

**U.S. DEPARTMENT OF ENERGY  
OFFICE OF CIVILIAN RADIOACTIVE WASTE MANAGEMENT**

**PRESENTATION TO  
THE NUCLEAR WASTE TECHNICAL REVIEW BOARD**

**SUBJECT: SPENT FUEL/HIGH-LEVEL  
WASTE DATA BASE OVERVIEW**

**PRESENTER: ALAN B. BROWNSTEIN**

**PRESENTER'S TITLE AND ORGANIZATION: ACTING CHIEF, LOGISTICS BRANCH  
TRANSPORTATION AND LOGISTICS DIVISION  
OFFICE OF STORAGE AND TRANSPORTATION  
U.S. DEPARTMENT OF ENERGY**

**PRESENTER'S  
TELEPHONE NUMBER: (202) 586-4973**

**AUGUST 28-29, 1990**

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# **SPENT FUEL/HIGH-LEVEL WASTE DATA BASE OVERVIEW**

**ALL SPENT FUEL(SF) AND HIGH-LEVEL  
WASTE (HLW) DATA USED BY THE OCRWM  
PROGRAM IS CONTAINED IN THREE  
DATA BASES**

- **REACTOR-SPECIFIC SPENT FUEL DATA BASE**
- **CHARACTERISTICS DATA BASE**
- **INTEGRATED DATA BASE**

# **SPENT FUEL/HIGH-LEVEL WASTE DATA BASE OVERVIEW**

## **REACTOR-SPECIFIC SPENT FUEL DATA BASE**

- **DATA COMPILED FROM UTILITIES TO ESTABLISH HISTORICAL AND PROJECTED SF DISCHARGES**
- **KEY FUEL DEFINITION AND OPERATIONAL PARAMETERS ARE OBTAINED FOR DISCHARGED AND IN-REACTOR FUEL**
- **DISAGGREGATE DISCHARGE PROJECTIONS ARE PRODUCED WHICH FOLLOW EIA AGGREGATE PROJECTIONS**
- **DATA AND ANALYSIS IS PROVIDED TO OTHER OCRWM PROGRAM ELEMENTS**

# **SPENT FUEL/HIGH-LEVEL WASTE DATA BASE OVERVIEW**

## **CHARACTERISTICS DATA BASE**

- **PROVIDES DETAILED TECHNICAL CHARACTERISTICS OF WASTES THAT WILL OR MAY REQUIRE GEOLOGIC DISPOSAL**
- **INCLUDES SF (LWR AND NON-LWR), HLW, AND MISCELLANEOUS WASTES**
- **DATA COMPILED FROM FUEL VENDORS, NRC, WASTE GENERATORS AND OTHERS**
- **PHYSICAL DESCRIPTIONS, CHEMICAL COMPOSITIONS, RADIOLOGICAL PROPERTIES, INVENTORIES AND PROJECTIONS ARE COMPILED OR CALCULATED**
- **DATA IS PROVIDED TO OTHER OCRWM PROGRAM ELEMENTS**

