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WHC-SP--0530

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Chemical Processing FY 1990 Program and Operating Plan

Prepared for the U.S. Department of Energy
Assistant Secretary for Defense Programs



Westinghouse
Hanford Company Richland, Washington

Hanford Operations and Engineering Contractor for the
U.S. Department of Energy under Contract DE-AC06-87RL10930

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Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

December 22, 1989

8957346

Mr. J. R. Hunter, Director
Operations Division
U.S. Department of Energy
Richland Operations Office
Richland, Washington 99352

Dear Mr. Hunter:

FISCAL YEAR 1990 CHEMICAL PROCESSING PROGRAM PLAN

Transmitted for your review and approval is the Westinghouse Hanford Company (WHC) Chemical Processing Program Plan for fiscal year (FY) 1990. The Plan consists of a program summary, detailed end function program plans and master program schedules.

The Program Plan identifies the assumptions and funding requirements to achieve the defined Chemical Processing Program goals. It defines a baseline consisting of detailed scope, schedule and budgets based on the funding guidance for FY 1990. It should be noted that at the target funding level, a number of key workscope items remain unfunded or are only partially funded. Items that remain unfunded include: Plutonium Finishing Plant (PFP) ductwork remediation, catalyzed electrical plutonium oxide dissolution (CEPOD) development activities, fifth shift training staff, and expense support to outyear non-environmental candidate construction projects. Significant workscope that is only partially funded includes: Plutonium Uranium Extraction (PUREX) Plant final safety analysis report, job control system implementation, material staging upgrades, Pacific Northwest Laboratory continuous air monitor calibration, and PUREX/PFP essential drawing upgrades. The status of these workscope items as well as the funded scope will be reassessed at mid-year. In the interim, changes to the program baseline will be documented through the change control process.

In addition, the plan does not take into account funding to support resolution of the listed waste issue at PUREX since the strategy for funding the Liquid Effluent Retention Facility has not been finalized. Options for funding the retention, treatment and disposal for the affected streams from both the 242-A Evaporator and PUREX include utilization of funds from several sources and programs (Waste Operations, Chemical Processing, Operating, Equipment and Construction). These options will likely involve reprogramming of funds, changes to the Hanford Environmental Compliance line item and special project validations. We are working with the U.S. Department of Energy-Richland Operations Office (DOE-RL) Financial Resources Division to identify and implement actions necessary to proceed with the reprogramming efforts.

Key assumption and planning basis used in development of the baseline plan include:

- o Operate facilities in an environmentally sound manner. Meet requirements and commitments defined in the Tri-Party Agreement and Duffy Plan.
 - Continue enhancements/improvements: Health and safety areas; operational assurances and efficiency improvements; environmental upgrades and compliance; operational training program upgrades; planning and scheduling; maintenance backlog reductions and new programs, i.e., asbestos abatement, fire systems maintenance.
- o Operate the PUREX Plant to complete the stabilization run. Place the facility in long term maintenance mode awaiting upgrades/modifications required at PUREX and 242-A evaporator.
- o Operate the Plutonium Reclamation Facility (PRF) to process remaining inventory of Hanford generated plutonium scrap to keep inventory current and continue processing of non-specification plutonium to support Rocky Flats and the Material Management Executive Committee. The entire PRF facility will operate approximately 100 days in FY 1990.
- o Operate the Remote Mechanical C (RMC) Line to convert all weapon-grade plutonium nitrate product from PUREX and PRF to metal and ship to Rocky Flats. Ship blendstock oxide to the Savannah River Plant. The RMC will operate approximately 20 days in the last quarter of FY 1990.
- o Develop plans to operate PRF and RMC in a total concurrent mode beginning in FY 1991.
- o Support: surveillance, monitoring, and cleanup of retired facilities and systems; safeguards and security activities as required; selective cleanout of obsolete facilities; and ongoing and future construction projects commensurate with fiscal constraints and the facility missions.
- o Westinghouse Hanford Company planning assumption for rates and services are used for pricing.
- o Duffy funding and workscope activities are integrated into the plan.

Mr. J. R. Hunter
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December 22, 1989

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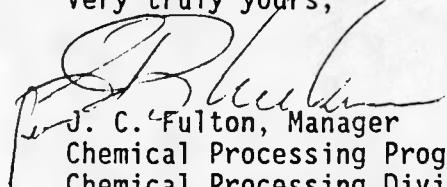
Below is a summary of the FY 1990 Budget by budget and reporting (B&R) by funds type:

	<u>GE-02</u>	<u>GE-03</u>	<u>GF-71</u>	<u>GF-73</u>	<u>Total</u>
Expense	\$139,709	\$20,570	\$1,851	\$21,655	\$183,785
CENRTC	12,659			936	13,595
GPP		4,240	950	620	5,810
LI	788	2,067			2,855
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
TOTAL	\$153,156	\$26,877	\$2,801	\$23,211	\$206,045

Again, this Plan defines the FY 1990 baseline. Major budget, schedule and scope changes to this Plan will be documented on Class I change requests and submitted to DOE-RL for approval.

Should you have any questions, please contact Mr. D. B. Cartmell (373-2002).

Very truly yours,



J. C. Fulton, Manager
Chemical Processing Programs
Chemical Processing Division

jmm

Attachment

DOE-RL - A. W. Kellogg (w/o attachment)

WESTINGHOUSE HANFORD COMPANY
CHEMICAL PROCESSING
FY 1990 PROGRAM AND OPERATING PLAN

APPROVALS:

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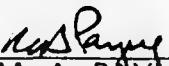

N. C. BOYTER, MANAGER
CHEMICAL PROCESSING DIVISION

DATE

12-20-89


J. C. FULTON, MANAGER
CHEMICAL PROCESSING PROGRAMS

12-20-89


M. A. PAYNE, PLANT MANAGER
PUREX OPERATIONS DEPARTMENT

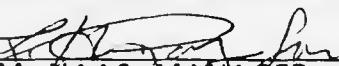
12/20/89


E. C. VOGT, PLANT MANAGER
PLUTONIUM OPERATIONS PROGRAMS

12/20/89


E. J. KOSIARCIC, MANAGER
CHEMICAL PROCESSING SYSTEMS ENGINEERING

12/20/89


M. HAAS, MANAGER
PLUTONIUM FINISHING PLANT
PLANT ENGINEERING

12/20/89


D. B. CARTMELL, MANAGER
CHEMICAL PROCESSING ADMINISTRATION

12-20-89

CHEMICAL PROCESSING FY 1990 PROGRAM AND OPERATING PLAN

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CHEMICAL PROCESSING PROGRAM FY 1990 PROGRAM & OPERATING PLAN

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MANAGEMENT SUMMARY

CHEMICAL PROCESSING PROGRAM FY 1990 PROGRAM & OPERATING PLAN

MANAGEMENT SUMMARY

INTRODUCTION

THE FY 1990 CHEMICAL PROCESSING PROGRAM PLAN IDENTIFIES THE CURRENT BASELINE PLAN CONSISTENT WITH DEPARTMENT OF ENERGY FUNDING GUIDANCE OF \$183.8M. CONTAINED WITHIN THE PLAN ARE THE FISCAL YEAR WORK SCOPE DESCRIPTIONS, SCHEDULES, MILESTONES, AND BUDGET BASELINES FOR EACH OF THE PROGRAM'S END FUNCTIONS. ONCE APPROVED, THIS PROGRAM PLAN PROVIDES A FRAMEWORK FOR AGREEMENT BETWEEN WESTINGHOUSE AND DOE-RL REGARDING THE BASELINE PLAN SO THAT ALTERNATIVE OPERATING SCENARIOS, IMPACT ANALYSIS, AND BUDGET REQUIREMENTS CAN BE MEASURED AGAINST A COMMON BASE. MAJOR SCOPE, SCHEDULE, OR BUDGET CHANGES TO THIS PLAN WILL BE DOCUMENTED ON CHANGE REQUESTS AND SUBMITTED TO DOE-RL FOR APPROVAL.

PROGRAM DESCRIPTION / PLANNING ASSUMPTIONS

BELOW IS A SUMMARY OF THE PLANNED ACTIVITIES TO BE PERFORMED TO SUPPORT DOE NUCLEAR MATERIALS PRODUCTION REQUIREMENTS AND GOALS.

- OPERATE FACILITIES IN AN ENVIRONMENTALLY SOUND MANNER. MEET REQUIREMENTS AND COMMITMENTS DEFINED IN THE TRI-PARTY AGREEMENT AND DUFFY PLAN.
 - CONTINUE ENHANCEMENTS / IMPROVEMENTS: HEALTH AND SAFETY AREAS; OPERATIONAL ASSURANCES AND EFFICIENCY IMPROVEMENTS; ENVIRONMENTAL UPGRADES AND COMPLIANCE; OPERATIONAL TRAINING PROGRAM UPGRADES; PLANNING AND SCHEDULING; MAINTENANCE BACKLOG REDUCTIONS AND NEW PROGRAMS, I.E., ASBESTOS ABATEMENT, FIRE SYSTEMS MAINTENANCE.
- OPERATE THE PLUTONIUM URANIUM EXTRACTION (PUREX) PLANT TO COMPLETE THE STABILIZATION RUN. PLACE THE FACILITY IN MAINTENANCE MODE TO IMPLEMENT UPGRADES / MODIFICATIONS REQUIRED.

CHEMICAL PROCESSING PROGRAM FY 1990 PROGRAM & OPERATING PLAN

MANAGEMENT SUMMARY

PROGRAM DESCRIPTION / PLANNING ASSUMPTIONS (CONTINUED)

- OPERATE THE PLUTONIUM RECLAMATION FACILITY (PRF) TO PROCESS REMAINING INVENTORY OF HANFORD GENERATED PLUTONIUM SCRAP TO KEEP INVENTORY CURRENT AND CONTINUE PROCESSING OF NON-SPECIFICATION PLUTONIUM TO SUPPORT ROCKY FLATS AND THE MATERIAL MANAGEMENT EXECUTIVE COMMITTEE (MMEC). THE ENTIRE PRF FACILITY WILL OPERATE APPROXIMATELY 100 DAYS.
- OPERATE THE REMOTE MECHANICAL C (RMC) LINE TO CONVERT ALL WEAPON-GRADE PLUTONIUM NITRATE PRODUCT FROM PUREX AND PRF TO METAL AND SHIP TO ROCKY FLATS. SHIP BLENDSTOCK OXIDE TO SRP. THE RMC WILL OPERATE APPROXIMATELY 20 DAYS IN FY 1990.
- DEVELOP PLANS TO OPERATE PRF AND RMC IN A TOTAL CONCURRENT MODE BEGINNING IN FY 1991
- SUPPORT: SURVEILLANCE, MONITORING, AND CLEANUP OF RETIRED FACILITIES AND SYSTEMS; SAFEGUARDS AND SECURITY ACTIVITIES AS REQUIRED; SELECTIVE CLEANOUT OF OBSOLETE FACILITIES; AND ONGOING AND FUTURE CONSTRUCTION PROJECTS COMMENSURATE WITH FISCAL CONSTRAINTS AND THE FACILITY MISSIONS.
- WESTINGHOUSE HANFORD COMPANY PLANNING ASSUMPTION FOR RATES AND SERVICES ARE USED FOR PRICING.
- DUFFY FUNDING AND WORK SCOPE ACTIVITIES ARE INTEGRATED INTO THE PLAN.

CHEMICAL PROCESSING PROGRAM FY 1990 PROGRAM & OPERATING PLAN

MAJOR PROGRAM SCOPE

KE - ENVIRONMENTAL PROTECTION

- ENGINEERING STUDIES AND CONCEPTUAL ENGINEERING FOR ENVIRONMENTAL CANDIDATE CONSTRUCTION PROJECTS
- PROVIDE ENVIRONMENTAL TECHNOLOGY SUPPORT TO OPERATING FACILITIES
- PERFORM ENVIRONMENTAL OVERSIGHT AND DIRECTION
- PERFORM FACILITY ASSESSMENTS AGAINST EXISTING REQUIREMENTS
- PREPARE PART B PERMITS FOR CHEMICAL PROCESSING FACILITIES

K1 - STRATEGIC PLANNING AND PROJECT SUPPORT

- LONG RANGE PLANNING FOR NUCLEAR MATERIAL PRODUCTION, INCLUDING HANFORD CHEMICAL PROCESSING PLAN AND THE NUCLEAR MATERIAL PLAN
- TECHNOLOGY EXCHANGE COMMITTEE
- ENGINEERING STUDIES FOR ALL NON-ENVIRONMENTAL CANDIDATE CONSTRUCTION PROJECTS
- MANAGE SAFEGUARDS AND SECURITY ACTIVITIES FOR THE NON-PROTECTED AREAS
- TECHNOLOGY DEVELOPMENT
- TECHNICAL TRAINING PROGRAM AND ACCREDITATION PROGRAM

K2 - T PLANT OPERATIONS

- STORAGE AND SURVEILLANCE OF PWR CORE II
- DECONTAMINATE AND REPAIR CRITICAL PROCESS SPARES AND EQUIPMENT
- UPGRADE VENTILATION SYSTEMS FOR CONTINUED PLANT AVAILABILITY
- PERFORM PM ON CASK CARS, UO₃ TANKER

**CHEMICAL PROCESSING PROGRAM
FY 1990 PROGRAM & OPERATING PLAN**

**MAJOR PROGRAM SCOPE
(CONTINUED)**

K6 - PLUTONIUM FINISHING PLANT

- PROCESS SNM SCRAP IN PRF
- RESTART RMC FOR METAL CONVERSION
- SHIP FG PU OXIDE AS REQUIRED TO SUPPORT SAVANNAH RIVER PLANT (SRP)
- MAINTAIN COMPLIANCE WITH HAZARDOUS WASTE CRITERIA
- PLAN FOR CONCURRENT OPERATIONS
- SAFELY STORE SNM
- PERFORM SAFEGUARDS AND SECURITY ACTIVITIES
- COMPLETE PFP FSAR REVISION

