

**SECTION C – STATEMENT OF WORK
FOR THE
ADVANCED MIXED WASTE TREATMENT PROJECT (AMWTP)**

A. Introduction

BBWI shall continue to retrieve, characterize, treat and dispose of primary wastes involved in this effort, which are DOE laboratory and processing wastes from Rocky Flats and various DOE facilities. These wastes are currently stored in drums, boxes, and bins at the Idaho National Laboratory (INL) Transuranic Storage Area (TSA). The wastes may consist of, but not limited to, heterogeneous mixtures of various solid materials including paper, cloth, plastic, rubber, glass, graphite, bricks, concrete, metals, nitrate salts, process sludge, miscellaneous components, and some absorbed liquids.

The waste is believed to contain both RCRA hazardous waste constituents and radioactivity, hence classifying it as a “mixed waste.” Some wastes may also contain TSCA regulated materials such as PCBs and asbestos. In addition, the waste is broken down into three categories, based upon the level of radioactivity. The first is classified as low-level waste which contains alpha-emitting radionuclides with an atomic number greater than 92 and half-lives greater than 20 years, at concentrations between 10 - 100 nCi/g, referred to as alpha mixed low-level waste (AMLLW). Second, low-level waste that may or may not contain alpha-emitting radionuclides with an atomic number greater than 92 and half-lives greater than 20 years, at concentrations lower than 10 nCi/g, referred to low-level waste (LLW). Lastly, the other category is referred to as Transuranic (TRU) waste. Waste in this classification contains alpha-emitting radionuclides with an atomic number greater than 92 and half-lives greater than 20 years, at concentrations greater than or equal to 100 nCi/g. Currently the INL has the majority of DOE’s stored AMLLW and TRU waste.

The estimated volume (m3) of wastes remaining on February 21, 2005:

TRU: 42,880 m3

AMLLW with activity levels 10-100Ci/gm: 1,470 m3

MLLW with activity levels <10nCi/gm: 10,679 m3

B. Project Support:

The Project Management Plan (PMP) (ICP/EXT-05-00843 Revision Draft B) dated March 29, 2005, describes how BBWI shall perform its waste processing activities. This PMP should be updated to include a detailed, resource loaded project schedule tied to waste volumes showing waste retrieval, characterization, certification activities and the specific number of shipments BBWI shall make to

WIPP each week under this contract. DOE will rely on and use the schedule contained in the PMP to make available transportation assets supporting shipments to WIPP.

The contractor shall develop and submit an AMWTP contract baseline and a project execution plan (PEP). The baseline shall be developed in accordance with DOE Order 413.3 and include the scope, cost, and schedule for the entire contract baseline. The contract baseline shall conform to the DOE provided Work Breakdown Structure (attached) and contain project cost estimates (i.e. BCWS) that are consistent with the negotiated estimated cost. The baseline shall be submitted to DOE-ID for approval by June 15, 2006. This lifecycle baseline will reflect completion of disposal activities by the end of Fiscal Year 2012.

The PEP shall be developed utilizing the format prescribed in DOE M 413.3-1. The plan shall include the contractor's approach to management of the cost and schedule baseline, risk management, performance measurement, earned value management, baseline change control, resource loaded schedule with associated work breakdown structure, and project reporting. The project execution plan shall be submitted to DOE-ID for approval within one month of execution of this contract.

Project Report - BBWI shall submit monthly status reports on or before the 15th of each month. The status shall include cost and schedule variance at a suitable WBS level, and critical technical or programmatic issues.

The contractor shall implement, using a graded approach, all List B requirements. A detailed schedule for implementation shall be issued to DOE-ID within one month of execution of this contract.

C. Waste Processing Activities

BBWI shall retrieve waste from the Radioactive Waste Management Complex (RWMC); transport the waste between the RWMC and the AMWTP facility; perform pre-treatment characterization of the waste necessary for storage and/or treatment; storage; treatment; post-treatment characterization as necessary to certify the final waste form; preparation of the waste for shipment; loading of TRUPACT II containers or other approved transport carriers loading of containers on approved transport carriers; coordinating the shipment of TRU waste to the Waste Isolation Pilot Plant (WIPP); and as necessary, support audits/surveillances for Carlsbad Field Office (CBFO) certification. Consistent with these activities, BBWI shall continue to achieve optimum volume reduction of waste through sorting, supercompaction, or other means to minimize space demands at disposal facilities. Transportation of DOE waste to WIPP is the responsibility of DOE. Waste shall be treated to meet the requirements of the then current version of the WIPP Waste Acceptance Criteria (WIPP WAC), and other current versions of

WIPP-related documents. BBWI is responsible for transporting MLLW and LLW to offsite disposal locations, and disposal of the process-generated waste from its AMWTP operations.