# **SPENT FUEL/HIGH-LEVEL WASTE DATA BASE OVERVIEW**

## **INTEGRATED DATA BASE**

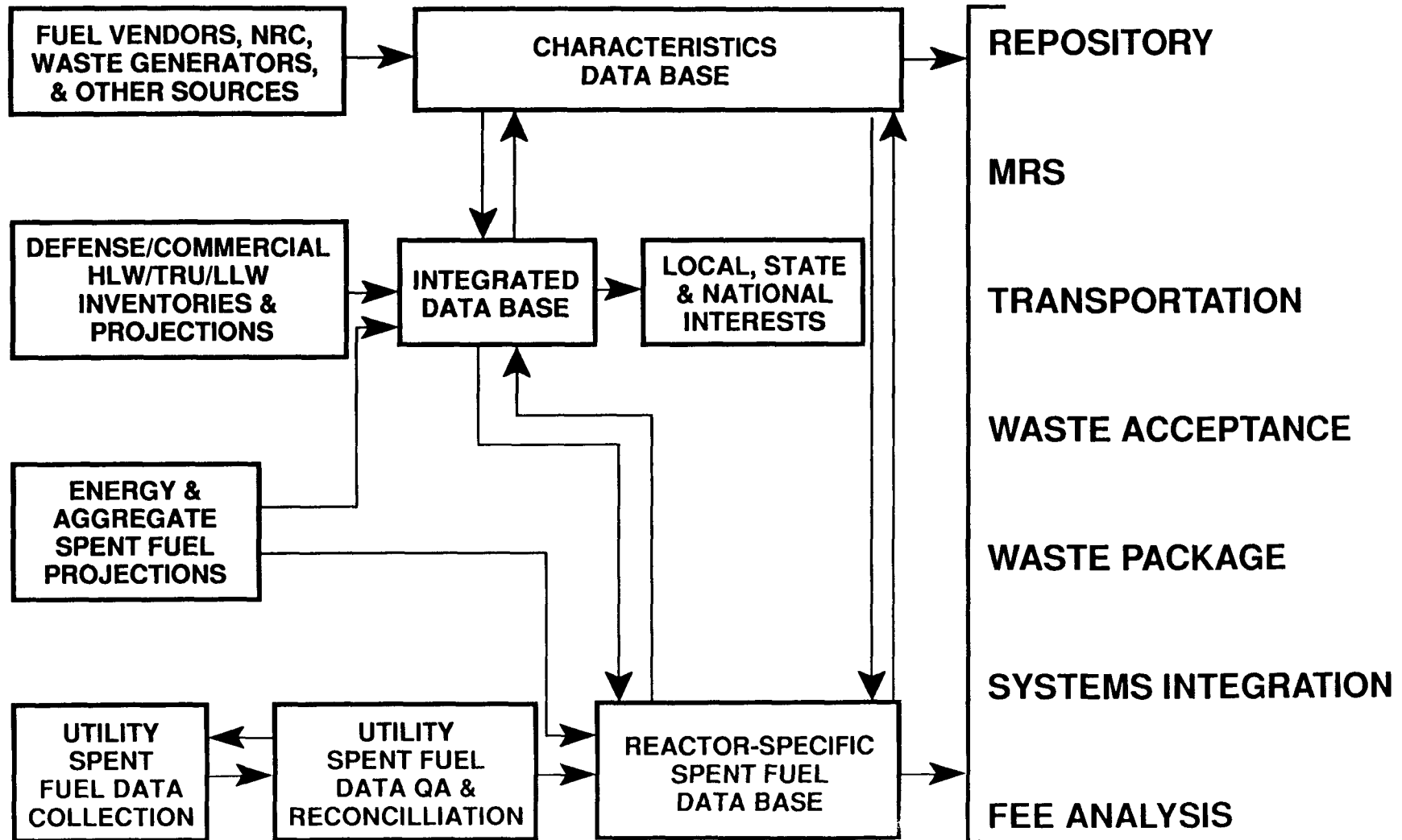
- **SUMMARY OR EXECUTIVE-LEVEL DATA**
- **ANNUALLY UPDATED INVENTORIES AND PROJECTIONS OF ALL RADIOACTIVE WASTE TYPES IN THE U.S., INCLUDING LWR AND NON-LWR SF, HLW, TRU WASTE, LLW, MILL TAILINGS, AND MISCELLANEOUS RADIOACTIVE WASTES**
- **DATA OBTAINED FROM REACTOR-SPECIFIC SPENT FUEL DATA BASE, CHARACTERISTICS DATA BASE, AND LEAD SITES**
- **DATA BASE IS CO-SPONSORED BY DOE-RW AND DOE-EM**

# **SPENT FUEL/HIGH-LEVEL WASTE DATA BASE OVERVIEW**

## **DATA BASES USED BY ALL PROGRAM ELEMENTS**

- **PROGRAM MANAGEMENT/PLANNING**
- **WASTE ACCEPTANCE PROCESS**
- **TRANSPORTATION**
- **MONITORED RETRIEVABLE STORAGE (MRS)**
- **REPOSITORY DESIGN**
- **WASTE PACKAGE DESIGN**
- **SYSTEMS INTEGRATION**
- **FEE ADEQUACY ANALYSIS**

# SPENT FUEL/HIGH-LEVEL WASTE DATA BASE OVERVIEW





# **SPENT FUEL/HIGH-LEVEL WASTE DATA BASE OVERVIEW: WHERE ARE WE?**

- **REACTOR-SPECIFIC SPENT FUEL DATA BASE**
  - **EVOLVED THROUGH COOPERATION/CONSULTATION WITH UTILITIES SINCE 1980**
  - **CONTRACT REQUIRED MANDATORY DATA SUBMITTALS SINCE 1983**
  - **PERIODIC MEETINGS HELD TO DISCUSS NEW DATA REQUIREMENTS AND NEEDS FOR CONTINUING COLLECTION OF EXISTING DATA**
  - **DATA BASE SUBSTANTIALLY COMPLETE**
  - **NEXT MEETING WILL FOCUS ON DATA REQUIREMENTS FOR NON-FUEL COMPONENTS AND DEFECTS**

# **SPENT FUEL/HIGH-LEVEL WASTE DATA BASE OVERVIEW: WHERE ARE WE?**

**(CONTINUED)**

- **CHARACTERISTICS DATA BASE**
  - **BEGAN IN 1983 BASED ON RECOGNIZED NEED FOR DETAILED CHARACTERISTICS**
  - **PROCESS USES LITERATURE SEARCHES AND INPUT FROM FUEL VENDORS AND UTILITIES**
  - **DATA BASE INCOMPLETE IN CERTAIN AREAS**
  - **PERIODIC UPDATES AS NEW AND ENHANCED DATA RECEIVED**