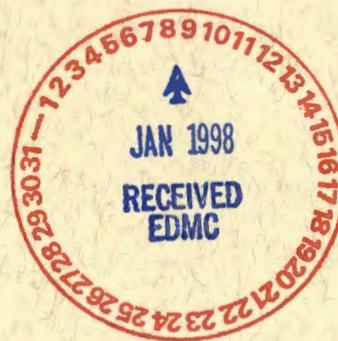
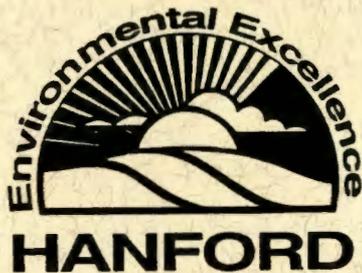


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Draft A

190-C Main Pumphouse Facility Final Report



Prepared for the U.S. Department of Energy
Office of Environmental Restoration

Bechtel Hanford, Inc.
Richland, Washington

For External Review

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Date

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Figure 1. Aerial View of the 190-C Building, Pointing Northeast.

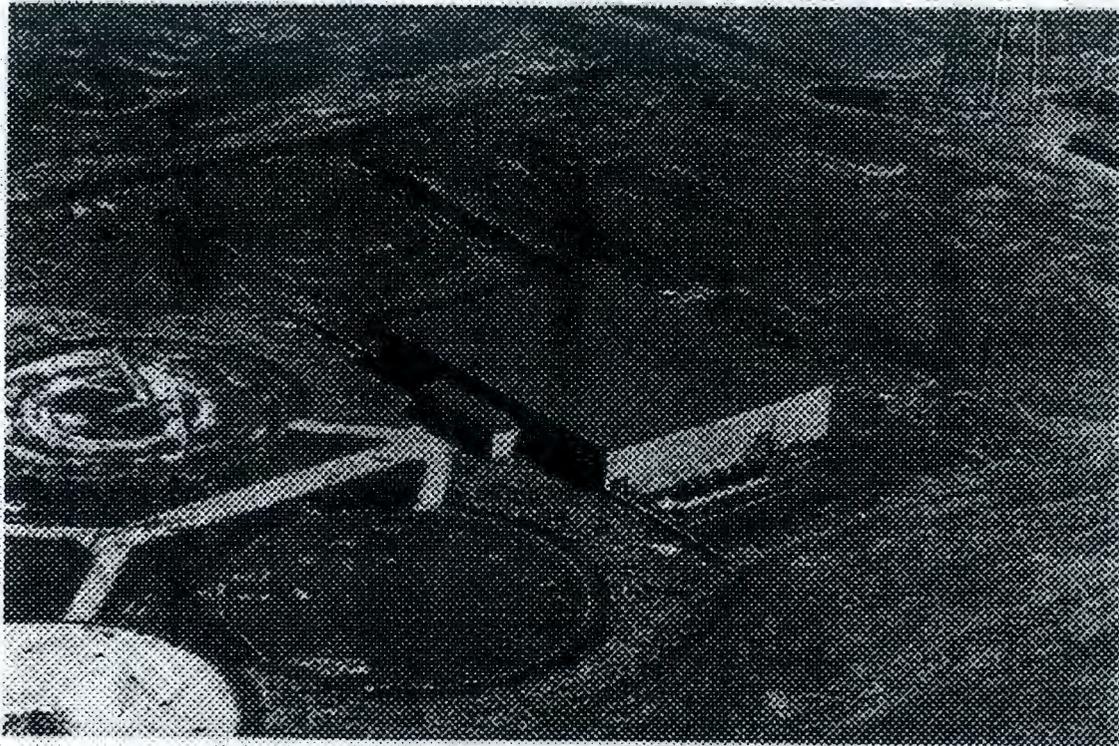
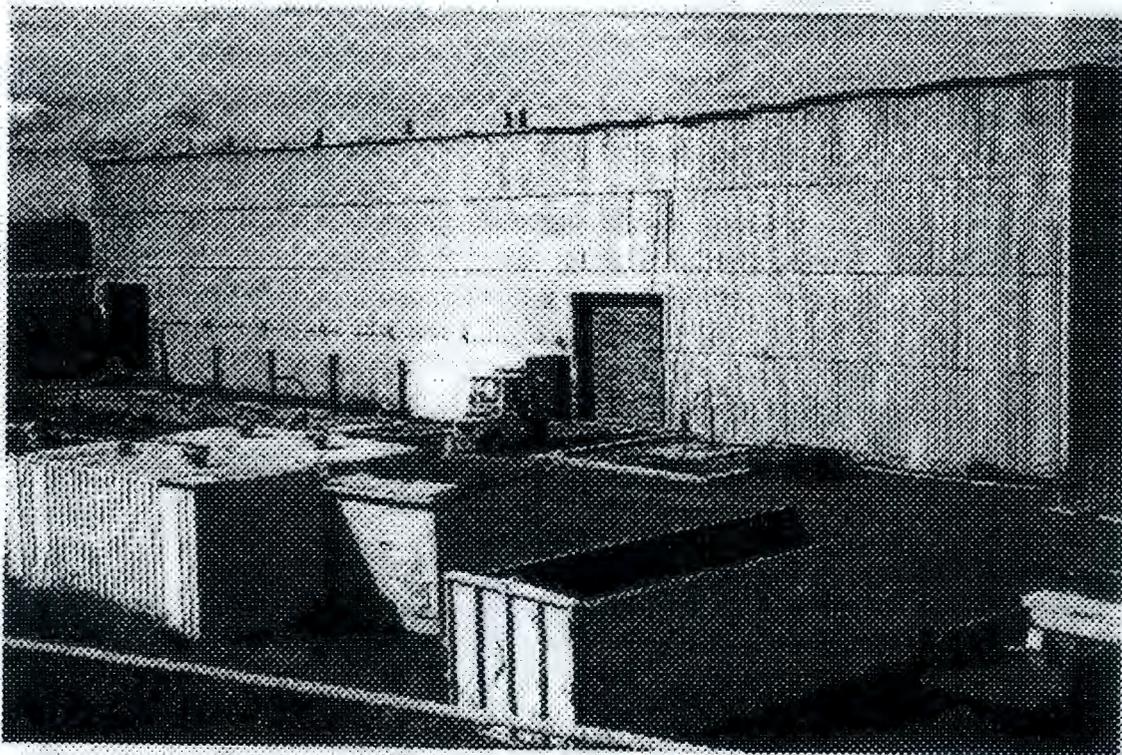


Figure 2. External View of the South Side of the Building.



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Figure 3. Picture of the Inside of the Building, View of Large Pumps.



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190-C Main Pumpouse Facility Final Report

Author
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Date Published
December 1997



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1.0 SCOPE

This report documents the decontamination and decommissioning (D&D) of the 190-C Main Pumphouse Facility. The D&D of the facility included characterization, engineering, decontamination, removal of hazardous and radiologically contaminated materials, equipment removal, demolition of the structure, and restoring the site.

2.0 FACILITY DESCRIPTION AND CONDITIONS

The 190-C Main Pumphouse Facility pumped water to the C Reactor as part of the reactor cooling process after the water was treated/filtered in the 183-C Filter Building/Pumphouse. The water was chemically treated with sodium dichromate and stored in outside tanks located between the 190-C and 183-C Facilities. Physical attributes of the facility are taken from available facility drawings. Figures 1 and 2 are photographs of the facility before demolition.

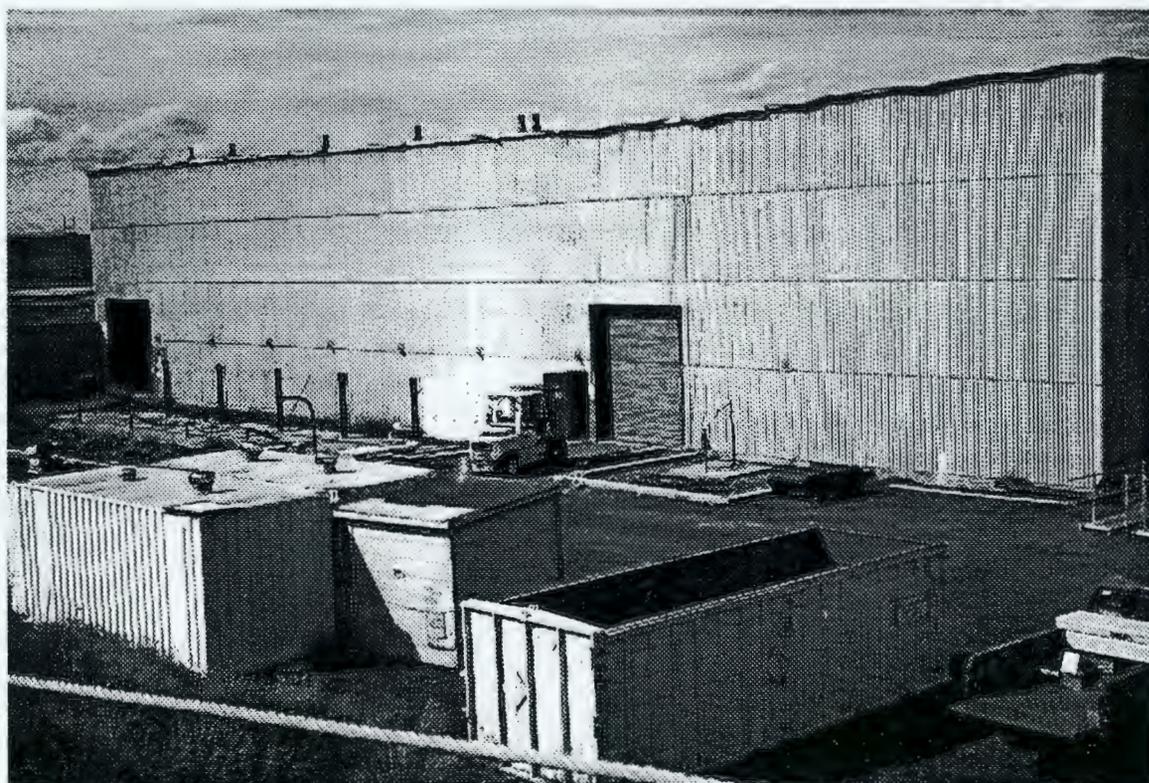
The 190-C Facility was approximately 48.8 m (160 ft) by 59.7 m (196 ft) by 9.8 m (32 ft), above ground structure, constructed on a reinforced concrete foundation with a full basement. The interior and exterior walls were made of 1.27-cm (0.5-in.)-thick transite totaling approximately 9,290 m² (100,000 ft²). The building contained approximately 1,900 linear feet of asbestos-lagged pipes and valves.

Ten pumping stations were located on the main floor with a 10,000 gallons per minute capacity each, electrical switchgear room, control room, survey room, lunchroom, change room, bathroom, shop area, and filter storage area. Figure 3 portrays the inside of the building. The basement contained cooling water, compressed air and steam piping, fluid coupling heat exchanger, solids injection system, valve pits, and the entrances to the 105-C water tunnels. Each tunnel contained the piping used to supply water to the C Reactor and a steam supply pipe to 190 C. The tunnels are located at the northeast and southeast corners of the building and are approximately 3 m (10 ft) by 3.7 m (12 ft) by 152.4 m (500 ft) long. Although the tunnels are not part of the 190-C D&D project, certain activities were accomplished in conjunction with the 190-C project activities. These activities will be discussed in other sections of this report.

Figure 1. Aerial View of the 190-C Building, Pointing Northeast.



Figure 2. External View of the South Side of the Building.



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Figure 3. Picture of the Inside of the Building, View of Large Pumps.



