

May 15, 2003

**CERTIFIED MAIL- RETURN RECEIPT REQUESTED**

Dr. Inés R. Triay  
Manager  
Carlsbad Field Office  
U.S. Department of Energy  
Carlsbad, NM 88221

Dear Dr. Triay:

The United States Environmental Protection Agency (EPA), Region 6 is in receipt of your application of March 22, 2002, in which the Waste Isolation Pilot Plant (WIPP) seeks approval for land disposal of non-liquid polychlorinated biphenyls (PCBs) contaminated with transuranic waste (PCB/TRU) and PCB/TRU waste mixed with hazardous waste pursuant to 40 C.F.R.

§ 761.75 (Chemical waste landfills). The WIPP is currently permitted by the New Mexico Environment Department (NMED) pursuant to the Resource Conservation and Recovery Act (RCRA) as a Subpart X Miscellaneous Unit (40 C.F.R. § 264.600). After reviewing your application and an evaluation of the WIPP, EPA hereby approves your request to dispose of TRU and TRU-mixed waste containing PCBs pursuant to Section 761.75 subject to this letter and the enclosed "Conditions of Approval." The EPA has determined that the operation of this facility in accordance with the enclosed "Conditions of Approval" will not present an unreasonable risk of injury from PCBs to human health or the environment.

The WIPP application was evaluated against the technical requirements for a PCB chemical waste landfill in 40 C.F.R. § 761.75(b). The WIPP disposal area is located in a thick, relatively impermeable formation of salt known as the Salado Formation which consists mainly of halite and anhydrite. Hydraulic testing performed in halite indicates this salt formation permeability is below the required permeability value of  $1 \times 10^{-7}$  cm/sec in Section 761.75(b)(1)(ii) for soils lining a chemical waste landfill. The WIPP site is approximately 400 feet above the 100-year flood plain. Protection from flooding or ponding caused by probable maximum precipitation events is provided by the diversion of water away from the WIPP facility by a system of peripheral interceptor diversions. Additionally, grade elevations of roads and surface facilities are designed so that storm water will not collect on the site under the most severe conditions. The site is in a stable geological area where severe earthquakes or volcanic eruptions are highly unlikely and the location of the WIPP disposal area itself prevents erosion or landslides.

As part of the WIPP's application for land disposal of PCB Items, EPA also evaluated a request by the WIPP for a waiver from three of the technical requirements in Section 761.75(b) of TSCA. Pursuant to Section 761.75(c)(4), EPA may determine that the operation of a PCB chemical waste landfill will not present an unreasonable risk of injury to health or the environment from PCBs when one or more of the technical requirements are waived. The waiver requests are based upon the unique geologic and hydrologic conditions at the site, and the fact that the disposal panels are over 2,000 feet below the ground surface and isolated from any potential surface water infiltration. As such, WIPP requested waivers from certain requirements that related to soil based landfills in regard to site hydrology, monitoring systems, and leachate collection systems.

There are several aspects of the WIPP's salt bed formation design which are unique to this facility that do not apply to the PCB chemical waste landfill technical requirements for soil based landfills listed in Section 761.75(b). Therefore, EPA has reviewed the waiver request and determined that the hydrologic condition requirement in Section 761.75(b)(3), the monitoring systems requirements in Section 761.75(b)(6), and the leachate collection system requirement in Section 761.75(b)(7) are not necessary for the safe operation of the WIPP landfill. Accordingly, the request for a waiver from each of the aforementioned requirements is approved and a discussion follows.

#### 1. Hydrologic Conditions:

a. Regulatory requirement: The PCB regulations at Section 761.75(b)(3) require that the bottom of the landfill be at least fifty feet above the historical high groundwater table, and that there be no hydraulic connection between the site and standing or flowing surface water.

b. Reason for granting waiver request: The WIPP repository is located in the Salado Formation salt beds over 2,000 feet below the ground surface, and is well isolated from any potential surface water infiltration from incident precipitation. Three ground water bearing zones were identified in the WIPP Compliance Certification Application and the RCRA permit application that demonstrated these water-bearing zones are isolated from the salt bed formations chosen for PCB disposal. Since the intent of the regulations are met, this waiver request is hereby granted.