KP - PUREX / UO₃ PLANTS

- PRODUCE WG PU NITRATE FROM STABILIZATION RUN
- OPERATE J-CELL TO RECOVER AND STORE NEPTUNIUM
- MAINTAIN COMPLIANCE WITH HAZARDOUS WASTE CRITERIA
- COMPLETE MAJOR MAINTENANCE OUTAGE ITEMS
- PERFORM SAFEGUARDS AND SECURITY ACTIVITIES
- INITIATE REVISION OF PUREX FSAR

**CHEMICAL PROCESSING PROGRAM
PROPOSED FY 1990 DOE-HQ MILESTONES**

MILESTONE DESCRIPTION	DATE
0.6 LOST WORKDAY CASES PER 200,000 MANHOURS WORKED FOR FISCAL YEAR 1990	9-90
CRITICALITY PREVENTION SPECIFICATION LIMITS FOR FISCAL YEAR 1990	9-90
<ul style="list-style-type: none"> ● 0 CRITICALITY PREVENTION SPECIFICATION VIOLATIONS ● NO MORE THAN 12 CRITICALITY PREVENTION SPECIFICATION INFRACTIONS 	
NO SAFETY AND ENVIRONMENTAL INCIDENTS REQUIRING CLASS A INVESTIGATIONS FOR FISCAL YEAR 1990	9-90
NO RADIATION RELEASES TO THE ENVIRONMENT IN EXCESS OF LIMITS SET FORTH IN W. A. VAUGH MEMORANDUM, DATED AUGUST 5, 1985	9-90
INITIATE PUREX STABILIZATION RUN	12-89
SUBMIT PUREX TUNNEL PART B PERMIT APPLICATION TO WDOE AND EPA	9-90
SUBMIT PUREX FSAR CHAPTER 11	9-90
COMPLETE WHC AND DOE-RL PREPARATIONS TO SUPPORT RESTART OF PRF REPROCESSING ⁽¹⁾	3-90
SUBMIT DRAFT PFP FSAR TO DOE-RL	3-90
COMPLETE 232-Z ISOLATION FROM THE MAIN PFP VENTILATION SYSTEM	4-90
COMPLETE WHC AND DOE-RL PREPARATIONS TO SUPPORT RMC RESTART ⁽¹⁾	8-90

(1) PENDING HQ RESOLUTION OF APPLICATION OF LAND DISPOSAL RESTRICTIONS FOR RADIOACTIVE MIXED WASTE. REFERENCE: RL MEMO, M. J. LAWRENCE TO J. C. TUCK, "APPLICATION OF THE LAND DISPOSAL RESTRICTIONS FOR RADIOACTIVE MIXED WASTE", DATED JULY 21, 1989.

**CHEMICAL PROCESSING PROGRAM
FY 1990 PROGRAM & OPERATING PLAN**

TABLE A

**FY 1990 BUDGET SUMMARY BY B&R
(DOLLARS IN THOUSANDS)**

	<u>GE-02</u>	<u>GE-03</u>	<u>GF-71</u>	<u>GF-73</u>	<u>TOTAL</u>
EXPENSE	139,709	20,570	1,851	21,655	183,785
CENRTC	12,659			936	13,595
GPP		4,240	950	620	5,810
LI	788	2,067			2,855
	=====	=====	=====	=====	=====
TOTAL	\$153,154	\$26,877	\$2,801	\$23,211	\$206,045
	=====	=====	=====	=====	=====

**CHEMICAL PROCESSING PROGRAM
FY 1990 PROGRAM & OPERATING PLAN**

TABLE B

**FY 1990 OPERATING BUDGET / MANPOWER SUMMARY BY END FUNCTION
(DOLLARS IN THOUSANDS)**

	<u>\$</u>	<u>FTE</u>
KE - ENVIRONMENTAL PROTECTION	4,575	30.4
K1 - STRATEGIC PLANNING AND PROJECT SUPPORT	16,640	126.3
K2 - T PLANT OPERATIONS	3,960	45.9
K6 - PLUTONIUM FINISHING PLANT	71,610	646.0
KP - PUREX / UO ₃ PLANTS	87,000	696.0
<hr/>		
TOTAL TARGET	\$183,785	1,544.6
<hr/>		
UNFUNDED WORKSCOPE	\$33,518	280.4
<hr/>		
FUNDING REQUIREMENTS	\$217,303	1,825.0
<hr/>		

**CHEMICAL PROCESSING PROGRAM
FY 1990 PROGRAM & OPERATING PLAN
FY 1990 BUDGET SUMMARY BY COST ELEMENT
(DOLLARS IN THOUSANDS)**

TABLE C

	\$
LABOR	76,649
MATERIALS	8,296
CONTRACT SUPPORT	3,266
OTHER CONTRACTORS	5,030
IRM	815
ASSESSMENTS	33,142
DEPARTMENT OVERHEADS	20,608
G&A / CSP	35,979
 TOTAL TARGET	 \$183,785
 <u>UNFUNDED WORKSCOPE:</u>	
LABOR	16,049
MATERIALS	956
CONTRACT SUPPORT	2,620
OTHER CONTRACTORS	2,053
IRM	138
ASSESSMENTS	1,317
DEPARTMENT OVERHEADS	3,924
G&A / CSP	6,461
 FUNDING REQUIREMENTS	 \$217,303

**CHEMICAL PROCESSING PROGRAM
FY 1990 PROGRAM & OPERATING PLAN**

TABLE D

FY 1990 BUDGET SUMMARY - CENRTC
(DOLLARS IN THOUSANDS)

<u>PRIORITIZATION</u>	<u>K1</u>	<u>K2</u>	<u>K6</u>	<u>KP</u>	<u>TOTAL</u>
1 CRITICAL SAFETY					0
2 CRITICAL OPERATIONS		50	200	10,115	10,365
3 NEW PROGRAMS					0
4 ENHANCED SAFETY	100	250	2,590	290	3,230
5 CONTINUITY OF OPERATIONS					0
TOTAL (B/A)	\$100	\$300	\$2,790	\$10,405	\$13,595

**CHEMICAL PROCESSING PROGRAM
FY 1990 PROGRAM & OPERATING PLAN**

TABLE E

**FY 1990 BUDGET SUMMARY - GENERAL PLANT PROJECTS
(\$000'S)**

<u>FUNDING YEAR</u>	<u>PROJECT #</u>	<u>PROJECT TITLE</u>	<u>SUPPORT TO FACILITY</u>	<u>TEC</u>
90	C-023	ENCLOSED MATERIAL HANDLING	PFP	\$1,100
90	C-025	PFP MAINTENANCE FACILITY	PFP	1,200
90	C-044	PFP NEW BADGEHOUSE	PFP	1,100
90	C-076	2706-T CONDITIONED AIR SYSTEM (SF)	T-PLANT	200
		FY90 SMALL PROJECTS AND GPP RESERVE		2,210
TOTAL FY 1990 TARGET				\$5,810
91	C-028	BLDG 2706-T HEPA EXHAUST SYSTEM (SF)	T PLANT	\$ 680
91	C-076	2706-T CONDITIONED AIR SYSTEM (SF)	T PLANT	415
91	C-046	PFP DRUM STORAGE FACILITY	PFP	1,100
91	C-075	211-U CHEMICAL STORAGE AREA UPGRADE	UO ₃ PLANT	520
		FY91 SMALL PROJECTS AND GPP RESERVE		1,485
TOTAL FY 1991 FUNDING REQUIREMENTS				\$4,200

**CHEMICAL PROCESSING PROGRAM
FY 1990 PROGRAM & OPERATING PLAN**

TABLE F

**FY 1990 BUDGET SUMMARY - LINE ITEMS
(\$000'S)**

<u>PROJECT</u>	<u>PROJECT #</u>	<u>PROJECT TITLE</u>	<u>TEC</u>	<u>FY 1990 B/A</u>
90-D-XXX	C-031	PFP LIQUID EFFLUENT TREATMENT FACILITY (HEC)	18,000	HEC LINE ITEM
90-D-XXX	B-680	PFP LIQUID LOW LEVEL WASTE SYSTEM MOD (HEC)	5,800	HEC LINE ITEM
90-D-XXX	B-631	PFP FIRE SAFETY & LOSS LIMITATION	3,300	788
90-D-XXX	B-634	PFP NITRATE HANDLING UPGRADE (PR)	9,300	2,067
91-D-XXX	C-018	PUREX PDD LIQUID EFFLUENT TREATMENT FACILITY (HEC)	11,200	HEC LINE ITEM
<hr/>				
TOTAL FY 1990 TARGET				\$ 2,855

END FUNCTION PLANS

**KE - ENVIRONMENTAL PROTECTION
WORKSCOPE DESCRIPTION**

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
KE	ENVIRONMENTAL COMPLIANCE	Provides for development of environmental compliance plans and implementation schedules to meet EPA and DOE requirements and Tri-Party Agreement milestones for the Chemical Processing Program. Also, development and coordination of engineering studies and expense support to environmental related construction projects for the Chemical Processing Program is provided.
KE2	Expense Support to Environmental Capital	
KE2P8	PUREX Environmental Project Support / CDR Development & General Support	Provide expense support for PUREX Environmental General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) provided by the Projects Department. Specifically includes funding and direction for completion of CDR's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning. Completion of all CDR's will be timed to support submittal of documents to DOE - RL to meet predetermined submittal dates.
KE2P9	PUREX Environmental Expense Upgrades & General Support	Provide expense support for PUREX Environmental EXPENSE UPGRADES that require a major effort by KEH. Support to expense upgrades will include funding for KEH and direction and support from WHC to include Project Engineering, Construction Coordination, and Engineering. Provides expense support for GENERAL SUPPORT to all environmental construction projects as required. Support will be provided by any support group relating to the projects as determined by the specific project, e.g.; QA Construction, Safeguards, Security, Industrial Safety, Utilities and Communication, Nuclear Safety, Laboratories, Plant Engineering, Process Engineering, Engineering Administration, etc.

KE - ENVIRONMENTAL PROTECTION WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
KE228	T Plant Environmental Project Support / CDR Development & General Support	<p>Provide expense support for T Plant Environmental General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) provided by the Projects Department. Specifically includes funding and direction for completion of CDR's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning. Completion of all CDR's will be timed to support submittal of documents to DOE - RL to meet predetermined submittal dates.</p>
KE229	T Plant Environmental Expense Upgrades & General Support	<p>Provide expense support for T Plant Environmental EXPENSE UPGRADES that require a major effort by KEH. Support to expense upgrades will include funding for KEH and direction and support from WHC to include Project Engineering, Construction Coordination, and Engineering. Provides expense support for GENERAL SUPPORT to all environmental construction projects as required. Support will be provided by any support group relating to the projects as determined by the specific project, e.g.; QA Construction, Safeguards, Security, Industrial Safety, Utilities and Communication, Nuclear Safety, Laboratories, Plant Engineering, Process Engineering, Engineering Administration, etc.</p>
KE268	PFP Environmental Project Support / CDR Development and General Support	<p>Provide expense support for PFP Environmental General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) provided by the Projects Department. Specifically includes funding and direction for completion of CDR's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning. Completion of all CDR's will be timed to support submittal of documents to DOE - RL to meet predetermined submittal dates.</p>

KE - ENVIRONMENTAL PROTECTION WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
KE269	PFP Environmental Expense Upgrades & General Support	Provides expense support for PFP Environmental EXPENSE UPGRADES that require a major effort by KEH. Support to expense upgrades will include funding for KEH and direction and support from WHC to include Project Engineering, Construction Coordination, and Engineering. Provides expense support for GENERAL SUPPORT to all environmental construction projects as required. Support will be provided by any support group relating to the projects as determined by the specific project, e.g.; QA Construction, Safeguards, Security, Industrial Safety, Utilities and Communication, Nuclear Safety, Laboratories, Plant Engineering, Process Engineering, Engineering Administration, etc.
KE5	Environmental Technology and Project Development	
KE521	PUREX Environmental Technology Development	Provide for environmental technology identification and development / demonstration required to support the PUREX Plant and the overall Chemical Processing Environmental requirements, including support for PUREX ASD.
KE522	PFP Environmental Technology Development	Provide for environmental technology identification and development / demonstration required to support the PF Plant and the overall Chemical Processing Environmental requirements.
KE523	T Plant Environmental Technology Development	Provide for environmental technology identification and development / demonstration required to support T Plant and the overall Chemical Processing Environmental requirements.

**KE - ENVIRONMENTAL PROTECTION
WORKSCOPE DESCRIPTION**

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
KE5P6	PUREX Environmental Project Engineering Studies	Provide development and coordination of engineering studies to support environmental construction projects as contained in the Chemical Processing Program Plan and current capital planning. Completion of all engineering studies will be timed to support submittal of documents to DOE - RL to meet predetermined submittal dates.
KE5P7	PUREX Environmental Project / FDC Development	Expense support for environmental General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) provided by Advanced Projects and PUREX Systems and Technology. Specifically includes funding and direction for completion of FDC's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning. Completion of all FDC's will be timed to support submittal of all documents to DOE - RL to meet predetermined submittal dates.
KE526	T Plant Environmental Project Engineering Studies	Provide development and coordination of engineering studies to support environmental construction projects as contained in the Chemical Processing Program Plan and current capital planning. Completion of all engineering studies will be timed to support submittal of documents to DOE - RL to meet predetermined submittal dates.
KE527	T Plant Environmental Project / FDC Development	Expense support for environmental General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) provided by Advanced Projects and PUREX Systems and Technology. Specifically includes funding and direction for completion of FDC's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning. Completion of all FDC's will be timed to support submittal of all documents to DOE - RL to meet predetermined submittal dates.

