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Waste and Decontamination Services FY 94 Multi-Year Program Plan Phase II WBS #1.2.3

E. A. Cruz

Date Published
May 1994

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Waste Management

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Hanford Company**

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Richland, Washington 99352

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WASTE AND DECONTAMINATION SERVICES PROGRAM FY 1994 MYPP PHASE II 1.2.3

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ATTACHMENT 4

Section I

Program Overview and Technical Basis

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1A. Program Vision/Mission

VISION

The vision is to provide excellent decontamination and liquid transfer services, safely and effectively meeting the needs of the Hanford Site.

MISSION

During the remediation of the Hanford Site, large volumes of radioactive and mixed solid waste are expected to be produced thus creating the need for subsequent decontamination, treatment, storage, and/or waste disposal. The program mission is to manage current and future contaminated solid waste streams in a safe, responsible, cost effective and legally compliant manner, accomplished through the following:

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1A. Program Vision/Mission

● Waste and Decontamination Services (WDS)

- Provide disciplined, safe, environmentally sound, and cost effective waste management.
- Decontamination Services, presently utilizing the T Plant facilities to decontaminate customer and legacy equipment and structures for re-use, recycle, or safe disposal. New decontamination technologies will be explored and utilized.
- Waste Transfer Services, accomplished primarily through the use of existing and new Liquid Waste Tank Cars.
- Containerized Waste Characterization, Segregation, and Repackaging Services; presently utilizing T Plant facilities in a program to minimize the volume and environmental impact of dangerous waste. T Plant facilities are currently being reviewed in regard to suitability for continued use in these programs.

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1A. Program Vision/Mission

- **Customer Services**

- WDS will provide technical and operational expertise in decontamination services and other services to maximize protection to personnel and the environment, and minimize costs during Hanford Site Restoration.

- **Spent Fuel Services**

- WDS will provide safe interim storage while planning for the disposition of the 72 irradiated fuel elements from the Shippingport Pressurized Water Reactor (PWR) Core II.

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1B. Mission Strategy

To accomplish the program mission, WDS proposes to become technical and operational experts in decontamination services at the Hanford Site through training, communication with other DOE sites, and operational experience. WDS will minimize cost to the customer and maximize the efficiency of the Hanford Site Restoration Mission by careful allocation of resources through the following:

- **Meet waste minimization goals by developing repackaging techniques, waste source control, planning, and recycling.**
- **Ensure compliance with safety and regulatory requirements by continuous monitoring and review of activities and facilities.**

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1B. Mission Strategy

- **Maintain ALARA goals by continued training, monitoring, and engineered radiological safety improvements.**
- **Continue waste forecasts, customer integration studies, shipment verifications, on-time processing/shipments, and incorporate results of the Long Term Decontamination Engineering Study.**
- **Assure continued service through value engineering and economic analysis of facilities and processes.**

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1B1. Technical Requirements

Technical Requirements enable WDS to meet the Hanford Mission Plan (HMP) commitment to serve as the DOE model in site restoration, requiring the evaluation/incorporation of new technological advances as they are appropriate to the accomplishment of the restoration mission. WDS Technical Requirements are driven by a variety of State and Federal Regulations including, but not limited to, the regulations referenced in the following:

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1B1. Technical Requirements

- **Implement operations for waste treatment, size reduction, and repackaging, as required in 40 CFR 260 "Hazardous Waste Management Systems, 57 FR 37914 "Debris Rule", WAC 173-303 "Dangerous Waste Regulations", and WAC 173-307 "Hazardous Waste Reduction Regulations".**
- **Initial requirements include the procurement and installation of treatment/decontamination equipment and emplacement of procedures to assure minimal waste by-product generation. Modifications to WDS facilities must be completed to improve safety, handling capabilities, and equipment access. Radiological survey equipment must be procured and procedures established for post-treatment assay and categorization of waste.**

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1B1. Technical Requirements

- **Transfer liquid waste from WDS and other site facilities per 49 CFR 173 (DOT Equivalent) "General requirements for Shipping and Packaging", and DOE 5480.3 "Safety Requirements for the Packaging and Transportation of Hazardous Waste".**
 - **Requirements include the procurement of Liquid Waste Tank Cars (LWTCs) and periodic recertification of all LWTCs to maintain regulatory compliance and enhance personnel safety.**

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1B1. Technical Requirements

- **Continue to implement personnel safety and environmental training to ensure facility compliance with 29 CFR 1910.120 "OSHA Training Schedule", WAC 173-303 "Dangerous Waste Regulations", and DOE 5480.19 "Conduct of Operations Requirements for DOE Facilities", DOE 5480.20 "Personnel Selection, Qualification, Training, and Staffing Requirements at DOE Reactor and Non-Reactor Nuclear Facilities".**
 - **Specific training requirements include surveillance, waste handling, decontaminations, emergency response, and conduct of operations. Procedure and documentation upgrades will be performed as required to maintain currency and to optimize safety.**

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1B1. Technical Requirements

- **Store the irradiated fuel rods located at T Plant in accordance with DOE 5400.5 "Safety of Nuclear Facilities", and DOE 5820.2A "Radioactive Waste Management".**
 - WDS will store the Shippingport PWR Core II fuel until alternative storage, such as dry storage, is determined and implemented. Requirements include Support to Programmatic Environmental Impact Statement, pool maintenance, and radiological surveys to provide maximum safety for personnel and the environment.
- **Upgrade the existing electrical system in accordance with 29 CFR 1910.301-399 (OSHA) and the National Electric Code.**
 - Upgrades to the T Plant 271-T electrical distribution system are required to improve worker safety and system reliability.

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1B1. Technical Requirements

- **Perform required decontamination facility forecasts as required in DOE 5820.2A "Radioactive Waste Management".**
 - WDS will conduct the forecasts necessary to determine the Hanford Site's current and future requirements. Forecast requirements include a long-range contaminated equipment forecast to determine the quantity of material to be decontaminated; a study of T Plant's viability (structural and otherwise) as a long term decontamination facility, and a study of planned facility capabilities. Results of these forecasts/studies will be cross-analyzed to determine long-term decontamination facility needs at Hanford.
- **Complete the T Plant Ventilation system upgrades as required by 29 CFR 1910.94,107 "Ventilation", 40 CFR 61 "Radiation Emission Standards" WAC 296-155 (State OSHA) "Ventilation", and ALARA considerations.**
 - WDS will perform the planned upgrades to the ventilation system to improve personnel safety (radiological/industrial). Requirements include system design, procurement and installation of new supply and exhaust fans and air circulation contamination control.

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1B1. Technical Requirements

- **Complete the T Plant secondary containment upgrade to comply with Tri-Party Agreement milestone M-32-03, "Complete T Plant Tank Actions," WAC 173-303 "Dangerous Waste Regulations," and 40 CFR 264 (RCRA) requirements to provide tanks and pipes storing or transporting hazardous material with secondary containment and leak detection. Upgrades include secondary containment and required leak detection systems.**

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1B2. Key Objectives

- **Ensure safety**
 - Continue operational and radiological surveillances of all systems and grounds. Submit daily/weekly/monthly reports, as required.
 - Continue Conduct of Operations training and implementation, Operator Certification, and Building Emergency Orientation. Maintain training packages and validate by on-the-job training (OJT).
 - Continue the Safety Analysis Report (SAR) development. Incorporate the hazards classification and approved Operational Safety Requirements for the T Plant facilities.
 - Continue the Radiological Zone Reduction program under a graded approach. Develop and implement identified Radiological Control Manual requirements.
 - Continue to maintain the existing pool and ancillary equipment, in support of the interim storage of 72 irradiated fuel elements from Shippingport PWR Core II. WDS will continue to support the Hanford Site planning for removal and final disposition of irradiated fuels.

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1B2. Key Objectives

- Continue the Electrical Distribution System Upgrade planning to replace aging electrical distribution components, including motor control centers and transformers. This upgrade is key to the continued usage of the 271-T office/maintenance facility.
- Continue 221-T HVAC upgrade to replace key ventilation components in the T Plant Canyon.
- Provide and maintain Treatment, Storage, and Disposal (TSD) facilities for the management of radioactive and hazardous wastes on the Hanford Site.
- Manage all generated and accepted waste compliantly and ensure that WDS processes will not pose an unacceptable threat to human health and safety or to the environment.
- Continue acceptance and disposition of the Tank Farms "Unknown" and "Suspect" waste.
- Continue disposition of the Tank Farm/PUREX/B Plant backlog failed equipment in the T Plant Canyon.

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1B2. Key Objectives

- Complete the FY 1994 and 1995 Forecast, which will determine the amount and types of wastes to be received by WDS in FY 1995.
- Complete the Outyear Treatment Forecast, which will determine the amount and types of decontamination services required for the Hanford Site for the next 30 years.
- Complete the Long-Term Decontamination Engineering Study, which will address:
1) capacity requirements, 2) regulatory compliance and requirements of a decontamination facility, 3) T Plant Compliance assessment, 4) viability requirements for T Plant to continue decontamination support, 5) alternative decontamination facility options, and 6) an economic evaluation of all alternatives.

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1B2. Key Objectives

- **Continue on schedule performance for workscope in support of the Hanford Federal Facility Agreement and consent Order (Tri-Party Agreement) and Washington State Department of Ecology (Ecology) Compliance Schedules.**
 - **Continue support to the Liquid Effluent Project W-291 "200 Area BAT/AKART Implementation" in support of M-17 milestones to cease liquid discharge to the ditches.**
 - **Continue compliance upgrades/modification and application assembly for M-20-51 "T Plant Part B Permit."**
- **Complete the conceptual design in support of M-32-03 "Complete T Plant Tank Actions."**
- **Complete acceptance and disposition of the Tank Farm backlog waste containers.**

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1B2. Key Objectives

- **The Washington State Department of Ecology (Ecology) approved the Interim Status (Part A Application) for waste treatment and storage at the T Plant Complex. Ecology stipulated that milestones contained in M-32-03 must be completed as scheduled or interim status would be revoked and penalties assessed. Milestones include:**
 - **Complete Conceptual Design Report W-259 for T Plant tank system upgrades, Tri-Party Agreement M-32-03-T02, 4/30/94.**
 - **Install level indication device for 211-T tank, Tri-Party Agreement M-32-03-T05, 6/30/94.**

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1B2. Key Objectives

- Complete modification to the 2706-T staging pad to eliminate accumulation of precipitation, Tri-Party Agreement M32-03-T04, 6/30/94.
- Submit a schedule for completion of T Plant tank system upgrades (Project W-259), Tri-Party Agreement M32-03-T03, 6/30/94 .
- Complete scheduled upgrades to T Plant tank systems (Project W-259), Tri-Party Agreement M32-03-T06, 9/30/99.
- Continue to obtain acceptable compliance with the regulatory issues as listed in section 3A.
- Continue to implement new orders via change requests.

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1B3. Key Deliverables

- **Maintain the base safe status of T Plant using a graded approach to preventive maintenance, corrective maintenance, summarization/winterization, surveillances, training, and radiological control.**
- **Complete T Plant Tank System Interim Status actions by September, 1999. Key commitments include:**
 - **Implementing inspections and leak tests for the 2706-T/211-T tanks. October, 1993 (Complete).**
 - **Completing the Tank System Upgrade Conceptual Design Report in April, 1994.**
 - **Submitting a schedule for implementation of tank system upgrades. June, 1994.**

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1B3. Key Deliverables

- Modifying the 2706-T pad to eliminate precipitation accumulation. June, 1994
- Installing a level indication device for the 221-T tank. June, 1994.
- Completing scheduled upgrades to T Plant Tank Systems (Project W-259). September 1999.
- **Maintain Decontamination Services for the Hanford Site.**
- **Complete an alternative analysis study for T Plant/New Decontamination Facility (Long-Term Decontamination Engineering Study). This analysis will evaluate alternative facilities and complete a T Plant viability study.**

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1B3. Key Deliverables

- **Complete 2706-T Operational Readiness Evaluation (ORE) by RL in FY 1994 to allow full operation at the Low-Level Decontamination facility.**
- **Complete 221-T modifications/upgrades. Major modifications include (Dependant upon the LTDES):**
 - **Construction of T Plant HVAC Upgrades.**
 - **Secondary containment/leak detection upgrades.**
- **Continue Decontamination/Repair/Repackage services, primarily involving TWRS equipment and backlog waste drums/containers as outlined in the Backlog Waste Sampling and Analysis Plans.**

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1B3. Key Deliverables

- **Provide train cars to transport liquid waste from the 340 Facility and T Plant to Tank Farms, and to serve as backup transportation for other Hanford Site Facilities.**
 - **Maintain Liquid Waste Tank Cars (LWTCs).**
 - **Procure two new LWTCs that are compliant with WAC requirements and will maintain equivalent safety and environmental compliance with DOT requirements for vessels transporting hazardous constituents.**
- **Submit Part B Permit Application in December, 1995. T Plant currently has interim status (Part A) for treatment and storage operations.**

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1B3. Key Deliverables

- **Cease all discharge to ditches 216-T-1 and 216-T-4-2 by June 1995.**
 - Continue bi-annual sampling of ditches until discharges cease, per Tri-Party Agreement requirement for the implementation of the sampling analysis plan.
 - Eliminate the PWR Core II Chiller Unit and Process Air Compressor cooling water waste streams.
- **Provide Shippingport PWR Core II Storage.**
 - Initiate planning for fuel removal.
 - Support the Programmatic Environmental Impact Statement.
 - Continue efforts currently underway to evaluate the long term dry storage/disposition of the fuel.

