



# CCNS

**Concerned Citizens for Nuclear Safety**

ENTERED

## ROADMAP for the WIPP HAZARDOUS WASTE PERMIT

By: Deborah Reade

The Permit, which is for the operation of a hazardous waste storage and disposal facility at WIPP, lasts for five years before renewal is required and is divided into seven **Modules** and numerous **Attachments**. NMED's summary of these Modules along with some of their comments on the Permit and a history of DOE/WID's numerous attempts to write a complete permit application are available in NMED's fact sheets (see above for where to see these.)

### Module I: General Permit Conditions

Module I contains standard language similar to all other hazardous waste facility permits on definitions, procedures, reporting and other duties.

### Module II: General Facility Conditions

Module II addresses waste sources (the generator/storage sites like Los Alamos National Laboratory (LANL) and Rocky Flats), general waste analysis (how waste will be determined to be acceptable at WIPP), prohibited waste, security and inspection, personnel training, emergency preparedness and response, closure and post-closure requirements and liability requirements. It is closely tied to **Attachment B (Waste Analysis Plan)** which will be described below.

Prohibited wastes include: liquid waste, non-radioactive pyrophoric waste (ignites on contact with air), purely hazardous (non-mixed) waste, wastes that are chemically incompatible with other materials at WIPP, explosives and compressed gases, PCB-contaminated waste and ignitable, corrosive or reactive wastes.

### Module III: Container Storage

Waste is allowed to be stored above ground in the TRUPACT-II shipping containers in the parking lot for up to 2 months and in the above-ground Waste Handling Building for up to one year.

### Module IV: Geologic Repository Disposal

Module IV describes the Underground Hazardous Waste Disposal Units (HWDUs) or panels which are or will be excavated underground. Each HWDU will consist of 7 rooms. Only Panel 1 has been excavated to date. The Permit only covers Panels 1, 2 and 3. A renewed Permit or Permit Modification would be necessary for additional Panels.

This module describes permitted and prohibited waste, and acceptable disposal containers (55-gal drums, 7-packs of 55-gal. drums, standard waste boxes [SWB], 10-drum overpacks and 85-gal drum overpacks). It also limits the concentration of volatile organic compounds (VOCs) in each room. VOCs are hazardous gases that are in the waste containers. The containers are vented to allow the escape of these gases so they will be present in the waste rooms while workers are emplacing waste and after each room is closed. VOCs can be toxic, flammable or explosive in certain concentrations.

This module also includes repository maintenance and monitoring requirements including air monitoring for VOCs and monitoring of the stability of the underground areas.



## **Module V: Ground-Water Detection Monitoring**

The Permit requires monitoring for the detection of hazardous releases for 30 years after the WIPP facility is closed. (It is possible to require a longer time period, say, 100 years in the permit.) NMED is requiring 7 Detection Monitoring Wells for this post-closure monitoring. This module describes the monitoring program, including which hazardous constituents will be monitored and sampling analysis procedures.

### **Module VI: Post-Closure Care Plan**

This module goes into general post-closure requirements other than ground-water detection monitoring.

### **Module VII: Corrective Action for Solid Waste Management Units (SWMUs)**

Some hazardous waste will be generated at WIPP itself through various activities. Some of this waste has been or will be put into landfills, waste piles, land treatment units etc. This Module describes requirements for dealing with or cleaning up these SWMUs. A more detailed description of NMED's conditions and approaches to this clean up is the Technical Support Document which accompanies the draft Permit.

### **Attachment B: Waste Analysis Plan**

This attachment describes which wastes are acceptable and prohibited at WIPP under the Permit and describes in detail how to identify these wastes and characterize them. Characterizing the waste tries to determine which hazardous components are in the waste and uses several methods to do this. The most common hazardous constituents in the mixed waste are metals like mercury and lead and VOCs.

There are three major waste categories: **Homogenous Solids, Soils and Gravel**, and **Debris Wastes**. Each is characterized somewhat differently. The generator/storage sites will use documentation or **Acceptable Knowledge (AK)** on the history of the waste and the processes that generated the waste as the primary basis for assigning the waste to one of these categories. They will also use AK to begin to determine what hazardous materials might be in the waste.

The Permit requires that all waste containers be **sampled and analyzed for VOCs** in their headspaces (the space between the waste and the top of the container). A certain percentage of the Homogenous Solids and the Soils/Gravel will be **sampled and analyzed to determine hazardous waste constituent concentrations and toxic contaminants**. Often these wastes will be sampled by "coring" though other techniques may be used.

**Radiography (X-rays) or visual examination (VE)**-means actually opening and looking inside) will be used to check inside containers to verify that no prohibited items are in the containers. A certain percentage of containers will be visually examined (VE) to verify the radiography. Radiography or VE is required for every waste container. Because the contents of Debris Wastes can vary greatly from drum to drum it is difficult to take a representative sample of them. Therefore, only AK and radiography or VE will be used to determine what hazardous materials might be in them.

### **Attachment B2: Statistical Methods Used in Sampling and Analysis**

Not all the waste containers will be sampled or visually examined for every hazardous constituent. Therefore it has to be determined what percentage of containers will be sampled in what way. This Attachment describes these percentages and the statistical methods used in deciding on them. Different numbers of containers will be sampled depending on whether or not the waste is retrieved, newly-generated, or to be visually examined.

### **Attachment B4: TRU Mixed Waste Characterization Using Acceptable Knowledge**

This Attachment describes what AK is required for each container, what AK is "supplemental" and procedure for determining AK.

These are only a few of the Attachments. There are many more and can be reviewed at NMED's web site at [www.nmenv.state.nm.us/wipp/](http://www.nmenv.state.nm.us/wipp/).