

## HLWYM HEmails

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**From:** Osvaldo Pensado  
**Sent:** Friday, April 15, 2005 4:22 PM  
**To:** Patrick Laplante; Timothy McCartin; Christopher Grossman; Richard Codell; Keith Compton; 'PA\_Group'  
**Subject:** RE: Quick Query of the PA Staff's Knowledge of DOE FEIS Model

### New models

Near field transport (10 to 15 m below drifts)  
In-drift chemistry for colloidal stability and solubility (transport in invert)

### Updated models

Instantaneous cladding unzipping  
No more model for gradual degradation of cladding (no localized corrosion model anymore)  
Diffusive release model (diffusion through degraded waste form, invert, and drift near field)

### Opinion

There is no seepage in various thousands of years, radionuclide transport is via diffusion in a complex system (the limiting step is not the rate of waste form degradation but the diffusive transport rate; it is unclear to me the role of solubility and colloid stability to control release rates to the UZ); thus, EBS release rates may be much lower than estimated in FEIS.

-----Original Message-----

**From:** Patrick Laplante [mailto:plaplante@cnwra.swri.edu]  
**Sent:** Wednesday, April 13, 2005 8:11 PM  
**To:** Timothy McCartin; Christopher Grossman; Richard Codell; Keith Compton; PA\_Group  
**Subject:** Quick Query of the PA Staff's Knowledge of DOE FEIS Model

Folks,

As part of a current effort to identify differences in the DOE FEIS modeling vs what DOE is currently doing for LA (to the best we understand it at this time) I'm pulsing the PA staff that were involved in the FEIS Goldsim model review earlier this year for any quick insights you might have gained regarding what parts of the DOE FEIS model have been updated or changed for the LA model. I recall when we did the FEIS model review that some areas were identified where staff indicated the FEIS model was not much good for preparing for LA review because we already knew DOE had changed the model (these are the areas, in particular, I'm interested in knowing about).

Thus, if you have a minute (not asking anyone to spend much time on this... just provide your recollections) please send me a reply indicating which model you reviewed (e.g., UZ, SZ etc) and your understanding of whether there were changes from FEIS to LA and (if you have any), a few simple phrases or bullets describing the nature of the changes, and perhaps any insights regarding the potential risk significance of the changes. This information may help support ongoing planning discussions (CNWRA/NRC) regarding FEIS review that are occurring outside of the PA group. Any input you can provide should be useful.

Thanks  
Pat

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**Subject:** RE: Quick Query of the PA Staff's Knowledge of DOE FEIS Model  
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**Received Date:** 4/15/2005 4:22:31 PM  
**From:** Osvaldo Pensado

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