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1B4. Key Strategies

- **Provide long and short-term decontamination forecasts to enhance planning for program needs and identify volume, contents, and sizes requirements to ensure treatment standards are met and plant capacity is available.**
- **Continue operations under Part A Interim Status until Part B permit obtained. The Part B application must be submitted and approved for continued TSD operations.**

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1B4. Key Strategies

- Obtain funding for line items to continue upgrades and operations.
 - T Plant ventilation upgrade, C-077 (see Technical Requirements)
 - T Plant secondary containment and leak detection, W-259 (see Technical Requirements)
 - Solid Waste Processing Facility upgrade/replacement -- The alternative analysis study will provide the key decision point as to whether T Plant continues to operate as the Hanford Site decontamination facility, or a new decontamination facility will be built to take T Plant's place.

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1.C PLANNING ASSUMPTIONS

- **The Cost Account Plans and Cost Account Authorizations represent a Basis of Estimate based on the acquisition of personnel and materials as planned.**
- **Funding for waste treatment and repackaging at T Plant will be from Productivity Reallocation and Tank Waste Remediation System (TWRS). This does not include special lab, transportation packaging, and disposal charges which will still be direct funded by the generating programs.**
- **Carry over funding for ongoing safety/compliance/environmental workscope will be approved via change control. These projects were delayed due to site safety issues, and site contractor prioritization. This workscope will reduce personnel radiological exposure and enhance worker safety.**

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1.C PLANNING ASSUMPTIONS

- **The Washington Department of Ecology (Ecology), Environmental Protection Agency (EPA), and the Department of Energy, Richland Operations Office (RL) will approve the Secondary Containment and Leak Detection Interim Milestones for T Plant in January, 1994. Regulatory protection will be granted to T Plant through Tri-Party Agreement #M-32-03 for continued use of the T Plant tank and piping systems.**
- **The transfer port extension to the T Plant Canyon, for acceptance of TWRS air lances and other projected long equipment items, will utilize an engineering management plan for project planning. Funding will be provided by TWRS.**
- **Existing TWRS pumps and jumpers, and PUREX/B Plant failed equipment in the T Plant Canyon, will not be re-used by the generating facilities and will be disposed.**

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1.C PLANNING ASSUMPTIONS

- **The Liquid Effluents, Hanford Environmental Compliance (HEC) subproject W-291 "200 Area BAT/AKART Implementation" will be validated and construction will be completed by June 30, 1995.**
- **Milestones contained in M-32-03 will be completed as scheduled to prevent Ecology revocation of T Plant's Interim Status (Part A Application).**
- **Capital equipment required to implement "Debris Rule" treatment standards will be procured.**
- **Completion of the Compliance Assessment and Integrated Safety Appraisal may identify areas of noncompliance and/or partial compliance. Safety related areas of non-compliance will be reprioritized against existing funded workscope and change requests will be generated.**

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1D. Issues and Constraints

Several areas exist in which T Plant facilities are not in full compliance with state and federal requirements, industry codes and standards, and DOE orders. Corrective measures will be implemented on a graded approach to achieve compliance.

- **T Plant currently has a maintenance backlog, which can cause production delays, equipment outages. Prioritization of resources must be carefully performed to ensure plant safety.**

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1D. Issues and Constraints

- **T Plant continues to be non-compliant with the WAC-173-303 tank and piping requirements for tank systems containing dangerous wastes. A compliance schedule has been identified in Tri-Party Agreement milestone M-32-03.**
- **The Hanford Site's ability to transfer liquid waste via the rail system could be curtailed if the equivalency of current tank cars with U. S. Department of Transportation (DOT) specifications is challenged.**

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1D. Issues and Constraints

- The 221-T headend contains miscellaneous LLW, excess chemicals, and abandoned process equipment from past Hanford operations and equipment and chemicals from experiments conducted by the Liquid Metal Reactor Program during the late 60's and 70's. The Liquid Metal Reactor Program will fund the cleanup of equipment and chemicals associated with their experiments. This cleanup is scheduled to be completed in FY 1996. The remaining waste poses ALARA and industrial safety hazards incurred during the daily surveillances of the headend facilities.

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1D. Issues and Constraints

- **T Plant has a number of out-of-service process tanks which do not meet the requirements for secondary containment or leak detection. Removal of these tanks will eliminate the exposure concern to facility personnel and the environment. These include the SQ tanks, AMU (1st and 3rd floors) tanks, and two out-of-service tanker cars. Removal and disposition of out-of-service process tanks is not funded. The tanks were noted in the May 1992 NOD letter from Ecology, and are considered critically unfunded.**
- **T Plant's monitor/alarm system needs to be centralized so that a tripped alarm can be located and the trouble identified without entering a radiologically controlled area. The current system requires that personnel enter an RCA to look for the tripped alarm.**

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1D. Issues and Constraints

- **Studies of the T Plant structures and components have revealed problems and potential problems which, if not addressed, could affect the near and long term suitability of T Plant as a decontaminating facility:**
 - **Based on results of a linear two dimensional computer analysis, the beam supporting the 296-T ventilation slot in the 221-T roof is potentially overstressed. Three dimensional inelastic structural engineering analysis, deemed more appropriate to the issue, is scheduled to be performed in FY 1994, and may prove the adequacy of the existing roof.**

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1D. Issues and Constraints

- Because of age and lack of maintenance, significant repairs are required to the T Plant roof to prevent leakage and further damage to the structure. Funding for needed corrective actions is being sought for FY 1994.
- The wall of the pool containing the Shippingport spent fuel has a crack. Structural deficiencies in the pool wall, if extant, could compromise personnel and public safety. An engineering analysis has identified that the cause of the leak, which appears occasionally as a wet spot on the tunnel floor, is from water trapped between the white concrete of the pool and the waterproof membrane. When sufficient water or pressure accumulates, water seeps through the crack in the tunnel wall. To preclude further leakage, the tunnel wall crack will be repaired by injecting it with epoxy. Funding for this corrective action is being sought for FY 1994. An effort is underway to examine the need for water in the pool and whether the water needs to be cooled.
- The T Plant office area (271-T) contains asbestos contaminated air ducting. Because of damaged friable asbestos found in the air ducting, an air sampling program was implemented in FY 1993. All results have been negative. Air monitoring for asbestos will continue. Funding does not exist for asbestos abatement.

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1D. Issues and Constraints

- **T Plant's electrical system is non-compliant with current codes and standards. Any repairs and upgrades to a part of the electrical system, such as motor control centers, switches, and wiring require entire portions of the system be brought up to current codes of standards.**
- **Milestones for T Plant tank and piping system upgrades are included in the M-32 Tri-Party Agreement milestone. Provisions in the T Plant Part A permit allow interim operation as a waste treatment facility assuming continued timely completion of the milestones.**

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1.E. Work Breakdown Structure Information

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1E1. Work Breakdown Structure Diagram

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1E2. WBS Dictionary Sheets

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT Waste and Decontamination Services	2 DATE 11/24/93	3 REVISION NO. AND AUTHORIZATION Rev 0, FY95 Activity Data Sheets 2320-0
4 WBS ELEMENT CODE 1.2.3.1	5 WBS ELEMENT TITLE WDS Safety Assurance	
6 APPROVED CHANGES N/A		
7 SYSTEM DESIGN DESCRIPTION N/A	8 BUDGET AND REPORTING NUMBER EW3130020	
9 ELEMENT TASK DESCRIPTION <u>TECHNICAL CONTENT/WORK STATEMENT</u> This program element funds the base safe status of the WDS facilities. This program element provides: 1) The interface between the WDS Program Office and the RL Waste Management and Program Planning for the WDS facilities. Deliverables include, FYWP, ADS, MYPP, SMS/PTS, FY 95 Treatment Forecast, Outyears Treatment Forecast, and Alternative Analysis Study. 2) The continuation of a graded implementation of the Conduct of Operations and facility specific training. This also includes responses and corrective actions to QUEST, WRTS, Conduct of Operations deficiencies, and notifications of off-normal and unusual conditions. 3) Provides personnel to update and incorporate current plant configurations and processes into the T Plant Safety Analysis Report (SAR). It provides for the Health Physics and radiological control and quality assurance administration, for the T Plant facilities. This includes HPT support in providing a Westinghouse Radiation Area management (WRAM) System to verify employees medical and training status prior to entry into radiological areas. 4) Configuration control, alarm management, RPR resolution, Conduct of Operation in maintenance, and lock and tag. It also provides for radiological decontamination of the facility and grounds to be continued in an effort to achieve ALARA principles. 5) Operational safety reviews, radiation work procedure postings, controls, alarm management and monitoring and operation of the PWR Core II pool. 6) Funded activities also include engineering studies and functional Design Criteria for all WDS planned projects, Also funds Conceptual Design Reports for all Small Projects and General Plant Projects. 7) Expense support to the FY 1996 Line item--C-077 HVAC upgrade. This cost account funds up to the completion of the Conceptual Design Report. The project C-077 HVAC upgrade is required to correct deficiencies in the air exchange and differential pressure regulation in the 221-T canyon.		

WASTE AND DECONTAMINATION SERVICES

1994 MYPP Phase II WBS 1.2.3

1E2. WBS Dictionary Sheets

WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Waste and Decontamination Services	2 DATE 11/11/93	3 REVISION NO. AND AUTHORIZATION Rev 0, FY95 Activity Data Sheets 2320-0
4 WBS ELEMENT CODE 1.2.3.2	5 WBS ELEMENT TITLE T Plant Maintenance and Assessments	
6 APPROVED CHANGES N/A		
7 SYSTEM DESIGN DESCRIPTION N/A	8 BUDGET AND REPORTING NUMBER EW3130020	
9 ELEMENT TASK DESCRIPTION <u>TECHNICAL CONTENT/WORK STATEMENT</u> This program element provides: 1) Maintenance and preventative maintenance for the T Plant facilities. Continued emphasis will be on regulatory, safety, health, and environmental compliance. Maintenance management will consist of maintenance craft support, job control system, work package authorization and review, and material coordination. Other improvements include reduction of maintenance backlog, an upgrade to the steam system, and replacement of motors in the 221-TA supply fan. 2) The establishment of requirements and direction for compliant accumulation, storage, sampling, and shipping of hazardous wastes. Emphasis will be placed on interim status compliance issues. This cost account provides for waste to be surveyed and inspected, and for hazardous, mixed, low-level, and liquid waste shipments to continue as required. 3) The support for assessments of the T Plant facilities: steam, electricity, water, laundry, masks, and other company pool assessments for the daily operation of the WDS facilities. 4) Sampling and analysis of waste water streams from T Plant in accordance with sampling analysis plans. Administrative and environmental compliance support to write a Part B permit application for the T Plant Complex. This permit is associated with Tri-Party Agreement milestone M-20-51, and is required for decontamination. 5) Engineering and construction services to complete expense-funded projects. These are facility modifications required to correct safety and deteriorated conditions at the T Plant facilities.		

WASTE AND DECONTAMINATION SERVICES

1994 MYPP Phase II WBS 1.2.3

1E2. WBS Dictionary Sheets		
WORK BREAKDOWN STRUCTURE DICTIONARY		
1 PROJECT TITLE/PARTICIPANT Waste and Decontamination Services	2 DATE 11/11/93	3 REVISION NO. AND AUTHORIZATION Rev 0, FY95 Activity Data Sheets 2320-0
4 WBS ELEMENT CODE 1.2.3.3	5 WBS ELEMENT TITLE Liquid Waste Transfers	
6 APPROVED CHANGES N/A		
7 SYSTEM DESIGN DESCRIPTION N/A	8 BUDGET AND REPORTING NUMBER EW3130020	
9 ELEMENT TASK DESCRIPTION <u>TECHNICAL CONTENT/WORK STATEMENT</u> The funded portion of this program element provides for the maintenance, decontamination, certification, and modification of the Hanford Site's LWTCs. These cars are the primary liquid transfer system for 340 and T Plant, and serve as backup for other Hanford Site facilities whose primary system is hard piping from the facility to Tank Farms.		