3.0 CHARACTERIZATION, DECONTAMINATION, AND PROJECT READINESS

After the 190-C Facility was shut down, the floor space was used to store miscellaneous items (i.e., boxes of insulation, pallets of scrap metal, crates of pump parts, piping, etc.). In addition, a containment structure was erected to replace radiologically contaminated filters from the 117-N Filter Banks. It is believed that containment integrity was lost, and contamination from the filter frames escaped into the facility. The stored insulation, scrap metal, and various pieces of stored equipment were removed from the building. Because of the particulate contamination, all items removed were surveyed for radiological release at the end of fiscal year (FY) 1995 and throughout FY 1996.

FY 1995 activities included developing a characterization plan (Mihalic 1995), characterization of the facility, sample and data analysis, and completing the characterization report and miscellaneous material cleanout. The 190-C Facility was characterized for hazardous and radiological contaminants; the results are provided in BHI 1995a; this report identifies the areas containing hazardous materials, their constituents, and proposed methods of disposal. FY 1996 activities consisted of mobilization, setting up a temporary power and lighting system, utility isolation, equipment cleanout, radiological surveys, and decontamination. Mercury was discovered in the basement trenches during decontamination activities. The visible beads were vacuumed, and concrete samples were taken in the trenches. All the mercury was removed, as documented by the Analytical Report. Radiological decontamination was completed in September 1996, and the facility was released based on the results of a conservative radiation exposure scenario analysis using RESRAD-BUILD and the residential scenario developed to support the revised U.S. NRC policy on decommissioning. Documentation of the analyses is provided in BHI 1997a and 1997b. Approval for release was obtained in May 1997, from the U.S. Department of Energy (DOE), Richland Operations Office (RL) (DOE/RL 1997).

The readiness evaluation to initiate facility demolition was conducted the week of September 24, 1996 (Mihalic 1996a). The primary objectives of the evaluation were to determine if (1) the project was ready to begin from an administrative standpoint, (2) all the required resources were available, and to ensure that all work activities would be accomplished safely. The evaluation concluded that the project was ready to proceed as scheduled, (Mihalic 1996b).

4.0 PROJECT ACTIVITIES

Project demolition activities were conducted in accordance with the 190-C Main Pumphouse Facility Demolition Project Incentive Share Proposal (ISP) approved in November 1996. A schedule for the activities is provided in the Appendix.

The scope of the demolition project included removing hazardous oils and grease from the various pumps and valves; removing asbestos-containing material (ACM) from piping, valves, equipment lagging and transite; and removing the pump stations and associated equipment. The various hazardous materials (i.e., mercury switches, lead contaminated pipe joints, light bulbs, light ballasts, and PCB and lead-contaminated oils) were also removed and properly disposed. The facility was dismantled in a safe, efficient manner within state and federal regulations.

The facility was demolished to 0.91 m (3 ft) below grade. The basement structure, located greater than 0.91 m (3 ft) below grade, was left in place and filled with construction debris. All below-grade areas were filled to eliminate future subsidence.

4.1 ISP ASSUMPTIONS

The demolition activities were conducted in accordance with the following, which were listed in the ISP as assumptions:

- The project was not performed under the *Comprehensive Environmental Response, Compensation, and Liability Act of 1980*.
- Before building demolition, an Independent Verification Contractor (IVC) was used to verify that the facility complied with DOE Order 5400.5, "Radiation Protection of the Public and the Environment." The project was not charged for the IVC. The IVC confirmed decontamination activities were acceptable for release.
- Asbestos abatement of insulated piping and ventilation equipment required the use of glovebags and negative pressure enclosures.
- All removed equipment, facility roof, walls, and structural steel met radiological release criteria eliminating the need for radiological disposal.
- Asbestos, including transite, was disposed at Rabanco via Basin Disposal, Inc. (BDI) at a cost of approximately \$20,000 or \$20.20/yd³ (\$0.75/ft³). It was assumed in the ISP that disposal would be at the Basin Disposal Facility (Pasco) at \$23.20/yd³ (\$0.86/ft³). Disposal costs, in both cases, included truck and driver costs for transportation.
- A large portion of the structural steel and equipment was recycled through the onsite salvage contractor. Approximately 1,500 tons were salvaged. No project credit was received for the recycled material.
- The facility demolition did not extend beyond the main pumphouse foundation.
- Nonrecyclable/nonhazardous debris was placed in the basement, as it was demolished for in-place disposal.

Figure 6. View of Where the 190-C Building Once Stood, View Facing North with the 105-B Reactor in the Background.

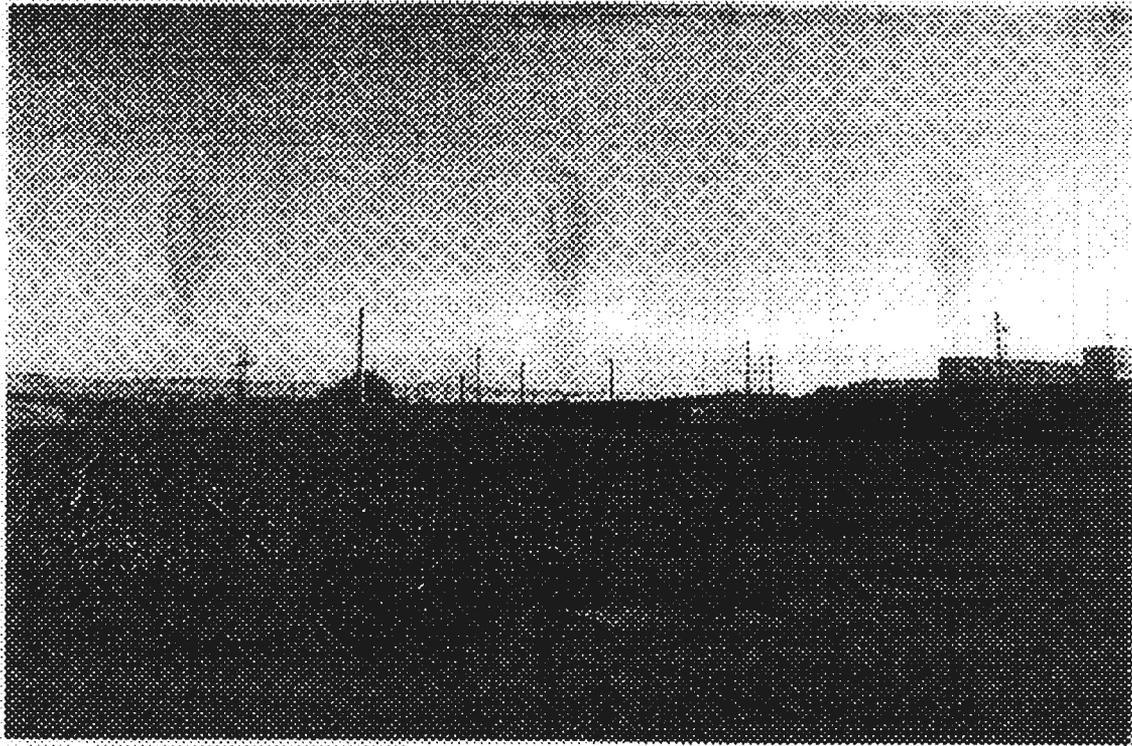
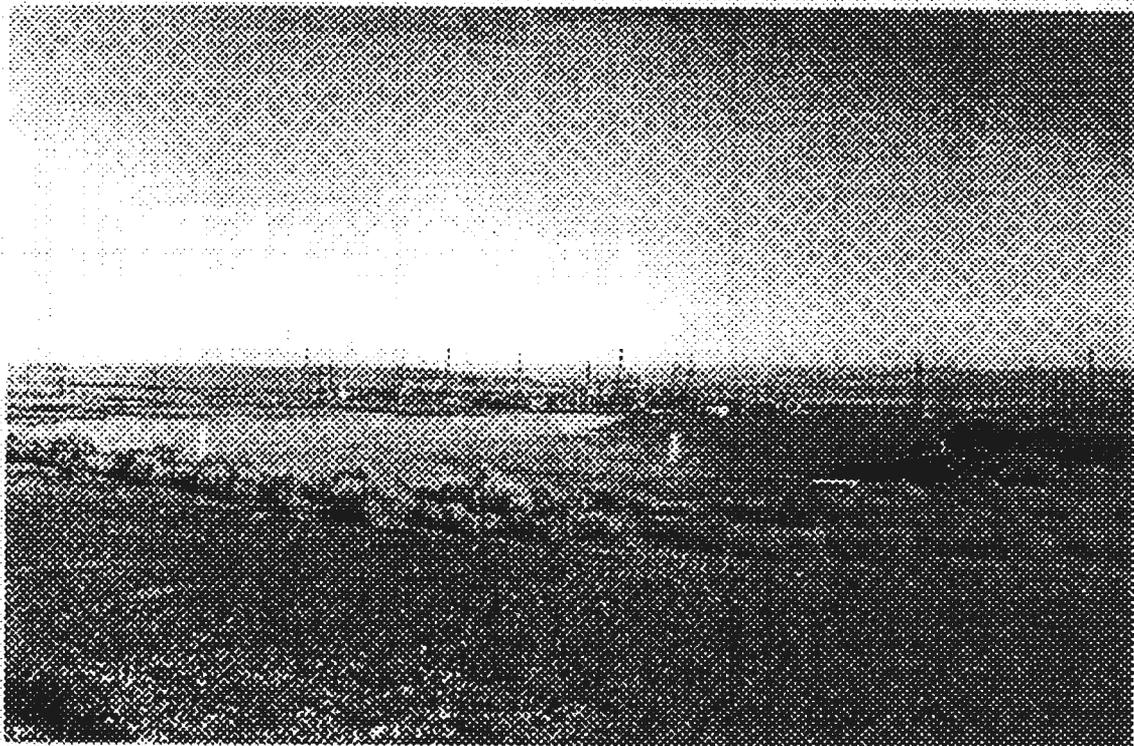


Figure 7. View of 190-C Site Where the Building Once Stood, View Facing Northwest.



0271-0031-2

- Concrete was not removed from the facility for recycling or crushing purposes, it was disposed of in the basement.

The following items were excluded from the scope of the ISP:

- Engineering activities before starting the removal/demolition activities
- Obtaining the necessary permits
- Preparing and executing subcontracts
- Conducting the readiness evaluation
- Remedial action activities, including sample analysis plan development, sample collection, and clean release acceptance
- Workslope of the IVC
- Demolition of the 105-C water tunnels.

4.2 MOBILIZATION

Mobilization activities in support of asbestos removal activities were initiated on October 1, 1996 (FY 1997). The 190-C Facility was used as the center for the Field Support activities. Upon completion of the hazardous oil removal activities, three trailers were installed east of the facility and served as the center for the remaining demolition activities. The three trailers were powered by the temporary power and lighting system engineered for the 105-C D&D Project currently taking place adjacent to the 190-C D&D Project. Work being conducted inside of the 190-C Building used portable generators.

4.3 ASBESTOS REMOVAL

Estimated volumes for ductwork, piping, transite walls, and transite roofing were all higher than initially estimated because of unexpected discoveries of ACM during abatement and dismantlement. It is not uncommon to discover materials (i.e., asbestos) during dismantling activities that were not initially estimated or known to exist. This commonly occurs during activities such as wall removal or removal of large equipment granting access to previously inaccessible areas. On the 190-C project, this was exactly the case. Secondly, all actual ACM volume quantities were based on invoices of waste shipments. ACM were placed into 30 yd³ (39.2 m³) waste luggers, which included void spaces and were not always completely full to accurately represent 30 yd³ (39.2 m³) of ACM. Therefore, the quantities (Table 1) were increased even higher than initially estimated. Lastly, increased volumes of asbestos were

generated when a cut-and-wrap technique was used versus using glovebags. Actual costs were obtained from the project controls direct cost reports by code of account.