**KE - ENVIRONMENTAL PROTECTION
WORKSCOPE DESCRIPTION**

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
KE566	PFP Environmental Project Engineering Studies	Provide development and coordination of engineering studies to support environmental construction projects as contained in the Chemical Processing Program Plan and current capital planning. Completion of all engineering studies will be timed to support submittal of documents to DOE - RL to meet predetermined submittal dates.
KE567	PFP Environmental Project / FDC Development	Expense support for environmental General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) provided by Advanced Projects and PUREX Systems and Technology. Specifically includes funding and direction for completion of FDC's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning. Completion of all FDC's will be timed to support submittal of all documents to DOE - RL to meet predetermined submittal dates.
KE8	Environmental Support	
KE801	Program Environmental Support	Provide Chemical Processing Program direction and assess long range environmental protection and management trends and requirements and recommend long range objectives, assess and evaluate technology development for potential application in support of program goals. Evaluate program facilities and activities with respect to adequacy and conformance to program objectives for environmental protection and management which are consistent with applicable orders, directives and regulations, including the Tri-Party Agreement.
KE802	General Environmental Oversight	Monitor the implementation of environmental protection and management activities in all Chemical Processing Program facilities and areas of responsibility. Serve as focal point (central point of contact) for environmental issues for the program.

**KE - ENVIRONMENTAL PROTECTION
WORKSCOPE DESCRIPTION**

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
KE803	PFP Environmental Support	Update and revise PFP effluent monitoring plans to comply with regulatory orders and directions.
KE804	Facility Permits Part B's	Provides support for the Chemical Processing facilities to meet the Resource Conservation and Recovery Act (RCRA) permitting needs. Specifically provides support for the part B permit application for the PUREX tunnels and PUREX waste treatment.
KE805	PUREX Environmental Support	Update and revise the PUREX effluent monitoring plans to meet regulatory agency and Tri-Party Agreement requirements.
KE807	RCRA Generator Requirements	Perform facility assessments against all existing requirements have not been completed, e.g., assessment of tank systems and RCRA generator requirements. Also, Provides for corrective actions usually identified in the annual EPA inspection.

KE - ENVIRONMENTAL PROTECTION

FY 1990 MILESTONES / DELIVERABLES

<u>MILESTONE / DELIVERABLE DESCRIPTION</u>	<u>DATE</u>
<u>MILESTONES:</u>	
• SUBMIT PUREX TUNNEL PART B APPLICATION TO WDOE AND EPA	9-90
<u>DELIVERABLES:</u>	
• ISSUE PUREX STEAM CONDENSATE DISCHARGE STREAM BEST AVAILABLE TECHNOLOGY EVALUATION	12-89
• ISSUE CHEMICAL PROCESSING WASTE MINIMIZATION DEVELOPMENT PLAN	3-90
• ISSUE FDC'S AND CDR'S FOR ENVIRONMENTAL FY 1991 GENERAL PLANT PROJECTS	9-90

KE - ENVIRONMENTAL PROTECTION

TABLE 1

FY 1990 BUDGET / MANPOWER SUMMARY BY ACTIVITY

<u>(B/O)</u>	\$ (000'S)		FTE	
	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>
KE2 - EXPENSE SUPPORT TO ENVIRONMENTAL CAPITAL	1,130	1,130	6.2	6.2
KE5 - ENVIRONMENTAL TECHNOLOGY & PROJECT DEVELOPMENT	1,175	2,570	6.2	15.8
KE8 - ENVIRONMENTAL SUPPORT	2,270	2,270	18.0	18.0
SUBTOTAL EXPENSE (B/O)	\$4,575	\$5,970	30.4	40.0
CENRTC (B/A)	0	0	0	0
CONSTRUCTION (B/A)	0	0	0	0
TOTAL	\$4,575	\$5,970	30.4	40.0

KE - ENVIRONMENTAL PROTECTION

TABLE 2

FY 1990 SUMMARY BY COST ELEMENT

(DOLLARS IN THOUSANDS)

	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>
LABOR	1,841	2,382
MATERIALS	130	188
CONTRACT SUPPORT	603	1,065
OTHER CONTRACTORS	661	661
IRM	40	40
ASSESSMENTS	0	0
DEPARTMENT OVERHEADS	456	575
G&A / CSP	844	1,059
 <hr/>	 <hr/>	 <hr/>
TOTAL	\$4,575	\$5,970
 <hr/>	 <hr/>	 <hr/>

KE - ENVIRONMENTAL PROTECTION

TABLE 3

FY 1990 UNFUNDED WORKSCOPE
(DOLLARS IN THOUSANDS)

<u>DESCRIPTION</u>	<u>\$</u>	<u>FTE</u>
RESEARCH AND DEVELOPMENT - WASTE MINIMIZATION	\$1,395	9.6
 TOTAL UNFUNDED WORKSCOPE	 \$1,395	 9.6
 =====	 =====	 =====

KE - ENVIRONMENTAL PROTECTION

TABLE 4

RECONCILIATION TO THE 1991 BUDGET SUBMITTAL MINIMUM FUNDING CASE

(\$000'S)

FY 1990 EXPENSE BUDGET (1991 BUDGET SUBMITTAL) \$3,922

CHANGES

G&A/CSP REDUCED TO 25.5% FROM 27.0% <50>

SCOPE INCREASES

PROGRAM OFFICE ENVIRONMENTAL SUPPORT	140
RCRA GENERATOR REQUIREMENTS/TANK INTEGRITY ASSESSMENTS	425
PART B PERMIT FOR PUREX	88
ENVIRONMENTAL OVERSIGHT REQUIREMENTS	195
PFP AND T PLANT TECHNOLOGY DEVELOPMENT	110
EXPENSE SUPPORT TO PROJECTS	140

SCOPE DECREASES

PFP EFFLUENT MONITORING	<240>
PUREX EFFLUENT MONITORING	<155>

TOTAL FY 1990 TARGET **\$4,575**

K1 - STRATEGIC PLANNING & SUPPORT

WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K1	STRATEGIC PLANNING & SUPPORT	<p>The Strategic Planning Program provides Chemical Processing Program long-range planning and coordination with DOE and other DOE-RL contractors. Coordination with other DOE contractors and appropriate WHC components is provided to assure that material production and material receipts to and from WHC are planned and integrated to meet customer(s) needs. Safeguards and Security support excluding direct support to PUREX and PFP is provided to maintain policy and requirements associated with SNM accountability and physical control. Also, development and coordination of engineering studies and expense support to construction projects for the Chemical Processing Program is provided.</p>
K11	Program Management & Support	
K1101	Program Management	<p>Provide Chemical Processing Program direction and support to the end function. Support will be provided by the Program Manager and the Project/Activity Managers reporting directly to the Program Manager.</p>
K1102	Program Control	<p>Provide a program planning and control service to monitor, analyze, and control areas of program effort by participating in the development of schedules and plans; monitor performance against plans; identify variables, problems and risks; coordinate impact analysis and problem resolution plans; and provide management visibility over costs, schedules, and technical performance.</p>
K1104	Program Assessment	<p>Provide independent review and evaluation (assessment) of Chemical Processing facilities and operations. Will also provide recommendations for corrective actions and improvements.</p>

K1 - STRATEGIC PLANNING & SUPPORT WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION/ DESCRIPTION</u>
K12	Expense Support to Capital & Expense Upgrades PACE Administration	
K1223	T Plant Project Support / CDR Development	<p>Provide expense support for T Plant General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) by the Projects Department. Specifically includes funding and direction for completion of CDR's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning, excluding environmental related projects. Completion of all CDR's will be timed to support submittal of documents to DOE-RL to meet predetermined submittal dates.</p>
K1224	T Plant Expense Upgrades & General Support	<p>Provide expense support for T Plant EXPENSE UPGRADES that require a major effort by KEH. Support to expense upgrades will include funding for KEH and direction and support from WHC to include Project Engineering, Construction Coordination, and Engineering. Provides expense support for GENERAL SUPPORT to all construction projects as required. Support will be provided by any support group relating to the projects as determined by the specific project, e.g.; QA Construction, Safeguards, Security, Industrial Safety, Utilities and Communication, Nuclear Safety, Laboratories, Plant Engineering, Process Engineering, Engineering Administration, etc.</p>

K1 - STRATEGIC PLANNING & SUPPORT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K1263	PFP Project Support / CDR Development	Provide expense support for PFP General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) by the Projects Department. Specifically includes funding and direction for completion of CDR's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning, excluding environmental related projects. Completion of all CDR's will be timed to support submittal of documents to DOE-RL to meet predetermined submittal dates.
K1264	PFP Expense Upgrades & General Support	Provides expense support for PFP EXPENSE UPGRADES that require a major effort by KEH. Support to expense upgrades will include funding for KEH and direction and support from WHC to include Project Engineering, Construction Coordination, and Engineering. Provides expense support for GENERAL SUPPORT to all construction projects as required. Support will be provided by any support group relating to the projects as determined by the specific project, e.g.; QA Construction, Safeguards, Security, Industrial Safety, Utilities and Communication, Nuclear Safety, Laboratories, Plant Engineering, Process Engineering, Engineering Administration, etc.
K12P3	PUREX Project Support / CDR Development	Provide expense support for PUREX General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) provided by the Projects Department. Specifically includes funding and direction for completion of CDR's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning, excluding environmental related projects. Completion of all CDR's will be timed to support submittal of documents to DOE-RL to meet predetermined submittal dates. Projects include B - 383.

K1 - STRATEGIC PLANNING & SUPPORT / WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K12P4	PUREX Expense Upgrades & General Support	Provide expense support for PUREX EXPENSE UPGRADES that require a major effort by KEH. Support to expense upgrades will include funding for KEH and direction and support from WHC to include Project Engineering, Construction Coordination, and Engineering. Provides expense support for GENERAL SUPPORT to all construction projects as required. Support will be provided by any support group relating to the projects as determined by the specific project, e.g.; QA Construction, Safeguards, Security, Industrial Safety, Utilities and Communication, Nuclear Safety, Laboratories, Plant Engineering, Process Engineering, Engineering Administration, etc.
K12P5	Commingling	Provide expense support for capital to resolve commingling within the PUREX Plant and PF Plant. Support will include engineering studies, project management, KEH, and general support as required.
K13	Technical Training	
K13TR	Technical Training	Provide the training program to maintain qualified and certified personnel for PUREX and Plutonium Finishing Plants nuclear process operators and maintenance personnel. Provide the training for the certification program for 200 Area nuclear process operators to meet the DOE Training Accreditation Program requirements.

K1 - STRATEGIC PLANNING & SUPPORT
WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K14	Program Safeguards & Security	
K1401	Safeguards and Security General Support	Provide Safeguards and Security support to Chemical Processing Program which is of a general benefit to the Program rather than to a specific plant. Includes, but is not limited to, Activity Manager support, Site Security Plan preparation and review, Monthly Report production, development of user requirements, vulnerability assessment requirements, security procedure policy development, and administration.
K1402	S & S Equipment Maintenance	Provide maintenance support to the 200 Area Safeguards and Security non-protected area security systems hardware, including the Patrol Operations Center, 209-E alarm system and communications networks between protected areas. Provide facility maintenance to Safeguards and Security facilities outside the protected areas. Includes BCSR/IRM Support.
K1403	Security Applications Center (SAC) Support	Provide funding for the Chemical Processing portion of the Security Applications Center. Provides Chemical Processing monitoring and coordination of SAC activities as those activities relate to the Program.
K1404	Nuclear Material Overview	Provide for Safeguards activities not directly associated with operating plant support. Overview of safeguards activities, development, maintenance, and implementation of broad policy requirements associated with Special Nuclear Materials control and accountability, resolution of shipper/receiver differences and general reviews or performance evaluations of Safeguards section activities will be provided. Development of the EMCAS method of inventory analysis.

**K1 - STRATEGIC PLANNING & SUPPORT
WORKSCOPE DESCRIPTION**

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K15	Project & Technology Development Support	
K1502	PUREX Technology Development	Provide for a technology identification and development/ demonstration required to support the PUREX Plant and the overall Chemical Processing mission requirements for the Material Production Program.
K1504	PFP Technology Development	Provide for technology identification and development/ demonstration required to support the PF Plant and the overall Chemical Processing mission requirements.
K1505	Seismic Analyses	Provide support and overall coordination for seismic analysis activities.
K1506	T Plant Technology Development	Provide for technology identification and development demonstration required to support T Plant and the overall Chemical Processing mission requirements.
K1508	Technology Exchange Committee	Provide the Chemical Processing Program Support required by the Department of Energy Technology Exchange Committee.
K1510	LANL Technology Exchange	Provide mechanism and support technology exchange with LANL.
K1512	PUREX Terminal Cleanout	Provide for identification of requirements and technical issues to support proposed PUREX terminal cleanout operations.

K1 - STRATEGIC PLANNING & SUPPORT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K1516	PFP Terminal Cleanout	Provide for identification of requirements and technical issues to support proposed Plutonium Finishing Plant terminal cleanout operations.
K1521	T Plant Project Engineering Studies	Provide development and coordination of engineering studies to support construction projects, excluding environmental related projects, as contained in the Chemical Processing Program Plan and current capital planning. Completion of all engineering studies will be timed to support submittal of documents to DOE-RL to meet predetermined submittal dates.
K1522	T Plant Project Support / FDC Development	Expense support for T Plant General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) provided by Advanced Projects and PUREX Systems and Technology. Specifically includes funding and direction for completion of FDC's to support capital projects, excluding environmental related projects, as contained in the Chemical Processing Program Plan and to support current capital planning. Completion of all FDC's will be timed to support submittal of documents to DOE-RL to meet predetermined submittal dates. Projects include the T Plant ventilation control upgrade.
K1561	PFP Project Engineering Studies	Provides development and coordination of engineering studies to support construction projects as contained in the Chemical Processing Program Plan and current capital planning. Completion of all engineering studies will be timed to support submittal of documents to DOE-RL to meet predetermined submittal dates.