WASTE AND DECONTAMINATION SERVICES

1994 MYPP Phase II WBS 1.2.3

1E2. WBS Dictionary Sheets

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT Waste and Decontamination Services	2 DATE 11/11/93	3 REVISION NO. AND AUTHORIZATION Rev 0, FY95 Activity Data Sheets 2320-0
4 WBS ELEMENT CODE 1.2.3.4	5 WBS ELEMENT TITLE Liquid Waste Compliance	
6 APPROVED CHANGES N/A		
7 SYSTEM DESIGN DESCRIPTION N/A	8 BUDGET AND REPORTING NUMBER EW3130020	
9 ELEMENT TASK DESCRIPTION <u>TECHNICAL CONTENT/WORK STATEMENT</u> <p>This program element provides for engineering support to provide compliant secondary storage and installation of proper leak detection equipment in support of decontamination operations at the T Plant Complex. This will include all required piping and tanks to meet all WAC and 40 CFR requirements for temporary storage of RLW.</p> <p>This program element also provides procurement of two new LWTCs to replace the existing transfer cars. They will maintain equivalent safety and environmental compliance requirements with those of DOT and NRC vessels transporting hazardous constituents.</p>		

WASTE AND DECONTAMINATION SERVICES

1994 MYPP Phase II WBS 1.2.3

1E2. WBS Dictionary Sheets

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT Waste and Decontamination Services	2 DATE 11/11/93	3 REVISION NO. AND AUTHORIZATION Rev 0, FY95 Activity Data Sheets 2320-0
4 WBS ELEMENT CODE 1.2.3.5	5 WBS ELEMENT TITLE Decontamination/Repair Direct Services	
6 APPROVED CHANGES N/A		
7 SYSTEM DESIGN DESCRIPTION N/A	8 BUDGET AND REPORTING NUMBER EW3130020	
9 ELEMENT TASK DESCRIPTION <u>TECHNICAL CONTENT/WORK STATEMENT</u> This program element via assessment primarily to TWRS, funds the 2706-T Low Level Decontamination Facility and the 221-T Canyon High Radiation Decontamination Facility. It allows WDS to store equipment waste in a containment structure and to perform treatment. Treatment includes the segregation, decontamination, repair, testing and disposal and/or return to service of Low-Level and high level contaminated Hanford Site equipment. This workscope allows for disposal of radioactive-mixed waste (RMW) in compliance with the Debris Rule. These activities enable facilities to reuse contaminated failed equipment, thereby meeting waste minimization requirements in waste disposal practices and providing equipment replacement cost savings. Currently, facilities have a large backlog of failed equipment and RMW that require compliant treatment and storage.		

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II WBS 1.2.3

1E2. WBS Dictionary Sheets

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT Waste and Decontamination Services	2 DATE 11/11/93	3 REVISION NO. AND AUTHORIZATION Rev 0, FY95 Activity Data Sheets 2320-0
4 WBS ELEMENT CODE 1.2.3.7	5 WBS ELEMENT TITLE High Level Applied Technology	
6 APPROVED CHANGES N/A		
7 SYSTEM DESIGN DESCRIPTION N/A	8 BUDGET AND REPORTING NUMBER EW3130020	
9 ELEMENT TASK DESCRIPTION <u>TECHNICAL CONTENT/WORK STATEMENT</u> This unfunded program element provides for the acquisition of commercially available waste minimization/waste volume reduction equipment. This is a significant part of the overall Hanford Site mission of environmental remediation and includes Best Available Technology implementation of waste volume reduction and minimization. This equipment will be used in the 221-T canyon decontamination and waste treatment operations. Emphasis will continue to be placed on the reduction of the secondary wastes from these processes. This can be accomplished primarily through existing technology and products. Current acquisitions include ice blasters, surface etchers, hydraulic shears, and compaction units. This equipment may also expand the scope of decontamination services available onsite, further reducing the amount of RMW disposed of onsite.		

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II WBS 1.2.3

1E2. WBS Dictionary Sheets

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT Waste and Decontamination Services	2 DATE 11/11/93	3 REVISION NO. AND AUTHORIZATION Rev 0, FY95 Activity Data Sheets 2320-0
4 WBS ELEMENT CODE 1.2.3.8	5 WBS ELEMENT TITLE Process Planning	
6 APPROVED CHANGES N/A		
7 SYSTEM DESIGN DESCRIPTION N/A	8 BUDGET AND REPORTING NUMBER EW3130020	
9 ELEMENT TASK DESCRIPTION <u>TECHNICAL CONTENT/WORK STATEMENT</u> This element supports funding for full scale process planning, as required for disposition of operating and D & D wastes. Plans should include T Plant modification, construction and operation of possible alternate Decontamination facilities, and privatization as applicable.		

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II WBS 1.2.3

1E2. WBS Dictionary Sheets

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT Waste and Decontamination Services	2 DATE 11/24/93	3 REVISION NO. AND AUTHORIZATION Rev 0, FY95 Activity Data Sheets 2320-0
4 WBS ELEMENT CODE 1.2.3.9	5 WBS ELEMENT TITLE T Plant Head End	
6 APPROVED CHANGES N/A		
7 SYSTEM DESIGN DESCRIPTION N/A	8 BUDGET AND REPORTING NUMBER EW3130020	
9 ELEMENT TASK DESCRIPTION <u>TECHNICAL CONTENT/WORK STATEMENT</u> <p>This unfunded program element provides for the cleanup of the T Plant Head End. This workscope funds the planning and implementation of a characterization and removal program of the non-sodium chemical products, ancillary equipment for reuse/disposal, and stabilization of the Head End area. The remaining sodium and contaminated equipment will be removed by the Liquid Metal Reactor Program under their scope guidance.</p>		

This task is currently unfunded. The obtaining of funds will require mid-year budget action.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II WBS 1.2.3

1E2. WBS Dictionary Sheets

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT Waste and Decontamination Services	2 DATE 11/11/93	3 REVISION NO. AND AUTHORIZATION Rev 0, FY95 Activity Data Sheets 2320-0
4 WBS ELEMENT CODE 1.2.3.10	5 WBS ELEMENT TITLE Legacy Waste Cleanup	
6 APPROVED CHANGES N/A		
7 SYSTEM DESIGN DESCRIPTION N/A	8 BUDGET AND REPORTING NUMBER EW3130020	
9 ELEMENT TASK DESCRIPTION <u>TECHNICAL CONTENT/WORK STATEMENT</u> This unfunded program element provides funding for activities required to continue disposition of legacy/backlog waste, which accumulated from former production activities. Disposition entails characterization, segregation, decontamination (if required), repackaging, and shipment of waste for disposal. Although WDS has completed corrective actions associated with hazardous and mixed waste as required by a May 1992 Ecology NOD letter, a large amount of strictly Low-Level Waste (LLW) exists throughout the T Plant Complex. This is mainly from the long term use of T Plant by several programs as a storage depot for contaminated or obsolete failed equipment. <u>Note: This work was unfunded at a site level due to it's lack of immediate regulatory compliance driver. This work is extremely important to implement Conduct of Operations and is a good management practice. This work will be completed through increases in the productivity of the T Plant workforce.</u>		

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II WBS 1.2.3

1E2. WBS Dictionary Sheets

WORK BREAKDOWN STRUCTURE DICTIONARY

1 PROJECT TITLE/PARTICIPANT Waste and Decontamination Services	2 DATE 11/24/93	3 REVISION NO. AND AUTHORIZATION Rev 0, FY95 Activity Data Sheets 2320-0
4 WBS ELEMENT CODE 1.2.3.12	5 WBS ELEMENT TITLE Railcar Disposition	
6 APPROVED CHANGES N/A		
7 SYSTEM DESIGN DESCRIPTION N/A	8 BUDGET AND REPORTING NUMBER EW3130020	
9 ELEMENT TASK DESCRIPTION <u>TECHNICAL CONTENT/WORK STATEMENT</u> <p>There is an unused flat car with a wooden deck parked on a siding within the T Plant grounds. The flat car cannot be radiologically released because the wooden deck may contain low level waste. The flat car causes work around and radiological exposure concerns to facility personnel, therefore it will be disposed.</p> <p>The two Liquid Waste Tank Cars (LWTCs) currently in use will be replaced in FY 1995. The LWTCs are being replaced because they do not provide double containment as required by regulations for radioactive waste transportation. They also contain a radiologically contaminated heel which cannot be totally removed because of LWTC design constraints. The LWTCs are currently allowed to remain in service because they are periodically pressure tested to certify worthiness. When the old LWTCs are replaced in FY 1995, they will become a radiological waste requiring disposal.</p>		

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

1F. ASSIGNMENT MATRIX

PROGRAM ELEMENT	ACTIVITY	COST ACCOUNT	TITLE	RESPONSIBLE MANAGER	RESPONSIBLE ORGANIZATION
1.2.3			WASTE & DECONTAMINATION SERVICES	GW Faulk	WDS
	1.2.3.1		WDS SAFETY ASSURANCE (Expense)	W Smith	WDS
		1A310A	Rate Adjustments	MR Ibatuan	Programs
		1A3111	Program Management & Reporting	MR Ibatuan	Programs
		1A3121	Plant Management & Operations Support	AP Williams	Fac Proj Upgrades
		1A3131	Operational Safety	RJ Bottenus	T Plant Engineer
		1A3141	Facility Support	W Smith	T Plant Oper
		1A3151	Routines/Surveillances	W Smith	T Plant Oper
		1A3161	Procedures/Drawings Development	RJ Bottenus	T Plant Engineer
		1A3181	Projects Support	AP Williams	Fac Proj Upgrades
		1A3191	C-077 HVAC Line Item	AP Williams	Fac Proj Upgrades
		3A31XX	T Plant Ventilation Project C-077	Projects Dept	WHC
			WDS SAFETY ASSURANCE (CENRTC)	WS Ayers	WDS
		2A3141	Training/Office Trailer	AP Williams	Fac Proj Upgrades
		2A3143	FY 1994 Asset Account	WS Ayers	Work Control
	1.2.3.2		T PLANT MAINTENANCE & ASSESSMENTS (Expense)	WS Ayers	WDS
		1A3231	T Plant Maintenance	WS Ayers	Work Control
		1A3232	Facility Modifications	AP Williams	Fac Proj Upgrades
		1A32AA	Roof/PWR Pool Credit Account	MR Ibatuan	Programs
		1A3241	Waste Disposal Management	PJ Crane	Environ Control
		1A3251	Waste Disposal Assessments	PJ Crane	Environ Control
		1A3261	T Plant Complex Assessments	MR Ibatuan	Programs
		1A3271	Liquid Effluent Sampling	PJ Crane	Environ Control

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WHC-SP-0992-1

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

1F. ASSIGNMENT MATRIX

PROGRAM ELEMENT	ACTIVITY	COST ACCOUNT	TITLE	RESPONSIBLE MANAGER	RESPONSIBLE ORGANIZATION
		1A3281	Part B Permitting	PJ Crane	Environ Control
			T PLANT MAINTENANCE & ASSESSMENTS (CENRTC)	WS Ayers	WDS
		2A3241	291-T Vent System Modifications	AP Williams	Fac Proj Upgrades
	1.2.3.3		LIQUID WASTE TRANSFERS (Expense)	WS Ayers	WDS
		1A3321	LWTC Maintenance	W Smith	T Plant Oper
	1.2.3.4		LIQUID WASTE COMPLIANCE (Expense)	PJ Crane	WDS
		1A3421	W-259 T Plant 2nd Containment/Leak Detection	AP Williams	Fac Proj Upgrades
		3A34XX	Secondary Containment/Leak Detection Project W-259	Projects Depart	WHC
			LIQUID WASTE COMPLIANCE (CENRTC)	MR Ibatuan	WDS
		2A3441	LWTC Procurement	MR Ibatuan	Programs
	1.2.3.5		DECONTAMINATION/REPAIR DIRECT SERVICES (Expense)	W Smith	WDS
		1A3511	2706-T Low Level Decontamination Operations	W Smith	T Plant Oper
		1A3521	221-T Canyon Decontamination Operations	W Smith	T Plant Oper
		1A35AA	Phase III Waste Treatment Credit Account	MR Ibatuan	Programs
	1.2.3.7	2A3A11	High Level Applied Technology	RJ Bottenus	T Plant Engineer
	1.2.3.8	1A3AJ1	Process Planning	MR Ibatuan	Programs
	1.2.3.9	1A3CA1	Head End Modifications	RJ Bottenus	T Plant Engineer
	1.2.3.10	1A3CB1	Legacy Waste Clean-up	W Smith	T Plant Oper
	1.2.3.11	4A3CC1	NESHAP Air Quality Compliance	RJ Bottenus	T Plant Engineer
	1.2.3.12	1A3CD1	Material Tank/Asbestos Disposition	WS Ayers	Work Control

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

Attachment 4

Section II

Program Baselines

(Schedules, Cost, and Milestones)

Waste Destinations

- Facility Transition
- Waste and Decon Services
- Liquid Effluent
- Solid Waste
- Off-Site Connectors
- TWRS
- Environmental Restoration
- On-Site Connectors

221-T
DECONTAMINATION
OPERATIONS
01OCT94 03SEP40

PERFORM 221-T
HIGH RAD UPGRADES
01JUN94 02SEP01

PERMIT, DESIGN &
CONSTRUCT NEW
FACILITY
30MAR94 06JAN10

D&D T-PLANT
04JAN10 02JAN15

OPERATE NEW
DECON FACILITY
04JAN10 02JAN40

D&D T-PLANT
04SEP40 04SEP45

D&D NEW FACILITY
03JAN40 02JAN45

DECONTAMINATION
OPERATIONS
BY-PRODUCTS
01OCT93 03JAN45

TEDF 200 AREA
(LIQUID)
01OCT93 04JAN45

SANITARY SEPTIC
FIELD (LIQUID)
01OCT93 04JAN45

SOLID WASTE
FACILITIES
(STORAGE)
01OCT93 04JAN45

SOLID WASTE
TRENCHES
(BURIAL)
01OCT93 04JAN45

RECYCLE
(OFFSITE)
01OCT93 04JAN45

DOUBLE SHELL
TANKS (RMW
LIQUID)
01OCT93 04JAN45

WHC
DECON SERVICES
OW DIAGRAM

Date	Revision	Checked	Approved

[illegible]