**Table 1. Asbestos Quantities and Asbestos Abatement Costs
(ISP Assumptions vs. Actuals).**

	Estimated Quantities from ISP	Actual (Shipped) Quantities	Estimate Cost from ISP	Actual Cost
Asbestos (ductwork)	8.2 m ³ (288 ft ³)	36.0 m ³ (1,270 ft ³)	160,653	107,872
Asbestos (piping)	123.8 m ³ (4,372 ft ³)	285.2 m ³ (10,070 ft ³)	373,722	267,652
Asbestos (transite-walls)	156.5 m ³ (5,525 ft ³)	289.1 m ³ (10,210 ft ³)	185,188	151,990
Asbestos (transite-roof)	74.3 m ³ (2,625 ft ³)	146.7 m ³ (5,180 ft ³)	175,747	144,315
Totals*	362.7 m³ (12,810 ft³)	756.9 m³ (26,730 ft³)	895,310	671,829

*Cost excludes monitoring and disposal associated costs.

4.3.1 Piping and Ductwork

Asbestos monitoring was performed in support of asbestos-removal activities. Removal work activities included the use of glovebags, a cut-and-wrap technique, and negative pressure enclosures. An asbestos clearance sampling and inspection program was implemented to release each major level or area from asbestos concerns following asbestos abatement in those areas. The results were documented in accordance with the project-specific Asbestos Abatement Work Plan.

Approximately 8.2 m³ (288 ft³) of asbestos ductwork was estimated in the ISP, but actual quantities equated to 36.0 m³ (1,270 ft³). During abatement of ductwork in the mezzanine, asbestos-covered piping was discovered that was not originally estimated in the ISP and was included in the ductwork actual quantity in Table 1 because they were shipped at the same time. Radiologically contaminated asbestos abatement and waste charges associated with 105-C water tunnels were not estimated in the ISP workscope, but work was completed nonetheless. Increased volumes of asbestos were found during abatement activities in the exhaust plenum. During removal of asbestos ductwork, the potable water supply was lost causing increased work durations and costs.

Approximately 123.8 m³ (4,372 ft³) of asbestos piping was estimated in the ISP, but actual quantities equated to 285.2 m³ (10,070 ft³). Increased volumes, more than originally estimated in the ISP, of asbestos piping were discovered during abatement of the valve pit portion of the facility. Approximately 7.6 m³ (270 ft³) were removed from the pump turbines, which were not

part of the asbestos removal quantities in the ISP. By removing asbestos from the pump turbines, approximately 40 tons of steel were recycled.

4.3.2 Transite

Upon authorization from RL to demolish the building, exterior roof and wall transite removal activities were initiated. The exterior walls were assumed to be constructed of double transite panels (exterior and interior). However, an additional layer of transite was present, which increases volumes and costs. Approximately 156.5 m^3 ($5,525 \text{ ft}^3$) of transite for the walls was estimated in the ISP, but actual quantities resulted in 289.1 m^3 ($10,210 \text{ ft}^3$). The wall removal activities were planned using a work crew on the interior and exterior at the same time. However, the actual removal activities used one crew to remove both walls.

Approximately 74.3 m^3 ($2,625 \text{ ft}^3$) of transite from the roof was estimated in the ISP, but actual quantities resulted in 146.7 m^3 ($5,180 \text{ ft}^3$). Nonfriable material above the roof transit had to be disposed as regulated material, which increased the volume that had to be disposed. Faster work techniques and efficiencies achieved cost savings.

4.4 EQUIPMENT REMOVAL

Hazardous oils and grease from pumps and valves were removed by plant forces and under a subcontract executed through Westinghouse Hanford Company Acceptance Services. Based on review of the initial characterization data, it was determined that several drums would contain hazardous/polychlorinated biphenyl (PCB) waste requiring subcontractor involvement. The oils and grease were free of radiological contaminants. Approximately 3,500 gal (13,249 L) of lead-contaminated oil were estimated to be disposed. Four 55-gal (208-L) drums of PCB-contaminated waste were disposed at a cost of \$7,200; the 43 55-gal (208-L) drums of lead-contaminated oils, valves, and personal protective equipment was disposed at a cost of \$13,619.

Equipment disconnection activities were initiated to isolate equipment before removal. During preparation for removal of the cooling water pumps, samples were obtained beneath the pumps to determine radiological conditions in the previously inaccessible areas. This effort was necessary because of contaminants found within oil spills that were near the pump foundations. No contaminants were present; therefore, no cleanup efforts were necessary.

Equipment removed included the cooling water pump stations, a solids feed mixer pump, overhead gantry crane, miscellaneous tanks, compressors, valves, a milling machine, switchgear, and small pumps.

4.5 INDEPENDENT VERIFICATION CONTRACT

The Oak Ridge National Laboratory (ORNL) was contracted by RL to serve as the IVC for the 190-C Facility. G. H. Forbes, Site Project Manager, (Environmental Technology Section Health Sciences Research Division of ORNL) served as the IVC Project Manager.

A scoping meeting and walkdown of the 190-C Facility was conducted on September 18, 1996. The meeting and walkdown was attended by D. Mackenzie, the DOE-Headquarters Independent Verification Coordinator; J. Bruggeman, the RL Project Manager; D. Halford and G.H. Forbes of ORNL; and BHI Environmental Restoration (ERC) 190-C project and health physics personnel. A review of the facility operating history, contaminants, sampling procedures, and radiological work activities was presented during the meeting and walkdown. Radiological survey data, the 190-C Characterization Report, and draft RESRAD-BUILD packages was provided to the IVC team to determine the scope of the scheduled independent verification survey.

The IVC team conducted the IVC survey the week of November 18, 1996. The survey results are documented in DOE/RL 1997 and Forbes 1996 and determined that the source term is extremely conservative with lower doses than portrayed in project documentation.

4.6 STRUCTURAL DEMOLITION

Building structural framework was demolished using hydraulic shears and segregated for salvage (Figure 5). Figure 4 shows the east side of the facility with the building's walls removed. The main level concrete floors and pump foundations were demolished and disposed into the basement. Concrete and steel were demolished in place to a depth 0.91 m (3 ft) below grade, and the basement was filled to eliminate future subsidence. Nonrecyclable/nonhazardous debris was placed in the underlying basement, as it was demolished for in-place disposal. A majority of the below-grade water pipes were removed, except some piping that was left in place.

4.7 SITE RESTORATION

Upon completion of the demolition activities, the area was backfilled with a minimum 0.91-m (3-ft)-thick soil/aggregate surface layer placed over the footprint of the facility and graded to match the surrounding terrain (Figure 6). The source of backfill was the 100-B Area Borrow Pit (approximately 5,046 m³ [6,600 yd³]) and the dirt berm that was located north of the 190-C Facility (approximately 10,092 m³ [13,200 yd³]). Figure 7 shows a northwest view after all site restoration activities were completed.

A process sewer sump existed approximately 4.6 m (15 ft) north of the northeast corner of the facility. The basement trench fed this sump, which overflowed into the 100-B/C process sewer system. Before building demolition, the access from the 190-C basement trench was closed and barricaded to prevent subsidence activities into the sump. No demolition activities were associated beyond the barricade, as the sump was outside of the 190-C foundation and was approximately 3.7 m (12 ft) below grade. The grade-level manhole cover and concrete pad allowing access to the sump were left intact after site grading and are visible at the site.

Figure 4. View of the East Side of the Building Without Siding.

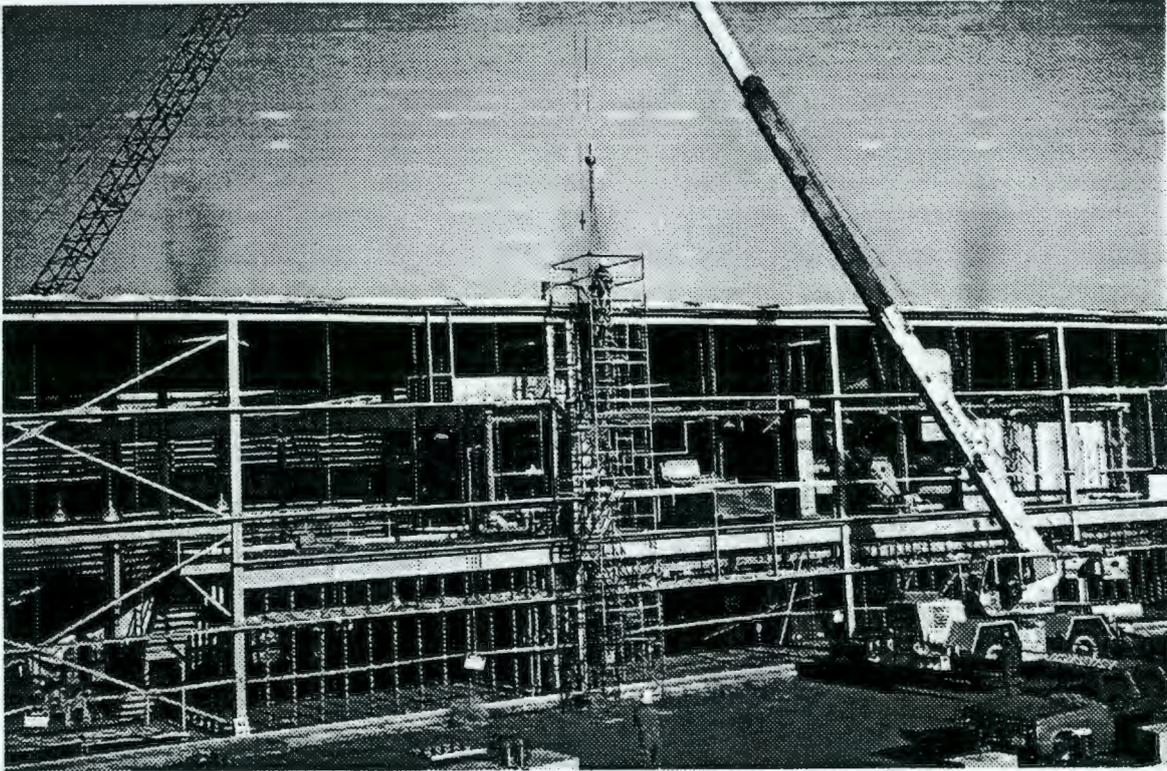


Figure 5. Steel Dismantlement of the 190-C Structure with Hydraulic Sheers, View Pointing Northwest.



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Figure 6. View of Where the 190-C Building Once Stood, View Facing North with the 105-B Reactor in the Background.



Figure 7. View of 190-C Site Where the Building Once Stood, View Facing Northwest.



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In preparation of building demolition, the process water tunnels running from 190-C to 105-C needed to be isolated. After inspecting the tunnel entrance at 190-C, a location was identified to be the best spot to erect an isolation wall. The plan was comprised by field support personnel and approved by the project engineer. All water piping and electrical conduits were cut and capped at the isolation location. An angle iron 7.6 cm (3 in.) by 7.6 cm (3 in.) was anchored to each wall and 20.3-cm (8-in.) by 20.3-cm (8-in.) wood beams were anchored vertically 0.91 m (3 ft) from each wall. Railroad ties were then stacked and secured against the iron and wood. Spray foam was applied to all seams and cracks to complete the seal. During demolition, dirt was deposited against the isolations as the basement was backfilled.

4.8 DEMOBILIZATION

Trailers, tools, equipment, and miscellaneous items were removed from the project site during demobilization activities that occurred in August and September 1997.

4.9 ADDITIONAL WORK ACTIVITIES

The following activities were completed and charged to the 190-C project, but were outside the scope of the ISP estimate:

Table 2. Identification of Out of Scope Activities That Were Completed.

Activity ID	Description
B7190C0145	Radioactive waste disposal (tunnels)
B7190C0120	Cut and cap tunnel pipe/barricade
B7190C0035	Sewer isolation
B7190C0150	Telephone isolation
B7190C0810	IVC support associated with water tunnels

All activities associated with mercury contamination cleanup and disposal, electrical transformer/pad removal, and RESRAD-BUILD approval were completed, but were not included within the ISP estimate.

The project supported the soil sampling activities performed by Remedial Actions to verify that the soils beneath the 190-C basement and 105-C water tunnels met the requirements for site closeout. The verification sampling was conducted in accordance the Field Instruction Guide 0100C-IG-G0001. The results are documented in Dronen 1997 and BHI 1997c and concluded that soil below the subject structures is below cleanup standards.