K1 - STRATEGIC PLANNING & SUPPORT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K1562	PFP Project Support / FDC Development	<p>Expense support for PFP General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) provided by Advanced Projects and PUREX Systems and Technology. Specifically includes funding and direction for completion of FDC's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning, excluding environmental related projects. Completion of all FDC's will be timed to support submittal of documents to DOE-RL to meet predetermined submittal dates.</p>
K15P1	PUREX Project Engineering Studies	<p>Provides development and coordination of engineering studies to support construction projects as contained in the Chemical Processing Program Plan and current capital planning, excluding environmental related projects. Completion of all engineering studies will be timed to support submittal of documents to DOE-RL to meet predetermined submittal dates.</p>
K15P2	PUREX Project Support / FDC Development	<p>Expense support for PUREX General Plant Projects (GPP), Line Items, Capital Work Orders (CWO), and Capital Equipment Not Related To Construction (CENRTC) provided by Advanced Projects and PUREX Systems and Technology. Specifically includes funding and direction for completion of FDC's to support capital projects as contained in the Chemical Processing Program Plan and to support current capital planning, excluding environmental related projects. Completion of all FDC's will be timed to support submittal of documents to DOE-RL to meet predetermined submittal dates.</p>

K1 - STRATEGIC PLANNING & SUPPORT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K16	Nuclear Material Management	
K1602	On Site Packaging / Shipping Support	Provide engineering support for on site packaging and shipping, including Safety Analysis Reports Packaging (SARP's) and review of packaging and shipping procedures, including spot audits of actual shipping and packaging operations and resulting record keeping. Provide multifunctional support to the Packaging and Shipping Safety Committee (PSSC).
K1604	Nuclear Material Management	Provide coordination with other DOE contractors and appropriate Westinghouse Hanford Company (WHC) components to assure that material production and material receipts to and from WHC are appropriately planned and integrated to meet customer needs. Prepare data in support of the Materials Management Plan revisions and special requests. Prepare quarterly Production forecasts and monthly production reports addressing activities at PUREX Plant, UO ₃ Plant, and the Plutonium Finishing Plant operations. Quarterly production forecasts will include forecasts for the current year plus four years. Provide scrap evaluations and data development unique to nuclear material planning.
K17	Strategic Planning	
K1701	Long Range Planning	Provides yearly revisions of the Hanford Chemical Processing Plan (HCPP) and plans for implementation of the HCPP into the specific plants.
K1702	Strategic Studies Support	Provide specific engineering studies to support strategic and long range studies for the Chemical Processing Program and the overall Chemical Processing mission requirements for the Material Production Program. This also includes specific engineering studies to respond to special studies and request for DOE inquires.

K1 - STRATEGIC PLANNING AND PROJECT SUPPORT

FY 1990 MILESTONES / DELIVERABLES

<u>MILESTONE / DELIVERABLE DESCRIPTION</u>	<u>DATE</u>
<u>MILESTONES:</u>	
<u>DELIVERABLES:</u>	
● SUBMIT ANNUAL HANFORD CHEMICAL PROCESSING PLAN (HCPP) TO DOE-RL	3-90
● 86-D-151 PUREX ELECTRICAL SYSTEM UPGRADE - COMPLETE INSTALLATION OF THE 26 MOTOR CONTROL CENTERS	9-90
● ISSUE THE NUCLEAR MATERIAL PRODUCTION / SHIPPING REPORTS AND FORECASTS (MONTHLY)	9-90
● LANL TECHNOLOGY EXCHANGE	9-90
● IMPLEMENT TRAINING ACCREDITATION PROGRAM REQUIREMENTS	9-90
● SUBMIT FDC'S AND CDR'S FOR THE IDENTIFIED FY 1991 GPP'S TO DOE-RL	9-90

K1 - STRATEGIC PLANNING AND PROJECT SUPPORT

TABLE 1

FY 1990 BUDGET / MANPOWER SUMMARY BY ACTIVITY

<u>(B/0)</u>	<u>\$ (000'S)</u>		<u>FTE</u>	
	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>
K11 - PROGRAM MANAGEMENT	1,119	1,119	10.6	10.6
K12 - EXPENSE SUPPORT TO CAPITAL	3,448	5,041	16.2	19.3
K13 - TRAINING	3,669	3,669	37.3	37.3
K14 - PROGRAM SAFEGUARDS & SECURITY	2,727	2,923	21.7	23.8
K15 - TECHNOLOGY DEVELOPMENT SUPPORT	4,199	7,734	28.2	47.2
K16 - NUCLEAR MATERIAL MANAGEMENT	408	408	4.3	4.3
K17 - STRATEGIC PLANNING	1,070	1,070	8.0	8.0
SUBTOTAL EXPENSE (B/0)	<u>\$16,640</u>	<u>\$21,964</u>	<u>126.3</u>	<u>150.5</u>
CENRTC (B/A)	\$100	\$100		
CONSTRUCTION (B/A)	0	0		
TOTAL	\$16,740	\$22,064	126.3	150.5

K1 - STRATEGIC PLANNING AND PROJECT SUPPORT

TABLE 2

FY 1990 SUMMARY BY COST ELEMENT (DOLLARS IN THOUSANDS)

	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>
LABOR	7,415	9,611
MATERIALS	442	560
CONTRACT SUPPORT	749	1,217
OTHER CONTRACTORS	2,149	3,282
IRM	46	114
ASSESSMENTS	411	421
DEPARTMENT OVERHEADS	2,160	2,526
G&A / CSP	3,268	4,233
TOTAL	\$16,640	\$21,964

K1 - STRATEGIC PLANNING AND PROJECT SUPPORT

TABLE 3

FY 1990 UNFUNDDED WORKSCOPE (DOLLARS IN THOUSANDS)

<u>DESCRIPTION</u>	<u>\$</u>	<u>FTE</u>
B-383 ELECTRICAL UPGRADE / AS BUILT	803	1.0
OUTYEAR PROJECT CDR SUPPORT	790	2.1
S&S REQUIREMENTS	197	2.0
ENHANCED LANL SUPPORT	131	1.0
CEPOD	314	2.0
PFP TERMINAL CLEANOUT PLAN	50	0.6
PFP ENGINEERING STUDIES	260	2.5
C-003 PFP ACCOUNTABILITY UPGRADE	275	3.0
PUREX BASELINE ELEC. DRAWING	276	2.0
DOE ORDER 6430.1A COMPLIANCE	599	1.0
202-A CAMS EMERGENCY POWER	250	0.2
TECHNOLOGY DEVELOPMENT PLAN	125	1.4
ENHANCED SEISMIC ANALYSIS	125	1.1
PFP TECHNICAL MANUALS	673	1.5
PWR CORE 2 PROCESSING / TECHNOLOGY STUDIES	456	2.8
<hr/>		
TOTAL UNFUNDDED WORKSCOPE	\$5,324	24.2
<hr/>		

K1 - STRATEGIC PLANNING AND PROJECT SUPPORT

TABLE 4

RECONCILIATION TO THE 1991 BUDGET SUBMITTAL
MINIMUM FUNDING CASE

(\$000'S)

FY 1990 EXPENSE BUDGET (1991 BUDGET SUBMITTAL)	\$21,778
<u>CHANGES</u>	
G&A/CSP REDUCED TO 25.5% FROM 27.0%	<191>
TRANSFER OF ENVIRONMENTAL SUPPORT TO THE KE END FUNCTION	<3,922>
SITE IMPACTS	<1,000>
<u>SCOPE INCREASES</u>	
SAFETY REVIEWS FOR CDRs	225
B-383 ELECTRICAL UPGRADES / AS-BUILTS	571
PUREX TECHNOLOGY	130
SEISMIC ANALYSIS STUDIES	291
TECHNOLOGY EXCHANGE WITH LANL	135
PFP ENGINEERING STUDIES	152
SAFETY DOCUMENTATION FOR PROJECTS	300
<u>SCOPE DECREASES</u>	
TECHNOLOGY DEVELOPMENT PLAN	<130>
PFP TECHNOLOGY DEVELOPMENT	<218>
CEPOD QUALIFICATION TESTS	<900>
PWR CORE 2 PROCESSING STUDIES	<260>
STRATEGIC PLANNING STUDIES	<199>
TCO STUDIES	<122>
<hr/>	<hr/>
TOTAL FY 1990 TARGET	\$16,640
<hr/>	<hr/>

K1 - STRATEGIC PLANNING AND PROJECT SUPPORT

TABLE 5

CAPITAL EQUIPMENT NOT RELATED TO CONSTRUCTION

B/A DOLLARS IN THOUSANDS

LEGEND - PRIORITY

1 - CRITICAL SAFETY

2 - CRITICAL OPERATIONS

3 - NEW PROGRAMS

4 - ENHANCED SAFETY

5 - CONTINUITY OF OPERATIONS

<u>PRIORITY</u>	<u>ITEM</u>	FY 1990	
		<u>REPLACE</u>	<u>NEW</u>
4	NIGHT VISION SCOPES		100
	TARGET	\$ 0	\$ 100
	FUNDING REQUIREMENTS	\$ 0	\$ 100

K2 - T PLANT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K2	T PLANT OPERATIONS	Provide a viable, safe, fuel storage, and equipment decontamination and repair facility.
K21	Program Management & Support	
K2101	Program Management	Provide program management to T Plant, including Program Project Manager.
K2102	Program Control	Provide a program planning and control service to monitor, analyze, and control areas of program effort by participating in the development of schedules and plans; monitor performance against plans; identify variables, problems and risks; coordinate impact analysis and problem resolution plans; and provide management visibility over costs, schedules, and technical performance.
K2104	Assessments	<p>Fund the following assessments for the T Plant Program:</p> <ul style="list-style-type: none"> ● T Plant Maintenance Credit ● Electricity ● Utility Maintenance ● Steam ● Laundry / Mask ● 222 - S Lab ● Capital MPR ● Job control allocations

**K2 - T PLANT
WORKSCOPE DESCRIPTION**

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K210A	Environmental Assessments	<p>Fund the following assessments for the T Plant Program:</p> <ul style="list-style-type: none"> ● Hanford Environmental Management Plan ● Non-Radioactive Waste (on-site and off-site) ● Radioactive Solid Waste / Pickup ● Dry Waste Disposal ● Hanford Liquid Effluent Study
K22	Plant Management & Support	
K2202	Nuclear Safety Review / Overview	<p>Provide overview and reviews of T Plant safety analysis, changes and evaluations. Review/design operating procedure changes. Review criticality appraisal/ walkthroughs, Radiation Protection Manual, and ensures day-to-day safety of facilities is maintained.</p>
K2205	Engineering Management Systems	<p>Provide East / West Area design/operating document release and control. Standards application and systems application support.</p>
K2206	Systems Engineering Support	<p>Perform engineering studies on near-term plant technology issues/fixes.</p>
K23	Plant Operations & Maintenance	

K2 - T PLANT WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
K2301	Plant Operations	General operator support to T Plant operations, including equipment decontamination and repair, housekeeping, maintenance, surveillance, radiation waste handling, training, project support, administrative support, PWR Core II storage operations. General Production Control Services to T Plant including planning, scheduling, material control, training, incident evaluation and analysis, and general plant services (rigging, hauling, weed control, burials, vent and balance and janitorial). Provide fabrication services for T Plant. Basic maintenance support only for 221-T head end (PM's, PISCES, HVAC systems, and lighting).
K2302	Process Engineering	Provide cognizant engineering and other process engineering support for operation / maintenance of T Plant PWR Core II in 221 - T storage pool, including preparation of engineering documentation. Identify essential and support drawings and perform hazardous waste tasks. Basic maintenance support only for 221 - T head end (PM's, PISCES, HVAC systems, and lighting).
K2303	Plant Maintenance	General maintenance of T Plant including housekeeping, preventive maintenance, repairs, surveillance, carpenter, and painting services. Provide general engineering support for the T Plant facility and associated process equipment. Basic maintenance support only for 221 - T head end (PM's, PISCES, HVAC systems and lighting).
K2304	Plant Engineering	Provide design engineering support to T Plant, including the incorporation of red-line changes to IEFD's and the update of existing drawings to current standards.
K2305	Health Physics	Provide radiation protection technician (RPT) support to T Plant including routine inspections, monitoring programs, and Westinghouse Radiation Area Management System. Does not include construction / upgrade projects.

K2 - T PLANT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K2308	QE&C Support	Quality Engineering and Control support to fabrication, installation, procurement, operations, surveillance, planning, documentation, and in-process and final inspection/verification. These activities include assuring that applicable contractual quality provisions are in compliance with current requirements; providing support in the procurement of materials and equipment; and providing support in areas affecting quality relating to fabrication, installation, operations, surveillance, planning, and documentation.
K230A	Environmental - Plant Operations	Provide environmental compliance support to include tank integrity plan, and the C-027-211-T Chemical Storage Upgrade readiness review and startup.
K230B	Environmental - Process Engineering	Provide cognizant engineer services to T Plant to implement the hazardous waste and effluent discharge regulations into daily plant operations. Provide technical leadership and direction to the plant in all hazardous waste/effluent issues.

