CARLSBAD TOWN HALL MEETING

U.S. Department of Energy
Waste Isolation Pilot Plant (WIPP)

March 27, 2014

AGENDA ITEMS

Joe Franco

CBFO Manager

Meeting Agenda

- WIPP Status presentations
  - Tammy Reynolds
  - Fran Williams
  - Joe Franco
- Audience Questions
  - One question at a time please
- Final Remarks / Close

WIPP RECOVERY PLAN ACTIVITIES

Tammy Reynolds
NWP Recovery Manager

WIPP Recovery Plan Activities

- Install a Continuous Air Monitor (CAM) at Station B
  - Provides real time radiological information on exhaust stack air
  - Installation to complete this week
  - One week run time to validate operation and procedures
  - Will be utilized to trigger protective actions

- Perform venting of the TP-II and TP-III containers to meet transportation requirements
  - First container vented on Tuesday, March 26th
  - Remaining containers being vented to support the 60 day requirement

WIPP Recovery Plan Activities *(continued)*

- **Re-entry activities**

- **Phase 1: Air Intake and Salt Shaft Unmanned Entries - Complete**
  - Monitor for air and radiological hazards
  - Establishes the shafts safe to transport people
  - No hazards were identified

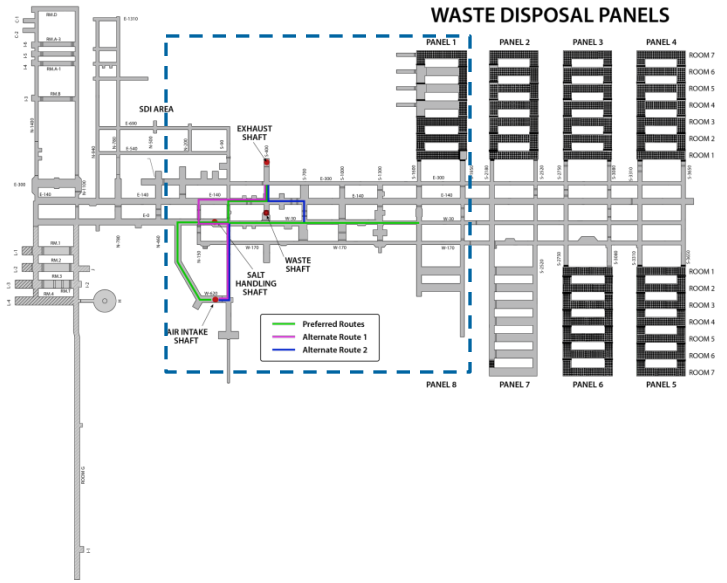
- **Phase 2: Perform Mine Safety Compliance Inspections - Complete**
  - Personnel ride on top of the conveyance to inspect the shaft
  - Monitor for air and radiological hazards
  - No hazards were identified

