

EPA WIPP ISSUES

EPA-DOE MEETING

OCTOBER 6, 1994

941004



Meeting With the Secretary of Energy

EPA Views Concerning WIPP Compliance with the Radiation Disposal Standards

EPA believes that DOE has made some important positive changes in the management of the WIPP project, including greater stakeholder involvement, early exchanges of information with EPA, and examination of the value of research projects towards demonstrating compliance. However, given DOE's commitment to submitting its application for certification in December 1996, EPA has serious concerns about some very critical work that DOE needs to do before it could submit a successful application. Among the most important of these are:

1. Study of Waste Treatment and Other Engineered Barriers

Given the uncertainty involved, DOE needs to look at the effectiveness of engineering enhancements including waste treatments such as solidification, and changes to the containers or the backfill. It is in DOE's interest to complete this study as quickly as possible so that its results can be shared with EPA and used as an input to the System Prioritization Method. EPA has repeatedly requested the plan for the study but has not received it.

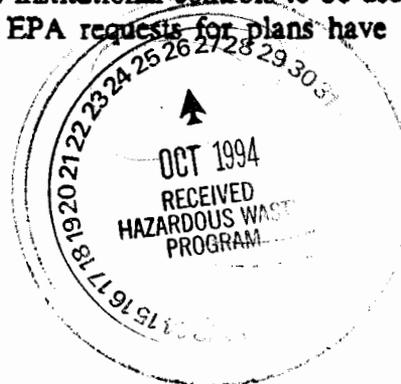
2. Waste Characterization

The description of the waste is the backbone of any compliance application, it determines the allowable releases and predictions of repository behavior. DOE has not made significant progress in addressing several major waste characterization issues raised by EPA.

- o Both DOE and EPA recognize the need for waste categories to simplify the analysis of WIPP. The current categories used by DOE have not been shown to be related to performance.
- o DOE should identify the critical parameters of the waste which determine how the waste performs in the WIPP before the waste generators characterize the waste. EPA has requested but has not received a study plan or study results.
- o The current performance assessment does not take into account potential chemical interactions of the waste. DOE must evaluate these interactions.

3. Institutional Controls

Passive institutional controls are required by EPA's disposal rule. DOE's performance assessment currently claims credit for institutional controls to reduce the rate of human intrusion but DOE has to date, not produced any plans for the institutional controls to be used. Without such a plan, no credit of any kind can be given. EPA requests for plans have received no response.



BACKGROUND

- O EPA HAS REVIEWED NUMEROUS DOE DOCUMENTS
- O EPA HAS COMMENTED ON EXPERIMENTAL PROGRAM PLAN AND 1992 PERFORMANCE ASSESSMENT, COMPLIANCE STATUS REPORT
- O EPA COMMENTS ARE WILL SOON BE SENT ON 2ND ROUND OF PA COMMENTS AND QUALITY ASSURANCE PROGRAM PLAN
- O EPA HAS STATED A NUMBER OF TECHNICAL ISSUES WITH DOE ANALYSIS
 - MANY APPEAR TO BE HANDLED BY SPM (FOR NOW)
- O EPA HAS CONCERNS ABOUT ADDITIONAL WORK NEEDED FOR COMPLIANCE APPLICATION
 - EXAMPLE: ENGINEERED BARRIER STUDY, DOE HAS AGREED TO COMPLETE - WE HOPE TO SEE THE STUDY PLAN BEFORE THE STUDY IS BEGUN
 - THIS WORK WILL BE VITAL TO APPLICATION, IN SOME CASES IT NEEDS TO GET STARTED

ISSUE 1 - INSTITUTIONAL CONTROLS**BACKGROUND**

- O ACTIVE AND PASSIVE INSTITUTIONAL CONTROLS CAN REDUCE LIKELIHOOD OF HUMAN INTRUSION**
- O ACTIVE AND PASSIVE INSTITUTIONAL CONTROLS ARE REQUIRED BY 40 CFR 191**
- O CREDIT FOR ACTIVE INSTITUTIONAL CONTROLS UP TO 100 YEARS**
- O CREDIT FOR PASSIVE INSTITUTIONAL CONTROLS TO BE DETERMINED, BASED ON EVIDENCE PRESENTED**
 - HOW TO DETERMINE CREDIT WILL BE A TOPIC OF TECHNICAL WORKSHOP**