K2 - T PLANT OPERATIONS

TABLE 1

FY 1990 BUDGET / MANPOWER SUMMARY BY ACTIVITY

<u>(B/0)</u>	<u>\$ (000'S)</u>		<u>STAFF</u>	
	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>
K21 - PROGRAM MANAGEMENT	<155>	776	1.3	1.3
K22 - PLANT SUPPORT	163	187	1.7	2.1
K23 - PLANT MANAGEMENT & SUPPORT	3,952	4,571	42.9	50.1
SUBTOTAL EXPENSE (B/0)	\$ 3,960	\$ 5,534	45.9	53.5
CENRTC (B/A)	\$ 300	\$ 300		
CONSTRUCTION (B/A)	\$ 530	\$530		
TOTAL	\$ 4,790	\$ 6,364	45.9	53.5

K2 - T PLANT OPERATIONS

TABLE 2

FY 1990 SUMMARY BY COST ELEMENT (DOLLARS IN THOUSANDS)

	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>
LABOR	\$ 2,318	\$ 2,640
MATERIALS	248	278
CONTRACT SUPPORT	97	147
OTHER CONTRACTORS	66	76
IRM	13	13
ASSESSMENTS	<157>	610
DEPARTMENT OVERHEADS	583	659
G&A / CSP	792	1,111
 TOTAL	 \$ 3,960	 \$ 5,534

K2 - T PLANT OPERATIONS

TABLE 3

FY 1990 UNFUNDDED WORKSCOPE (DOLLARS IN THOUSANDS)

<u>DESCRIPTION</u>	<u>\$</u>	<u>FTE</u>
ENHANCED INSTRUMENT TECHNICIANS	44	.5
DUCT WORK REMOVAL AT 291 T STACK AREA	91	.6
TANK SQ - 143 REMOVAL	18	.1
221 T / 207T CONTAMINATION CLEANUP	1,225	3.4
5TH SHIFT FOR TRAINING	196	3.0
<hr/>		
TOTAL UNFUNDDED WORKSCOPE	\$ 1,574	7.6
<hr/>		

K2 - T PLANT OPERATIONS

TABLE 4

RECONCILIATION TO THE 1991 BUDGET SUBMITTAL MINIMUM FUNDING CASE

(\$000's)

FY 1990 EXPENSE BUDGET (1991 BUDGET SUBMITTAL)	\$ 3,755
<u>CHANGES</u>	
G&A/CSP REDUCED TO 25.5% FROM 27.0%	<35>
SITE IMPACTS	<300>
<u>SCOPE INCREASES</u>	
HAZARDOUS WASTE BURIAL ASSESSMENT	369
INCREASED SAFETY OVERVIEW	56
INCREASED PM's & PIECES	98
PAINTING AT 2706-T FOR CONTAMINATION CONTROL	200
CLEAN UP AT 291-T STACK AREA	46
211-T READINESS REVIEW & STARTUP	63
B-459 T PLANT EXHAUST FILTER SYSTEM TIE IN	16
INCREASED MAINTENANCE CREDIT DUE TO INCREASED HAZARDOUS WASTE BURIAL ASSESSMENT	<472>
MANAGEMENT OVERSIGHT	264
<u>SCOPE DECREASES</u>	
T PLANT SAR DEFERRED	<100>
<hr/>	<hr/>
TOTAL FY 1990 TARGET	\$ 3,960
<hr/>	<hr/>

K2 - T PLANT OPERATIONS

TABLE 5

CAPITAL EQUIPMENT NOT RELATED TO CONSTRUCTION

B/A DOLLARS IN THOUSANDS

LEGEND - PRIORITY

1 - CRITICAL SAFETY

2 - CRITICAL OPERATIONS

3 - NEW PROGRAMS

4 - ENHANCED SAFETY

5 - CONTINUITY OF OPERATIONS

<u>PRIORITY</u>	<u>ITEM</u>	FY 1990	
		<u>REPLACE</u>	<u>NEW</u>
2	T PLANT ASSET ACCOUNT	50	
4	SLUDGE REMOVAL SYSTEM		250
		_____	_____
	TARGET	\$ 50	\$ 250
		_____	_____

**CHEMICAL PROCESSING PROGRAM
GPP / LI CANDIDATES**

TABLE 6

<u>PROJECT NUMBER</u>	<u>FUNDING SOURCE</u>	<u>DESCRIPTION</u>	<u>TEC (\$000)</u>
C-028 BUILDING 2706-T VENTILATION UPGRADE	89/91 GPP	THIS PROJECT WILL PROVIDE VENTILATION SUPPLY AND EXHAUST SYSTEMS FOR BUILDING 2706-T TO REPLACE THE EXISTING SYSTEMS, WHICH HAVE MAJOR DEFICIENCIES. THE EXHAUST AIR IN THE UPGRADED SYSTEMS WILL BE DUCTED TO A PREFILTER AND A BANK OF HEPA FILTERS. PRIOR TO DISCHARGE THROUGH A NEW STACK, THE EXHAUST AIR WILL BE SAMPLED AND MONITORED FOR RADIONUCLIDES.	980
C-076 2706-T CONDITIONED AIR SYSTEM	90/91 GPP	PROJECT C-076 IS TO EXPAND THE 2706-T BUILDING HEATING AND COOLING CAPABILITY TO ASSURE REASONABLE OPERATING CONDITIONS FOR DECONTAMINATION ACTIVITIES DURING HOT AND COLD TEMPERATURES. THE EXISTING 2706-T OFFICE WILL ALSO BE EXPANDED AND AN AIRLOCK PROVIDED TO THE OFFICE FROM THE WORK AREA. THE CAPACITY OF THE EXISTING STEAM SUPPLY TO THE 2706-T WILL BE DOUBLED TO HANDLE THE INCREASED HEATING REQUIREMENTS.	615

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K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
K6	PLUTONIUM FINISHING PLANT	<p>The PFP Program is responsible for maintaining the PFP facilities in a safe condition and providing required safeguards and physical protection systems. Operations within the facilities include the PRF and the RMC metal line. Plutonium-bearing scrap from WHC and Rocky Flats Plant will be processed through the PRF and converted to feed for RMC metal line production. The RMC metal line will convert weapon grade plutonium nitrate from the PRF and from PUREX to metal. The program also provides for the operation and upkeep of the nuclear material shipping, receiving, and vault storage facilities.</p>
K61	Program Management and Support	
K6101	Program Management	<p>Provide Chemical Processing Program direction and support to the K6 End Function. Support will be provided by the PFP Program Manager reporting directly to the Chemical Processing Program Manager.</p>
K6102	Program Control	<p>Provide a program planning and control service to monitor, analyze, and control areas of program effort by participating in the development of schedules and plans; monitor performance against plans; identify variables, problems and risks; coordinate impact analysis and problem resolution plans; and provide management visibility over costs, schedules, and technical performance.</p>

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
K6103	Base Assessments	<p>Fund the following assessments for the PFP Program:</p> <ul style="list-style-type: none">● Electricity● Utility Maintenance● 222-S Lab● Laundry/masks● Steam● Job Control system● Capital MPR
K610A	Environmental Assessments	<p>Fund the following assessments for the PFP Program:</p> <ul style="list-style-type: none">● Waste Burials● Hanford Environmental Management Plan (HEMP)● Hanford Liquid Effluent Study● Hazardous Chemicals Disposal
K62	PFP Safeguards & Security	
K6201	Patrol Support	<p>Provide Hanford Patrol Security support for the PFP protected area and the 200 West Area in general, including access control, law enforcement and alarm monitoring. Provide special coverage for Special Nuclear Material movement within the facility, coverage of the search trailer and coverage from roving patrol (including surveillance from the roof).</p>
K6202	S & S Equipment Maintenance	<p>Provide maintenance for S&S systems and facilities at the PFP protected area. Support includes preventive maintenance, calibration, repairs, maintaining spare parts and acquiring appropriate equipment maintenance contracts in order to assure that the safeguards and security systems are operable.</p>

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K6204	Security Services	<p>Provide assistance in the development and implementation of facility and process security plans. Provide the interface with Patrol for access control, alarm monitoring, and physical protection of the Plant. Maintain and interpret policy and requirements associated with nuclear materials physical protection.</p>
K6205	Safeguards Services	<p>Maintain policy and requirements associated with nuclear material accountability, records preparation and maintenance, measurement specification and inventory programs.</p> <p>Provide Safeguards support in the following areas:</p> <ul style="list-style-type: none">● Access control to 2736-Z vaults.● Support bi-monthly inventories of long term storage and associated surveillance.● Provide Safeguards support to shipping and receiving activities at 2736 complex.
K6207	MSSA Update	Provide the annual Master Safeguards and Security Agreement (MSSA).
K6208	Reports & Analysis	Provide special activities as required by the Activity Manager.
K6210	Patrol Supplemental Support	Provide overtime patrol support to special requests in support of plant projects and access control.
K63	Plant Operations	

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
K630A	Plant Management	<p>Provide support to the Plant Manager and general plant activities. Includes, but is not limited to, the following activities: activity administration support; support for incident investigations; support for PFP, ALARA, PACE and OPSEC committees/teams; support for readiness reviews; management and coordination for Plant training programs; and miscellaneous incidental support.</p>
K630B	Facilities Services	<p>Provide essential materials, maintenance materials, and consumable supplies to support production. Provide operations safeguards and security surveillance of the PFP as required by DOE orders and Westinghouse security plans. Activities include functional testing of alarms, response to PFP emergencies, audits and drills. Also includes the access control receptionist. Provide landlord activities for the PFP and its associated structures. Included in the general activities are:</p> <ul style="list-style-type: none">● Environmental and hazardous waste control operations of the Plant support systems.● Surveillance of plant conditions, effluents, and construction activities.● Operation of the plastic fabrication shop, plant stores, and chemical storage.● Direct and essential materials for general plant operations.● Support to various ALARA improvements.● Maintain control for power, ventilation, utilities, and fire protection systems. <p>Provide in-plant support to capital and expense upgrades and capital equipment not related to construction (CENRTC). Support will be provided from Operations, Plant Engineering, Process Engineering, and Analytical Labs as liaison contacts.</p>

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
K630E	Product Handling	<p>Provide operations support for special nuclear materials movements as required to support PFP processing operations. This effort includes waste handling/disposal; WIPP/WAC certification and criteria for drum handling; staging material for processing, scrap handling and in-plant storage; operation of glove boxes HA-211, HC-21C, and HC-60 for burning buttons, stabilization and hydrolysis; and operation of the low-level waste counter. Also includes operation of the rag rinsing station.</p> <p>Provide operational services to ship and receive special nuclear materials, both off site and on site, in support of production milestones and customers requirements.</p> <p>Maintain sufficient product receiver (PR) cans/jackets to support nitrate shipping from PUREX. This will include refurbishment of old PR cans and/or procurement of new cans as required.</p> <p>Provide operational support for non-destructive assay work, bi-monthly inventories and 2736-ZB repackaging efforts.</p> <p>Provide operational special nuclear material accountability support to meet shipping commitments and schedules.</p>

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
K6301	Plutonium Operations	<p>Provide personnel and materials to support operation of the PRF to meet scrap processing requirements and commitments. Operation of the PRF will be on an XYZ or an ABCD shift configuration dependent upon the processing requirements and the resources required to meet that requirement.</p> <p>Provide personnel and materials to perform maintenance on the PRF on a single shift basis during the time the PRF is in an outage mode. The outage maintenance will consist of ALARA upgrades and repairs required to maintain continuity of operations. Provide training/retraining of personnel as required.</p> <p>Provide personnel and materials to support operation of the RMC metal line to meet production commitments. Operation of the RMC line will be on an XYZ or an ABCD shift configuration dependent upon the production commitment and the resources required to meet that commitment. The production commitment is to be based upon the Chemical Processing Quarterly Forecast (classified).</p>
K6302	Plant Operations Control	<p>Provide planning, scheduling, work control and procurement support to PFP operations, including PRF and RMC operations and maintenance. Direct and maintain the PFP Job Control System (JCS).</p>
K6303	Spares Inventory Control	<p>Provide storage for the PFP spare parts inventory. Rent for space utilized will be assessed as an occupancy charge. Provide special process spares administration support; provide spare parts inventory reserve for items such as obsolescence, breakage, pilfering, etc.</p>
K6304	Spares Inventory Change	<p>Provides a net change (increase/decrease) to the PFP spare parts inventory and provides a monthly visibility on current status.</p>

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
K6306	Fabrication Services	Provide fabrication services to support maintenance and operation of the PFP and Analytical Laboratory. Support will include the necessary planning, material procurement, and fabrication services, including painting.
K6307	Criticality Engineering	Maintain nuclear criticality safety standards, computer codes and code validation. Provide criticality engineering support for analyses, specification preparation and revision, inspections, and design reviews. Provide criticality safety training.
K64	PFP Engineering	
K6401	Engineering Management & Support	Provide engineering management and administrative support to PFP Engineering. Maintain the engineering certification program, engineering training records and the tracking and reporting of engineering open items. Subcontract the necessary Central Engineering Design Services support to PFP Plant Engineering. Subcontract engineering support from the Packaging Development Organization, the Plutonium Process Support Laboratory and to KP for technical assistance and for the Procedure Production Team.
K6402	Process Engineering	Provide support to resolution of operating problems and deficiencies. Provide Cognizant Engineering support for fire protection and safety systems and for product handling. Maintain matrices for plant operating procedures, criticality prevention specification, operational specification requirements and for safety analyses for packaging. Provide plant waste volume projections, shipping and receiving support, scrap evaluations, the safety equipment list and projects support. Maintain interface with the PUREX Procedure Production Team and perform document reviews and special long range studies as required.

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K6403	Process Control	Provide Cognizant Engineering and Shift Engineer support to the operation of the RMC Line, to PRF and to the scrap stabilization processes. Prepare operating procedures, operation specification documents and their basis, feed blend plans, campaign reports and other special reports as required. Provide support to OSR preparation and implementation and to the facility ALARA committee. Support Operations & Maintenance in the implementation of process modifications and upgrades. Maintain IEDs, configuration control and flowsheet revisions. Participate in readiness reviews and respond to open issues. Provide leadership to the software QA initiative.
K6404	Plant Engineering	Provide plant engineering and related support for the PFP. This includes cognizant engineering for HVAC, power and support systems. Support the mechanical and electrical engineering service requests and where necessary, seek central engineering expertise in structural, welding and I & C areas. Provide liaison services to the fabrication shops.
K6405	Engineering Laboratory	Provide analytical chemistry support to the PFP and to the operation of its chemical processes. This includes: process control samples, product and feed analyses, effluent measurements and nondestructive analysis of special nuclear material. Provide analytical chemistry support to the PUREX Plant and UO ₃ as required. Subcontract technical expertise from CPD Systems Engineering and from PNL on special analyses.
K6406	ECM Support	Provide 200-W Engineering Document Control Stations, construction projects, files maintenance and vendor information. Provide Engineering Practice and Instruction Development, review and issuance.
K6407	Systems Engineering Support	Provide systems engineering support for process and facility problems; cognizant engineering support for Safeguards and Security.

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K6408	Environmental Compliance	Provide cognizant engineering support to solid wastes and to environmental issues. This includes land disposal restricted issues, SARA inventories, waste minimization, hazardous and mixed waste management, PCB management and plant effluent monitoring. Develop plans for low level waste certification facility waste minimization. Implement dangerous waste tank regulations and provide necessary permits as required and support all Tri-Party Agreement activities.
K6409	PFP SAR	Complete comment resolution of consolidated FSAR Chapters, complete necessary graphics and printing to support submission of draft to DOE/RL.
K6410	PFP Remediation Program	Provide management, operators and technical support for remediation/ removal of plutonium bearing duct work identified by the PFP Remediation Project plan.
K6411	232-Z Stabilization	Provide engineering support for the design and fabrication of a portable redundant exhauster to be installed at 232-Z and to effect a ventilation reversal prior to isolation of the facility from the 291-Z main stack plenum. Develop a plan and schedule for isolation, provide the necessary risk analyses and cost and schedule estimates for D & D activities.
K65	PFP Safety	
K6501	PFP Nuclear Safety	Provide safety overview of PFP operations, including the following: Review, coordination and approval of designs and documents; audits, appraisals and inspections; nuclear analyses; criticality safety except for analyses; incident response and review; radiological assessments; and facility and operations readiness reviews.