WIPP Recovery Plan Activities *(continued)*

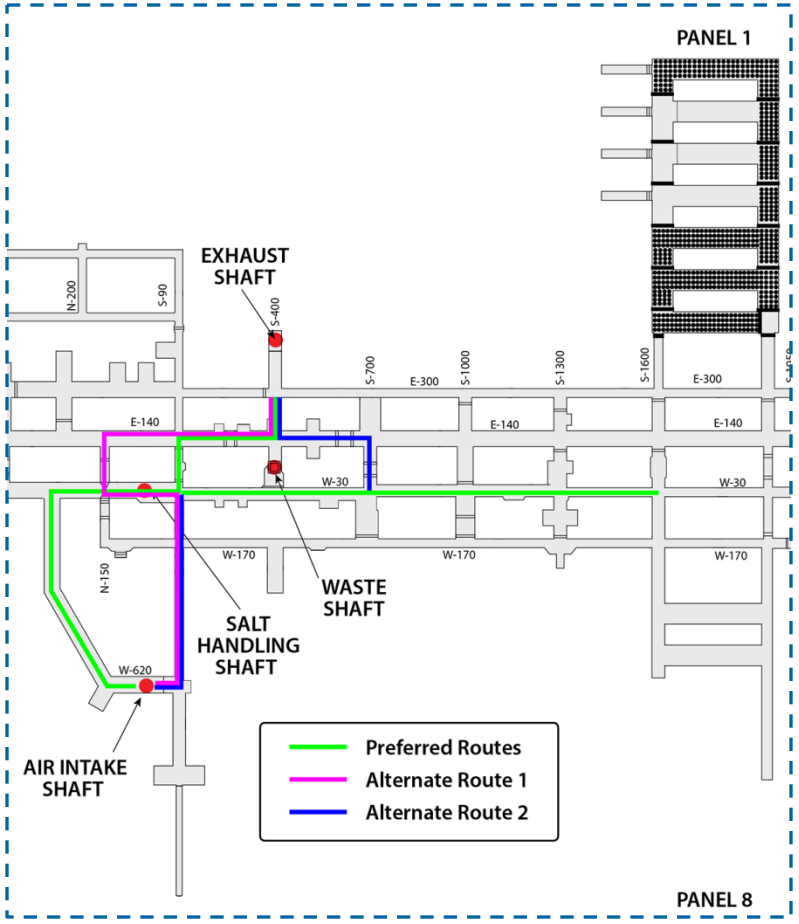
- **Re-entry activities**

- **Phase 3: Establish Operating Base in the Underground**
  - Establish egress capability between the Salt and Air Intake Shafts
  - Survey area near salt shaft for habitability
  - Protective equipment – Two pairs of protective clothing and a respirator
  - Establish operating base where personnel will transition from contamination area to a “clean” area

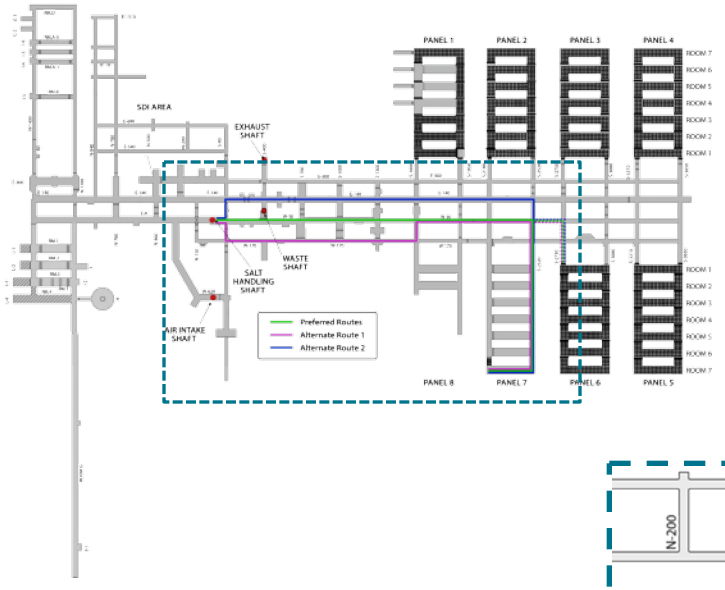
- **Phase 4: Identify Scene of the Event**
  - Survey from the operating base to panel 7 or panel 6
  - Protective equipment – two pairs of protective clothing or plastic suit and breathing air system (BG-4) or equivalent