BBWI shall maintain certification authority granted to AMWTP by DOE-CBFO in order to dispose of transuranic waste at the WIPP. As part of this effort, BBWI shall maintain good communications with both CBFO and WIPP management and operations contractor to minimize misunderstanding between the parties.

BBWI shall follow the DOE policy for efficient use of TRU waste transportation resources. This policy requires shipping sites to ship the maximum number of loaded packages (i.e., three TRUPACT-II or two TRUPACT-II and on HalfPACT) per shipment with minimal dunnage containers and the maximum amount of waste. All over-packed shipping configurations require specific approval from CBFO. Exceptions to this policy are payloads restricted by the WIPP WAC due to weight or Fissile Gram Equivalent (FGE) limitations, as identified in a memo issued by EM-3 dated June 21, 2005. Other exceptions may be obtained from the CBFO, Director of the Office of Characterization and Transportation.

AMWTP Activity Approximate Distribution

Waste Form	TRU >100 nCi/g	10 -100 nCi/g	<10 nCi/g
Debris Boxes (33,330 m3)	75% 25,005	6% 1,998	19% 6,327
Inorganic Homogeneous Solids (7,637 m3)	90% 6,873	5% 382	5% 382
Organic Homogeneous Solids (3,180 m3)	60% 1,908	17% 541	23% 731
Debris Drums (10,882 m3)	50% 5,442	10% 1,088	40% 4,352
Total	71% 39,228 m3	7% 4009 m3	22% 11,792 m3

Planned Approach for Treatment and Disposal

Waste Form	TRU >100 nCi/g	10 -100 nCi/g	<10 nCi/g
Boxes (33,330 m3)	81% 27,003	-	19% 6,327
Inorganic Homogeneous Solids (7,637 m3)	95% 7,255	5% 382	-
Organic Homogeneous Solids (3,180 m3)	100% 3,180	-	-
Debris Drums (10,882 m3)	50% 5,442	10% 1,088	40% 4,352
Total	78% 42,880 m3	3% 1,470 m3	19% 10,679 m3

BBWI shall make every effort to ship payload configurations that maximize the utilization of the WIPP disposal capability, as determined by CBFO. BBWI shall, to the best of their ability, assemble shipments that contain a mixture of payloads that can be disposed in an efficient arrangement in WIPP. The mixture of payloads can either be 10-drum overpacks (TDOPs), direct-shipped 55-gallon drums, direct-shipped 85-gallon drums, direct shipped 100-gallon drums or standard waste boxes (SWBs).

The documents listed below contain information relating to the wastes to be treated under this contract. These documents are reference material only.

- a. Waste Description Information for Transuranic Contaminated Wastes Stored at the INEEL (Dec. 1995)
- b. Appendix A Detailed Information for Mixed and Non-mixed Alpha Low Level Waste (Dec. 1995)
- c. Appendix B, Detailed Information for Mixed and Non-mixed Transuranic Waste (Dec. 1995)
- d. Characterization Information on Additional INEEL and Offsite Transuranic Contaminated and Mixed Low-Level Waste Potentially Available for Treatment by the Advanced Mixed Waste Treatment Project (Sept. 1995)
- e. Current Version of the INEEL Site Treatment Plan
- f. 216 and 218 Acceptable Knowledge summaries and other Acceptable Knowledge Reports approved prior to May 1, 2005

In addition to the waste identified in the above documents, other potential waste to be treated may include contaminated soil, contaminated plywood and plastic, DOE environmental restoration and D&D wastes.

At any point, DOE-ID may opt to add waste volume for treatment and disposal whether from on or off-site locations.

Specific activities supporting waste processing include:

1. Retrieval

Retrieval refers to the recovery of INL stored waste from the earthen covered berms located within the Transuranic Storage Area/Retrieval Enclosure, and the RCRA Type I and II storage modules.

Soil cover removed from the bermed waste must be dispositioned in accordance with the Soil Sampling and Disposition Plan for the Transuranic Storage Area - Retrieval Enclosure (Revision 2), April 26, 2004.

BBWI shall analyze the hazards identified in the recent ARP drum event and take necessary steps to ensure retrieval is performed in a manner that protects all workers from these hazards.

2. Characterization

BBWI must perform all pre-treatment characterization for INL waste to be transported and for all wastes to be treated or stored. BBWI must also perform all post-treatment characterization and certify the waste meets all requirements. Any waste that the Parties mutually agree cannot be treated must be characterized as required by the INEEL RWMC RCRA Part B permit for storage and/or to meet the WIPP WAC, Revision 1 and other WIPP-related documents, requirements, or other mutually agreed upon disposal requirements.