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K6503	Health Physics	Provide radiation protection (monitoring) services and associated materials for the general facility operations. Includes a routine surveillance program for assessing radiological conditions in the plant and work areas. Also includes preparation of necessary RWP's and Radiation Protection Technologist (RPT) monitoring of work sites. Provide facility orientation regarding radiological controls as required.
K66	PFP Maintenance	
K6601	RMC Maintenance	Provide maintenance personnel and materials to support operation and maintenance of the RMC. Support includes preventative maintenance (PM) on a scheduled basis. Additional upgrades and modifications will be performed dependent upon mission requirements, funding and schedule.
K6602	PRF Maintenance	Provide maintenance personnel and materials to support operation and maintenance of the PRF during process outages. Support includes preventative maintenance (PM) on a scheduled basis. Additional upgrades and modifications will be performed dependent upon scrap processing requirements, funding, and schedule.
K6603	General Plant Maintenance	Provide maintenance support to the PFP and laboratories to assure safe continuity of operations. Normal repair and equipment replacement is included. Minor plant and systems modifications will be performed as approved by the Plant Manager. Support includes dedicated PFP maintenance, and preventative maintenance on a scheduled basis.
K6604	General Maintenance Services	Provide janitorial, crane and rigging, ventilation and balance, light hauling, excavation, herbicide application, and vehicle maintenance support to PFP.

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
K6606	Maintenance Engineering	<p>Provide Maintenance Engineering support including:</p> <ul style="list-style-type: none">● PISCES● Predictive & Preventative Maintenance Programs (including fire systems)● Troubleshooting● Readiness & Design reviews
K6608	Shipping / Receiving Maintenance	<p>Provide maintenance personnel and materials to support operations in 2736-Z, 2736-ZA, and 2736-ZB facilities. Also included will be maintenance support for "In-Plant" product handling. Minor plant and systems modifications will be performed as approved by the Plant Manager and preventative maintenance on a scheduled basis.</p>
K6609	PFP Material Staging	<p>Provide for management of PFP materials to include procurement, storage and issuance of tools, consumable shop stock, operations supplies and essential materials, and the receiving, staging and issuance of work package materials/equipment.</p>
K67	Quality Assurance	
K6701	QA Support	<p>Ensure that systems, elements, and disciplines of a quality assurance program are developed, implemented and maintained. Assist Plant management with development and update the Quality Assurance Program Plan as identified by WHC-CM-4-2. Provide Quality Engineering support for procurement, corrective actions, readiness review board, problem solving/resolution, procedure reviews, NCR disposition and tracking, event reviews, review and approval of test plans and procedures, computer software, review and approval of engineering documents, and participate in QA audits.</p>

K6 - PLUTONIUM FINISHING PLANT WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
K6702	Quality Control Support	Provides Quality Control for all PFP operations by performing surveillance planning and surveillances of both OSR related and non-OSR related activities per MRP 5.2 and WHC-CM-4-2. Perform inspections including readiness review support, nonconformance reporting, inspection planning, fabrication services inspections, laboratory activities, and provide procurement support, QA and safety records tracking and support technology programs.

K6 - PLUTONIUM FINISHING PLANT
FY 1990 MILESTONES / DELIVERABLES

MILESTONE / DELIVERABLE DESCRIPTION	DATE
<u>MILESTONES:</u>	
0.6 LOST WORKDAY CASES PER 200,000 MANHOURS WORKED FOR FISCAL YEAR 1990	9-90
CRITICALITY PREVENTION SPECIFICATION LIMITS FOR FISCAL YEAR 1990	9-90
<ul style="list-style-type: none"> ● 0 CRITICALITY PREVENTION SPECIFICATION VIOLATIONS ● NO MORE THAN 12 CRITICALITY PREVENTION SPECIFICATION INFRACTIONS 	
NO SAFETY AND ENVIRONMENTAL INCIDENTS REQUIRING CLASS A INVESTIGATIONS FOR FISCAL YEAR 1990	9-90
NO RADIATION RELEASES TO THE ENVIRONMENT IN EXCESS OF LIMITS SET FORTH IN W. A. VAUGH MEMORANDUM, DATED AUGUST 5, 1985	9-90
COMPLETE WHC AND DOE-RL PREPARATIONS TO SUPPORT RESTART OF PRF REPROCESSING ⁽¹⁾	3-90
SUBMIT DRAFT PFP FSAR TO DOE-RL	3-90
COMPLETE 232-Z ISOLATION FROM THE MAIN PFP VENTILATION SYSTEM	4-90
COMPLETE WHC AND DOE-RL PREPARATIONS TO SUPPORT RMC RESTART ⁽¹⁾	8-90
<u>DELIVERABLES:</u>	
DEVELOPE RMC LINE INTEGRATED SCHEDULE	12-89
COMPLETE SEISMIC UPGRADES	9-90

(1) PENDING HQ RESOLUTION OF APPLICATION OF LAND DISPOSAL RESTRICTIONS FOR RADIOACTIVE MIXED WASTE. REFERENCE: RL MEMO, M. J. LAWRENCE TO J. C. TUCK, "APPLICATION OF THE LAND DISPOSAL RESTRICTIONS FOR RADIOACTIVE MIXED WASTE", DATED JULY 21, 1989.

K6 - PLUTONIUM FINISHING PLANT

TABLE 1

FY 1990 BUDGET / MANPOWER SUMMARY BY ACTIVITY

<u>(B/0)</u>	<u>\$ (000'S)</u>		<u>FTE</u>	
	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>
K61 - PROGRAM MANAGEMENT	11,431	11,431	7.3	7.3
K62 - SAFEGUARDS & SECURITY	8,467	8,489	79.5	79.5
K63 - PFP PLANT OPERATIONS	19,137	22,708	234.8	268.2
K64 - PFP ENGINEERING	14,835	18,003	145.8	183.8
K65 - PFP SAFETY	4,879	5,678	54.3	60.3
K66 - PFP MAINTENANCE	10,907	13,426	104.3	131.8
K67 - QUALITY ASSURANCE	1,954	2,315	19.6	22.7
 SUBTOTAL EXPENSE (B/0)	 \$71,610	 \$82,050	 645.6	 753.6
CENRTC (B/A)	\$2,790	\$2,790		
CONSTRUCTION (B/A)	\$7,120	\$7,120		
 TOTAL	 \$81,520	 91,960	 645.6	 753.6

K6 - PLUTONIUM FINISHING PLANT

TABLE 2

FY 1990 SUMMARY BY COST ELEMENT
(DOLLARS IN THOUSANDS)

	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>
LABOR	29,515	35,260
MATERIALS	3,016	3,426
CONTRACT SUPPORT	1,017	1,017
OTHER CONTRACTORS	1,314	1,814
IRM	436	506
ASSESSMENTS	14,488	14,628
DEPARTMENT OVERHEADS	8,069	9,602
G&A / CSP	13,755	15,797
TOTAL	\$71,610	\$82,050

K6 - PLUTONIUM FINISHING PLANT

TABLE 3

FY 1990 UNFUNDED WORKSCOPE (DOLLARS IN THOUSANDS)

<u>DESCRIPTION</u>	<u>\$</u>	<u>FTE</u>
FABRICATION	230	2.4
JOB CONTROL SYSTEM ENHANCEMENTS	250	2.0
GLOVEBOX 211 AND HOOD 60 OPS	380	6.0
PRF INSTRUMENT UPGRADE / NITRATE HANDLING SYSTEM	250	0.0
MISCELLANEOUS KAISER SUPPORT	630	0.0
QUALITY SAFETY TRACKING SUPPORT	1,010	12.0
REMEDIAL ACTIONS	1,140	15.2
ESSENTIAL DRAWINGS / ESR SUPPORT	860	11.0
PFP SCRAP RESIDUE STABILIZATION	320	2.0
PRF SHIFT ENGINEERS	270	3.0
ENHANCED SUPPORT TO ENGINEERING	630	8.0
ENHANCED MAINTENANCE SUPPORT	700	9.0
MATERIAL STAGING	510	6.7
MAINTENANCE UPGRADES	700	4.0
MAINTENANCE ENGINEERING ENHANCEMENTS	350	3.6
ENHANCED SHIPPING / RECEIVING MAINTENANCE	300	4.0
ENHANCED SAFEGUARDS, QA, SAFETY	1,210	9.1
5TH SHIFT (TRAINING)	700	10.0
 TOTAL UNFUNDED WORKSCOPE	 \$10,440	 108.0

K6 - PLUTONIUM FINISHING PLANT

TABLE 4

RECONCILIATION TO THE 1991 BUDGET SUBMITTAL MINIMUM FUNDING CASE

(\$000's)

FY 1990 EXPENSE BUDGET (1991 BUDGET SUBMITTAL) \$75,343

CHANGES

G&A/CSP REDUCED TO 25.5% FROM 27.0%	<1,100>
SITE IMPACTS	<1,400>
INCREASED STEAM CHARGES	1,145
INCREASED ASSESSMENTS	1,177

SCOPE INCREASES

SHIFT STIPEND	150
SAS UPGRADES FOR PRF	250
SEISMIC UPGRADES	375
MSSA UPDATE	160
CAM PURCHASE	175
MATERIAL STAGING	220
ENHANCED SAFEGUARDS, SAFETY & QUALITY	1,150
SAR UPDATE	1,255
WASTE BURIALS INCREASE	1,680

SCOPE DECREASES

LABOR - INABILITY TO HIRE STAFF	<710>
MATERIALS	<1,500>
REDLINE DRAWINGS	<1,115>
REMEDIAL ACTIONS	<1,000>
FACILITY CLEANOUT (232-Z STABILIZATION)	<1,065>
5TH SHIFT (TRAINING)	<700>
ENHANCED ASBESTOS ABATEMENT	<535>
ENHANCED MAINTENANCE	<400>
ENGINEERING TECHNICAL MANUALS	<500>
FL-10 CONTAINERS DISPOSAL	<215>
FABRICATION SUPPORT	<230>
CHEMICAL PREP FLOOR REPAIR	<1,000>

TOTAL FY 1990 TARGET \$71,610

K6 - PLUTONIUM FINISHING PLANT

TABLE 5

CAPITAL EQUIPMENT NOT RELATED TO CONSTRUCTION

B/A DOLLARS IN THOUSANDS

LEGEND - PRIORITY

- 1 - CRITICAL SAFETY
- 2 - CRITICAL OPERATIONS
- 3 - NEW PROGRAMS
- 4 - ENHANCED SAFETY
- 5 - CONTINUITY OF OPERATIONS

<u>PRIORITY</u>	<u>ITEM</u>	<u>REPLACE</u>	<u>FY 1990</u>	<u>NEW</u>
2	PFP ASSET ACCOUNT	200		
4	WASTE HANDLING & SCRAP SUPPORT			250
4	PRF INSTRUMENT UPGRADE	2,090		
4	Z-20 DISCHARGE MONITORING SYSTEM	50		
4	MAIN VENTILATION CONTROL UPGRADE	200		
			<hr/>	<hr/>
	TARGET		\$2,540	\$250
			<hr/>	<hr/>

**CHEMICAL PROCESSING PROGRAM
GPP / LI CANDIDATES**

TABLE 6

<u>PROJECT NUMBER</u>	<u>FUNDING SOURCE</u>	<u>DESCRIPTION</u>	<u>TEC (\$000)</u>
C-023 ENCLOSED MATERIAL HANDLING	90GPP	THE PROJECT WILL ENLARGE AND ENCLOSE THE PFP WEST DOCK AREA. A ROOM FOR LOADING BURIAL BOXES WILL BE PROVIDED AND WILL BE EQUIPPED WITH AN AIRLOCK, HOIST, AND HEPA EXHAUST FILTERS FOR VENTILATION CONTROL. A NEW DOCK WILL BE PROVIDED FOR HANDLING PR CANS. THE PROJECT WILL ALSO PROVIDE SAFEGUARDS, FIRE SUPPRESSION, AND RADIOLOGICAL MONITORING EQUIPMENT.	1,100
C-025 PFP MAINTENANCE FACILITY	90GPP	THE PROJECT WILL PROVIDE A CENTRALIZED MAINTENANCE FACILITY CONTAINING SHOPS FOR MECHANICAL/PIPING, ELECTRICAL, AND INSTRUMENTATION, PERSONNEL. WELDING FACILITIES WILL BE PROVIDED TO SUPPORT THE SHOPS. A TOOL CRIB, STORAGE, AND STAGING AREAS WILL BE PROVIDED. A MULTI SERVICE AREA WILL BE PROVIDED FOR LUNCH ROOM, JOB PRE-PLANNING, AND TRAINING ACTIVITIES. OFFICES WILL BE PROVIDED FOR MANAGEMENT, PLANNING, AND PRODUCTION CONTROL PERSONNEL.	1,200
C-044 PFP NEW BADGEHOUSE	90GPP	THIS PROJECT WILL CONSTRUCT A NEW BADGEHOUSE TO THE EAST OF THE EXISTING BADGEHOUSE. SPACE WILL BE PROVIDED FOR THE SECURITY INSPECTION EQUIPMENT PRESENTLY LOCATED IN THE SEARCH TRAILER AND FUTURE CARD ASSIGNMENT STATIONS. THE CARDS WILL BE USED TO CONTROL ACCESS TO THE BUILDINGS INSIDE THE PFP PROTECTED AREA.	1,100