#### 2. Monitoring Systems:

a. Regulatory requirement: The regulations at Section 761.75(b)(6) require that a facility sample any surface or groundwater for PCBs as baseline data, and then monitor any surface or groundwater designated by EPA for PCBs.

b. Reason for granting the waiver request: Baseline surface and groundwater sampling for PCBs at the site did not detect any PCBs. There are no major surface-water bodies within five miles of the site, and the nearest river, the Pecos River, is approximately 15 miles from the site. The site is approximately 500 feet above the riverbed, and 400 feet above the 100-year flood plain. Surface grading provides for diversion of water from the site in case of incident precipitation events. Repository shafts are elevated at least six inches to prevent surface water from entering the shafts. In addition, there is no hydraulic connection between the repository and the groundwater. Since the design of the facility and the 2,000 foot depth of the disposal cell in salt bed formations meets the intent of the PCB landfill regulations which is to prevent contact between the disposed PCBs and surface or groundwater, this waiver request is hereby granted.

### 3. Leachate Collection:

a. Regulatory requirement: The regulations at Section 761.75(b)(7) require that a leachate collection system be installed above the chemical waste landfill in order to collect ground or surface water to prevent it from entering into the disposal cell.

b. Reason for granting the waiver request: The site is approximately 500 feet above the riverbed, and 400 feet above the 100-year flood plain. Surface grading provides for diversion of water from the site in case of incident precipitation events. Repository shafts are elevated at least six inches to prevent surface water from entering the shafts. The 2,000 foot depth of the disposal cells isolates the PCB waste from surface or groundwater contact or the production of leachate. The proposed PCB landfill does not include the disposal of free-flowing PCB liquids. Since the aforementioned meets the intent of the PCB landfill regulations to prevent contact between the disposed PCBs and surface or groundwater, this waiver request is hereby granted.

In addition to the request for approval for land disposal of PCB/TRU and PCB/TRU mixed waste at the existing WIPP facility, the WIPP also asked for conditional approval for several planned future facility modifications including:

1. the storage and disposal of Remote Handled (RH) PCB/TRU and PCB/TRU mixed waste;
2. the establishment of a central confirmation facility at WIPP for waste sample analysis; and
3. an increase in the maximum storage capacity allowed in the approved storage areas, and approval of additional PCB/TRU and PCB/TRU mixed waste storage areas to facilitate safe handling.

Approval of the planned facility modifications are not included in this approval action. The EPA will consider requests for approval of any future completed projects as modifications to this approval after review and consultation with the NMED. That process would also provide for public participation.

This approval shall become effective on the date of this letter, and expire at midnight, the same day and month, five years later. Applications for renewal should be submitted at least one year before the expiration date. If you have questions, please contact Mr. James Sales of my staff at (214) 665-6796.

Sincerely yours,

Carl E. Edlund, P.E.  
Director  
Multimedia Planning and  
Permitting Division

Enclosure

cc: Charles Lundstrom, NMED  
Betsy Forimash, ORIA  
Dr. Steven Warren, Washington TRU Solutions, L.L.C.

**CONDITIONS OF APPROVAL**

**FOR  
DISPOSAL OF PCB/TRU AND PCB/TRU MIXED WASTE  
AT THE  
U.S. DEPARTMENT OF ENERGY (DOE)  
WASTE ISOLATION PILOT PLANT (WIPP)  
CARLSBAD, NEW MEXICO  
ISSUED MAY 15, 2003  
CORRECTED JUNE 26, 2003**

The disposal of transuranic waste by the DOE is congressionally mandated in Public Law 102-579 (as amended by the National Defense Authorization Act for Fiscal Year 1997, Public Law 104-201, referred to as the WIPP Land Withdrawal Act [LWA]). Portions of the transuranic waste inventory contain hazardous waste constituents regulated in 40 C.F.R. Parts 260 through 279, and/or polychlorinated biphenyls (PCBs) and PCB Items regulated in 40 C.F.R. Part 761. The following conditions of approval address the safe disposal of transuranic PCB and PCB Items at the WIPP.