ACTIVITY ID	EARLY START	EARLY FINISH	MTYP	MN	ACT DATA SYS							
						FY94	FY95	FY96	FY97	FY98	FY99	FY00
TK9025	5JUL94	30JUN94	TPA	A32-94-T22	2320	☒ REP. INST. LIQ. LEV. DETER. TO ECOLOGY 211 T SMP INSTALL LIQ. LEV. INDICATION DEVICE TO 211-T TANK M-32-03-T05						
TQ6399	10CT93	1NOV93			2320	☐ INITIATE INSPECTION/LEAK TEST 2706/211 TANKS						
TQ6405		1NOV93	TPA	A32-94-T20	2320	☒ IMPLEMENT INSPECTION/LEAK TEST 2706/211 TANKS TPA MS# M32-03-501						
TQ6450	10CT93	30JUN95			2320	☐ CEASE ALL DISCHARGE TO THE 216-T-4-2 DITCH TPA MS# M-17-41						
TQ6460		30JUN95	TPA	A31-95-T01	2320	☒ CEASE ALL DISCHARGE TO THE 216-T-4-2 DITCH TPA MS# M-17-41						
TQ6470	10CT93	30MAR95			2320	☐ ELIMINATE CHILLER AND COMPRESSOR STREAMS						
TQ6480		30MAR95	FO	A32-95-F04	2320	☒ ELIMINATE CHILLER AND COMPRESSOR STREAMS						
TQ6650	10CT93	30JUN95			2320	☐ CEASE ALL DISCHARGE TO THE 216-T-1 DITCH TPA MS# M-17-42						
TQ6700		30JUN95	TPA	A31-95-T02	2320	☒ CEASE ALL DISCHARGE TO THE 216-T-1 DITCH TPA MS# M-17-42						
DS1350	10CT93	29DEC95			2320	☐ SUB. PART B. PERMIT APP./CLOSURE PLAN (M-20-51)						
DS1400		31DEC95	TPA	A32-96-T01	2320	☒ SUB. PART B. PERMIT APP./CLOSURE PLAN (M-20-51)						
TU0088	10CT93	17JAN94			2320	☐ CDR FOR T-PLANT SECONDARY CONT LEAK DET						
TU0102		17JAN94	FO	A34-94-F04	2320	☒ COMP. CDR FOR T-PLANT SECON. CONT LEAK DET M-259						
TU0105	18JAN94	29APR94			2320	☐ SUBMIT M-259 CDR TO ECOLOGY						
TU0108		30APR94	TPA	A34-94-T21	2320	☒ SUBMIT M-259 CDR TO ECOLOGY T-PLANT TANK SYS UPGRADE MS-#M-32-03-T02						
TU0110	1FEB94	29JUN94			2320	☐ SUBMIT M-259 SCHEDULE TO ECOLOGY FOR COMPLETION OF T PLANT TANK UPGRADES MS-#M-32-03-T03						
TU0112		30JUN94	TPA	A34-94-T23	2320	☒ SUBMIT M-259 SCHEDULE TO ECOLOGY FOR COMPLETION OF T PLANT TANK UPGRADES MS-#M-32-03-T03						
TU0200	1JAN96		FO	A34-96-F03	2340	☒ INIT DEF DES FOR T-PLT SEC CONT & LEAK DET M-259						
TU0300	1JAN96	31DEC96	FO	A34-96-F03	2340	☐ PERF. DEF. DES. FOR T-PLT SEC. CONT & LEAK M-259						

Plot Date 7APR94
Data Date 10CT93
Project Start 10CT93
Project Finish 30SEP04

Activity Bar/Early Dates
Critical Activity
Progress Bar
Milestone/Flag Activity

WESTINGHOUSE HANFORD COMPANY
WASTE AND DECONTAMINATION SERVICES
WDS MYPP PHASE II 2B

Sheet 2 of 3
PREPARED BY JAMES R. HAEG 3-9259

Date	Revision	Checked	Approved

(c) Primavera Systems, Inc.

ACTIVITY ID	EARLY START	EARLY FINISH	MTYP	MN	ACT DATA SYS	FY94	FY95	FY96	FY97	FY98	FY99	FY00
TU0310		1JAN97	FO	A34-97-F05	2340				◇ CMPT. DEF. DES. FOR T-PLT SEC CONT & LEAK W-259			
TU0400	2JAN97		FO	A34-97-F06	2340				◇ INIT CONST. FOR T-PLNT SEC CONT & LEAK DET W-259			
TU0500		30SEP99	TPA	A34-00-T01	2340				CMPT CONST. T-PLNT SEC CONT AND LEAK DET (W-259) ◇			
									TPA MILESTONE# M-32-03-T06			
TX1009	10CT93	30SEP94			2320				TREAT UP TO 1000 CF OF LL WASTE FOR DISP.			
TX1140		30SEP94	FO	A35-94-F05	2320				◇ TREAT UP TO 1000 CF OF LL WASTE FOR DISPOSAL			
TY0090	10CT93	30SEP94			2320				TREAT UP TO 1000 CUBIC FEET HIGH RAD. FOR DISP.			
TY0100	30CT94	30SEP94	FO	A35-94-F07	2320				◇ TREAT UP TO 1000 CUBIC FEET HIGH RAD. FOR DISP.			
TW0005	1JUN94	28SEP95			2320				CONCEPT DES FOR SW PROC FAC REPL UPGRD'S (W-354)			
TW0050		30SEP95	FO	A38-95-F03	2320				◇ CMPT. COR FOR SW PROC. FAC. REPL UPGRD'S (W-354)			
TW0100	31JAN97		FO	A38-97-F04	2320				◇ INIT DEF DES FOR SW PROC FAC REPL UPGRD'S W-354			
TW0200		30SEP99	FO	A38-99-F04	2320				CMPT DEF DES FOR SW PROC FAC. REPL UPGR'S W-354 ◇			
TW0300	20CT00		FO	A38-00-F03	2320				INIT. CONST. FOR SW PROC FAC REPL UPGRD'S (W-354) ◇			
TW0400		30SEP04	FO	A38-04-F01	3240							

Plot Date	7APR94		DIMS	WESTINGHOUSE HANFORD COMPANY WASTE AND DECONTAMINATION SERVICES WDS MYPP PHASE II 2B	Sheet	3 of	3	PREPARED BY JAMES R HAEG 3-9259
Date	Revision				Checked	Approved		

(c) Primavera Systems, Inc.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2D. Milestone Control Log

Milestone Type*	RL WBS	Milestone Control Number	ADS Number	Milestone Description	Milestone Completion Date	Rev. Number/ Date	CIN Change Auth.
TPA-RL	1.2.3.2	A32-94-T20	2320-0	Implement Inspection/ Leak Test Program for 2706-T/211-T Tanks (Tri-Party Agreement Milestone #M-32-03-T01)	10/31/93		
FO	1.2.3.4	A34-94-F04	2320-0	Complete CDR for T Plant Secondary Containment & Leak Detection (W-259)	01/17/94		
FO	1.2.3.1	A31-94-F03	2320-0	Complete CDR for T Plant HVAC (C-077)	02/14/94		
TPA-RL	1.2.3.4	A34-94-T21	2320-0	Complete Conceptual Design Report (W-259) for T Plant Tank System Upgrades (Tri-Party Agreement Milestone #M-32-03-T02)	04/30/94		
TPA-RL	1.2.3.2	A32-94-T22	2320-0	Install Level Indication Device for 211-T Tank (Tri-Party Agreement Milestone #M-32-03-T05)	06/30/94		

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2D. Milestone Control Log

Milestone Type*	RL WBS	Milestone Control Number	ADS Number	Milestone Description	Milestone Completion Date	Rev. Number/ Date	CIN Change Auth.
TPA-RL	1.2.3.2	A32-94-T24	2320-0	Complete Modification to the 2706-T Staging Pad to Eliminate Accumulation of Precipitation (Tri-Party Agreement Milestone #M-32-03-T04)	06/30/94		
TPA-RL	1.2.3.4	A34-94-T23	2320-0	Submit a Schedule for Completion of T Plant Tank Upgrades (Tri-Party Agreement Milestone #M-32-03-T03)	06/30/94		
F0	1.2.3.1	A31-94-F02	2320-0	Complete FY 95 Treatment Forecast	06/30/94		
F0	1.2.3.1	A31-94-F01	2320-0	Complete Outyear Treatment Forecast	09/30/94		
F0	1.2.3.5	A35-94-F05	2320-0	Treat up to 1,000 Cubic Feet of LL Waste for Disposal	09/30/94		
F0	1.2.3.5	A35-94-F07	2320-0	Treat up to 1,000 Cubic Feet of High Radiation Waste for Disposal	09/30/94		
F0	1.2.3.2	A32-95-F04	2320-0	Eliminate Chiller and Compressor Streams	03/30/95		

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2D. Milestone Control Log

Milestone Type*	RL WBS	Milestone Control Number	ADS Number	Milestone Description	Milestone Completion Date	Rev. Number/ Date	CIN Change Auth.
TPA-RL	1.2.3.2	A32-95-T01	2320-0	Cease All Discharge to the 216-T-4-2 Ditch (Tri-Party Agreement Milestone #M-17-41)	06/30/95		
TPA-RL	1.2.3.2	A32-95-T02	2320-0	Cease All Discharge to the 216-T-1 Ditch (Tri-Party Agreement Milestone #M-17-42)	06/30/95		
FO	1.2.3.1	A31-95-F01	2320-0	Complete FY 96 Treatment Forecast	06/30/95		
FO	1.2.3.1	A31-95-F02	2320-0	Complete Update of Outyear Treatment Forecast	09/30/95		
FO	1.2.3.8	A38-95-F03	2320-0	Complete Conceptual Design for Solid Waste Processing Facility Replacement/Upgrade (W-354)	09/30/95		
TPA-RL	1.2.3.2	A32-96-T01	2320-0	Submit Part B Permit Application (Tri-Party Agreement Milestone #M-20-51)	12/31/95		
FO	1.2.3.4	A34-96-F03	2340-0	Initiate Definitive Design for T Plant Secondary Containment & Leak Detection (W-259)	01/01/96		

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2D. Milestone Control Log

Milestone Type*	RL WBS	Milestone Control Number	ADS Number	Milestone Description	Milestone Completion Date	Rev. Number/ Date	CIN Change Auth.
F0	1.2.3.1	A31-96-F01	2320-0	Complete FY 97 Treatment Forecast	06/30/96		
F0	1.2.3.1	A31-96-F02	2320-0	Complete Update of Outyear Treatment Forecast	09/30/96		
F0	1.2.3.4	A34-97-F05	2340-0	Complete Definitive Design for T Plant Secondary Containment & Leak Detection (W-259)	01/02/97		
F0	1.2.3.4	A34-97-F06	2340-0	Initiate Construction for T Plant Secondary Containment & Leak Detection	01/02/97		
F0	1.2.3.8	A38-97-F04	2340-0	Initiate Definitive Design for Solid Waste Processing Facility Replacement/Upgrade(W-354)	01/31/97		
F0	1.2.3.1	A31-97-F01	2320-0	Complete FY 98 Treatment Forecast	06/30/97		
F0	1.2.3.1	A31-97-F02	2320-0	Complete Update of Outyear Treatment Forecast	09/30/97		
F0	1.2.3.1	A31-98-F01	2340-0	Complete Definitive Design for T Plant HVAC (C-077)	01/31/98		
F0	1.2.3.1	A31-98-F02	2320-0	Complete FY 99 Treatment Forecast	06/30/98		

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2D. Milestone Control Log

Milestone Type*	RL WBS	Milestone Control Number	ADS Number	Milestone Description	Milestone Completion Date	Rev. Number/ Date	CIN Change Auth.
F0	1.2.3.1	A31-98-F03	2320-0	Complete Update of Outyear Treatment Forecast	09/30/98		
F0	1.2.3.1	A31-99-F02	2320-0	Complete FY 00 Treatment Forecast	06/30/99		
F0	1.2.3.1	A31-99-F03	2320-0	Complete Update of Outyear Treatment Forecast	09/30/99		
F0	1.2.3.8	A38-99-F04	2320-0	Complete Definitive Design for Solid Waste Processing Facility Replacement/Upgrade (W-354)	09/30/99		
TPA-RL	1.2.3.4	A34-00-T01	2340-0	Complete Construction of T Plant Secondary Containment Leak Detection System (Tri-Party Agreement Milestone #P-32-03-T06)	09/30/99		
F0	1.2.3.8	A38-00-F03	2340-0	Initiate Construction for Solid Waste Processing Facility Replacement/Upgrade (W-354)	10/03/00		
F0	1.2.3.1	A31-99-F01	2340-0	Complete Construction of T Plant HVAC (C-077)	06/30/00		
F0	1.2.3.1	A31-00-F01	2320-0	Complete FY 01 Treatment Forecast	06/30/00		