**CHEMICAL PROCESSING PROGRAM
GPP / LI CANDIDATES**

TABLE 6

<u>PROJECT NUMBER</u>	<u>FUNDING SOURCE</u>	<u>DESCRIPTION</u>	<u>TEC (\$000)</u>
C-046 PFP DRUM STORAGE FACILITY	91GPP	THIS PROJECT WILL STORE DRUMS AND SPARE PARTS, AND WILL BE ADDED TO THE EAST SIDE OF THE 236-Z BUILDING. THE ADDITION WILL PROVIDE STORAGE FOR EMPTY AND FULL WASTE DRUMS, EMPTY AND FULL CHEMICAL DRUMS, AND SPARE PARTS. THE ADDITION WILL BE PART OF THE 234-5Z/242-Z/ 236-Z SECURITY ENVELOPE. THE DRUMS AND PARTS WILL BE SEGREGATED AND MONITORED TO MEET ENVIRONMENTAL AND SAFETY REQUIREMENTS. THE ADDITION WILL BE SIZED TO HOLD SEVERAL DAYS SUPPLY OF DRUMS AND HIGH USE SPARE PARTS.	1,100
B-631 PFP FIRE SAFETY & LOSS LIMITATION	90LI	THIS PROJECT WILL UPGRADE REMAINING SECTIONS OF THE FACILITY TO MEET THE INTENT OF FIRE LIFE SAFETY AND MAXIMUM PROPERTY LOSS PROTECTION CODES AND REGULATIONS. INCLUDED ARE NEW EMERGENCY EXPRESS ROUTES FROM SPECIFIC ROOMS OR AREAS, UPGRADING EXISTING OR INSTALLING NEW WALL STRUCTURES, SEALING PENETRATIONS, PROVIDING FIRE-RESISTANT COATING TO STRUCTURAL STEEL, AND FIRE PROTECTION FOR WEST HALF OF THE DUCT LEVEL AND A NEW FIRE ALARM SYSTEM.	3,300
B-634 PFP NITRATE HANDLING UPGRADE	90LI	THIS PROJECT WILL UPGRADE THE NITRATE HANDLING SYSTEM TO SUPPORT THE REMOTE MECHANICAL "C" (RMC) LINE AND PLUTONIUM RECLAMATION FACILITY (PRF) CONCURRENT AND SEQUENTIAL OPERATIONS. THIS PROJECT WILL PROVIDE NEW NITRATE AND PRODUCT STORAGE TANKS IN THE 242-Z BUILDING. THIS PROJECT CONTROL AND MONITORING SYSTEMS WILL BE PROVIDED FOR THE SOLUTION STORAGE AND HANDLING SYSTEMS. THIS PROJECT WILL ALSO PROVIDE DEDICATED TRANSFER LINES WITH SPARES BETWEEN VARIOUS PROCESS SYSTEMS AND TANKS WHICH WILL ELEMINATE POTENTIAL ROUTING.	9,300



Westinghouse
Hanford Company

THIS SCHEDULE BASELINED TO		K-89-11-03MPS
PLANNER	A. C. HANSON 3-17	
PAGE	ONE	OF
WBS NO.	K6	DATE 19 DEC

PROGRAM TITLE CHEMICAL PROCESSING
SCHEDULE TITLE K6 END FUNCTION SCHEDULE
SCHEDULE NO. K6-89-15-11EFS
REVISION NO. 0
89

KP - PUREX / UO₃ PLANTS
WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
KP	PUREX / UO ₃ PLANT	Operate the PUREX and UO ₃ Plants for the production of plutonium oxide and uranium oxide from N Reactor irradiated fuels. Perform strategic planning and engineering to support current and future fuel reprocessing missions.
KP1	Program Management & Support	
KP101	Program Management	Provide Chemical Processing Program direction and support to the KP End Function. Support will be provided by the PUREX / UO ₃ Program Manager reporting directly to the Chemical Processing Manager.
KP102	Program Control	Provide a program planning and control service to monitor, analyze, and control areas of program effort by participating in the development of schedules and plans; monitor performance against plans; identify variables, problems and risks; coordinate impact analysis and problem resolution plans; and provide management visibility over costs, schedules, and technical performance.
KP103	Base Assessments	<p>Fund the following assessments for the PUREX / UO₃ Program:</p> <ul style="list-style-type: none"> ● Electricity ● Utility Maintenance ● 222-S Lab ● Laundry / masks ● Steam ● Job Control System ● Capital MPR

KP - PUREX / UO₃ PLANTS WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
KP10A	Environmental Assessments	<p>Fund the following assessments for the PUREX / UO₃ Program:</p> <ul style="list-style-type: none">● Waste Burials● Hanford Environmental Management Plan (HEMP)● Hanford Liquid Effluent Study● Hazardous Chemicals Disposal
KP2	PUREX Safeguards and Security	
KP201	Patrol Support	<p>Provide Hanford Patrol support to the Chemical Processing Program at the PUREX protected area and other facilities within the 200 East limited area. Support includes access control, law enforcement, alarm monitoring, system operations and response, as well as support to the activity manager for identification of future resource requirements. Additional support includes miscellaneous patrol escort support for the PUREX Plant.</p>
KP202	S & S Equipment Maintenance	<p>Provide maintenance of safeguards and security equipment and facilities at the PUREX protected area. Support includes preventive maintenance, calibration, repair, spares and maintenance contracts.</p>
KP204	Security Services	<p>Provide Security and Technical Services Department Support to the PUREX protected area and other facilities within the 200 East limited area. Support includes maintenance of policy, interpretation of requirements associated with nuclear material physical protection, develop and assist in the implementation of facility/process security plans, and day-to-day security support to plant operations.</p>
KP205	Safeguards Services	<p>Provide policy and requirements maintenance associated with nuclear material accountability, records preparation, and maintenance measurement specifications and inventory control.</p>

KP - PUREX / UO₃ PLANTS
WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
KP206	MSSA Update	Provide the annual Master Safeguards & Security Agreement (MSSA) update.
KP208	Reports and Analysis	Provide special activities as required by the Activity Manager.
KP210	Patrol Supplemental Support	Provide overtime patrol support to special requests in support of plant projects and access control.
KP3	Plant Operations	
KP301	PUREX / UO ₃ Operations	<p>Manage the processing of nuclear fuels in the PUREX Plant. The primary tasks are receiving, dissolving, solvent extraction, conversion to PuO₂, shipping UNH, shipping oxide or nitrate. Direct and manage all support tasks required to maintain the process continuity such as: inventory and NMC support; system preparation surveillance and clean out; treatment and transfer of waste solution; and sampling per the PUREX sample schedule. Supporting tasks also include: housekeeping, refurbishment, administrative support and maintenance of training certifications.</p> <p>Manage all processing tasks required to convert PUREX UNH through calcination into UO₃ including the following activities: Receiving and storage of UNH from PUREX, concentrate UNH solution, calcine UNH to UO₃ powder, handle and load UO₃ powder into shipping containers, store UO₃ powder and ship off site, and recover and recycle nitric acid to PUREX. Oversee and monitor the receiving of T-hoppers on railcars and off site shipments.</p>

KP - PUREX / UO₃ PLANTS
WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION/ DESCRIPTION
KP301	PUREX / UO ₃ Operations (Continued)	Provide process engineering support to the operation of the PUREX Plant, including day-to-day troubleshooting, evaluation/control of process limits, safety, audits and qualified engineering shift support to the process. Provide technical liaison/direction to other organizations on equipment/process changes and operation/program planning. Establish/maintain plant operating and technical documents such as process control plans, sample schedules, flowsheets, essential material specifications, process control manual, operability test procedures/evaluations, process test plans/reports, process memos, IEDF's and plant operation procedures. Provide support to Nuclear Materials Control Campaign Inventory associated with sampling techniques/frequency coordination with process activities, and enhancements as determined.
KP302	PUREX / UO ₃ Planning	Provide production and maintenance scheduling support to the PUREX and UO ₃ Plants, to include capital equipment status, spare parts status, plant CVI files, material status. Provide T Plant and Fab Shops with schedules of required support and priorities, maintain special nuclear material inventory records.
KP303	PUREX / UO ₃ Materials	Provide essential materials, maintenance materials and consumable supplies to support the production schedule.
KP304	Spares Inventory Control	Provide for management of the PUREX/UO ₃ spare parts inventory; to include procurement, forecasting monthly reporting, occupancy assessment at the 2101M warehouse, and inventory reserve charges.
KP305	Spares Inventory Change	Provide for changes to the Spare Parts Inventory level.
KP306	ADP Support	Provide operational computer support to the PUREX production control protected area computer, and the Lab Customer Communications System (LCCS).

KP - PUREX / UO₃ PLANTS
WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
KP307	T Plant Decon. & Repair	Perform PMs on PUREX well cars, UO ₃ acid cars, and other rolling stock as required. Decontaminate and repair minor PUREX/UO ₃ equipment.
KP308	Technical Administration	Establish and maintain effective and efficient administrative practices to support plant operations. Provide Emergency Preparedness documentation and training to assure smooth handling of abnormal plant conditions. Develop and maintain integrated plant documentation systems. Administer the in-house commitment tracking system. Maintain CENRTC and expense Cost Account Authorizations for the plant. Provide support to the preparation of PUREX and UO ₃ Plants operating procedures. Administer the plant training program to assure the plant has properly trained personnel. Review and approve training manuals and materials. Develop and maintain a training records system. Provide SNM control for the plant. Provide the interface to Security, Safeguards, RAD Protection, Industrial Safety, etc.
KP309	Plant Engineering	Provide design engineering support for the PUREX and UO ₃ Plants including: <ul style="list-style-type: none"> ● Design engineering (including drafting and checking) for repair and maintenance of existing equipment and systems. ● Incorporate red-line changes to IEDFs and key cell arrangement drawings as required. ● Update existing drawings to current standards. ● Technical services support for computer automated drawing capabilities.

KP - PUREX / UO₃ PLANTS
WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
KP310	Regulatory Compliance	<p>Identify regulations for hazardous waste handling at PUREX and coordinate with cognizant engineers and operations personnel to implement the hazardous waste regulations into daily plant operations. Provide technical leadership and direction for hazardous waste concerns in the plant.</p> <p>Provide documentation and response plans consistent with the regulations and requirement governing hazardous waste handling. Provide recommendations and plans to implement new or changed regulations. Prepare and issue documentation necessary for compliance with hazardous waste regulations.</p>
KP311	Analytical Labs	<p>Perform analyses required to monitor, control and evaluate PUREX and UO₃ operations, particularly as identified in the PUREX Sample Schedule. Perform essential material, process control and R & E analyses at the 222-S laboratory. Perform R & E and mass spec. analyses at the PFP laboratory. Perform product analyses at PFP and PUREX laboratories. Monitor and maintain analytical laboratories performance via the Laboratory Measurement System (LMCS). Perform supporting activities, including housekeeping; hazardous waste handling; radioactive material and special nuclear management training of personnel; and procedure writing and review.</p>
KP313	Engineering Management Systems	<p>Provide Engineering Management Systems support to the PUREX/UO₃ Program in accordance with the Engineering Procedures Manual and required Westinghouse operating policies, to include:</p> <ul style="list-style-type: none"> ● Configuration Management ● Operating Document Control ● Document Release Stations ● Record Retention

**KP - PUREX / UO₃ PLANTS
WORKSCOPE DESCRIPTION**

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
KP314	Instrumentation Engineering	Provide engineering support to PUREX / UO ₃ for electrical systems and nuclear monitoring and control instrumentation. Provide technical support to Operations for criticality alarm systems, CCTV, constant air monitors, liquid effluent monitors alpha and beta/gamma, moving filter aerosol monitor (MFRAM) and other electrical control systems. Prepare a technical evaluation of radiation monitoring instrumentation for compliance with WHC and DOE requirements.
KP315	Fabrication Services	Provide fabrication support to the PUREX / UO ₃ Plants as required. Includes planning, scheduling, procurement, and fabrication of jumpers and other needs in the boiler shop, sheet metal shop, and machine shop.
KP316	Outside Services	Provide PUREX / UO ₃ Plants services not directly dedicated to the plants and not including 200 Area Support Services. Included are KEH expense support, IRM support, crane crew support, road maintenance, radio & telecommunication support, diesel generator maintenance, railroad equipment maintenance, and fabrication of plastic suits and greenhouses.
KP317	PUREX SAR Revision	Provide a revision of the PUREX Safety Analysis Report, as required by current safety regulations.
KP318	Criticality Engineering	Provide Criticality Engineering analysis support to PUREX Operations including preparation of criticality safety evaluations and design reviews. Provide daily support and consultation with Operations and engineering personnel, criticality safety training, response to off-normal situations and support to maintenance of the WHC criticality safety program.
KP320	Environmental Process Engineering	Provide cognizant engineer services to PUREX to implement effluent discharge regulations into daily plant operations. Provide technical leadership and direction to the plant in all hazardous HVAC and effluents issues.

KP - PUREX / UO₃ PLANTS
WORKSCOPE DESCRIPTION

WBS ELEMENT CODE	WBS ELEMENT TITLE	WORK DEFINITION / DESCRIPTION
KP321	Environmental Instrumentation Engineering	Provide engineering support to environmental / effluents instrumentation in support of Environmental Process Engineering and Environmental Plant Engineering. Provide instrumentation and control engineering test facilities and equipment as needed.
KP30B	Environmental Plant Engineering	Provide design engineering support to the PUREX and UO ₃ Plants for environmental/effluents projects and equipment.
KP5	PUREX / UO ₃ Safety	
KP501	Nuclear Safety	Provide overall independent safety overview of PUREX / UO ₃ facilities. This support includes review of EFS, critiques, UORs, operating and maintenance procedures, radiological procedures, criticality safety projects, and engineering designs. Provides support to perform PUREX / UO ₃ annual appraisals and monthly operational safety assessments. Provides support to readiness reviews and develop, update, and track major facility safety concerns.
KP503	Health Physics	Provide comprehensive Health Physics support to PUREX/UO ₃ , including certified Radiation Protection Technicians (RPTs) and radiological overview support. Conduct a radiological control program using air and effluent sampling, surveys, and evaluation of trends. Perform surveillances for compliance with radiological control requirements. Prepare and review radiation work permits (RWPs) and other radiological control procedures. Provide facility orientation as required.

