



## **MEETING MINUTES**

### **Transportation/Waste Committee**

755 East Flamingo Road, Las Vegas, NV 89119

**August 20, 2008**

**Members Present:** Ted Oom, Chair (via conference call); Robert Johnson, Vice Chair; Bob Gatliff, Bill Lindsey, John McGrail, Hal Sullivan, Walt Wegst

**Liaisons Present:** Bob Gamble, Nye County

**Department of Energy (DOE):** Kelly Snyder, DDFO

**CAB Technical Advisor:** Dr. Helen Neill, UNLV; Jennifer Ward, Graduate Student, UNLV

**Facilitator:** Rosemary Rehfeldt, Navarro Research and Engineering, Inc.

**Guest Speaker:** Dr. Ruth Weiner, Sandia National Laboratory

After review of the meeting's agenda, Rosemary Rehfeldt introduced Dr. Ruth Weiner with Sandia National Laboratory. Dr. Weiner will be assisting Lee Stevens, Transportation Specialist with Navarro Research and Engineering, and the DOE Nevada Site Office (NSO), in conducting a transportation study requested by the CAB. The objective of the study is to determine the radiological risk for the routes used by the NTS generators to ship low-level waste (LLW) and mixed low-level waste (MLLW) to the Nevada Test Site (NTS). Once the risk is determined, the routes can be compared with the study that was completed in 1996.

The modeling software that will be used is RADTRAN. RADTRAN is a nationally accepted standard computer program that calculates the risk of radiation exposure to individuals and populations along the travel route of radioactive waste shipments. This program incorporates such factors as exposures to people during truck rest stops and during truck refueling, and repeated exposures to people who live or work close to transportation routes. The program can also be used to calculate exposure to the driver of the truck. In addition to these exposure pathways, the program can be used to calculate exposures resulting from various accident scenarios.

The NSO is determining what the shipment data will look like based upon historical data from shipments received, and working on how this data will be normalized. The study will take into account the current major routes being used to transport LLW and MLLW to the NTS, which will include the NV-160 route.

The committee was informed by Dr. Weiner that RADTRAN population data is based upon the 2000 census, so a more up-to-date estimate of population needs to be determined. RADTRAN has the ability to enter alternate population data points, for example, persons per square mile. Considering that most of the United States is rural and there are approximately 60 persons per square mile in rural areas, RADTRAN uses actual population density and breaks it down to estimations that approximate that:

- 85 percent of road miles are rural
- 10 percent of road miles are suburban
- 5 percent of road miles are urban

The physical transportation routes and population data for RADTRAN come from an Oak Ridge National Laboratory client server application called TRAGIS, which can be accessed at <https://tragis.ornl.gov/tragis.htm>.

Dr. Weiner explained the “risk triplet” to the committee – the components of which are:

- Scenario (routine transportation and/or accidents)
- Probability
- Consequence
- Probability x Consequence = Risk

Dr. Weiner explained that, although an accident may carry consequences, it does not happen very often. She also explained that radiation decreases as the square of the distance increases, and risk decreases faster with distance. Therefore, the farther away a person is from the source, the less radiation exposure they will have. For more detailed information on Dr. Weiner’s presentation, you may see her PowerPoint presentation on the CAB website at [www.ntscab.com](http://www.ntscab.com), or contact the CAB office via e-mail at [NTSCAB@nv.doe.gov](mailto:NTSCAB@nv.doe.gov), or call (702) 657-9088.

Once Dr. Weiner completed her presentation, the committee was ready to suggest parameters for DOE NSO to use in the new transportation study. They are as follows:

- 1) Use 1996 parameters for comparison
- 2) Run software using numbers from the Desert Research Institute’s (DRI) pic array study
- 3) Look at accident rates
- 4) Look at alternate routes
- 5) Look at vehicle density rates
- 6) Adjust population data

The committee then discussed and outlined its Transportation/Waste Committee 2009 Work Plan, which is outlined as follows:

- 1) Continuing research into transportation routes
  - a. Compare current and alternate routes; look at the six routes that overlap
  - b. Make recommendation(s) to DOE
  - c. Solicit county liaison input
- 2) Research and analyze how much waste is moving along waste transportation routes
  - a. R. Johnson working on spatial network analyses
  - b. Research and recommend alternative reporting of shipments
- 3) Work on the status of Mixed Low-Level Waste (MLLW) Pit 3 – closing after 2010
  - a. Decided on whether or not to make a recommendation to DOE to apply for a new operating permit
- 4) Review and comment on the State of Nevada Attorney General’s letter regarding no new MLLW streams being shipped to the NTS
- 5) Work on other EM-related activities as needed

The meeting adjourned at 6:30 p.m.