BBWI shall be responsible for the management and payment for equipment and labor associated with operation and maintenance of Central Characterization Project (CCP) mobile units necessary to perform the AMWTP and Idaho Completion Project (ICP) work at a throughput of 200 drums/week. BBWI is to assume CCP will support AMWTP full-time until December 2006. Thereafter, BBWI is to assume CCP support is evenly distributed (i.e. 50%) between AMWTP and ICP contractors through May 2007 and 40 drums/week for the remainder of the contract period.

This contract will be modified when, and if, the WIPP permit modification 311 is implemented.

3. Processing

BBWI shall be responsible for the requirements associated with processing TRU, mixed low level (MLLW), and low level (LLW) waste. Treated waste greater than or equal to 100 nCi/g must meet minimum requirements of the latest version of the WIPP WAC, other WIPP-related documents, and TSCA requirements. Treated waste greater than 10nCi/g and less than 100 nCi/g that cannot be shipped to WIPP shall be disposed of off site; preferably the Nevada Test Site (NTS). Certain LLW may be disposed of on site through ICP contract. BBWI shall certify that the waste has been treated to these requirements. BBWI is responsible for process-generated wastes and all RCRA hazardous waste newly generated by BBWI in performing its waste treatment operation. Process Generated Hazardous Waste is defined as wastes, which are newly generated as a result of waste processing, maintenance operations, or equipment change out. Process generated hazardous wastes are those wastes that are generated from the operation and maintenance of the treatment and other facilities. Examples of process generated hazardous waste may include, but are not limited to, cleaning solvents used during maintenance, rags, contaminated clothing, and failed equipment parts. Process generated hazardous wastes are the responsibility of the Contractor. These wastes must be disposed of in accordance with regulatory requirements.

BBWI must establish management controls for verification of volume input and output to the AMWTP facility. These controls must track material flows sufficiently to provide the supporting information necessary to establish that contract performance meets all requirements.

4. Storage

BBWI is responsible for the safe and compliant storage of all wastes, both pre- and post- treatment, until transported offsite (returned to generator or disposed of) within the following areas:

AMWTP areas:

- TSA-RE
- Storage Modules
- Centralized Characterization Project (CCP) waste originated at AMWTP
- In-process generated waste
- Waste transferred to AMWTP from other areas of the INL

- Waste transferred from AMWTP to the INL

5. Packaging and Transportation

BBWI is responsible for transfer of the pre-treated waste containers and the waste product containers within the RWMC, and for the packaging and loading of the treated waste form for transport off-site. BBWI shall provide all transportation coordination related to the scheduling, inspection, notification, tracking, and reporting of waste shipments. If BBWI elects to treat, recycle or dispose of a category of waste at a commercial facility, BBWI is responsible for the packaging, transportation, and disposal costs for that waste.

Packaging and transportation must meet all Federal and state regulatory requirements and be consistent with BBWI's approach to on-site or off-site treatment. Waste can be transported from the TSA and other structures at the RWMC to the AMWTP Facility without further treatment to meet DOT requirements.

BBWI must time any planned facility maintenance outages with planned WIPP maintenance outages and other planned shipping curtailments to avoid any complex-wide impacts to the TRU shipping program.

The TRU final waste form must be packaged in containers that can be shipped in the TRUPACT II shipping container (NRC certificate of compliance #USA/9218/B(U)F) or other DOT-approved transport containers. These specifications are identified in the latest version of the WIPP WAC. Non-TRU final waste forms must be packaged in DOT approved containers.

DOE must agree to the final WIPP shipping schedule and number of monthly shipments. The BBWI PEP shipping schedule shall form the basis for the 4-month WIPP shipping schedule, however BBWI shall comply with the DOE approved WIPP shipping schedule.

DOE will provide transportation to WIPP or any other TRU storage/disposal facility to support the final waste form certification schedule contained in the PMP.

BBWI shall package CWI waste destined for disposal at WIPP and will be reimbursed by CWI.

BBWI shall obtain certification no later than December 31, 2006, to ship MLLW to the NTS in accordance with the NTS WAC. All existing backlog of MLLW (~125m³) shall be disposed of by May 31, 2007.

Any secondary waste generated by BBWI during the contract period shall be disposed of within one year of generation.

D. Integrated Safety Management System (ISMS) and Environmental Safety and Health Program (ES&H)

BBWI shall establish and maintain a single ISMS to accomplish all work as required by DEAR 970.5223-1, *Integration of Environment, Safety and Health into Work Planning and Execution*. BBWI's ISMS shall ensure safety and environmental protection considerations are integrated throughout the entire work planning and execution process and shall extend through the execution of individual work packages where job-site safety is ensured for each worker. BBWI shall ensure that the principles of ISMS serve as the foundation of the implementing mechanisms for work at the site. BBWI shall ensure that the structure of requirements to achieve nuclear safety is based on sound principles such as defense in depth, redundancy of protective measures, robust technical competence in operations and management oversight, and compliance with DOE Directives embodying nuclear safety requirements.