KP - PUREX / UO₃ PLANTS
WORKSCOPE DESCRIPTION

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
KP6	PUREX / UO ₃ Maintenance	
KP601	PUREX Maintenance	Provide the following maintenance labor support to PUREX: Maintain the Preventative Maintenance Program. Provide instrumentation, electrical, piping, and millwright services for maintaining the plant facilities and the following support systems; HVAC including 293-A, steam, water, electrical switchgear, samplers, monitors, criticality incident alarms, air compressors, vacuum pumps, chemical make up building 211A, UNH storage building 203A, and fire protection system.
KP602	UO ₃ Maintenance	Provide maintenance to the process systems of UO ₃ Plant. Maintain all necessary equipment in operable condition. Provide calibration and repair to necessary instruments associated with the process systems. Provide minor repairs to shipping and storage containers.
KP604	General Maintenance Services	Provide plant and facilities maintenance not directly dedicated to the PUREX and UO ₃ plants to include but not limited to: Carpenters, painters, cement finishers, sign painters, riggers for PUREX and Fab. Shops, equipment, Vent and Balance support, and Janitorial and floor service support including the badge house. Maintain the fire safety systems.

**KP - PUREX / UO₃ PLANTS
WORKSCOPE DESCRIPTION**

<u>WBS ELEMENT CODE</u>	<u>WBS ELEMENT TITLE</u>	<u>WORK DEFINITION / DESCRIPTION</u>
KP606	Maintenance Engineering	<p>Provide Maintenance Engineering support including:</p> <ul style="list-style-type: none"> ● Development and operation of PISCES calibration programs ● Preventative Maintenance Programs ● Routine trouble shooting ● Management Recall System ● Asbestos support
KP7	Quality Assurance	
KP701	QAPD Support	<p>Support PUREX Quality Assurance Program by providing:</p> <ul style="list-style-type: none"> ● QC support to Fabrication Shops for PUREX-related items. ● QC support to PUREX-related procurements. ● Quality and Safety Trending (QST) database and periodic trend reports. ● QC support to rail car inspections.
KP702	PUREX QE&C Support	<p>Provide Quality Engineering and Quality Control support to PUREX by providing:</p> <ul style="list-style-type: none"> ● A dynamic surveillance program within the plant which includes observation and assessment of engineering, process, maintenance, NMC, safety, and laboratory activities. Monitor activities for compliance and effectiveness, and provide plant management with feedback. ● Review of engineering documents, operating procedures, and procurement requests. ● QC inspection planning and support as part of job control system. ● QA internal audit program.

KP - PUREX / UO₃ PLANTS

FY 1990 MILESTONES / DELIVERABLES

<u>MILESTONE / DELIVERABLE DESCRIPTION</u>	<u>DATE</u>
<u>MILESTONES:</u>	
0.6 LOST WORKDAY CASES PER 200,000 MANHOURS WORKED FOR FY 1990	9-90
CRITICALITY PREVENTION SPECIFICATION LIMIT NONCONFORMANCE FOR FISCAL YEAR 1990	9-90
● 0 CRITICALITY PREVENTION SPECIFICATION VIOLATIONS	
● NO MORE THAN 12 CRITICALITY PREVENTION SPECIFICATION INFRACTIONS (IN CHEMICAL PROCESSING PLANTS)	
NO SAFETY AND ENVIRONMENTAL INCIDENTS REQUIRING CLASS A INVESTIGATIONS FOR FISCAL YEAR 1990	9-90
NO RADIATION RELEASES TO THE ENVIRONMENT IN EXCESS OF LIMITS SET FORTH IN W. A. VAUGH MEMORANDUM, DATED AUGUST 5, 1985	9-90
REVISE PUREX / FSAR CHAPTER 11 AND PROCESS CONTROL MANUAL (PCM) ADDENDUM I	9-90
INITIATE PUREX STABILIZATION RUN	12-89
<u>DELIVERABLES:</u>	
IMPLEMENT A PROGRAM TO PERFORM PERIODIC MANAGEMENT OVERVIEWS OF SHIFT OPERATIONS	12-89
DEVELOP A SCHEDULE FOR IMPLEMENTATION OF THE AUTOMATED OSR DATA ENTRY AND SURVEILLANCE SYSTEM	3-90
DEVELOP A QUALIFICATION PROGRAM FOR SELECTED MANAGEMENT POSITIONS	4-90
COMPLETE REFURBISHMENT OF J-1 TANK SUPPORTS	8-90
DESIGN AND INITIATE PROCUREMENT OF A WASTE SEGREGATION AND COMPACTION SYSTEM	9-90
INITIATE IMPLEMENTATION OF THE JOB CONTROL SYSTEM	9-90

KP - PUREX / UO₃ PLANTS

TABLE 1

FY 1990 BUDGET SUMMARY BY ACTIVITY

<u>(B/0)</u>	<u>\$ (000'S)</u>		<u>FTE</u>	
	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>
KP1 - PROGRAM MANAGEMENT	17,141	17,240	7.7	7.7
KP2 - SAFEGUARDS & SECURITY	6,834	7,120	59.4	62.1
KP3 - PUREX/UO ₃ OPERATIONS	41,568	52,530	416.4	508.9
KP5 - PUREX/UO ₃ SAFETY	6,151	7,030	60.2	68.2
KP6 - PUREX/UO ₃ MAINTENANCE	13,031	15,230	129.9	156.2
KP7 - PUREX/UO ₃ QA	2,275	2,550	22.4	23.9
 SUBTOTAL EXPENSE (B/0)	 \$87,000	 \$101,700	 696.0	 827.0
CENRTC (B/A)	\$10,405	\$10,405		
CONSTRUCTION (B/A)	\$1,015	\$1,015		
 TOTAL EXPENSE	 \$98,420	 \$113,120	 696.0	 827.0

KP - PUREX / UO₃ PLANTS

TABLE 2

FY 1990 SUMMARY BY COST ELEMENT
(DOLLARS IN THOUSANDS)

	<u>TARGET</u>	<u>FUNDING REQUIREMENTS</u>
LABOR	35,560	42,720
MATERIALS	4,460	4,800
CONTRACT SUPPORT	800	2,440
OTHER CONTRACTORS	840	1,250
IRM	280	280
ASSESSMENTS	18,400	18,800
DEPARTMENT OVERHEADS	9,340	11,170
G&A / CSP	17,320	20,240
TOTAL	\$87,000	\$101,700

KP - PUREX / UO₃ PLANTS

TABLE 3

FY 1990 UNFUNDED WORKSCOPE

(DOLLARS IN THOUSANDS)

<u>DESCRIPTION</u>	<u>\$</u>	<u>FTE</u>
ENHANCED SFGDS, QA, SAFETY	1,440	12.2
FSAR UPDATE ACCELERATION	2,500	10.8
5 TH SHIFT - TRAINING	1,000	13.0
ENHANCED PLNG / SCHEDULE	830	11.0
MATERIAL STAGING	160	2.5
FABRICATION SUPPORT	760	6.1
SPARES TRAIN DISPOSITION	400	3.0
QUALITY SAFETY TRACKING SUPPORT	900	11.0
WASTE MINIMIZATION	900	4.0
ANALYTICAL LAB STAFF	1,200	15.0
BAR CODE READER IMPLEMENTATION	300	3.0
RAD AREA MONITORING	300	3.0
OTHER OPERATIONS ENHANCEMENTS	1,810	10.1
ENHANCED MAINTENANCE SUPPORT	1,100	14.5
ENHANCED MAINTENANCE ENGR SUPPORT	1,100	11.8
<hr/>		<hr/>
TOTAL UNFUNDED WORKSCOPE	\$14,700	131.0
<hr/>		<hr/>

KP - PUREX / UO₃ PLANTS

TABLE 4

RECONCILIATION TO THE 1991 BUDGET SUBMITTAL
MINIMUM FUNDING CASE

(\$000'S)

FY 1990 EXPENSE BUDGET (1991 BUDGET SUBMITTAL)	\$ 96,100
<u>CHANGES</u>	
G&A/CSP REDUCED TO 25.5% FROM 27.0%	<1,300>
SITE IMPACTS NOT REALIZED	<2,100>
INCREASED ASSESSMENTS	760
<u>SCOPE INCREASES</u>	
SAR UPDATE	960
SHIFT STIPEND	150
UO ₃ C - CELL	270
ADDITIONAL SAFETY REQUIREMENTS	730
ENHANCED PLNG / SCHED / ADMIN / MTL STAGING	1,400
CAM PURCHASE	120
<u>SCOPE DECREASES</u>	
MINIMAL PUREX OPERATIONS (STEAM, ESSENTIAL MTLs)	<4,270>
5 TH SHIFT (TRAINING)	<700>
Q - CELL OPERATIONS	<1,060>
LAB STAFF REDUCTIONS	<2,040>
FABRICATION SUPPORT	<1,080>
N - CELL OPERATIONS	<720>
MISCELLANEOUS	<220>
<hr/>	<hr/>
TOTAL FY 1990 TARGET	\$ 87,000
<hr/>	<hr/>

KP - PUREX / UO₃ PLANTS

TABLE 5

CAPITAL EQUIPMENT NOT RELATED TO CONSTRUCTION

B/A DOLLARS IN THOUSANDS

LEGEND - PRIORITY

- 1 - CRITICAL SAFETY
- 2 - CRITICAL OPERATIONS
- 3 - NEW PROGRAMS
- 4 - ENHANCED SAFETY
- 5 - CONTINUITY OF OPERATIONS

<u>PRIORITY</u>	<u>ITEM</u>	<u>FY 1990</u>	<u>REPLACE</u>	<u>NEW</u>
2	PUREX ASSET ACCOUNT		250	
2	CONCENTRATOR TOWER		436	
2	CRW REPLACEMENT		1,000	
2	PUREX ASD UPGRADE PHASE 3			1,125
2	PUREX 242-A LISTED WASTE MODIFICATIONS			6,744
2	PALS REPLACEMENT		100	
2	COLUMN CARTRIDGES		350	
4	PROCESS SPECTROPHOTOMETER			290
2	MANAGEMENT RESERVE		110	
			_____	_____
	TARGET		\$2,246	\$8,159
			_____	_____

**CHEMICAL PROCESSING PROGRAM
GPP / LI CANDIDATES**

TABLE 6

<u>PROJECT NUMBER</u>	<u>FUNDING SOURCE</u>	<u>DESCRIPTION</u>	<u>TEC (\$000)</u>
C-075 211-U CHEMICAL STORAGE AREA UPGRADE	91GPP	THIS PROJECT PROVIDES THE 211-U CHEMICAL STORAGE AREA WITH DIKING OF THE SIX RECOVERED NITRIC ACID STORAGE TANKS ALONG WITH A SUMP WHICH IS ISOLATED FROM DISCHARGING TO THE CHEMICAL SEWER. A CONCRETE PAD COATED WITH A CHEMICALLY COMPATIBLE LINER IS PROVIDED WITHIN THE DIKED AREA TO CONTAIN ANY RECOVERED NITRIC ACID SPILLS. THESE CONTAINMENT BARRIERS PROVIDED BY THIS PROJECT WILL PROTECT THE ENVIRONMENT FROM SPILLS OF HAZARDOUS MATERIALS AS REQUIRED BY STATE AND FEDERAL REQUIREMENTS FOR HAZARDOUS WASTES.	520

WBS	DESCRIPTION	FY 1990																																																	
		OCT				NOV				DEC				JAN				FEB				MAR				APR				MAY				JUN				JUL				AUG				SEP					
2	9	16	23	30	6	13	20	27	4	11	18	25	1	8	15	22	29	5	12	19	26	5	12	19	26	2	9	16	23	30	7	14	21	28	4	11	18	25	2	9	16	23	30	6	13	20	27	3	10	17	24
	MAJOR MILESTONES	INITIATE PUREX STABILIZATION RUN																									LOST WORK DAY INCIDENT RATE																								
		CRITICALITY PREVENTION SPECIFICATION LIMIT																									RADIATION RELEASE LIMIT TO THE ENVIRONMENT																								
		NO SAFETY & ENVIRONMENTAL INCIDENTS REQUIRING CLASS A INVESTIGATIONS																									SUBMIT PUREX FSAR CHAP. 11 REVISIONS TO DOE-RL																								
		INITIATE PUREX STABILIZATION RUN																									FACILITY SAFETY AUDIT																								
		FLUSH AND INVENTORY																									INVENTORY																								
		READINESS REVIEW																									IMPLEMENT SCHEDULE																								
		DEFINING REQUIREMENTS																									SUBMIT PUREX FSAR CHAP. 11 REVISIONS TO DOE-RL																								
		FSAR UPGRADE																									COMPLETE REFURBISHMENT OF J-1 TANK SUPPORTS																								
		OSR UPGRADE ADDENDUM I PCM MANUAL																									L-CELL CONCENTRATOR TOWER REPLACEMENT																								
		MAINTENANCE OUTAGE AND MAJOR REPAIRS																									RELEASE DESIGN																								
		AMMONIA DESTRUCTION SYSTEM																									FABRICATION																								
		IN-PLANT PROCESS TEST																									MODIFICATIONS TO J-8 SAMPLE POT																								
		DESIGN, RECYCLE AND BATCH																									PDD DIVERSION AND J-8 NEUTRALIZATION UPDATES																								
		COMPLETE REFURBISHMENT OF J-1 TANK SUPPORTS																									COMPLETE REFURBISHMENT OF J-1 TANK SUPPORTS																								
		J-1 TANK REPAIRS																									L-CELL CONCENTRATOR TOWER REPLACEMENT																								
		L-CELL PREP AND ENTRY																									RELEASE DESIGN																								
		OBTAIN DATA																									FABRICATION																								
		MODIFICATIONS TO J-8 SAMPLE POT																									PDD DIVERSION AND J-8 NEUTRALIZATION UPDATES																								
		CALIBRATION OF INVENTORY ACCOUNTABILITY TANKS																									H-4 BOILER REPLACEMENT																								
		IN-PLANT PROCESS TEST																									REPLACE BOILER																								
		MODIFY RAIL CAR, FABRICATE TRUNNION																									FABRICATE JUMPERS																								