclides adjusted for 0.12 percent fuel failure rate
- Conversion from microCi/ml to pCi/g to determine total radionuclide inventory in soil
 - Adjusted for effective porosity (0.17) and for soil density (2.09 g/cm³)
- Radionuclides with half-life <1 day are excluded
- Gaseous state radionuclides are excluded
- Radionuclides without DCFs are excluded

Site-Specific Parameters

- Parameter selection preference:
 - Site-specific (e.g. Kd values)
 - Published materials (e.g. evapotranspiration coefficient)
 - RESRAD-OFFSITE default (e.g. B parameter)

Conservatism

- Assumes an immediate, non-mechanistic rupture of tank and transport of source term directly into groundwater (no retention for liquid in building)
- Lowest available Kd including subtraction of uncertainty
- Uses the shortest/fastest GW pathway

Sensitivity Analysis

- Saturated zone thickness
- Pump intake depth
- Saturated zone total porosity
- Saturated zone effective porosity
- Clean cover thickness
- Hydraulic gradient
- Distribution Coefficients

Results

- Calculation in progress, preliminary results less than unity and 10CFR20 Appendix B, Table 2 Column 2 effluent release values