The extra work activities were performed knowing that if cost overruns occurred, a Baseline Change Proposal would be submitted to address the additional costs.

4.10 COST ANALYSES

The total demolition cost estimated in the ISP, approved by DOE on 11/12/96, was \$2,597,000 of which \$2,155,200 was estimated for FY 1997 with the remaining \$441,800 in FY 1998. The approved Multiyear Work Plan (MYWP) that preceded the ISP reflected \$2,075,400 in FY 1997 and \$779,000 in FY 1998 for a total cost of \$2,854,400.

The FY97-FY99 MYWP estimate and schedule was initially used as the basis for the draft ISP. This information served as the basis for the DOE walkdown used to validate the ISP estimate. During the walkdown, it was determined that the work activities associated with the Independent Verification Contract (IVC) survey could be significantly reduced. As a result, transite roof removal was brought forward from FY 1998 to FY 1997. Because project work activities were approximately 3 months ahead of schedule, the FY 1998 work scope was brought forward into FY 1997. Due to changing labor rates throughout the course of the project, proposed shared earnings from cost reductions and penalties for cost overruns will be adjusted in Table A of the ISP. Table 3 is a listing of the significant BCPs for the project in thousands of dollars.

Table 3. Significant BCPs for the 190-C Project.

BCP No.	Description	FY 1997	FY 1998	Total
--	FY 1997 to FY 1999 MYWP	2,075.4	779.0	2,854.4
97-21	FY 1996 carryover	22.6	0	22.6
97-24	Implement ISP sequence and budget	77.2	<320.4>	<243.2>
97-119	FY 1997 implement initial provisional overhead rates	<43.2>	0	<43.2>
97-172	FY 1998 work acceleration to FY 97	418.9	<430.2>	<11.3>
97-293	FY 1997 provisional overhead rate changes	<17.3>	0	<17.3>
--	Change from 190-C baseline to ERC contingency		<28.4>	<28.4>
Total current budget		2,533.6	0	2,533.6

The project cost for FY 1997 (ISP scope related), is estimated to cost \$1,862,000. Included in the September 1997 actuals is an allowance of \$14,000 to address waste disposal accruals and preparing the final report. FY 1995 and FY 1996 costs equated to \$257,000 and \$1,214,000, respectively, for a total cost of \$3,333,000.

5.0 RECYCLED MATERIAL

The project supported recycling and waste minimization concepts. As described in Section 4.1, approximately 1,500 tons of steel were recycled. The 190-C field crew loaded material into the steel recycling trucks that were weighed by DynCorp, which were then sold to the steel subcontractor. The project cost to date excludes any salvage credits.

During site grading activities, instead of bringing all of the backfill soil from borrow pits, the project used approximately two-thirds of the backfill from the dirt berm that was located north of the 190-C Facility (approximately 10,092 m³ [13,200 yd³]). Approximately one-third of the soil for backfilling came from the 100-B Area Barrow Pit (approximately 5,046 m³ [6,600 yd³]). This created a cost and time savings for the project and also provided for a natural grade after site restoration activities were completed.

During removal of the interior bathroom wall, mercury was found in the mop sink drain. The mercury was removed using a mercury vacuum; the mercury was recycled, and the section of the drainpipe was disposed of mercury-contaminated waste.

6.0 OCCUPATIONAL EXPOSURES

6.1 PERSONNEL INJURIES

During the duration of the project there were 6 first aid cases, 1 recordable case, and a hyper-extended finger where the employee was placed on a 3-day restriction. There were no lost time injuries on the project. A total of 49,518 hours (manual and nonmanual) were spent on the entire project.

6.2 PERSONNEL RADIOLOGICAL EXPOSURES

There were no personnel radiological exposures on the project.

7.0 LESSONS LEARNED AND RECOMMENDATIONS

- To accurately track project activity costs, the project team (including the lead engineer, field engineer/superintendent and project controls representative) should arrange the Code of Accounts to better represent how activities are actually done. A Code of Account would benefit future projects in estimating, planning, engineering, staffing, etc.
- Inefficiencies were encountered with the steel-recycling subcontractor. As the structural steel was being brought down and equipment was being removed from the facility, the recyclable material could not be transported off of the 190-C site quick enough to accommodate the project. Material needed to be moved to a laydown area away from the building to continue demolition. Thus, the project had to handle material twice rather than just once. This increased the duration of the project, therefore, causing extra costs. Because DynCorp controls the subcontract with the steel recycler, the ERC had no control over the subcontract or the rate in which they removed the materials from the site.
- DynCorp receives approximately \$70/ton for recyclable steel. For the 190-C project, approximately 1,500 tons were recycled, equating to \$105,000. The ERC took the time and spent the resources; however, the ERC did not benefit from the recycling of this steel.
- The 190-C project encountered portions of the facility with hazardous materials that were overlooked during the characterization process. It is not expected that the initial characterization will determine ever hazard within the facility; however, careful planning initially can reduce the number of unexpected encounters. Proper time should be allocated to the precharacterization, planning, and resources should be estimated to sample unknowns as they are uncovered during facility demolition. If a potential for Remedial Action needs occur after demolishing a structure, the Remedial Action personnel should be involved in the process before access to the area is limited or eliminated due to a D&D action. Enough time must be allocated to allow for Remedial Action planning, sampling, and data analysis before final demolition occurs to ensure additional efforts are not required in the future to uncover areas of Remedial Action concern.

8.0 REFERENCES

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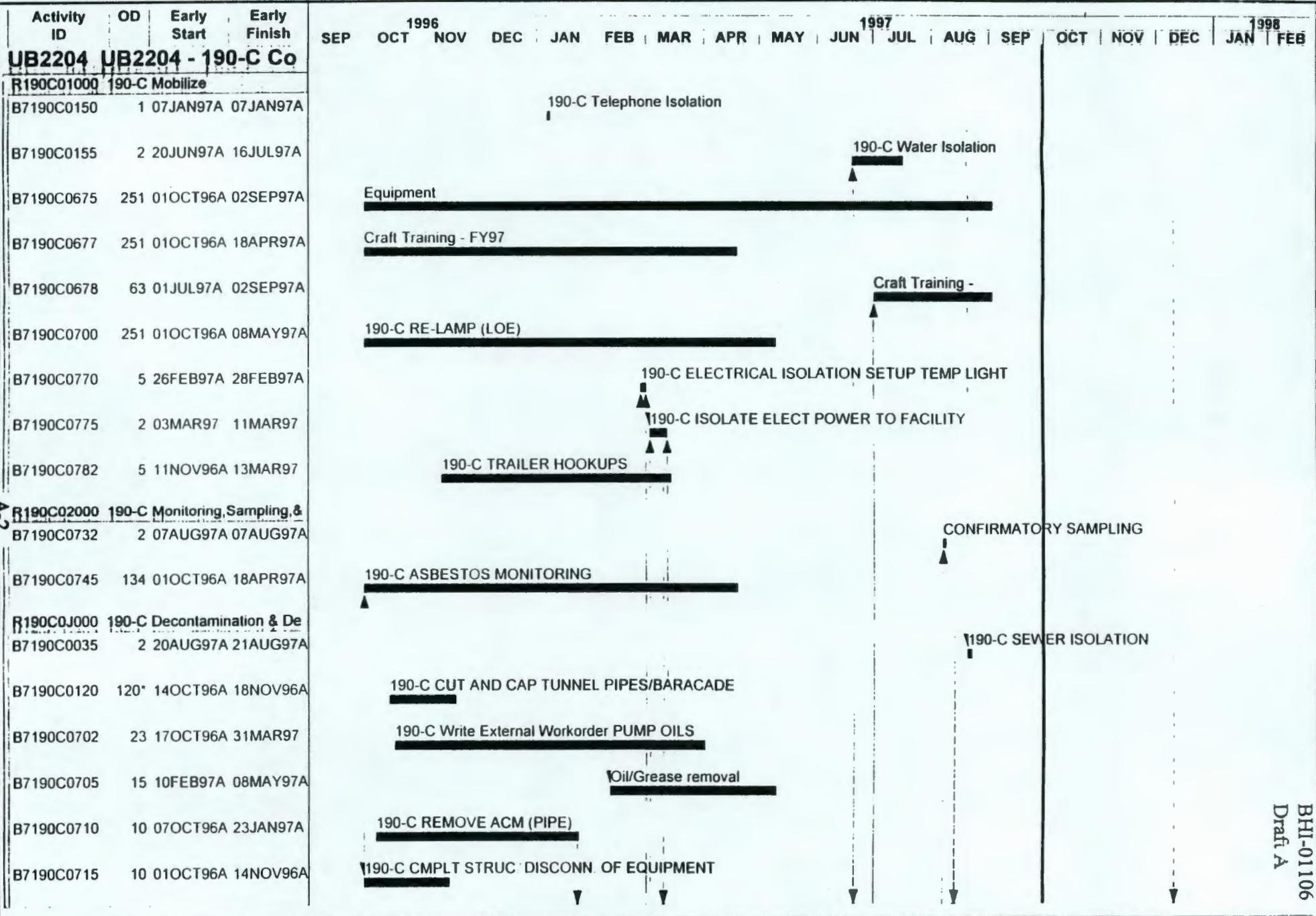
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APPENDIX
190-C MAIN PUMPHOUSE COST SUMMARY

190-C MAIN PUMPHOUSE
Cost Summary

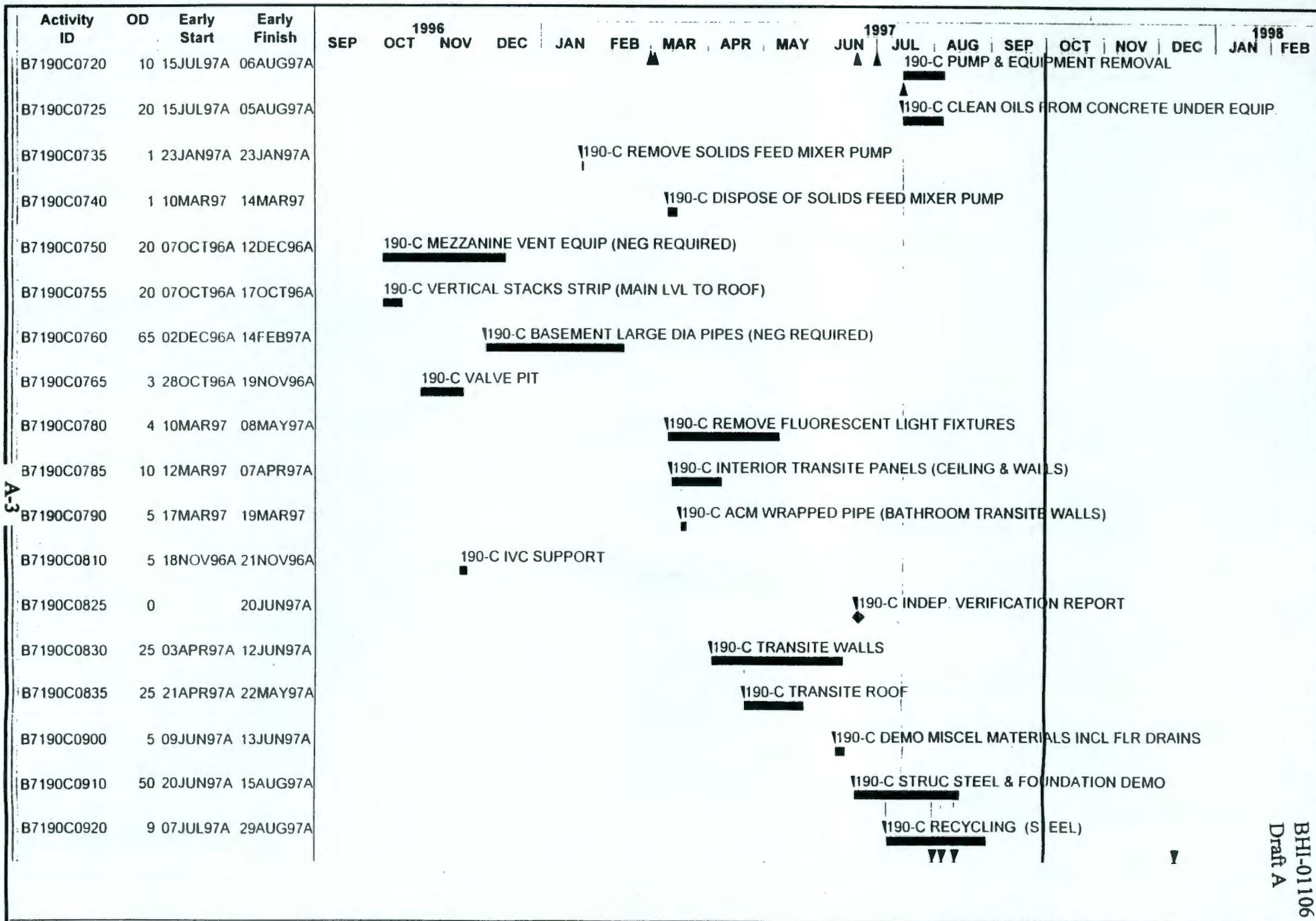
	<u>Dollars (x1000)</u>
1995 Characterization	\$ 257
1996 Decontamination	\$ 1,214
1997 Demolition	\$ 1,862
Total	\$ 3,333