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2D. Milestone Control Log

Milestone Type*	RL WBS	Milestone Control Number	ADS Number	Milestone Description	Milestone Completion Date	Rev. Number/ Date	CIN Change Auth.
FO	1.2.3.1	A31-97-F02	2320-0	Complete Outyear Treatment Forecast	09/30/00		
FO	1.2.3.8	A38-04-F01	2340-0	Complete Construction for Solid Waste Processing Facility Replacement/Upgrade (W-354)	09/30/04		

* TPA, HQ, RL, FO and selected contractor milestone

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WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2E. Cost Baseline Summary (\$ In Thousands)

Program Element/ ADS #	Fund Type (OP, LI, CE, GPP, ADS)	FY 1994 Guidance	FY 1995 *Required	FY 1996 *Required	FY 1997 *Required	FY 1998 *Required	FY 1999 *Required	FY 2000 *Required
1.2.3.1/ 2320	OP	9,422	11,500	11,364	11,547	11,862	12,041	12,362
1.2.3.1/ 2320	CE	661	1,600	2,400	2,400	2,400	2,400	2,400
1.2.3.1/ 2320	GPP		1,600	3,000	600	600	600	600
1.2.3.1/ 2340	LI			2,000	2,000	6,000	6,000	
1.2.3.2/ 2320	OP	13,319	15,100	15,961	16,931	17,812	18,874	19,549
1.2.3.2/ 2320	CE	500						
1.2.3.2/ 2320	GPP		1000					
1.2.3.3/ 2320	OP	572	600	620	630	650	670	680

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2E. Cost Baseline Summary (\$ In Thousands)

Program Element/ ADS #	Fund Type (OP, LI, CE, GPP, ADS)	FY 1994 Guidance	FY 1995 *Required	FY 1996 *Required	FY 1997 *Required	FY 1998 *Required	FY 1999 *Required	FY 2000 *Required
1.2.3.4/ 2320	OP	470	800	400	415	430	450	465
1.2.3.4/ 2320	CE	850						
1.2.3.4/ 2340	LI			1,000	4,000	5,000		
1.2.3.5/ 2320	OP	5,700 ¹	6,700	6,950	7,150	7,450	7,720	7,960
1.2.3.7/ 2320	CE		6,000	6,000				
1.2.3.8/ 2320	OP		3,500	3,500	580	670	660	690
1.2.3.8/ 2340	LI				4,000	6,000	10,000	40,000
1.2.3.9/ 2320	OP		2,500	1,000				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2E. Cost Baseline Summary (\$ In Thousands)

Program Element/ ADS #	Fund Type (OP, LI, CE, GPP, ADS)	FY 1994 Guidance	FY 1995 *Required	FY 1996 *Required	FY 1997 *Required	FY 1998 *Required	FY 1999 *Required	FY 2000 *Required
1.2.3.11 /2320	GPP		1,300					
1.2.3.12 /2320	OP		2,900	2,000				
Total	OP	29,483 ¹	43,600	41,795	37,253	38,874	40,415	41,706
Program	CE	2,011	7,600	8,400	2,400	2,400	2,400	2,400
Cost	GPP	0	3,900	3,000	600	600	600	600
Summary	LI	0	0	3,000	10,000	17,000	16,000	40,000
	Total	31,494	55,100	56,195	50,253	58,874	59,415	84,706

¹ Includes FY 1994 Indirect funding from TWRS 2,700

*"Required" funding represents that needed to be in compliance

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2F. Building Blocks

FY 1995 Building Blocks (\$000)

ADS	Description	RL Pri	TPA MS #	Fund Type	FY 1995	CUM FY 1995	Justification of Scope/Impact if not funded
2320-00	WDS Safety Assurance	A2		E	11,500	11,500	Inability to continue correction of safety deficiencies for base safe status of facilities, continue safety training, and provide treatment forecasts.
2320-00	WDS Safety Assurance	A2		CE	1,600	13,100	Inability to continue correction of remaining safety deficiencies for base safe status of facilities.
2320-00	WDS Safety Assurance	A2		GPP	1,600	14,700	Inability to upgrade T Plant's electrical system. T Plant's electrical system is over 45 years old and has non-compliance issues (NEC, OSHA, ALARA). System reliability to support current mission and final D&D of the facility will require upgrades.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2F. Building Blocks

FY 1995 Building Blocks (\$000)

ADS	Description	RL Pri	TPA MS #	Fund Type	FY 1995	CUM FY 1995	Justification of Scope/Impact if not funded
2320-00	T Plant Maintenance & Assessments	A2	M-17-41 M-17-42 M-20-51 M-32-03	E	15,100	29,800	Inability to perform preventive maintenance and critical repairs, update and develop plant specific procedures and continue environmental compliance permitting activities and cease discharge to ditches.
2320-00	T Plant Maintenance & Assessments	A2		GPP	1,000	30,800	Inability to upgrade the 271-T control room to provide a centralized monitor/alarm of critical instrumentation and equipment in T Plant. This upgrade would reduce potential exposure of personnel by minimizing personnel entrance into Radiologically Controlled Areas, and improve response time to abnormal conditions.
2320-00	Liquid Waste Transfers	A2		E	600	31,400	Inability to maintain and certify Liquid Waste Tank Cars (LWTCs).

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2F. Building Blocks

FY 1995 Building Blocks (\$000)

ADS	Description	RL Pri	TPA MS #	Fund Type	FY 1995	CUM FY 1995	Justification of Scope/Impact if not funded
2320-00	Liquid Waste Compliance	B1	M-32-03	E	800	32,200	Inability to resolve and incorporate comments for T Plant secondary containment and leak detection FDC and CDR.
2320-00	Decontamination/Repair Services	B2		E	6,700	38,900	Inability to provide decontamination/repair services for the Hanford Site. These services are essential to TWRS, Well Drilling/Monitoring, and WAC compliance.
2320-00	T Plant Head End	A2		E	2,500	41,400	Inability to dispose of chemicals and abandoned process equipment which pose an industrial safety concern (OSHA, ALARA).
2320-00	Rail Car Disposition	A2		E	2,900	44,300	Necessary to fund disposal of an unused flat car and two liquid waste tank cars which will become radioactive waste when replaced.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2F. Building Blocks

FY 1995 Building Blocks (\$000)

ADS	Description	RL Pri	TPA MS #	Fund Type	FY 1995	CUM FY 1995	Justification of Scope/Impact if not funded
2320-00	High Level Applied Technology	B2		CE	6,000	51,600	Inability to meet size reduction and ALARA goals in the compliant storage/treatment of high radiation contaminated waste from TWRS during 221-T canyon operations.
2320-00	Process Planning	B2		E	3,500	55,100	Full scale process planning required for disposition of operation and D&D wastes, including privatization.

	<u>FY 1995</u>
Total Operating (E)	\$43,600
Total CENRTC (CE)	7,600
Total GPP	3,900
Total Line Item (LI)	<u>0</u>
Grand Total	\$55,100

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2F. Building Blocks

FY 1996 Building Blocks (\$000)

ADS	Description	RL Pri	TPA MS #	Fund Type	FY 1996	CUM FY 1996	Justification of Scope/Impact if not funded
2320-00	WDS Safety Assurance	A2		E	11,364	11,364	Inability to continue correction of safety deficiencies for base safe status of facilities, continue safety training, and provide treatment forecasts.
2320-00	WDS Safety Assurance	A2		CE	2,400	13,764	Inability to continue correction of remaining safety deficiencies for base safe status of facilities.
2320-00	WDS Safety Assurance	A2		GPP	3,000	16,764	Inability to upgrade T Plant's electrical system. T Plant's electrical system is over 45 years old and has non-compliance issue (NEC, OSHA, ALARA). System reliability to support current mission and final D&D of the facility will require upgrades.
2340-01	T Plant Ventilation Upgrade Project C-077	A2		LI	2,000	18,764	Inability to initiate definitive design, procurement and preliminary safety analyses to correct the 221-T tunnel and canyon ventilation, differential pressure and air exchange system.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2F. Building Blocks

FY 1996 Building Blocks (\$000)

ADS	Description	RL Pri	TPA MS #	Fund Type	FY 1996	CUM FY 1996	Justification of Scope/Impact if not funded
2320-00	T Plant Maintenance and Assessments	A2	M-17-41 M-17-42 M-20-51 M-32-03	E	15,961	34,725	Inability to perform preventive maintenance and critical repairs, update and develop plant specific procedures and submit Part B Permit Application.
2320-00	Liquid Waste Transfers	A2		E	620	35,345	Inability to maintain and certify Liquid Waste Tank Cars (LTWCs).
2320-00	Liquid Waste Compliance	B1	M-32-03	E	400	35,745	Inability to resolve and incorporate comments for T Plant secondary containment and leak detection FDC and CDR.
2340-01	T Plant Secondary Containment Leak Detection Project W-259	B1	M-32-03	LI	1,000	36,745	Inability to initiate definitive design procurement and preliminary safety analyses.
2320-00	Decontamination/ Repair Services	B2		E	6,950	43,695	Inability to provide decontamination/repair services for the Hanford Site. These services are essential to Tank Farms, Well Drilling/Monitoring, and WAC compliance.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2F. Building Blocks

FY 1996 Building Blocks (\$000)

ADS	Description	RL Pri	TPA MS #	Fund Type	FY 1996	CUM FY 1996	Justification of Scope/Impact if not funded
2320-00	T Plant Head End	A2		E	1,000	44,695	Inability to complete Head End stabilization, an industrial safety concern (OSHA, ALARA).
2320-00	Rail Car Disposition	B2		E	2,000	46,695	Necessary to fund disposal of an unused flat car and two liquid waste tank cars which will become radioactive waste when replaced.
2320-00	Process Planning	B2		E	3,500	50,195	Full scale process planning required for disposition of operation and D&D wastes, including privatization.
2320-00	High Level Applied Technology	B2		CE	6,000	56,195	Inability to meet size reduction and ALARA goals in the compliant storage/treatment of high radiation contaminated waste from TWRS during 221-T canyon operations.

	<u>FY 1996</u>
Total Operating (E)	\$41,795
Total CENRTC (CE)	8,400
Total GPP	3,000
Total Line Item (LI)	3,000
Grand Total	\$56,195

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WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.0100 <u>RATE ADJUSTMENTS</u>	\$	-400	0	0
	FTE	0	0	0

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based upon projections from WHC Overhead Planning affecting Lab Services and Continuity of Service (COS) rate reductions.

JUSTIFICATION:

To adjust for projected rate reductions associated with lab service rate decreases and COS reductions.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.0001 <u>PROGRAM MANAGEMENT AND REPORTING</u>	\$	1717.	1907.	1813.
	FTE	9.6	11.	11.
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY</u>				
This estimate is based on Financial Data System rates; estimate of required support activities; manpower, office, and equipment requirements; and activity based planning.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- Provide the interface between the WDS Program office and the RL Waste Management Division.
- Furnish programmatic management support and planning control for the WDS facilities.
- Supply programmatic documents (MYPPs, FYWPs, ADSs, TDDs, SMSs, PTSs), and special exercises as required.
- Assemble and issue mission statements and long term planning objectives for the WDS Program.
- Provide required program planning, waste amount and type forecasting including 30 year forecasts, and plant resource integration for accomplishment of Program and Customer objectives.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.0002 PLANT MANAGEMENT AND OPERATIONS SUPPORT	\$	1443.3	1657.	1698.
	FTE	11.4	13.	13.
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY:</u>				
This estimate is based on Financial Data System rates; extension of current support activities; past and predicted manpower, office, and equipment requirements; known work scope changes, and activity based planning.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- Provide management support to WDS activities, giving direction for policies, procedures, and graded implementation of Conduct of Operations and Site Specific Training.
- Integrate plant resources to accomplish WDS safety and compliance and customer objectives.
- Update WDS employee qualification and certification to ensure worker safety and environmental compliance.
- Provide accurate and timely responses QUEST, Waste Remediation Tracking System (WRTS), and Conduct of Operations deficiencies.
- Make timely notifications of off-normal and unusual conditions.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.0003 <u>OPERATIONAL SAFETY</u>	\$	1345.5	1486.	1261.
	FTE	10.1	11.	11.

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates; estimate of required support activities; manpower, office, and equipment requirements; known work scope changes; and activity based planning.

JUSTIFICATION:

- Provide Quality Assurance Engineering and Control to support the continuing and evolving need for the safe operation of the WDS facilities and equipment.
- Maintain the T Plant Safety Analysis Report by:
 - Submitting, gaining approval of, and incorporating new safety requirements.
 - Integrating current plant configurations and processes.