BBWI shall maintain an ES&H program to ensure the protection of the workers, the public and the environment. BBWI's ES&H program shall be operated as an integral, but visible, part of how the contractor conducts business. This includes prioritizing work planning and execution, establishing clear ES&H priorities, allocating resources to address programmatic and operational considerations, collecting and analyzing samples, correcting non-compliances and addressing all hazards for all EM facilities, operations and work. BBWI shall ensure that cost reduction efforts and efficiency efforts are fully compatible with ES&H performance.

BBWI shall submit a compliant ISMS program description document by July 31, 2006, to be validated by DOE and be ready to support a Phase I and Phase II ISMS validation not later than September 30, 2006.

BBWI shall ensure that all required life safety, occupational medicine, fire protection, operational and emergency response, and other institutional safety programs are provided throughout the life of the contract.

BBWI shall conduct all activities in compliance with environmental protection requirements including, but not limited to, those listed on the List of Applicable DOE Directives. BBWI shall take all actions necessary to preclude accidents and injuries, keep worker exposures as low as reasonably achievable, and prevent environmental releases. BBWI shall promptly respond to operational events and environmental releases.

BBWI shall maintain safety analysis documents. BBWI shall, at contract award, adopt existing regulatory required implementation plans and processes e.g., 10 CFR Part 835 Radiation Protection Plan (RPP), 10 CFR Part 830 Quality Assurance Implementation Plan, and Unreviewed Safety Question Process. BBWI may elect to update the adopted plans and resubmit them for DOE approval.

E. Quality

BBWI shall maintain a robust and compliant Quality Assurance Program that meets all applicable Federal, state, and local requirements, including 10 CFR 830.120, the WIPP Hazardous Waste Facility Permit, and the current version of the CBFO Quality Assurance Program Document.

BBWI is expected to improve the conduct of operations and software quality assurance controls necessary to improve productivity, safety, predictability and reliability. Necessary improvements should be identified and executed early within the contract to affect the most optimum return.

F. Permit Compliance

BBWI shall ensure that they remain compliant with the current versions of Permits. This includes maintenance of all personnel, training, equipment, facilities, and procedures in a compliant state. RCRA issues relating to the integrity of floors in storage structures shall be remedied during the term of the contract.

G. Laboratory Sampling and Analysis

BBWI shall reimburse costs related to all onsite and offsite analyses of samples associated with operation of the facility. In addition, BBWI shall reimburse other DOE on-site contractor's (BEA/CWI) for maintaining laboratory service continuity at the INL to include the relevant laboratory work at Central Facilities Area and INTEC.

H. Support to Permanent AMWTP Contractor

As further directed by the Contracting Officer, BBWI shall support activities that transition the work from BBWI to a successor AMWTP contractor.

I. AMWTP Government Furnished Equipment/Services/Items

All facilities and equipment currently used for safe and efficient operation of the AMWTP will continue to be provided to BBWI as Government Furnished Equipment (GFE). By June 1, 2006, BBWI shall submit a plan and implementation strategy for DOE approval of the preferred option identified within the AWMTP vehicle study in order to reduce the DOE-ID baseline beginning not later than September 30, 2006.

DOE will supply TRUPACTs, trucks, trailers, and drivers for shipment of TRU waste to WIPP throughout the contract period per the agreed upon WIPP shipping schedule.

DOE will supply a high-energy neutron counter (SuperHenc). BBWI will specify need date and operations plan as part of the life cycle baseline submission.

DOE will review and approve Authorization Basis documents within 30 days of receipt of an acceptable document, such as an Annual Update Document Safety Analysis (DSA).

J. Waste Not Included in the Estimated Cost

The following work is not included in the estimated cost of the contract. Separate funding will be identified. As directed by DOE-ID, BBWI is to assume responsibility for other INL waste or other waste from off site sources as allowed by applicable permits. The waste may include ICP, INL, NR generated or managed waste and other TRU waste identified by DOE-ID. In accordance with the Site Treatment Plan, waste must be treated within six months and disposed offsite within one year. BBWI shall account for all treated and disposed waste volumes. BBWI will be expected to support this work in addition to the obligations of their scope of work with no impact

K. Contract Shipping Requirements:

Vi-m ³	FY06 – 5 months	FY07 – 12 months	FY08 – 7 months	Total Contract Quantity
TRU to WIPP*	3,850 m ³	7,300m ³	4,350m ³	15,500m ³

*BBWI must comply with the DOE approved WIPP shipping schedule based on the weekly shipping rate averaged over a rolling month.

L. Attachments:

Work Breakdown Structure