The terms and abbreviations in these conditions are in accordance with those defined in 40 C.F.R. § 761.3 unless otherwise noted. The term “Facility” hereinafter refers to the Waste Isolation Pilot Plant (WIPP), Carlsbad, New Mexico. The term “owner” refers to the DOE, and the term “operator” refers to DOE and Washington TRU Solutions, L.L.C. The DOE owns the WIPP and is responsible for the development and day-to-day management of the WIPP facility.

**I. LOCATION OF FACILITY**

The Facility is located approximately 26 miles southeast of Carlsbad, New Mexico in Eddy County. The geographic coordinates are 32 degrees, 22 minutes, 30 seconds N; 103 degrees, 47 minutes, 30 seconds W.

**II. PCB WASTE AND DISPOSAL UNITS AUTHORIZED**

**A. PCB WASTE AUTHORIZED**

1. PCB contaminated transuranic (PCB/TRU), and PCB contaminated transuranic waste mixed with a hazardous waste (PCB/TRU mixed waste) including PCB remediation waste, PCB Articles, and PCB bulk product waste may be stored and disposed at this Facility. The terms “PCB/TRU” and “PCB/TRU mixed waste” are terms used by the Facility. For the purpose of this approval, PCB/TRU and PCB/TRU mixed waste shall be considered a “PCB Item(s)” in accordance with 40 C.F.R. § 761.3.

The Facility term “TRU waste” means waste containing more than 100 nanocuries of alpha-emitting transuranic isotopes per gram of waste, with half-lives greater than 20 years, except for (A) high-level radioactive waste; (B) waste that the DOE Secretary has determined, with the concurrence of the EPA Administrator, does not need the degree of isolation required by the disposal

regulations; or (C)

waste that the Nuclear Regulatory Commission (NRC) has approved for disposal on a case-by-case basis in accordance with 10 C.F.R. Part 61.

The Facility term “TRU mixed waste” means TRU waste that is also a hazardous waste as defined by the Hazardous Waste Act and 20 New Mexico Administrative Code (NMAC) 20.4.1.200 (incorporating 40 C.F.R. § 261.3).

The term “PCB/TRU waste” shall hereinafter refer to both PCB/TRU and PCB/TRU mixed waste.

2. The disposal of free-flowing PCB liquids are prohibited at this Facility.
3. No ignitable waste as defined by 40 C.F.R. § 261.21 may be received at this Facility.

#### **B. PCB DISPOSAL UNITS AUTHORIZED**

1. Disposal Panels 2 and 3 are authorized for disposal of PCB/TRU waste.
2. Before the Facility can dispose of any PCB/TRU waste in Panel 3, it must notify EPA when it has completed construction of Panel 3 and confirm that it has been constructed in accordance with approved plans and specifications.

#### **C. AUTHORIZATION TO OPERATE ADDITIONAL DISPOSAL UNITS**

For a new Panel, the owner/operator may not commence disposal until the Facility has notified in writing the EPA Region 6 OK/TX RCRA Permits Section and received a written approval authorizing the new Panel for PCB disposal. The notification must include a description and a map of the new Panel. The description must include anticipated depth, length, and width of the new Panel and how it will be operated.

#### **D. EXPANSION IN SIZE OR CAPACITY OF AUTHORIZED DISPOSAL UNITS**

Any existing Facility modification or expansion in capacity from what was proposed in the PCB application of March 22, 2002, requires notification and response from EPA according to the procedures outlined in II. C. of these conditions.