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BH-01106
Draft A

Project Start	01OCT96	Early Bar	DD01:B700	Decontamination & Decommissioning 190-C Main Pumphouse Fiscal Year 1997	Sheet 1 of 3	Date	Revision	Checked	Approved
Project Finish	09DEC97	Progress Bar							
Data Date	30SEP97	Critical Activity							
Run Date	06NOV97								



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Draft A

Project Start 01OCT96
 Project Finish 09DEC97
 Data Date 30SEP97
 Run Date 06NOV97

Early Bar
 Progress Bar
 Critical Activity

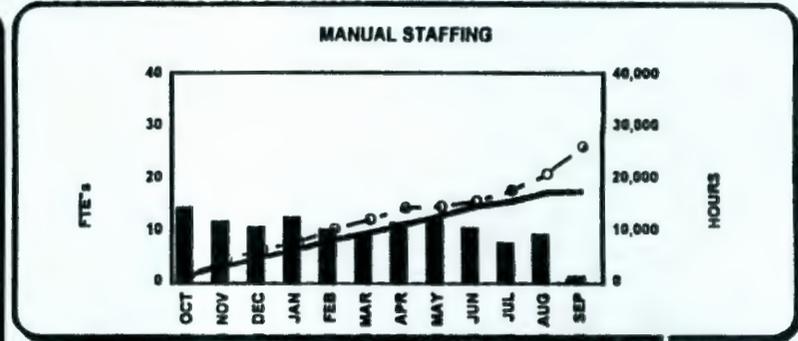
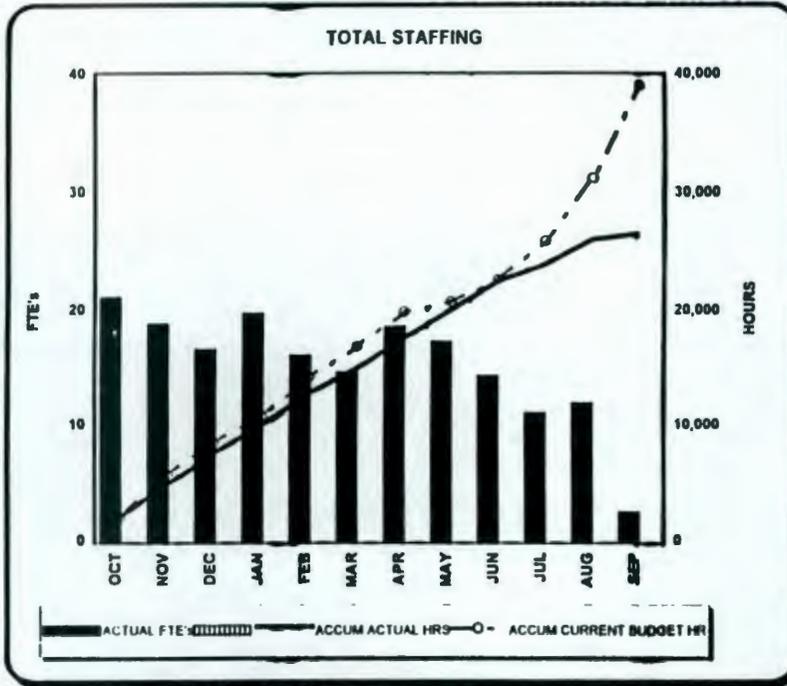
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Decontamination & Decommissioning
190-C Main Pumphouse
 Fiscal Year 1997

Sheet 2 of 3

Date	Revision	Checked	Approved

190-C MAIN PUMPHOUSE PROJECT STAFFING



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	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	AVG
TOTAL STAFFING													
ACTUAL FTE's	21.1	18.8	16.6	19.7	16.1	14.8	18.6	17.3	14.3	11.1	11.9	2.5	14.7
MONTHLY ACTUAL HRS	2135	2712	2753	2429	2780	2103	2677	2486	2468	1439	2144	469	
ACCUM ACTUAL HRS	2135	4847	7600	10029	12809	14912	17589	20075	22566	24005	26149	26818	
ACCUM CURRENT BUDGET HRS	2039	5790	8572	10795	14198	18885	19888	20783	22694	26025	31288	39109	
MANUAL STAFFING													
ACTUAL FTE's	14.4	11.7	10.5	12.4	10.1	9.1	11.4	11.9	10.3	7.5	9.1	1.0	9.6
MONTHLY ACTUAL HRS	1451	1682	1751	1529	1739	1313	1839	1708	1774	973	1642	183	9.6
ACCUM ACTUAL HRS	1451	3133	4884	6413	8152	9465	11104	12812	14589	15562	17204	17387	9.6
ACCUM CURRENT BUDGET HRS	1498	4476	6343	7825	10242	12094	14292	14518	15545	17621	20778	26008	
NON-MANUAL STAFFING													
ACTUAL FTE's	6.8	7.2	6.0	7.3	6.0	5.5	7.2	5.4	4.0	3.6	2.8	1.5	5.1
MONTHLY ACTUAL HRS	684	1030	1002	900	1041	790	1038	778	694	466	502	286	5.1
ACCUM ACTUAL HRS	684	1714	2716	3616	4657	5447	6485	7263	7977	8443	8945	9231	5.1
ACCUM CURRENT BUDGET HRS	541	1314	2229	2970	3956	4791	5594	6287	7149	8404	10512	13102	

DECONTAMINATION & DEMOLITION PROJECT JOB 22192 190-C Main Pumphouse Demolition (UB2204) FISCAL YEAR TO DATE SUMMARY										
COA	DESCRIPTION	UOM	QUANTITY		HOURS		DOLLARS		HOUR UNIT RATE	
			BUDGET	ACTUAL	BUDGET	ACTUAL THRU Sep-97	BUDGET	ACTUAL THRU Sep-97	BUDGET	ACTUAL
R190C0110	MOBILIZATION OF CONSTRUCTION EQUIPMENT	LS	1	1	-	269	\$ 292,638	\$ 54,310	0	269
R190C013Z	CRAFT TRAINING	LS	1	1	1,156	31	\$ 52,344	\$ 1,190	1156	31
R190C0150	CONSTRUCT TEMPORARY UTILITIES	LS	1	1	208	94	\$ 10,991	\$ 4,529	208	94
R190C0152	POWER CONNECTION / DISTRIBUTION	LS	1	1	477	56	\$ 27,844	\$ 7,367	477	56
	SUBTOTAL MOBILIZATION				1,841	450	\$ 383,817	\$ 67,395		
R190C0220	RADIATION MONITORING	LS	1	1	32	296	\$ 20,363	\$ 16,047	32	296
R190C0230	AIR MONITORING AND SAMPLING	LS	1	1	794	958	\$ 53,309	\$ 73,374	794	958
	SUBTOTAL MONITORING, SAMPLING				826	1,254	\$ 73,672	\$ 89,420		
R190C0J1W	INDEPENDENT VERIFICATION CONTRACTOR	LS	1	1	120	-	\$ 51,703	\$ 277	120	0
R190C0J450	DISMANTLE / TRANSFER OF CONTAMINATED EQUIP. & MA	LS	1	1	-	2	\$ -	\$ 86	0	2
R190C0J451	DISMANTLE / REMOVE EQUIPMENT	LS	1	1	1,248	757	\$ 67,115	\$ 41,851	1248	757
R190C0J452	DEMOLITION BUILDINGS AND / OR EQUIP. & FOUND	CY	37,167	37,167	5,304	3,221	\$ 246,582	\$ 273,983	0.14	0.09
R190C0J4E	REMOVAL / DISPOSAL OF ASBESTOS MATERIAL	CF	12,810	26,730	-	61	\$ -	\$ 23,350	0.00	0.00
R190C0J4E	ASBESTOS REMOVAL (DUCT WORK)	CF	288	1,270	3,056	1,680	\$ 160,653	\$ 107,872	10.61	1.32
R190C0J4E	ASBESTOS REMOVAL (PIPING)	CF	4,372	10,070	7,176	5,483	\$ 373,722	\$ 267,652	1.64	0.54
R190C0J4E	ASBESTOS REMOVAL TRANSITE - WALLS	CF	5,525	10,210	3,792	3,026	\$ 185,188	\$ 151,990	0.69	0.30
R190C0J4E	ASBESTOS REMOVAL TRANSITE - ROOFS	CF	2,625	5,180	3,480	2,170	\$ 175,747	\$ 144,315	1.33	0.42
R190C0J4X	HAZARDOUS MATERIAL REMOVAL	LS	1	1	-	56	\$ -	\$ 11,361	0	56
R190C0J4X	OIL REMOVAL	GAL	3,500	220	544	884	\$ 35,955	\$ 49,394	0	4
	SUBTOTAL DECONTAMINATION AND DECOMMISSIONING				24,720	17,340	\$ 1,296,665	\$ 1,072,130		
R190C0L20	TRANSPORTATION TO STORAGE / DISPOSAL FACILITY	TN	ot Available		-	56	\$ 22,472	\$ 7,253		
R190C0L21	SOLID LOADING / HAULING / UNLOADING	TN	ot Available		32	34	\$ 14,563	\$ 52,581		
R190C0L30	DISPOSAL FEES AND TAXES	TN	ot Available		-	42	\$ -	\$ 66,058		
	SUBTOTAL DISPOSAL				-	132	\$ 37,035	\$ 125,891		
R190C0M00	SITE RESTORATION	LS	1	1	256	-	\$ 10,648	\$ -	256	0
R190C0N00	DEMobilIZATION	LS	1	1	480	-	\$ 27,641	\$ -	480	0
	SUBTOTAL DEMobilIZATION				736		\$ 38,289			