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WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

- Provide Health Physics, Radiological Control, and ALARA administration for the T Plant facilities. Additional HPT support includes:
 - HPT support for a Westinghouse Radiation Area Management (WRAM) system to verify employees' medical and training status before entry into radiologically controlled areas.
 - Operating specification documents and operational safety requirement surveillances.
 - Radioactive Source Control
 - Air sampling, tracking, and trending
 - Training certification/recertification/OJT
 - Emergency response capabilities
 - Absence relief for personnel

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.0004 T PLANT OPERATIONS	\$	1940.	2312.	2365.
	FTE	15.6	17.	17.
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY:</u>				
This estimate is based on Financial Data System rates; estimate of required support activities; manpower, office, and equipment requirements; known work scope changes; and activity based planning.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- **Provide operational management and supervision for the operation of T Plant facilities. Manage and oversee:**
 - **Configuration Control**
 - **Alarm Management**
 - **Records Management**
 - **Audit Responses**
 - **Tracking and Trending**
 - **RPR Resolution**
 - **Conduct of Operations and Maintenance**
 - **Lock and Tag control**
- **Radiological decontamination of the facility and grounds continue in accordance with ALARA goals.**

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.0005 <u>ROUTINES/SURVEILLANCES</u>	\$	920.0	939.	978.
	FTE	9.6	10.0	10.0

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates; estimate of required support activities; manpower and equipment requirements; known work scope changes; operational experience; and activity based planning.

JUSTIFICATION:

- Provide HPT routines/surveillances for Constant Air Monitors (CAMs), Personnel Contamination Monitors (PCMs), sampling, and radiological sources and zones.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

- **Provide trained and qualified staff for:**
 - **Routines/Surveillances.**
 - **Operational Safety reviews.**
 - **Radiation Work Procedure Posting.**
 - **Radiological controls.**
 - **Alarm Management**
 - **Monitoring and operation of the Shippingport PWR Core II Pool.**
- **Provide operations support for Systems, Equipment, and Configuration Controls inspections.**
- **Initiate corrective actions as needed.**

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.0006 <u>PROCEDURE/DRAWINGS</u> <u>DEVELOPMENT</u>	\$	1749.6	1969.	1772.
	FTE	11.8	16.	15.
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY:</u>				
This estimate is based on Financial Data System rates; estimate of required support activities; manpower and equipment requirements; operational experience; and activity based planning.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- Provides for the development, review, revision, and implementation of procedures directing the safe operation of T Plant facilities including:
 - 2706-T Facility Operating Procedures.
 - 221-T Canyon Operating Procedures.
 - Liquid Waste Tank Car (LWTC) Certification.
 - Loading Procedures.
 - Sampling Procedures
 - T Plant Non-Operations Standard Procedures (Lock and Tag).
- Provides WDS Operations Drawing Support for:
 - Revision and upgrade of LWTC drawings.
 - As-Built Ventilation System Drawings.
 - As-Built Process and Instrumentation Control Circuit drawings.
 - CAD conversion of Support Drawings.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

- **Provides Engineering Administration including:**
 - **Document/drawing control support**
 - **Management of Plant Engineering**
 - **Safety review of documents, work packages, SARs, SARPs; annual integrated appraisal of WDS/T Plant**

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.0008 <u>PROJECTS SUPPORT</u>	\$	214.4	1025.	1132.
	FTE	0.5	7.0	7.0

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates; estimates of required support activities; manpower and equipment requirements; inflation allowances; Central Engineering, Project Group, and contractor interfaces; and activity based planning.

JUSTIFICATION:

- Provides engineering support and administrative direction to, Projects Group, and Contractors on behalf of WDS management.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

- Ensures completion of engineering studies and design criteria for all WDS planned small projects and general plant projects, including:
 - Conceptual Design Report (CDR) for 271-T electrical panel upgrade.
 - CDR for 271-T control room installation.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.0009 C-077 HVAC LINE ITEM	\$	491.0	205.	345.
	FTE	1.1	2.	2.

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates; estimates of required support activities; manpower and equipment requirements; inflation allowances; Central Engineering, Project Group, and contractor interfaces; and activity based planning.

JUSTIFICATION:

Provides expense support for the FY 1996 Line Item upgrading C-077 HVAC to correct deficiencies in the air exchange and differential pressure in the T Plant canyon and tunnel, funding through the completion of the CDR and issuance of the HVAC Environmental Assessment. Definitive Design, procurement and preliminary safety analyses will be initiated in FY 1996.

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WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.031X T PLANT VENTILATION PROJECT C-077	\$	0	0	2000.
	FTE	0	0	0

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This activity is based on Financial Data System rates, extension of current related activities, manpower, and activity based planning.

JUSTIFICATION:

Initiates funding for definitive design, safety analyses, and procurement to correct the 221-T tunnel and canyon ventilation, differential pressure, and air exchange system:

- Upgrades system as required to meet air quality standards.
- Provides increased personnel respiratory, safety, and ALARA protection.
- Enhances protection of the public and the environment.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.02.0001 T PLANT MAINTENANCE	\$	6304.6	7460.	7780.
	FTE	53.5	62.	62.
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY:</u>				
This estimate is based on Financial Data System rates; estimates of required support activities; manpower and equipment requirements; inflation allowances; and activity based planning.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- Provide necessary maintenance for T Plant equipment and systems with continued emphasis on safety, regulatory, health, ALARA, and environmental compliance. Maintenance management will consist of:
 - Maintenance and Craft Support.
 - Job control.
 - Work Package Authorization and Review.
 - Material Review.
- Improve Job Control System efficiency through the implementation and full staffing of the Material Control Area.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

- **Continue maintenance shop and 271-T electrical upgrades.**
- **Implement other improvements:**
 - **Reduce Maintenance Backlog.**
 - **Upgrade the Steam System (Replace Steam traps).**
 - **Replace 221-TA supply fan motors.**
 - **Upgrade the 296-T Stack Exhaust System.**
 - **Establish a safe, compliant compressed-gas bottle storage area.**
 - **Complete annual Safety Improvement Plan.**
- **Staff support requirements include:**
 - **Health Physics support during maintenance activities.**
 - **Nuclear Process Operator support during maintenance activities.**
 - **Engineering and procedural review of maintenance activities.**

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.02.0005 FACILITY MODIFICATIONS	\$	3018.8	2108.	1873.
	FTE	5.7	8.	3.

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates; estimates of required activities; past and manpower and equipment requirements; Central Engineering, Projects Group, and Contractor interfaces; and activity based planning.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- Provides Engineering and Construction services to complete Expense funded facility modification projects required to correct safety related and deteriorating compliance conditions at the T Plant facilities.
- Funds all Engineering Design, oversight labor, material procurement and fabrication, actual construction, quality assurance, NEPA documentation, and all other costs associated with Expense funded projects, except:
- The 2706-T Pad modification is funded.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.02.0008 <u>ROOF/PWR POOL CREDIT</u>	\$	* -470. January 1994 * 470. April 1994	0	0
	FTE	0	0	0

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Agreements between WHC and RL management, intended to resolve FY 1994 key unfunded activity issues.

* Used to document credit/offset to Basis of Estimate (BOE) #1.01.02.03.00.02.0005 Facility Modifications, for the T Plant roof repair. At mid-year funding will be added to the associated cost account to offset the negative balance.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

FYWP Phase I, II, and III funding initiatives have been incorporated into this estimate. Phase III requires \$3,470K worth of workscope associated with Decontamination Services for other programs (3,000K) and roof repair (470K) to be initiated. This funding will be provided at mid-year from Hanford Site funding through consolidated and effective leadership savings, program underruns, mid-year budget re-allocations, or additional funding from HQ. This approach has been agreed to by RL and WHC senior management.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.02.0002	\$	1506.4	2240.	2525.
<u>WASTE DISPOSAL</u>	FTE	13,9	15	16
<u>MANAGEMENT</u>				

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System estimates; estimates of required activities; manpower, office, and equipment requirements; Sub-contractor interfaces; and activity based planning.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- Provide requirements and direction for the compliant accumulation, storage, sampling, and shipping of wastes, with emphasis to be placed on interim status compliance issues.
- Continue hazardous, mixed, and low level waste shipments as required.
- Provide an assistance program to aid other programs' compliance with the WDS Waste analysis/acceptance plan.
- Support the 221-T Canyon cleanout.
- Initiate a waste minimization plan to install a central parts cage for the facility.
- Provide support for air permitting and administrative guidance for environmental compliance for WDS.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.02.0003 <u>WASTE DISPOSAL</u> <u>ASSESSMENT</u>	\$	657.9	918.	1134.
	FTE	0	0	0

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on estimates of required activities, projected waste volumes, Burial and Disposal Site Operation Interfaces, Solid Waste Programs planning rates, and activity based planning.

JUSTIFICATION:

Provides for storage/disposal of WDS's Low Level waste, Radioactive Mixed Waste, and Hazardous waste. Costs for disposal of waste originating from WDS's customers will be billed to the customer.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.05.0003 <u>PHASE III WASTE TREATMENT</u> <u>CREDIT</u>	\$	* -3000.0 January 1994 * +3000.0 April 1994	0	0
	FTE	0	0	0

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on agreements between WHC and RL management intended to resolve FY 1994 key unfunded activity issues.

* This estimate is a credit/offset account to estimates found in BOE 1.01.02.03.00.05.0001 and 1.01.02.03.00.05.0002. At mid-year, funding will be added to the CAA on which this estimate is based (1A35AA) to offset the balance associated with the initiation of work.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP Phase II

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

The Phase I, II, and III funding initiatives have been incorporated into the WDS FYWP Phase III, which requires \$3,470K worth of workscope associated with Waste and Decontamination Services and the balance of T Plant roof repair (\$470K) to be initiated. This funding will be provided at mid-year from Hanford Site funding through consolidated and cost-effective leadership savings, program underruns, mid-year budget re-allocations, or additional funds from HQ. This approach has been agreed to by RL and WHC senior management.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.02.0004 <u>T PLANT COMPLEX</u> <u>ASSESSMENT</u>	\$	1655.4	1853.	2140.
	FTE	0	0	0

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates, estimates of required activities, utility requirements, energy providers, other utility providers, Company Pool Assessments, and activity based planning.

JUSTIFICATION:

Provides support for Steam, Electricity, Water, Laundry, Masks, and other Company Pool Assessments as established for the daily operation of WDS facilities.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.02.0006 <u>LIQUID EFFLUENT</u> <u>SAMPLING</u>	\$	136.3	175.	228.
	FTE	.1	.5	.5

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates; estimates of required activities; manpower and equipment requirements; and activity based planning.

JUSTIFICATION:

Provides for sampling and analysis of waste water streams from T Plant in accordance with the Tri-Party Agreement requirements to implement the Sampling Analysis Plan and to cease all discharge to the 216-T-1 and 216-T-4-2 ditches.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.02.0007 <u>PART B PERMITTING</u>	\$	40.2	346.	281
	FTE	.4	2.	2.

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates; estimates of required activities; manpower, office, and equipment requirements; and activity based planning.

JUSTIFICATION:

Tri-Party Agreement Milestone M-20-00, "Submit Part B Permit applications or closure plans for all RCRA Treatment, Storage, Disposal (TSD) facilities" (i.e. T Plant Decontamination).

- T Plant will submit a T Plant complex Part B permit application by 12-31-95
- Emphasis will be placed on completing T Plant tank interim status actions set forth by Tri-Party Agreement milestone M-32-03.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.03.0002 <u>LWTC MAINTENANCE</u>	\$	572.4	600.	620.
	FTE	1.8	2.	2.

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates; estimates of required activities; manpower, office, and equipment requirements; and activity based planning.

JUSTIFICATION:

- Funding support for the Liquid Waste Tank Cars (LWTCs) will provide the following:
 - Maintenance.
 - Modification.
 - Certification for continued safe operation.
- Funding will support liquid waste transfers to 204-AR from T Plant, the 300 area and other areas when in need of back-up.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.04.0002 <u>T PLANT SECONDARY</u> <u>CONTAINMENT/</u> <u>LEAK DETECTION.</u> <u>Project W-259</u>	\$	470.0	800.	400.
	FTE	1.4	4.	3.
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY:</u>				
This estimate is based on Financial Data System rates, estimates of required activities; manpower, office, and equipment requirements; interface with Central Engineering, Projects Group, Subcontractors; and activity based planning.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- Provides expense support to the FY 1996 Line Item for T Plant secondary containment/leak detection system.
- Provides funding for the Conceptual Design Report, which will be completed in FY 1994.
- Funds comment resolution and incorporation for the T Plant Secondary Containment and Leak Detection Functional Design Criteria Report and Conceptual Design Report.
- Definitive Design, procurement and preliminary safety analyses for T Plant Secondary Containment and Leak Detection will be initiated.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.04.034X	\$	0	0	1000
<u>SECONDARY</u>	FTE	0	0	0
<u>CONTAINMENT/LEAK</u>				
<u>DETECTION PROJECT</u>				

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This activity is based on Financial Data System estimates, estimates of required activities, manpower, and activity based planning.

JUSTIFICATION:

This estimate is intended to provide funding for the preliminary design, safety analysis, and procurement for the T Plant secondary leak detection project. This project is essential to bring T Plant into regulatory compliance with WAC 173-303.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.05.0001 <u>2706-T LOW LEVEL DECONTAMINATION OPERATIONS</u>	\$	* 1000.0	4484.	4652.
	FTE	10.7	23.	21.

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates, estimates of required activities, manpower and equipment requirements, Hanford Site Forecasts of Waste Type and Volume, and activity based planning.