### **III. PCB/TRU WASTE STORAGE**

#### **A. AUTHORIZED STORAGE AREAS**

PCB/TRU waste storage is limited to the following areas:

1. The Parking Area Container Storage Unit consisting of a 115,000 square foot asphalt and concrete surface providing storage space for loaded Department of Transportation (DOT) Type B Packages with up to 1,591 cubic feet of waste, and
2. The Waste Handling Building (WHB) Container Storage Unit consisting of 33,175 square feet of storage area for PCB/TRU waste management and provides for storage of up to 2,718 cubic feet of waste.

**B. AUTHORIZATION TO OPERATE ADDITIONAL STORAGE AREAS**

For a new PCB/TRU storage area, the owner/operator may not commence storage of PCBs until the Facility has notified in writing the EPA Region 6 OK/TX RCRA Permits Section and received a written approval authorizing the new storage area. The notification must include a description and storage capacity of the proposed new area.

**C. EXPANSION IN SIZE OR CAPACITY OF AUTHORIZED STORAGE AREAS**

Any existing storage area modification or expansion in capacity over and above what is authorized in this approval requires notification and response from EPA according to the procedures outlined in III. B. of these conditions.

**D. GENERAL PCB/TRU STORAGE REQUIREMENTS**

1. Storage of PCB/TRU waste must comply with 40 C.F.R. § 761.65(c)(5) and (c)(6) (Storage for disposal).
2. The PCB/TRU waste must be received in sealed DOT Type B Package containers.
3. All PCB containing DOT Type B Packages, transport vehicles, and storage areas must be properly marked in accordance with 40 C.F.R. § 761.40.
4. All PCB Items must be identified in the WIPP Waste Information System to show the date of waste certification for disposal. This electronic database must show the date a PCB Item was removed from service for disposal and the date the PCB Item was sent to the Facility for disposal. This information must be provided to EPA upon request.
5. The Facility may store PCB Items for up to 60 days in the approved storage areas listed in condition III. A. above.

#### **E. PCB/TRU STORAGE AREA OPERATING REQUIREMENTS**

1. If manifest discrepancies are noted, the PCB Items must be placed either in a storage area of the WHB on a Facility pallet, or inside an approved DOT Type B Package and placed either in the WHB or Parking Area Unit.
2. Adequate aisle space must be maintained in all WHB Unit PCB/TRU waste storage areas to allow unobstructed movement of fire-fighting personnel, spill-control equipment, and decontamination equipment.
3. Waste containers may not be stacked more than two containers high in the approved storage areas, and not more than three containers high in the disposal Panels.

#### **IV. PCB/TRU DISPOSAL REQUIREMENTS**

##### **A. GENERAL OPERATING REQUIREMENTS**

The handling and disposal of PCB/TRU waste must comply with the applicable portions of 40 C.F.R. Part 761 except where waivers or exemptions have been granted either through regulation, this approval, or in writing by EPA.

##### **B. PCB/TRU DISPOSAL OPERATING REQUIREMENTS**

1. PCB/TRU waste must be received into the WHB through one of the three air-lock entries.
2. PCB/TRU waste must only be transported underground through the “waste shaft” vertical transport shaft from the WHB, and placed in the designated disposal Panel using standard procedures as defined in the Hazardous Waste Facility Permit (HWFP).
3. Waste volumes in Panel 2 and Panel 3 must not exceed 636,000 cubic feet, or 86,500 55-gallon drum equivalents in each Panel.
4. All PCB/TRU waste shipments that are not sampled must be considered to contain a PCB concentration greater than 500 parts per million (ppm).
5. PCB/TRU waste disposal records and reports must be prepared and maintained in accordance with the regulations appropriate to the Facility pursuant to Part 761, Subpart K (PCB Waste Disposal Records and Reports).
6. Management and disposal of PCB/TRU waste at the Facility must be



consistent with the disposal operations for TRU mixed waste as defined by Modules I, II, III, and IV of the effective HWFP issued by the New Mexico Environment Department (NMED) pursuant to 20.4.1.500 NMAC incorporating 40 C.F.R. § 264.600, Subpart X (Miscellaneous Units) of the Resource Conservation and Recovery Act (RCRA).