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DECONTAMINATION & DEMOLITION PROJECT JOB 22192 190-C Main Pumphouse Demolition (UB2204) FISCAL YEAR TO DATE SUMMARY										
COA	DESCRIPTION	UOM	QUANTITY		HOURS		DOLLARS		HOUR UNIT RATE	
			BUDGET	ACTUAL	BUDGET	ACTUAL THRU Sep-97	BUDGET	ACTUAL THRU Sep-97	BUDGET	ACTUAL
R190C0Y11	MANAGEMENT	LS	1	1	477	962	\$ 43,703	\$ 83,980	477	962
R190C0Y12	SUPERVISION	LS	1	1	5,510	3,700	\$ 318,644	\$ 184,532	5510	3700
R190C0Y22	ADMINISTRATIVE SUPPORT	LS	1	1	382	204	\$ 13,775	\$ 5,694	382	204
R190C0Y4A	FIELD ENGINEERING	LS	-	1	-	545	\$ -	\$ 34,275		
R190C0YF6	SAFETY ENGINEERING	LS	1	1	545	1,979	\$ 36,068	\$ 110,319	545	1979
	PROCUREMENT	LS	1	1	55	-	\$ 2,986	\$ -	55	0
	DESIGN ENGINEERING	LS	1	1	2,375	-	\$ 187,036	\$ -	2375	0
R190C0YFB	QUALITY PROGRAM	LS	1	1	55	6	\$ 3,759	\$ 344	55	6
R190C0YN9	PROJECT CONTROLS	LS	1	1	1,554	34	\$ 98,151	\$ 81,827	1554	34
R190C0YNA	PROJECT ESTIMATES & VALIDATIONS	LS	1	1	-	-	\$ -	\$ 1,688	0	0
	COSTS PRIOR TO COA					17	\$ -	\$ 5,142		
	SUBTOTAL DIRECT PROJECT SUPPORT				10,953	7,445	\$ 704,122	\$ 507,801		
	TOTAL				39,108	26,618	\$ 2,533,600	\$ 1,862,638		

Note: Hours by Code of Account (COA) include both Manual and Non-Manual

To Date total hours: Manual =	17,387
N/M =	9,231
TOTAL HOURS =	26,618

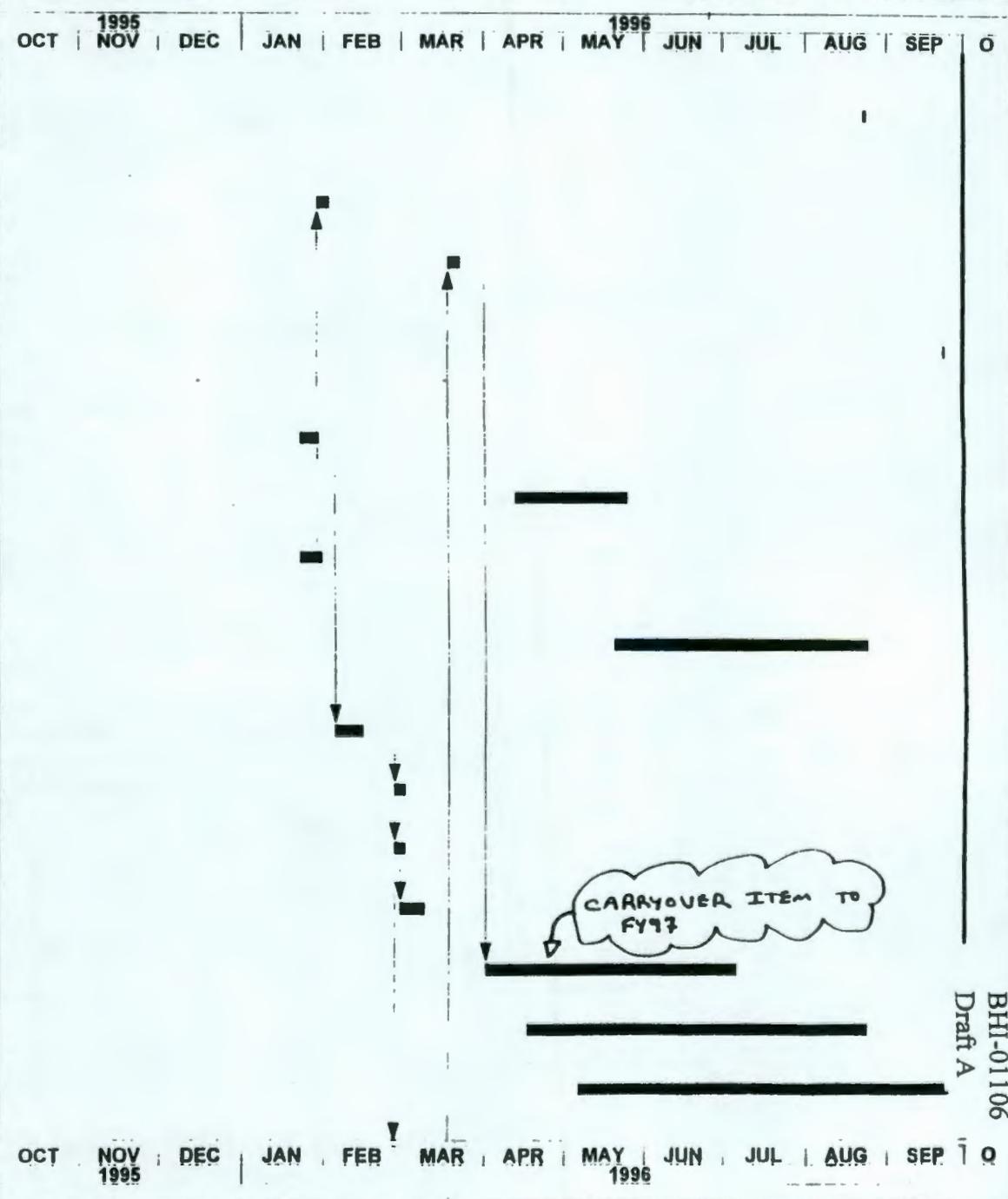
Project Controls was performed by contract employee and hours not included in labor database

Lead contaminated waste was approximately (43) 55 gallon drums
 PCB contaminated waste was approximately (4) 55 gallon drums
 Dimensions of facility was 160 ft x 196 ft x 32 ft high
 It was an above ground structure, constructed on a reinforced concrete with a full basement
 Approximately 1,500 Tons of steel was recycled.

Note: To date costs include \$14,000 for Waste Disposal Transportation Costs and Preparation of the Final Report

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Activity ID	Activity Description	%	Early start	Early finish
(1UB2204) 190 C BLDG COMPLEX DEMO REMEDIATION				
MOBILIZATION (UB19A)				
B7190CC010	190-C TRAILER HOOKUPS	100	23AUG96A	23AUG96A
LIGHTING/RELAMPING (UB19B)				
B7190CC015	190-C RELAMPING	100	29JAN96A	02FEB96A
B7190CC020	190-C ELEC ISOLATIONS (EQUIP)	100	18MAR96	22MAR96
UTILITY ISOLATIONS (UB19C)				
B7190CC030	190-C STEAM ISOLATION	100	23SEP96A	23SEP96A
MATERIAL CLEANUPS (UB19D)				
B7190CC045	190-C MEZZ ACM CLEANUP	100	23JAN96A	29JAN96A
B7190CC050	190-C LOOSE ACM CLEANUP	100	12APR96A	24MAY96A
B7190CC065	190-C MISC MATERIAL CLEANUP	100	23JAN96A	30JAN96A
CRANE RECERTIFICATION (UB19E)				
B7190CC060	190-C CRANE RECERTIFICATION	100	20MAY96A	23AUG96A
RAD DECON/SURVEY PREP (UB19F)				
B7190CC070	190-C SOUND BARRIER REMOVAL	100	05FEB96A	14FEB96A
B7190CC075	190-C OIL PAN CLEANUPS	100	27FEB96A	01MAR96
B7190CC080	190-C OIL PAN DECON	100	27FEB96A	01MAR96
B7190CC090	190-C OIL STAIN CLEANUP	100	29FEB96A	08MAR96
B7190CC120	190-C CUT AND CAP TUNNEL PIPES	50	01APR96A	08OCT96
B7190CC125	190-C BARRICADE TUNNELS	100	17APR96A	23AUG96A
B7190CC130	190-C HAZ DECON BASEMENT	100	06MAY96A	30SEP96A



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Project Start 28AUG95
Project Finish 01OCT96
Data Date 06NOV97
Run Date 06NOV97

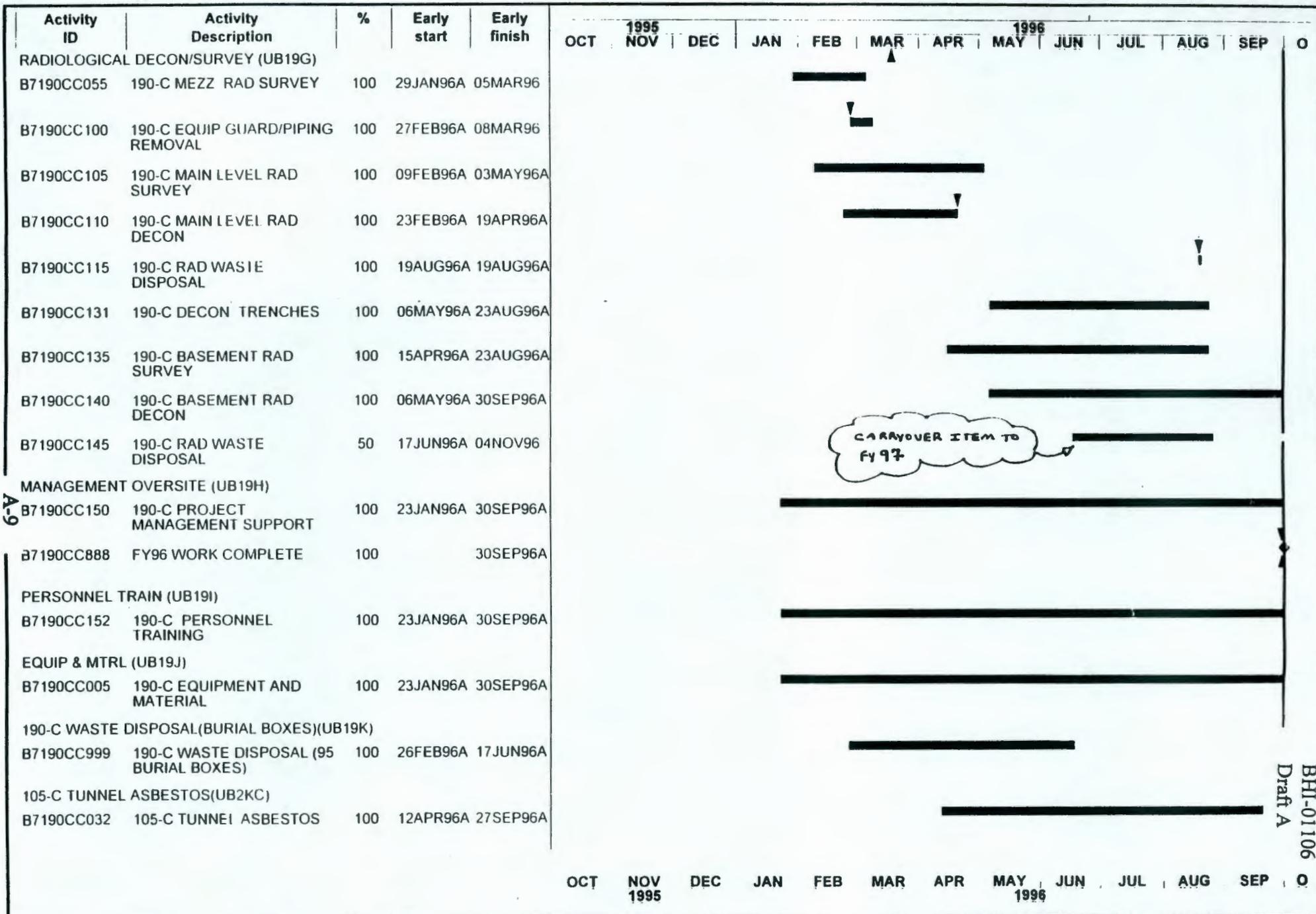
Early Bar
Progress Bar
Critical Activity

DNBP:B700

Decontamination & Decommissioning
190-C Main Pumphouse
Fiscal Year 1996

Sheet 1 of 3

Date Revision Checked Approved



CARRYOVER ITEM TO
FY 97

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Draft A

Activity ID	Activity Description	%	Early start	Early finish	1996												
					OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	O
105-C TUNNEL RAD DECON(UB2KF)																	
B7190CC141	105-C TUNNEL S RAD SURVEY	100	07AUG96A	07AUG96A													
B7190CC142	105-C TUNNELS RAD DECON	100	23AUG96A	23AUG96A													
B7190CC932	READINESS EVALUATION PLANNING	100	09SEP96A	19SEP96A													
B7190CC934	READINESS EVALUATION	100	23SEP96A	25SEP96A													