* Workscope of this cost account receives supplemental funding from Tank Waste Remediation System (TWRS). FY 1994 funding from TWRS is \$2,700,000.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

Provide low-level (LL) equipment decontamination, testing, repair/disposal services, and interim storage for contaminated equipment to support activities throughout the Hanford Site. 2706-T Operations will:

- Process up to 1000 cubic feet of LL waste for disposal.
- Allow continued processing of new service requests through a prioritized work control system.
- Place emphasis on safety, health, ALARA, and environmental compliance.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.05.0002 <u>221-T CANYON</u> <u>DECONTAMINATION</u> <u>OPERATIONS</u>	\$	2000.0	2216.	2298
	FTE	12.	12.	11.

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates; estimates of required activities, Hanford Site forecasts of waste type and volume, manpower and equipment requirements, and activity based planning.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- Provide High Rad equipment decontamination, testing, repair/disposal services, and interim storage for contaminated equipment to support activities throughout the Hanford Site. 221-T Operations will:
 - Process up to 1000 cubic feet of High Level waste for disposal.
 - Issue Canyon Clean-out plan
 - Clean-out the backlog of TWRS/PUREX/B Plant failed equipment stored in the 221-T Canyon.
- Allow continued processing of new service requests through a prioritized work control system.
- Place emphasis on safety, health, ALARA, and environmental compliance.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.2141 <u>TRAINING/OFFICE TRAILER</u>	575. 0\$	0	0	0
	FTE	0	0	0

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates; manpower and equipment requirements; supplier estimates and pricing, subcontractor interfacing; and activity based planning.

JUSTIFICATION:

Procure and install additional training and office accommodations to provide space for increased T Plant staffing levels.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.01.2143 FY 1994 ASSET ACCOUNT	\$	86.0	1600.	2400.
	FTE	0	0	0
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY:</u>				
This estimate is based on Financial Data System rates, equipment requirements, supplier estimates and pricing, Projects Group and Subcontractor interfacing, and activity based planning.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- Procure capital equipment as needed to replace failed or worn WDS equipment.
- Procure capital equipment as available to enhance waste minimization/size reduction goals for decontamination operations.

Note: Items included must cost at least \$5,000, must be a property record unit, and must have a service life of at least two years.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.02.2241 291-T VENT SYSTEM MODIFICATION	\$	500.0	0	0
	FTE	0	0	0
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY:</u>				
This estimate is based on Financial Data System rates; equipment requirements; vendor estimates and pricing; Central Engineering, Projects Group and Subcontractor interfacing; Procurement costs; and activity based planning.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

Ventilation systems in use at the T Plant Facility must maintain a small negative pressure in the Canyon area to ensure proper radiological containment. This modification provides for the installation of a parallel fan system which would:

- Utilize the existing HEPA filters and discharge stack.
- Improve the reliability of the current 291-T ventilation arrangement and allow for continued operations when periodic maintenance or repairs are required on fan components, which currently consist of two ventilation fans connected in series. These fans draw air from the T Plant Canyon through HEPA filters and discharge it through an existing air discharge stack. Failure of only one of these fans can significantly impact T Plant Canyon operations.
- Ensure all fabrication and system modifications meet required codes and standards.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.04.2441 <u>LWTC PROCUREMENT</u>	\$	850.0	0	0
	FTE	0	0	0
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY:</u>				
This estimate is based on past equipment requirements; vendor estimates and pricing; procurement costs; and Certification expenses.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

The Liquid Waste Transfer Cars (LWTCs) currently in use are non-compliant and have exceeded criticality specifications. Safety, environmental, and exposure concerns make this a crucial procurement.

- The purchase of a second Liquid Waste Transfer Car (LWTC) will provide the Hanford Site with a dedicated, compliant system for transferring liquid wastes between the 340 facility, T Plant, and Tank Waste Remediation Systems (TWRS).
- The LWTC will provide a backup liquid waste transfer system for other site facilities.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.07.03AI <u>HIGH LEVEL APPLIED</u> <u>TECHNOLOGY</u>	\$	0	6000.	6000.
	FTE	0	0	0
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY:</u>				
This estimate is based on vendor proposals, known and projected operating costs, and Best Available Technology/All Known And Reasonable Technology (BAT/AKART) related investigations.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- Provides for expansion of T Plant decontamination and waste treatment operations.
- Ensures compliance with BAT/AKART and the "Debris Rule", mandating the application of best available technologies to meet waste minimization and volume reduction requirements.
- Places emphasis on the reduction of secondary waste from the cleanup/decontaminating processes.
- Allows acquisition of equipment such as:
 - Ice Blasters
 - Surface Etchers
 - Hydraulic Shears
 - Compaction Units
- Allows evaluation and possible repair and return to service of existing decontamination equipment.
- Implements Best Management Practices and ALARA enhancements.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.08.03AJ <u>PROCESS PLANNING</u>	\$	0	3500.	3500.
	FTE	0	2.	2.

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on extension of current activities, sub-contractor pricing information, manpower needs, vendor supplied proposals and estimates, and activity based planning.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

An Engineering Study to determine the suitability of T Plant as a long term Site decontamination facility is under way. Whether T Plant is chosen for long term decontamination activities, or another facility is converted or built for the purpose, planning and funding must be provided for decontamination facilities and activities. This estimate:

- Provides funding to implement Best Demonstrated Available Technology (BDAT) for incoming waste streams.
- Allows WDS to strategize operational needs on a long term basis.
- Funds drafting of Functional Design Criteria and Conceptual Design Report for T Plant upgrades or for a new facility, if needed.
- Funds necessary interface with subcontractors.
- Allows for negotiations with Ecology.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.09.03CA HEAD END MODIFICATIONS	\$	0	2500.	1000.
	FTE	0	6.	3.

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on estimates of required cleanup activities, construction forces estimates and proposals, manpower and equipment requirements, and activity based planning

JUSTIFICATION:

This estimate funds the planning and implementation of a characterization and removal program for non-sodium chemical products, ancillary equipment for reuse/disposal, removal of the containment vessel, and stabilization of the T Plant head end area. The Liquid Metal Reactor Program is responsible for sodium removal. Cleanup activity is necessary to:

- Provide for reduction of industrial and safety hazard exposure to T Plant personnel and visitors.
- Allow equipment and chemicals to be sent to WHC Excess for re-use or disposal.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.10.0CB1 LEGACY WASTE CLEANUP	\$	*		
	FTE			

Basis of Estimate (Methodology of estimate and justification of resources for planned scope)

METHODOLOGY:

This estimate is based on Financial Data System rates, operating experience, extension of current cleanup activities, predicted manpower needs, and activity based planning.

* Current funding for this element is provided as a part of the FY 1994 Productivity Challenge.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

This estimate develops funding for cleanup and disposition of legacy waste from former production/storage activities at T Plant.

- Provide for disposition of legacy waste at the T Plant complex, the highest priority of which will be waste in Lay-Down yards, is necessary to:
 - Limit the exposure threat to the public
 - Limit occupational exposure to plant personnel (ALARA)
 - Limit direct exposure to the environment
- Disposition of the legacy waste entails the following:
 - Characterization
 - Segregation
 - Decontamination
 - Repackaging
 - Shipment to Central Waste Complex

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.11.03CC <u>NESHAP AIR QUALITY COMPLIANCE</u>	\$	0	1300.	0
	FTE	0	9.	0
Basis of Estimate (Methodology of estimate and justification of resources for planned scope)				
<u>METHODOLOGY:</u>				
This estimate is based on engineering evaluations and estimates, vendor costing, subcontractor estimates, and activity based planning.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

The scope of this estimate covers NESHAP air quality upgrades to T Plant's canyon exhaust sampling system, which is currently non-compliant. The ventilation system is an essential element in personnel, public, and environmental protection. This item specifically funds design and placement of stack monitoring equipment and flow regulators on 291-T-1 main stack and 296-T-13 roof stack. If major modifications are required to the stack itself, further funding will be required. Necessary activities include:

- Investigate placement of 291-T-1 main stack isokinetic probe to ensure accuracy of sampling under all operating flow conditions.
- Conduct a particle size study.
- Install upgraded flow regulators on monitoring equipment.
- Formally evaluate in-line losses.
- Develop and implement procedures for routine cleaning and inspection of sample probes.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

Activity/Cost Acct		FY 1994	FY 1995	FY 1996
1.01.02.03.00.12.03CD <u>MATERIAL TANK/ASBESTOS DISPOSITION</u>	\$	0	2900.	2000.
	FTE	0	2.	2.
Basis of Estimate (Methodology of estimate and justification of resources for planned scope) <u>METHODOLOGY:</u> This estimate is based on engineering evaluations and estimates, subcontractor proposal and estimates, projected manpower and equipment costs, and activity based planning.				

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

2G. Basis of Estimate

JUSTIFICATION:

- This estimate provides for removal of obsolete equipment found throughout the T Plant complex, including:
 - Out of service AMU tanks, some in close proximity to office workers)
 - Out of service SQ tanks
 - Out of service Liquid Waste Tank Cars (LWTC)
- Removal of this equipment is necessary to:
 - Reduce personnel exposure to asbestos and other hazardous material.
 - Comply with safety, health, and environmental regulatory drivers.
 - Remove clutter from T Plant spaces to allow less restricted personnel access and facilitate decontaminating activities.
 - Remove safety constraints imposed on decontamination activities by the presence of various substances in the tanks.

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP PHASE II

WBS 1.2.3

Attachment 4

Section III

Program Crosscut Data

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

3A. Regulatory Issues

Applicable Regulatory Statutes

- **10, 40, and 49 CFR, Code of Federal Regulations:**
 - 10 CFR 835 Personnel Protection (Extant, but not yet implemented)
 - 29 CFR 1910 Occupational Safety and Health Standards
 - 40 CFR 60 Standards of Performance for New Stationary Sources
 - 40 CFR 61 Radiation Emission Standards
 - 40 CFR 260 Hazardous Waste Management System: General
 - 40 CFR 261 Identification and Listing of Hazardous Waste
 - 40 CFR 262 Standards Applicable to Generators of Hazardous Waste
 - 40 CFR 264 Resource Conservation and Recovery Act (RCRA)
 - 40 CFR 265 Interim Standards for Owners and Operators of Hazardous Waste TSD Facilities
 - 40 CFR 270 EPA Administered Permit Programs: The Hazardous Waste Permit Program
 - 40 CFR 280 Technical Standards Corrective Action Requirements for Owners and Operators of Underground Storage Tanks
 - 49 CFR 173 DOT General Requirements for Shipping and Packaging
- **Federal Register 57 FR 37194, the "Debris Rule"**

WASTE AND DECONTAMINATION SERVICES

FY 1994 MYPP

WBS 1.2.3

3A. Regulatory Issues

- **WAC Statutes, Washington State Regulations**
 - 173-216 State Waste Discharge Permit Program (Contains BAT/AKART)
 - 173-303 Dangerous Waste Regulations
 - 173-307 Hazardous Waste Reduction Regulations
 - 173-400 General Regulations for Air Pollution Sources
 - 296-155 Washington Industrial Safety and Health Act
- **DOE Orders, Department of Energy:**
 - 2200.12A Financial Management Systems
 - 2250.1D Cost and Schedule Control Systems Criteria
 - 4320.2 Capital Asset Management Process
 - 4330.4A Maintenance Management Program
 - 4700.1 Project Management System
 - 5400.1 General Environmental Protection Program
 - 5400.5 Radiation Protection of the Public and the Environment
 - 5440.1E National Environmental Policy Act Compliance Program
 - 5480.1B Environment, Safety, and Health Program for DOE
Operations
 - 5480.11 Radiation Protection for Occupational Workers
(ALARA)

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3A. Regulatory Issues

- 5480.19 Conduct of Operations Requirements for DOE facilities
- 5480.20 Personnel Selection, Qualification, Training, and Staffing Requirements at DOE Reactor and Non-Reactor Nuclear Facilities
- 5480.21 Unreviewed Safety Questions
- 5480.22 Technical Safety Requirements
- 5480.23 Nuclear Safety Analysis Reports
- 5480.24 Nuclear Criticality Safety
- 5480.3 Safety Requirements for the Packaging and Transportation of Hazardous Materials, Hazardous Substances, and Hazardous Wastes
- 5480.4 Environmental Protection, Safety, and Health Protection Standards
- 5480.5 Safety of Nuclear Facilities
- 5481.1B Safety Analysis and Review System
- 5700.2D Cost Estimating, Analysis, and Standardization
- Quality Assurance
- 5700.7C Work Authorization
- 5820.2A Radioactive Waste Management
- 6430.1A General Design Criteria

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3A. Regulatory Issues

- **NESHAP, National Emission Standards for Hazardous Air Pollutants**
- **Tri-Party Agreement Milestones:**
 - M-10 Complete analyses of at Least Two Core Samples from Each Single-Shell Tank
 - M-17 Eliminate Discharge of T Plant Sewer and Laboratory Wastes into the Soil Column
 - M-20 Submit Part B Permit Applications or Closure Plans for All RCRA TSD Units
 - M-32 Requires standards for secondary containment, defines graded compliance guidelines for non-compliant facilities

Listing of Noncompliance Areas

WDS has not conducted a full compliance assessment with all applicable statutes and DOE orders. Newly generated statutes and orders will be implemented through change control. Existing noncompliance issues which are identified during audits will be implemented through change control. The following is a summary of current areas of noncompliance:

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3A. Regulatory Issues

- **T Plant is non-compliant with WAC and RCRA requirements for double containment and leak detection systems in liquid waste tanks and piping.**
- **A graded approach to gaining compliance with DOE requirements in Conduct of Operations, Training, Procedure Revision, and SAR updates is being implemented because of budget and time constraints.**

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3A. Regulatory Issues

- **Liquid Waste Tank Cars, LWTCs, do not meet DOT safety requirements found in 49 CFR 173; new cars are being purchased to correct this issue.**
- **T Plant Head End surveillance and documentation requirements under interim status have not been maintained.**
- **T Plant is currently non-compliant with WAC regulations in "Legacy Waste" clean-out issues; a clean-out schedule has been negotiated with and accepted by Ecology.**

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3A. Regulatory Issues

Issues/Problems with Regulations

All non-compliant issues listed above have been identified to the regulatory body. In some instances, regulatory action could be taken if immediate compliance is required. The WDS facilities do not have required regulatory protection through the Tri Party Agreement or Consent Orders.