## **V. CLOSURE AND POST-CLOSURE CARE**

### **A. CLOSURE PLAN REQUIREMENTS**

1. The owner/operator must comply with the Closure Plan requirements pursuant to 40 C.F.R. § 761.65(d)(3)(viii).
2. Closure must comply with requirements for closure as specified by the HWFP issued by the NMED.

### **B. NOTICE OF CLOSURE**

The owner/operator must notify the EPA Region 6 OK/TX RCRA Permits Section 30-days before closure of a disposal Panel is to begin along with any proposed changes to the closure plan.

### **C. POST-CLOSURE CARE**

1. Records required under 40 C.F.R. § 761.180(d) and (f) must be maintained for the times specified for closed disposal Panels.
2. Post-closure care of closed panels must comply with the requirements of the effective HWFP issued by the NMED.

## **VI. STANDARD APPROVAL CONDITIONS**

### **A. SEVERABILITY**

The conditions of this authorization are severable, and if any provision of this authorization, or any application of any provision, is held invalid, the remainder of this authorization shall not be affected thereby.

### **B. DUTY TO COMPLY**

The owner/operator must comply with all Federal, State, and local regulations, approvals, and permits including the effective HWFP issued by the NMED.

**C. PERSONNEL SAFETY**

The Facility personnel safety requirements and procedures for PCB handling, storage, transport, and disposal must comply with OSHA requirements.

**D. DUTY TO MITIGATE**

The owner/operator must correct any adverse impact on the environment resulting from noncompliance with this approval.

**E. OPERATION AND MAINTENANCE**

1. The owner/operator must at all times properly operate and maintain all systems of treatment and control (and related appurtenances) which are installed and used to achieve compliance with these Conditions of Approval. Proper operation and maintenance include effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures.
2. The owner/operator must provide training for employees that handle, transport, store, and/or dispose of PCB TRU waste. Training must include the kind described in Attachment H of the HWFP from the NMED as modified to include PCBs, the General Employee Training (GET) course as modified to include PCBs, and the Hazardous Waste Worker and Hazardous Waste Responder training as modified to include PCBs.

**F. TRANSPORT**

1. All transport vehicles owned or contracted by the owner/operator used for the transport of PCBs must be properly maintained, inspected, and certified in writing by a responsible official as meeting applicable safety standards under the DOT regulations before PCBs are transported on public highways. Copies of all safety certifications must be kept by the Facility or by the contracted carrier, and shall be available to EPA for review upon request. Transporters of PCB waste must notify EPA of their PCB waste activities by filing EPA Form 7710-53, "Notification of PCB Activity," prior to engaging in PCB waste handling activities.
2. All PCB waste must be shipped in DOT Type B Packages licensed by the Nuclear Regulatory Commission (NRC) with various configurations of containers meeting the DOT Type A drums and containers or other containers authorized by the NRC packaging Certificate of Compliance.

**G. DUTY TO PROVIDE INFORMATION**

1. The owner/operator must provide any relevant information which EPA may request to determine whether cause exists for modifying, revoking, reissuing, or terminating this approval, or to determine compliance with this approval.
2. Upon request, the owner/operator must provide copies of records required to be prepared and maintained by the TSCA PCB regulations at this Facility.

**H. INSPECTION AND ENTRY**

The owner/operator must allow an authorized representative, including contractors of EPA, upon presentation of credentials and/or other documents as may be required by law, to:

1. enter the Facility where PCBs are being handled, stored, or disposed,
2. have access to and copy, at reasonable times, any records that must be prepared and maintained by the TSCA PCB regulations or these Conditions of Approval,
3. inspect any facilities, equipment (including monitoring and control equipment), practices, or operations required under these Conditions of Approval or the TSCA PCB regulations, and
4. sample or monitor for the purpose of assuring that the Facility is operating in compliance with these Conditions of the Approval or the TSCA PCB regulations.