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OCT 1995 NOV DEC JAN FEB MAR APR MAY 1996 JUN JUL AUG SEP O

Project Start 28AUG95
 Project Finish 01OCT96
 Data Date 06NOV97
 Run Date

Early Bar
 Progress Bar
 Critical Activity

DNDP:B700

Decontamination & Decommissioning
 190-C Main Pumphouse
 Fiscal Year 1996

Sheet 3 of 3

Date Revision Checked / approved

PARADE (R)

FORECAST EXPENDITURE PLAN *** FY96 ONLY ***

REPORT DATE: 6NOV97

PROJECT NAME: 1111

STATUS DATE: 10CT96

COMPANY NAME: ERC Team

REPORT PERIOD: 13

PAGE 1 OF 3

CA Level	OBJECT ID	1900 (COMPLETE) DEMO												TO COMPLETE	AT COMPLETION		
		TOTAL	OCT95	NOV95	DEC95	JAN96	FEB96	MAR96	APR96	MAY96	JUN96	JUL96	AUG96			SEP96	
DIRECT LABOR (000)																	
	1071096	1996 HATH OPERATOR	0	0	0	0	5	0	86	0	0	23	8	8	130	0	261
	1071296	1996 HATH FOLE OPERATOR	0	0	0	0	0	0	5	8	0	7	16	2	1	0	39
	1071396	1996 HATH FOLE OPERATOR	0	0	0	0	0	0	0	0	2	2	4	2	7	0	17
	1071496	1996 HATH FOLE OPERATOR	0	0	0	0	0	0	4	21	12	12	10	16	99	0	177
	1071596	1996 HATH D & D WHEELER	0	0	0	181	181	497	806	755	296	1052	416	708	1036	0	6066
	1071696	1996 HATH ELECTRICIAN	0	10	0	0	0	79	21	40	19	4	3	3	38	0	217
	1071896	1996 HATH HEAVY DRIVER	0	8	16	0	4	0	0	42	25	35	7	9	85	0	231
	1071996	1996 HATH HEAVY EQUIPME	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	1072296	1996 HATH LIGHT DRIVER	0	0	0	0	0	0	2	0	0	0	0	0	3	0	5
	1072396	1996 HATH MATERIAL LABOR	0	0	0	0	0	0	0	3	0	2	4	16	15	0	40
	1072496	1996 HATH MELURGAN	0	0	0	0	0	0	30	17	0	0	0	1	0	0	48
	1072996	1996 HATH PAINTER	0	0	0	0	0	0	0	0	34	25	26	6	10	0	101
	1073096	1996 HATH TIEPETER	0	0	0	0	0	0	0	8	4	0	7	0	1	0	20
	1073496	1996 HATH RIGGER	0	0	0	0	0	3	23	38	0	0	0	0	200	0	511
	1073596	1996 HATH WELDER	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1
	1073896	1996 HATH WELDER	0	0	0	0	0	0	9	5	0	0	0	0	0	0	14
	1012596	1996 HATH HEALTH PHYSIC	0	0	0	4	0	370	775	555	511	768	476	593	686	0	4768
	1012696	1996 HATH INSTRUMENT TE	0	0	0	0	0	0	0	0	0	21	4	22	21	0	68
	2100096	1996 PLANNING & CONTROL	0	0	0	1	0	0	6	0	39	16	8	12	43	0	125
	3100096	1996 ENVIRONMENTAL ENGIN	0	24	58	57	16	58	182	93	90	88	3	27	10	0	706
	3200096	1996 DESIGN ENGINEERING	0	0	0	0	0	0	0	29	22	24	39	52	169	0	325
	4100096	1996 PROCUREMENT	0	0	0	0	0	3	1	18	0	5	-1	9	9	0	47
	5100096	1996 PROJECT MANAGEMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5200096	1996 QUALITY ASSURANCE	0	18	0	0	0	0	0	9	18	18	7	16	9	0	95
	5300096	1996 FIELD SUPPORT	0	26	29	44	33	111	337	359	487	486	234	385	492	0	4024
	5500096	1996 ADMINISTRATIVE SERV	0	1	1	9	2	13	27	19	28	46	26	45	33	0	250
	5800096	1996 SAFETY & HEALTH	0	0	3	11	8	97	183	167	167	392	206	310	196	0	1729
	DIRECT LABOR		0	87	107	307	109	1231	2495	2189	2284	3026	1503	2242	3294	0	18656
	CUMULATIVE LABOR		0	87	194	501	392	1623	4118	6307	8591	11617	13120	15362	18656	0	18656
	LWH		0	1	1	2	-1	9	14	15	16	17	12	12	18	0	117
	CUMULATIVE FWH		0	1	2	4	3	12	26	41	57	75	86	99	117	0	117

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BH1-01100

DIRECT LABOR COST:

1071096	1996 BANC CASHIER	0	0	0	0	431	0	1150	631	0	1269	405	412	6376	0	12415
1071296	1996 BANC TELLER OFFERED	0	0	0	0	0	0	208	510	0	397	772	111	12	0	2010
1071396		0	0	0	0	0	0	0	0	104	117	184	97	321	0	823
1071496	1996 BANC TELLER OFFERED	0	0	0	0	0	0	158	117	356	343	312	575	4684	0	7645
1071596	1996 BANC TELLER OFFERED	0	0	0	610	6694	17305	28592	32965	31097	46550	16536	28845	37163	0	242073
1071696	1996 BANC TELLER OFFERED	0	415	0	40	0	4122	1069	2270	1052	228	161	165	1848	0	11370
1071896	1996 BANC HEALTH SERVICE	0	263	610	71	163	0	0	2029	1155	1756	294	395	3451	0	10187
1071996	1996 BANC HEALTH SERVICE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1072096	1996 BANC HEALTH SERVICE	0	0	0	0	0	0	79	2	0	0	0	0	126	0	207
1072396	1996 BANC HEALTH SERVICE	0	0	0	0	0	0	0	147	0	90	187	745	670	0	1839
1072496	1996 BANC HEALTH SERVICE	0	0	0	0	0	0	1457	689	0	17	0	52	51	0	2361
1072596	1996 BANC HEALTH SERVICE	0	0	0	0	0	0	0	0	1889	1261	1310	317	417	0	5194

PARADE (R)
 PROJECT NAME: 1111
 COMPANY NAME: ERC Team

FORECAST EXPENDITURE PLAN *** FY96 ONLY ***

REPORT DATE: 6NOV97
 STATUS DATE: 10CT96
 REPORT PERIOD: 13
 PAGE: 2 OF 3

CA Level	DESCRIPTION	BY MONTH												TO DATE	AT DATE	
		1995	1996	JAN96	FEB96	MAR96	APR96	MAY96	JUN96	JUL96	AUG96	SEP96				
10.3096	1996 BIRTH CELEBRATION	0	0	0	0	0	0	0	416	240	0	355	0	31	0	1046
10.3196	1996 BIRTH CELEBRATION	0	0	0	0	0	150	1146	2191	19	0	0	0	10051	0	13957
10.3596	1996 BIRTH CELEBRATION	0	0	0	0	0	0	0	0	0	0	0	0	51	0	51
10.3896	1996 BIRTH CELEBRATION	0	0	0	0	0	0	10	138	0	0	0	0	5	0	373
101296	1996 BIRTH CELEBRATION	0	0	0	16	0	10559	41149	27895	7611	35571	25957	31007	28004	0	231409
101296	1996 BIRTH CELEBRATION	0	0	0	0	0	0	0	0	0	1214	278	1461	1101	0	4054
1100096	1996 PLANNING & DESIGN	0	0	0	0	0	0	38	9	2614	1180	523	829	2861	0	8162
3100096	1996 PLANNING & DESIGN	0	138	346	118	917	2870	10159	5465	6339	6387	337	1701	186	0	13082
3200096	1996 PLANNING & DESIGN	0	0	0	0	0	0	0	2774	1242	2237	3112	4993	14699	0	29357
4100096	1996 PROCUREMENT	0	0	0	0	0	116	22	665	0	226	-47	346	-406	0	1480
5100096	1996 PROJECT MANAGER	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5200096	1996 PROJECT MANAGER	0	0	0	1	0	0	0	559	1113	1084	363	963	-416	0	5401
5300096	1996 FIELD COLLECT	0	1394	1196	2462	2336	5365	17094	18713	25783	26157	11133	19158	21158	0	152374
5500096	1996 ADMINISTRATION	0	12	14	253	27	314	617	506	791	1184	635	1149	724	0	6276
5800096	1996 SAFETY MATERIALS	0	0	15	815	573	5216	11188	8291	669	17710	11628	17455	9301	0	6002
DIRECT LABOR COSTS		0	1394	5622	11965	2194	52061	117702	107020	112304	145378	74739	110776	144004	0	887290
OVERHEAD 1 ON LABOR		0	115	0	0	0	0	0	0	0	0	0	0	0	0	115
OVERHEAD 2 ON LABOR		0	234	0	0	0	0	0	0	0	0	0	0	0	0	234
G & A 1 ON LABOR		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BURDENED LABOR COSTS		0	1543	5622	11965	2194	52061	117702	107020	112304	145378	74739	110776	144004	0	887290
CUMULATIVE BURDENED LABOR COSTS		0	1543	10535	25500	23306	75367	193069	300089	412393	557771	632510	743286	887290	0	887290
DIRECT MATERIAL COSTS																
HTRL	1995 MATERIAL	0	110	0	0	0	0	0	0	0	0	0	0	0	0	110
HTRL96	1996 MATERIAL	0	0	0	0	0	1345	145	2833	2332	4123	22673	8272	19538	0	61111
DIRECT MATERIAL COSTS		0	110	0	0	0	1345	145	2833	2332	4123	22673	8272	19538	0	61111
OVERHEAD 1 ON MATERIAL		0	25	0	0	0	189	20	510	399	705	3875	1414	4023	0	11186
OVERHEAD 2 ON MATERIAL		0	12	0	0	0	82	9	202	157	277	1524	556	672	0	3490
G & A 1 ON MATERIAL		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BURDENED MATERIAL COSTS		0	147	0	0	0	1616	174	3575	2887	5105	28071	10242	24233	0	76159
CUMULATIVE BURDENED MATERIAL COSTS		0	147	147	147	147	1863	2037	5613	8500	13604	41676	51917	76150	0	76150
OTHER DIRECT COSTS (OOB)																

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DISTRE96		0	0	0	0	227	0	0	0	0	0	0	0	0	272
EQUIP96	F196 EQUIP	0	0	0	0	0	0	0	0	0	0	2700	635	0	3335
OTHER96	F196 OTHER	0	0	0	0	150	0	1592	2936	3057	2208	2237	2403	-4523	19106
PSSAD196		0	0	0	0	0	0	0	0	0	129	0	0	0	129
PSSAD196		0	0	0	0	0	0	0	20	0	2	0	0	0	-18
SUBP96	F196 SUB	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBS	F195 SUBCONTRACTOR	0	5.13	1079	0	0	0	0	0	0	0	0	0	-4011	4011
SUBS96	F196 SUBCONTRACTOR	0	0	9180	3199	3969	5885	-1635	10942	2766	2918	5748	3747	8093	54812
SUBW	F195 WAC	0	0	-8535	0	0	0	0	0	0	0	0	0	0	8535
SUBW96	F196 WAC	0	0	0	136	91	1727	3654	5107	1245	7366	-1244	-1182	108745	131136

PARADE (R)