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3A. Regulatory Issues

Key Regulatory Decision Points

- **Major decision point for the WDS program will be in the area of secondary containment leak detection. WDS has a line item plan to correct this deficiency. T Plant is in the early stages of RCRA permitting. Inability to obtain permits will significantly impact the programmatic mission.**
- **Ecology approved the Interim Status (Part A Application) for waste treatment and storage at the T Plant Complex. Ecology stipulated that milestones contained in M-32-03 must be completed as scheduled or they would revoke interim status and invoke penalties.**

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3B. Infrastructure

Planned Infrastructure and Service Requirements (Not currently provided and/or additional needs)

- **Analytical Services Group provides laboratory analyses to support characterization and designation of solid waste. The restart of decontamination operations in FY 1993 will increase the need for sampling, resulting in an increase of the 222-S Lab Assessment from its present level of 1.47%.**
- **Waste and Decontamination Services (WDS) operations and management require extensive use of personal, mini, and main frame computers for program planning, document preparation, and information tracking. Support is currently provided by Boeing Computer Services, and computer modeling is provided by various groups including PNL.**

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3B. Infrastructure

- **WDS's operation is largely dependent upon the receipt of waste from on-site and off-site DOE programs.**
- **The monitoring group provides Ground Water Monitoring of WDS facilities.**
- **WDS utilizes the Rail System for waste transfer. Assessments for track maintenance will increase with the restart of decontamination activities.**
- **Assessments for 204-AR Tank Farm services will increase with the resumption of decontamination work.**
- **WDS utilizes 200 Area's Steam and Water Utilities. The T Plant's current 4.2% assessment will increase significantly as decontamination activity increases and as other Utility Customers' use decreases due to decommissioning.**

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3B. Infrastructure

- **With the restart of decontamination activities, solid waste shipped to the landfill will increase.**
- **Additional WDS employees will require added office space. A mobile office is planned for FY 1995.**
- **WDS will require support from Landlord operations including well drilling rigs, cranes, trucks, and tankers.**

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3B. Infrastructure

- **To meet Tri-Party Agreement-17 Effluent requirements, T Plant is dependent on W-291 "200 Area BAT/AKART Implementation".**
- **Because of their age, extensive repair, remodeling, and possibly replacement of existing facilities may be necessary in order to meet industry requirement. Currently planned upgrades to plant infrastructures, required to meet current codes, include:**
 - **Electrical system upgrades**
 - **Ventilation system replacement**
 - **Secondary containment and leak detection systems installation**
 - **Effluent monitoring system upgrades**
 - **Control Room Upgrades**
 - **Ladies Change Trailer**
- **The need for laundry and masks will increase with the resumption of decontamination activities.**
- **Electrical energy use will increase with the restart of decontamination operations.**

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3B. Infrastructure

- **Upgraded and new packaging will be required for the transfer of solid and liquid waste from WDS/Solid Waste and other facilities to T Plant.**
- **Waste sources for decontamination and reduction will include but are not limited to:**
 - Tank Waste Remediation System
 - Solid Waste
 - Waste and Decontamination Services (including Legacy Wastes)
 - Standby facilities transition to Decontamination and Decommissioning (D&D) services and from D&D facilities
 - (Future) Grout operations
 - Landlord operations
 - (Future) Vitrification Project operations
- **WDS additionally provides maintenance and decontamination services for the LWTCs for the primary and backup transport of**

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3C. Waste Type Data

Additional Waste Storage, Treatment, and Disposal Capability Needs

- Two additional double-shelled stainless steel tanks are proposed to be installed on the north side of 2706T. These tanks would hold a total of 30,000 gallons for use in storing process liquid waste.

Waste Storage/Treatment, Disposal Issues

- The PWR Core II storage pool is an issue, only because of the uncertainty of storage needs. It is possible that it can be dry stored and the pool and coolant water is not necessary.
- Waste that cannot be rendered non-hazardous (i.e. mixed, hazardous) is to be stored at the Central Waste Complex until provisions for adequate disposal are formulated.

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3C. Waste Type Data

Projected Waste Volume Generation (cubic feet, gallons)

Waste Type	FY 1994 Liq/Solid	FY 1995 Liq/Solid	FY 1996 Liq/Solid	FY97- 2018 Liq/Solid	Planned TSD Facility/ Program
HLW (Tank Waste)					
TRU Waste	0 gal/512 ft ³	0 gal/512 ft ³	0 gal/512 ft ³		
LLW	0 gal/5000 ft ³	0 gal/5000 ft ³	0 gal/5000 ft ³		CWC
Mixed LLW	240,000 gal/0 ft ³	240,000 gal/0 ft ³	240,000 gal/0 ft ³		204-AR (DST)
Hazardous Waste	0 gal/ 500 ft ³	0 gal/500 ft ³	0 gal/500 ft ³		CWC
Sanitary Waste	0 gal/5400 ft ³	0 gal/5400 ft ³	0 gal/5400 ft ³		

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3C. Waste Type Data (continued)

Projected Waste Volume Received (cubic feet, gallons)
(from other Facilities/Programs)

Waste Type	FY 1994 Liq/Solid	FY 1995 Liq/Solid	FY 1996 Liq/Solid	FY97- 2018 Liq/Solid	Planned TSD Facility/ Program
HLW (Tank Waste)	0 gal/512 ft ³	0 gal/512 ft ³ 0 gal/10,000 ft ³	0 gal/512 ft ³ 0 gal/10,000 ft ³	0 gal/512 ft ³ 0 gal/10,000 ft ³	DSTs/Landfill (Possible return to customer items) Landfill or return to customer
TRU Waste	0 gal/10,000 ft ³	32,000 gal/30,000 ft ³	32,000 gal/30,000 ft ³	32,000 gal/ 30,000 ft ³	
LLW	32,000 gal/20,000 ft ³	0 gal/0 ft ³	0 gal/0 ft ³	0 gal/0 ft ³	
Mixed LLW	0 gal/ 0 ft ³				
Hazardous Waste					
Sanitary Waste					

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3D. Science and Technology Needs

Planned Technology Needs (What processes require the technology)

- **State-of-the-art Decontamination Techniques**
- **Radiological Assay Procedures**
- **Metal cutting processes**
- **Site waste minimization processes**
- **Waste repackaging processes**

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3D. Science and Technology Needs

Drivers and Justification of Technologies (How they support mission)

- As required in 57 FR 37194 (The "Debris Rule") Improvements in radioactive material handling technologies will benefit WDS operations, as well as other DOE waste generators, handlers, and other nuclear facilities through the following:
 - Enhanced personnel and environmental protection through improvements in radiological materials qualitative analysis, decontamination, metal cutting, volume reduction, and packaging technologies.
 - Increased productivity/reduced costs through use of advanced decontamination methods.

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3D. Science and Technology Needs

- Reduction of waste production from the decontaminating, cutting, and repackaging processes.
- Improvement in the degree of waste volume reduction.
- Provision of better treated waste categorization methods to improve determination of final disposition.
- Development of procedures for the handling of special problems like the Liquid Waste Tank Car criticality issue.

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3E. Planned Projects

		(\$ In Thousands)								
AD	RL/HQ	Project Title/Justification/ Impact If Unfunded	FY94	FY95	FY96	FY97	FY98	FY99		
S	Project #									
No.										
2320-01	C-077	<ul style="list-style-type: none"> T PLANT VENTILATION UPGRADE: This Line Item will correct the 221-T ventilation, differential pressure, air exchange system, and improve heating and cooling units. This upgrade is required to comply with RCRA and WAC requirements for permitted TSD facilities. Impact if Unfunded: Discontinued use of the 221-T canyon for high radiation decontamination, repair, and solid waste storage. 	0	0	2000	2000	6000	6000	4000	
2320-02	W-259	<ul style="list-style-type: none"> T PLANT SECONDARY CONTAINMENT AND LEAK DETECTION: This Line Item will install secondary containment and leak detection equipment for T Plant's liquid process and waste handling systems (tanks and piping). This upgrade is required by WAC 173-303-640 (2), for interim status facilities. 	0	0	1000	4000	5000	0	0	
2340	W-XXX	<ul style="list-style-type: none"> Impact if Unfunded: Loss of Maintenance and decontamination for the LWTCs, curtailment of RMW liquid waste transport, and shut down of T Plant decontamination services. T PLANT FACILITY REPLACEMENT: This Line Item will provide a new decontamination facility for the WDS program, if required. This construction project may be required to provide the Hanford Site with a compliant decontamination facility. It may be decided that it would be more economical to construct a new facility than to upgrade the T Plant Facility to meet RCRA and WAC requirements. Impact if Unfunded: The Hanford Site may end up without any decontamination services available at all. 	0	0	0	20000	21000	30000	30000	

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3F. Planned Staffing			NOTE: Job Family Only After 1995				
JOB FAMILY							
Job category	1994	1995	1996	1997	1998	1999	2000
MANAGERS	20	20	20	20	20	20	20
First line	17	17					
General/executive	2.0	2.0					
Project/Program	1.0	1.0					
Other							
ENGINEERS	48	48	48	48	48	48	48
Chemical	3	3					
Civil							
Computer							
Electrical	5	5					
Environmental	9	9					
Industrial	6	6					
Mechanical	6	6					
Nuclear							
Petroleum/Mining							
Plant	7	7					
Quality Control	2	2					
Safety	4	4					
Other	6	6					

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3F. Planned Staffing			NOTE: Job Family Only After 1995				
SCIENTISTS	1.5	1.5	2	2	2	2	2
Chemists	1	1					
Environmental							
Geologists							
Life							
Material							
Mathematicians							
Physicists							
Social							
Other	.5	.5					
ADMIN/OTHER PROFESSIONALS	30.5	32.5	33	33	33	33	33
Accountant/auditor	9	9					
Architect							
Buyers/procurement							
Communications	.5	.5					
Compliance inspectors							
Computer System Anal							
Cost Est/planner/sch	11	11					
Health Physics	5	5					
Industrial Hygiene		.5					
Lawyers							

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3F. Planned Staffing			NOTE: Job Family Only After 1995				
Personnel/Labor Rela							
Physicians							
Physician Assis/Nurs							
Safeguard & Security							
Tech Writers & Edit		.5					
Trainers	5	6					
Other							
JOB FAMILY							
Job category							
GEN ADM/SECRETARY/CLERK	12	12	12	13	13	13	13
Admin Assistants							
Office Clerks (Gen)	6	6					
Office Clerks (Special)							
Secretaries	6	6					
Typist/Word Process							
Other							
TECHNICIANS	28	30	31	31	31	32	32
Computer Oper/Coder	1	1					
Drafters	1	2					
Engrs/Tech	1	2					
Envir. Sci Technicians							

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3F. Planned Staffing			NOTE: Job Family Only After 1995				
Health Phys. Technic.	22	22					
Indus. Saf/Health Tech							
Instru/Control Tech							
Lab. Technicians	3	3					
Media Technicians							
Survey/Map Tech							
Other							
CRAFTS	25	27	27	27	27	27	27
Carpenters	1	1					
Electricians	7	7					
HVAC		.5					
Machinists							
Masons							
Millwrights	3	3.5					
Painters	2	2					
Plumbers/Pipefitters	2.5	3.0					
Struct/Metal Workers							
Vehic./Mob Equip Mech							
Welders	1.5	2					
Other	9	9					
OPERATORS	31	31	33	33	33	33	33

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3F. Planned Staffing			NOTE: Job Family Only After 1995				
Chemical System	1	1					
Drillers							
Lt. Vehicle Drivers	1	1					
Material Moving Equip	1	1					
Nuclear Plant							
Utilities Waste Proces	28	28					
Other							
LABOR & GEN WORKERS	2	2	2	2	2	2	2
Firefighters							
Food Service							
Hand/Help Lab Gen							
Hand/Help Lab Spec							
Janitors/Cleaners	2	2					
Laundry Workers							
Security Guards							
Other							

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