**I. MONITORING AND RECORDS**

1. All PCB records, documents, and reports required to be prepared and maintained by these Conditions of Approval and the PCB regulations must be maintained at the Facility, and must be made available for inspection by authorized EPA representatives.
2. The owner/operator must maintain records of PCB/TRU waste in accordance with 40 C.F.R. § 761.180(b).
3. Facility operating records of PCB/TRU waste disposal must be maintained as defined in the WIPP HWFP Module I.I. and IV.H.2. All records required by 40 C.F.R. Part 761 and this approval must be written in ink, typed, or put into electronic format. Any modification or correction of the records must be initialed

and dated by the supervisor in charge.

**J. NOTICE OF TRANSFER OF OWNERSHIP**

The owner/operator must notify EPA at least thirty (30) days before transferring ownership of the Facility. The owner/operator must also submit to EPA at least thirty (30) days before such transfer a notarized affidavit signed by the transferee stating that the transferee shall abide by the terms of this approval.

**K. TWENTY-FOUR HOUR REPORTING OF NONCOMPLIANCE**

1. If at any time the owner/operator finds it is in non-compliance with these Conditions of Approval, and that non-compliance may pose a risk to human health or the environment, it must notify the EPA Region 6 OK/TX RCRA Permits Section by telephone within 24 hours, and must submit a written report within five (5) work days.
2. If at any time the owner/operator finds it is in non-compliance with these Conditions of Approval, and that non-compliance does not pose a risk to human health or the environment, it must notify the EPA Region 6 Toxics Enforcement Section by telephone or e-mail within 24 hours, and must submit a written report within five (5) work days. E-mail messages must confirm successful delivery by return e-mail.

**L. OTHER INFORMATION**

If the owner/operator finds that it has failed to submit any relevant facts in its application, or submitted incorrect information in any report to EPA, it must promptly submit such facts or information to the EPA Region 6 OK/TX RCRA Permits Section.

**M. EMERGENCY PROCEDURES**

1. The owner/operator must maintain an adequately trained onsite RCRA emergency coordinator to direct emergency procedures which could result from fires, explosions or releases of PCB containing waste at the Facility. The owner/operator must submit the name and qualifications of the emergency coordinator within sixty (60) days of the effective date of this approval.
2. The owner/operator must maintain in good working order any equipment required to deal with onsite emergencies.
3. The owner/operator must comply with the WIPP Contingency Plan included in Attachment F of the HWFP which describes detailed emergency response actions to incidents involving TRU waste as modified to include incidents involving

PCB/TRU waste.

4. The owner/operator must provide emergency response training to its emergency response personnel as required by Attachment H of the Facility HWFP.

**N. SPILLS**

1. PCB spills occurring at the Facility or from any onsite transport vehicle, must be cleaned up according to the PCB Spill Cleanup Policy, 40 C.F.R. Part 761, Subpart G. Any PCB spills must be reported in accordance with Subpart G.
2. If spills cannot be cleaned up within the time required by the PCB Spill Cleanup Policy, the owner/operator must notify the EPA Region 6 Toxics Enforcement Section of the circumstance of the spill, the estimated time of cleanup, and a justification for the delay of the cleanup. The EPA may order cessation of PCB disposal at the Facility if spills are not cleaned up in accordance with the PCB Spill Cleanup Policy.

**O. DUTY TO NOTIFY**

The owner/operator must notify the EPA Region 6 OK/TX RCRA Permits Section in writing at least thirty (30) days prior to any planned physical or operational change related to PCB handling and disposal that may require modification of this approval.

**P. EFFECTIVE DATE**

This approval becomes effective on May 15, 2003, and expires at midnight, the same day and month, five years after. Please re-apply for re-authorization one year before the expiration date.

**END OF APPROVAL CONDITIONS**