ISSUE

- O EPA HAS TO DATE SEEN NO PLANS FOR EITHER TYPE OF CONTROL**
- O WITHOUT PLANS NO CREDIT OF ANY KIND CAN BE GIVEN**
- O EPA REQUESTS FOR PLANS HAVE GOTTEN NO RESPONSE**
- O DOE STATES DRAFT PLANS WILL BE READY IN NOVEMBER, WE WANT TO INCLUDE IN NOVEMBER EXCHANGE**

ISSUE 2 - WASTE CHARACTERIZATION

BACKGROUND

- O DESCRIPTION OF WASTE IS BACKBONE OF ANY COMPLIANCE APPLICATION
 - INVENTORY DETERMINES ALLOWABLE RELEASES
 - WASTE CHARACTERISTICS DETERMINE BEHAVIOR OF REPOSITORY

- O DOE CURRENT CHARACTERIZATION IS INADEQUATE

ISSUE

- O DOE MUST DEMONSTRATE IT IS QUANTIFYING THE CORRECT CHARACTERISTICS
 - DOE NEEDS TO PERFORM SENSITIVITY ANALYSIS
 - IN JUNE, EPA ASKED TO SEE PLANS FOR THIS STUDY AND WERE TOLD NONE WERE AVAILABLE
 - GLAD TO HEAR IT WILL BE READY FOR REVIEW BY END OF OCTOBER, WE LOOK FORWARD TO SEEING THE RESULTS

- O DOE MUST CATEGORIZE WASTE TO SIMPLIFY DOE'S ANALYSIS OF WIPP AND EPA'S ANALYSIS OF COMPLIANCE APPLICATION
 - CATEGORIES MUST BE BASED ON PERFORMANCE
 - DOE HAS NOT DEMONSTRATED THAT CATEGORIES OF WASTE IN THE DRAFT BASELINE INVENTORY REPORT ARE BASED ON PERFORMANCE OR THAT ALL WASTE IN A CATEGORY BEHAVES THE SAME IN THE WIPP

- O DOE MUST ESTABLISH ACCOUNTING SYSTEM TO KEEP TRACK OF WASTE IN REPOSITORY
 - SYSTEM NEEDED TO SHOW WASTE MEETS ACCEPTANCE CRITERIA
 - WE'VE SEEN NOTHING ON THIS

ISSUE 3 - QUALITY ASSURANCE

BACKGROUND

- O DATA MUST BE QUALITY ASSURED TO BE USED TO IN APPLICATION
- O DOE QUALITY ASSURANCE PROGRAM APPEARS TO BE MOVING FORWARD BUT A LOT OF WORK NEEDS TO BE DONE

ISSUES

- O VALIDATION OF OLD DATA - DOE CURRENTLY WORKING ON PROGRAM
 - HOLES IN PROGRAM, EXAMPLE: OVER RELIANCE OF AFFIDAVITS BY PRINCIPLE INVESTIGATOR
 - WHAT IS DOE'S SCHEDULE TO COMPLETE?
- O USE OF INDEPENDENT REVIEW TEAMS
 - EPA WOULD LIKE TO OBSERVE OPERATIONS OF TEAMS, IT WOULD SAVE TIME LATER, DOE SEEMS TO AGREE TO THIS

ISSUE 4 - MONITORING

BACKGROUND

- O BOTH RCRA AND 191 REQUIRE MONITORING OF WIPP
- O MONITORING OF SITE WILL BE NEEDED DURING OPERATIONS AND POST CLOSURE

ISSUE

- O EPA HAS NOT SEEN ANY PLANS FROM DOE
 - WHAT IS DOE GOING TO DO?

ISSUE 5 - REMOTE HANDLED WASTE**BACKGROUND**

- O REMOTE HANDLED WASTE IS THE MOST RADIOACTIVE MATERIAL DESTINED FOR WIPP**
- O DOE PROVIDED AN OUTLINE OF REMOTE HANDLED STUDY IN 1993 AND WE COMMENTED - WE HAVE HEARD NOTHING SINCE**

ISSUE

- O REMOTE HANDLED WASTE HAS BEEN ESSENTIALLY IGNORED IN EVERY MAJOR DOE DOCUMENT**
 - INCLUDING 1992 PERFORMANCE ASSESSMENT**
- O ANALYSIS OF REMOTE HANDLED WASTE COULD BE CRUCIAL TO WIPP MEETING STANDARD**
- O CURRENT INVENTORY FOR REMOTE HANDLED IS NOT ACCEPTABLE, DOE STAFF HAS SAID THAT THE INTEGRATED DATA BASE IS BASED ON SURVEYS THAT WERE FILLED OUT INCOMPLETELY, INACCURATELY AND IN SOME CASES BY SUMMER INTERNS**