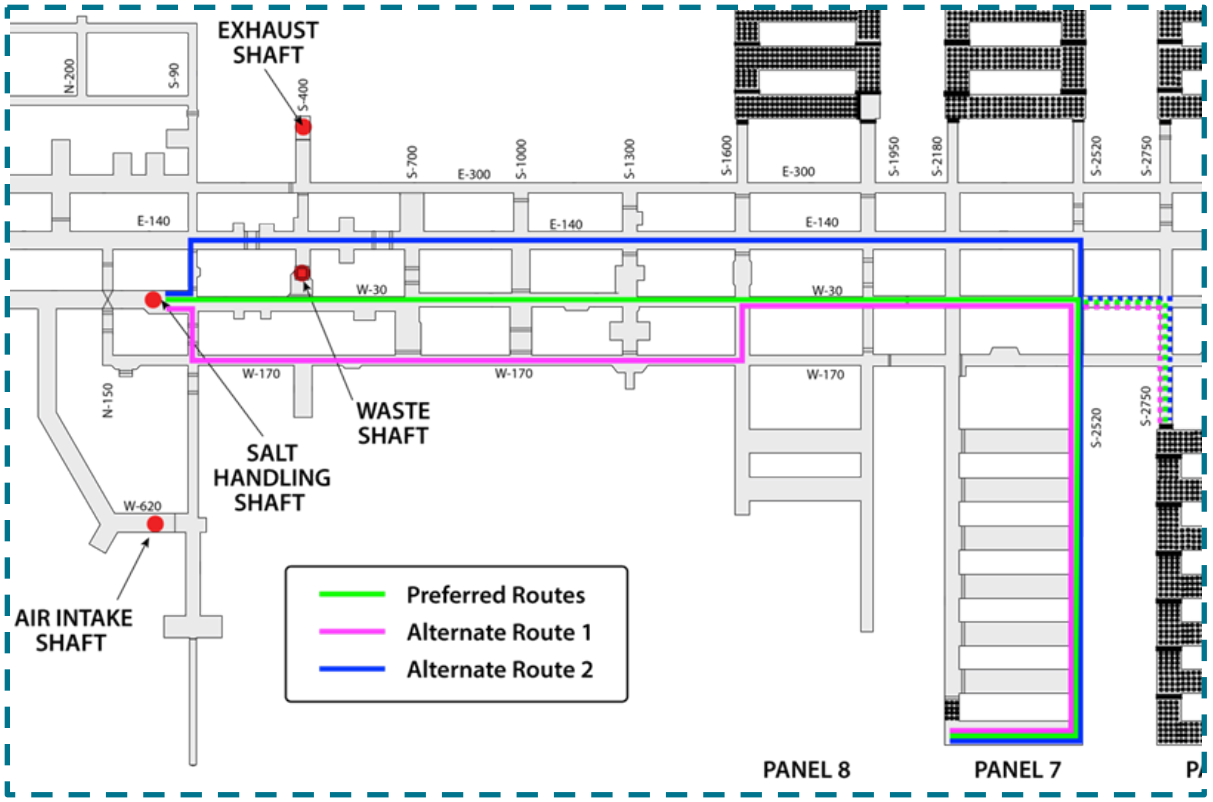


Inspect Area and Establish Underground Operating Base



Planned Routes to Scene of Event





WIPP Recovery Plan Activities *(continued)*

- **Perform an in-service aerosol test of the ventilation system filter banks**
  - LANL personnel performing
  - Smoke generator used to determine the efficiency of the filters
  - Tests to be completed this week

- **Return of the Workforce to the WIPP Site**
  - Installation and operation of the Continuous Air Monitor (CAM) at Station B
  - Successful completion of the In Service Aerosol Test of the Filter Banks

BIOASSAY SAMPLING

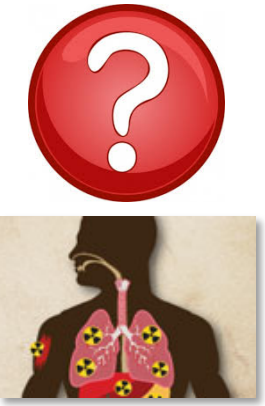
Fran Williams

NWP Expert Advisor

Bioassay for Internal Radioactive Contamination

Bioassay means the determination of kinds, quantities or concentrations, and, in some cases, the locations of radioactive material in the human body, whether by direct measurement (in vivo counting) or by analysis and evaluation of materials excreted or removed from the human body.

--Adapted from NRC 10 CFR 20.1003



Internal radioactive contamination suspected / possible

Common entry routes for internal radioactive contamination:

- **Inhalation (breathing it in)**
- **Ingestion (swallowing it)**
- **Through an opening in the skin**
- **Absorption through the skin (not applicable to WIPP event)**

Typical Schedule (for each sample)

Day 1 → Day 2-15 → Day 15 → Day 16-17

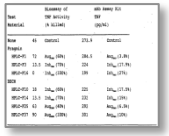
Excretion Collection

Urine sample

Fecal sample

Lab Analysis

Preliminary Results



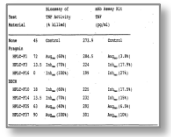
If radioactive contamination is detected

Additional samples requested or dose estimated

Direct Measurement (lung counting--in vivo counting)

Review / Interpretation of Results

Final Results



Day 1 → Day 1 → Day 1

Typical Schedule

Excretion Analysis

- **Advantage**: able to detect small amounts
- **Disadvantages:** results take a long time; many variables can come into play such as cross-contamination, particle size, entry route, etc.

Direct Measurement (lung counting – in vivo counting)

- **Advantage:** fast results
- **Disadvantages:** can't detect all materials; chest wall thickness can affect results

CLOSING COMMENTS

Joe Franco
CBFO Manager