

Follow Up Notes from 4/29/15 DNFSB public meeting

1. Board asked for a schedule for safety basis deliverables – Franco and Hutton

The Documented Safety Analysis (DSA) and the integration of the DSA schedule into the overall Waste Isolation Pilot Plan (WIPP) Recovery Performance Management Baseline (PMB) is continuing to be analyzed. WIPP Board staff representative, Brent Broderick, is kept apprised of DSA integration through weekly updates from the Carlsbad Field Office (CBFO) that includes a list of the status of all deliverables including the DSA/Technical Safety Requirements (TSR) sections and chapters.

2. “If a CAM fails in the underground, do personnel evacuate?” (McQuinn and Blankenhorn)

Alarm response in the underground requires workers to evacuate at least 100 feet upwind and await a Radiological Control response.

3. Do other sites use appropriate plume modeling methods? (Hutton and McMillian and Moussa)

Yes, all DOE EM sites must comply with DOE O 151.1C, Comprehensive Emergency Management System, relative to estimating onsite and offsite consequences of actual or potential releases of hazardous materials in a timely manner. DOE uses DOE G 151.1-4, *Response Elements*, as well as DOE G 151.1-2, *Technical Planning Basis*; DOE HDBK-3010, *Airborne release Fractions/Rates and Repairable Fractions for Nonreactor Nuclear Facilities*; and DOE-HDBK-1163-2003, *Integration of Multiple Hazard Analysis Requirements and Activities*, to implement the DOE Consequence Assessment modeling method. DOE has established a central registry (toolbox) which includes model codes that are compliant with the DOE Safety Software Quality Assurance (SSQA) requirements. Most sites use plume models from this toolbox. However, large sites that have developed their own models have validated their plume models through the SSQA requirements. DOE Directives also require that if an incident has the potential to reach a Site Area Emergency (SAE) or General Emergency (GE), the site must have National Atmospheric Release Advisory Center (NARAC) capability to effect near time consequence assessment modeling activities. The DOE Guide, DOE G 151.1-2, also guides the contractor in the three elements of the DOE consequence assessment process which includes: 1) event recognition, categorization-classification, and initial protective actions; 2) timely initial assessment (TIA); and 3) continuance ongoing assessment (COA). The contractor per DOE O 151.1C must annually perform a consequence assessment to validate modeling processes, annual exercises, and drills. Each site office federal program manager performs an assessment every three years to ensure that the

consequence assessment was adequately performed and captured in the Emergency Planning and Hazards Analysis.

4. What specific corrective actions have to be completed prior to restart?
(McQuinn, Franco and Hutton)

The Safety Management Programs (SMP) are being revitalized and/or enhanced based on the Accident Investigation Board (AIB) reports and external assessments. The Corrective Action Plans (CAPs) for the Fire and Radiological Phase I AIB reports reflect the activities that are being implemented. In general, the actions include revisions to SMP Requirements Documents and lower tier implementing procedures. For example:

The Fire Protection Program Document, Fire Hazards Analysis (FHA), Baseline Needs Assessment (BNA), Emergency Management Plan, Emergency Planning Hazards Analysis (EPHA) and associated emergency response procedures, RCRA Contingency Plan, Engineering Program Procedures, Documented Safety Analysis Revision, USQ (Unreviewed Safety Question) Procedure, Work Control Procedure, Contractor Assurance Program Description and System, establish a Conduct of Operations Mentoring Program, Nuclear Safety Culture Program Plan, and Radiological Control Program. In addition, establishment of an underground combustibles control area and combustibles permitting process.

In addition to programmatic improvements, the following infrastructure improvements are in progress for restart: Interim Ventilation System, Supplemental Ventilation System, automatic fire suppression systems on underground equipment (forklifts, lift trucks, dump trucks, salt haul trucks, bolters); in town Emergency Operations Center; cleaning system for underground equipment; CAM installation throughout the underground; refurbishment of the life safety equipment (emergency lights, strobes) and refuge chambers for underground personnel.

Procurement of the following equipment: underground ambulance, underground rescue vehicle, fire truck, waste handling transporter, continuous miner, 4 salt haul trucks, 3 dump trucks, electric carts, scrubbers, lube truck, forklifts, lift trucks and electric bolters.

Corrective Action Plans are available on the WIPP Recovery website:
<http://www.wipp.energy.gov/WIPPRecovery/recovery.html>

5. What more could be done for fire suppression in the underground while analysis like FHA and BNA get completed? (things like a fire protection mist system, or fire detection and alarm)—(McQuinn)

For the underground, we are considering dry chemical suppression for a number of areas such as the lube oil storage area, tire storage area, and other areas that may have hydrocarbon fluids or heavy smoke producing material such as tires. For areas with ordinary combustible material such as the Underground Facilities Engineering (UFE) office and Maintenance, NWP is considering a modified National Fire Protection Association (NFPA) 13 residential type automatic sprinkler system with a minimum 10 minute water supply. This type of sprinkler may be selected due to a salt laden environment and the 10 minute water supply would be to address life safety concerns rather than property protection. For recovery actions, temporary units such as Cease Fire dry chemical or clean agent may be installed until a more permanent fixed system can be installed.

In addition to the above, all diesel powered equipment in the underground with combined diesel fuel and hydraulic fluid quantities of 40 gallons or more will have automatic dry chemical fire suppression systems. The system will either be single or double system discharge depending on the size. In addition, all diesel powered equipment of 150 horsepower or greater, will have a dry chemical fire suppression system and a system discharging Aqueous Film Forming Foam in accordance with industry highly protected risk practices.

6. Has the process that should be followed if the DOE O 420 requirement for fire suppression throughout the facility can't or shouldn't be met in the underground been followed? (McQuinn)

Our plan is to address strict DOE O 420 compliance by developing equivalencies.

Will we submit some version of non-compliance (Exemption or Equivalency) agreement documents?

We will submit two equivalency documents in order to address DOE O 420.1C, *Facility Safety*, strict interpretation. One equivalency involves alternative automatic fire suppression approach for the WIPP underground, rather than an area wide system as required by strict interpretation of DOE O 420.1C. The other equivalency addresses the WIPP approach to safe underground exit in an emergency, such as a fire, evaluated in accordance with Life Safety Code basic requirements.