PROJECT NAME 1111
COMPANY NAME ERC Team

FORECAST EXPENDITURE PLAN *** FY96 ONLY ***

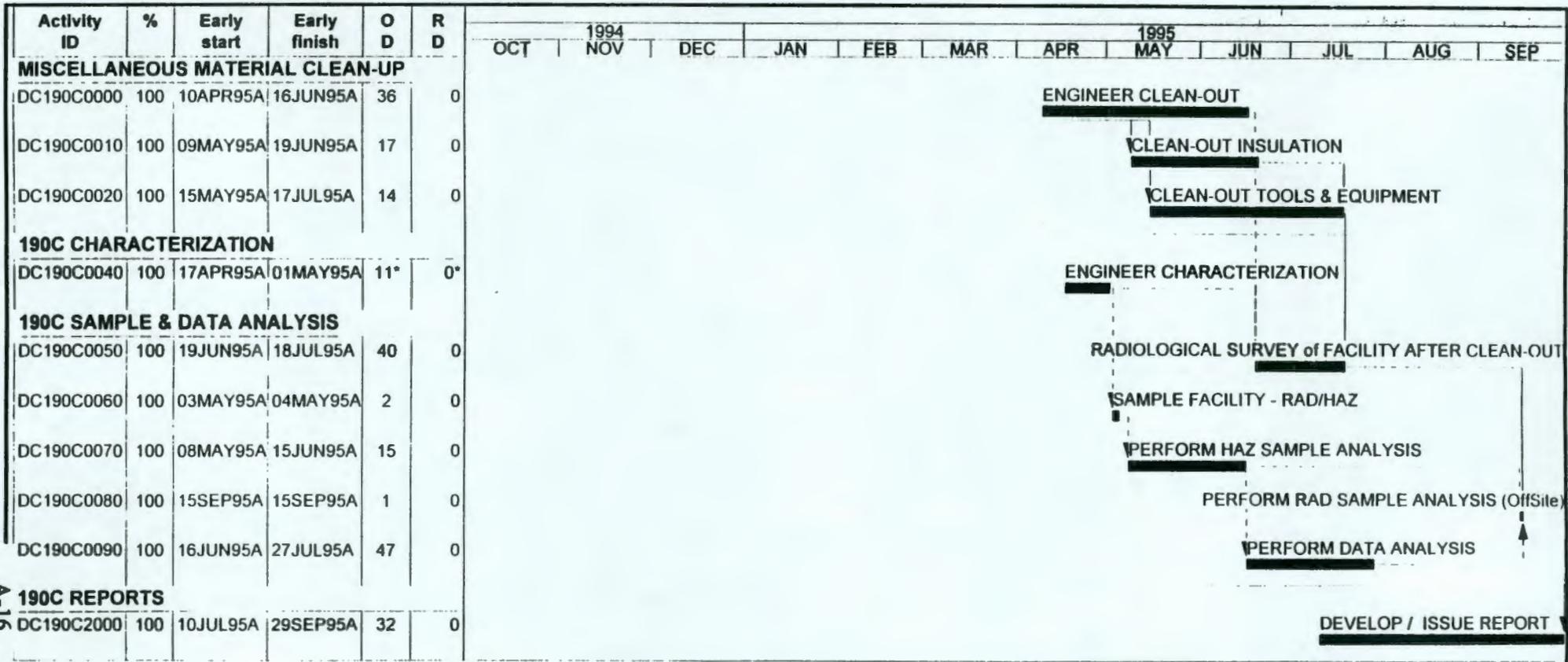
REPORT DATE: 6NOV97
STATUS DATE: 10C196
REPORT PERIOD 13
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CA Level 6 FFB 2704 190 C COMPLEX DEMO

	TOTAL	PREVIOUS											TO COMPLETE	AT COMPLETION	
		OCT95	NOV95	DEC95	JAN96	FEB96	MAR96	APR96	MAY96	JUN96	JUL96	AUG96			SEP96
OTHER DIRECT COSTS	0	533	174	2876	4140	7612	3511	18965	7068	12623	14929	5603	125372	0	201692
OVERHEAD - GEN ODR	0	112	57	675	580	1055	508	4260	1208	2158	2551	957	23815	0	37599
OVERHEAD - SPEC ODR	0	50	27	261	261	460	220	1508	475	849	1003	376	6209	0	14514
G & A - GEN ODR	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BURDENED ODR	0	109	557	3812	5281	9127	4338	24733	8751	15629	18484	6937	155397	0	250835
CUMULATIVE OTHER BURDENED ODR	0	109	1654	2158	7439	16567	20905	45638	54389	70018	88502	95438	250835	0	250835
TOTAL LABOR AND OTHER COST	0	1063	5075	18777	3087	62805	122215	135328	123942	166112	121294	127954	323633	0	1714271
CUMULATIVE COSTS	0	1063	9128	27905	30992	93797	216011	351339	475282	641393	762687	890642	1214275	0	1214275

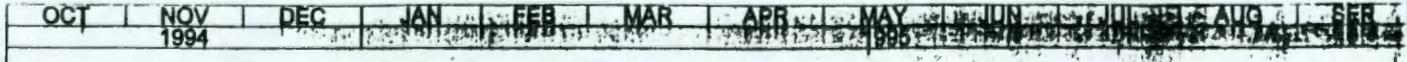
ALL COSTS IN \$

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Project Start	03MAY93	Early Bar
Project Finish	20FEB98	Progress Bar
Date Date	01OCT95	Critical Activity
Run Date	06NOV97	

100P

Decontamination & Decommissioning
190-C Pumphouse
 Fiscal Year 1995

Sheet 1 of 1	Date	Revision	Checked	Approved
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PARADE (P)

PROJECT NAME SLP2
COMPANY NAME

FORECAST EXPENDITURE PLAN

FY95

REPORT DATE 6NOV97
STATUS DATE 10C195
REPORT PERIOD 12
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(A Level)

PROJECT 190-C characterization

PREVIOUS

TO AI

TOTAL OCT94 NOV94 DEC94 JAN95 FEB95 MAR95 APR95 MAY95 JUN95 JUL95 AUG95 SEP95 COMPLETE COMPLETION

DIRECT LABOR (000)

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01751		0	0	0	0	0	0	0	0	0	0	0	0	0	0
107		0	0	0	0	0	0	0	0	0	0	0	0	0	0
10712	HANTIC CRANE OPERATOR	0	0	0	0	0	0	0	0	2	3	1	0	0	4
10714	HANTIC CRANE OPERATOR	0	0	0	0	0	0	0	0	0	0	0	4	0	4
10715	HANTIC D & E WORKER	0	0	0	0	0	0	0	0	1187	519	352	0	0	1954
10718	HANTIC TRACTOR DRIVER	0	0	0	0	0	0	0	0	6	88	-34	52	0	112
10722	HANTIC LIGHT DRIVER/TOPI	0	0	0	0	0	0	0	0	0	0	0	10	0	10
10723	HANTIC MATERIAL COORDINATOR	0	0	0	0	0	0	0	0	0	0	0	2	0	2
10730	HANTIC PILEE LITER	0	0	0	0	0	0	0	0	2	-1	0	0	0	1
10734	HANTIC RIGGER	0	0	0	0	0	0	0	0	0	0	0	8	0	8
100		0	0	0	0	0	0	0	0	0	0	0	0	0	0
101		0	0	0	0	0	0	0	0	0	0	0	0	0	0
10117	HANTIC HEALTH PHYSICIAN/TEC	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10125		0	0	0	0	0	0	0	0	1274	724	441	0	0	1957
21700	BHI PLANNING & CONTROL	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31700	BHI ENVIRONMENTAL ENGINEER	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31000	CH ENVIRONMENTAL ENGINEER	0	0	0	0	0	0	0	0	281	29	49	229	1	531
32500	BHI DESIGN ENGINEERING	0	0	0	0	0	0	0	0	0	0	0	4	0	4
35000	CH ENVIRONMENTAL COMPLIANCE	0	0	0	0	0	0	0	0	136	47	0	0	47	136
41700	BHI PROCUREMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51700	BHI PROJECT MANAGEMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51T00	TNA PROJECT MANAGEMENT	0	0	0	0	0	0	0	0	53	18	0	0	0	35
52700	BHI QUALITY ASSURANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53700	BHI FIELD SUPPORT	0	0	0	0	0	0	0	0	182	97	1	52	0	332
53T00	TNA FIELD SUPPORT	0	0	0	0	0	0	0	0	42	14	0	0	0	200
55700	BHI ADMINISTRATIVE SERVICE	0	0	0	0	0	0	0	0	0	0	3	22	0	25
55C00	CH ADMINISTRATIVE SERVICE	0	0	0	0	0	0	0	0	0	0	0	2	0	2
55100	IT ADMINISTRATIVE SERVICE	0	0	0	0	0	0	0	0	0	0	0	3	0	3
58700	BHI SAFETY & HEALTH	0	0	0	0	0	0	0	0	72	2	9	0	0	61
58100	TNA SAFETY & HEALTH	0	0	0	0	0	0	0	0	0	48	10	3	0	35
DIRECT LABOR		0	0	0	0	0	0	0	0	3237	1368	794	385	48	2441

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CUMULATIVE E-Exp	0	0	0	0	0	0	0	0	0	3237	-4605	3811	-1196	-48	4,411	
Exp	0	0	0	0	0	0	0	0	0	23	9	-6	2	0	29	
CUMULATIVE E-Exp	0	0	0	0	0	0	0	0	0	23	32	26	29	0	29	
DIRECT LABOR COSTS																
01751	0	0	0	0	0	0	0	0	0	0	0	2519	0	0	2519	
107	0	0	0	0	0	0	0	0	0	0	0	0	-1485	1	1484	
10712	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
10714	0	0	0	0	0	0	0	0	0	47	83	-38	0	0	92	
10715	0	0	0	0	0	0	0	0	0	0	0	0	119	0	119	
10718	0	0	0	0	0	0	0	0	0	24722	10362	-7164	0	0	27920	
10722	0	0	0	0	0	0	0	0	0	153	2207	-857	1253	0	2756	
10723	0	0	0	0	0	0	0	0	0	0	0	0	241	0	241	
10730	0	0	0	0	0	0	0	0	0	0	0	0	50	0	50	
										47	-16	0	0	0	31	

PARADE (R)

FORECAST EXPENDITURE PLAN

REPORT DATE 6NOV97
 STATUS DATE 10CT95
 REPORT PERIOD 12
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PROJECT NAME SLP2
 COMPANY NAME

CA Level 1	Description	FISCAL YEAR												TO COMPLETE	AT COMPLETION	
		TOTAL	0195	0295	0395	JAN95	FEB95	MAR95	APR95	MAY95	JUN95	JUL95	AUG95			SEP95
10.34	OFFICE HEAD	0	0	0	0	0	0	0	0	0	0	0	0	238	0	238
106		0	0	0	0	0	0	0	0	0	0	0	0	366	131	232
106		0	0	0	0	0	0	0	0	0	0	0	0	1590	1	1589
10117	OFFICE HEAD (OFFICE)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
10125		0	0	0	0	0	0	0	0	0	31611	18721	11211	0	0	31611
21400	OFFICE ADMINISTRATION	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31400	OFFICE ENVIRONMENTAL CHARGE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
31600	OFFICE TECHNOLOGICAL CHARGE	0	0	0	0	0	0	0	0	0	8946	1667	1973	8731	38	18071
32700	OFFICE DESIGN ENGINEERING	0	0	0	0	0	0	0	0	0	0	0	0	205	0	205
35000	OFFICE ENVIRONMENTAL CONTROL	0	0	0	0	0	0	0	0	0	2324	-801	0	0	1877	1350
41700	OFFICE PROCUREMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51700	OFFICE PROJECT MANAGEMENT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
51100	OFFICE PROJECT MANAGEMENT	0	0	0	0	0	0	0	0	0	1693	-584	0	0	0	1109
52700	OFFICE QUALITY ASSURANCE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
53400	OFFICE FIELD SUPPORT	0	0	0	0	0	0	0	0	0	5541	3175	240	1671	478	11055
53100	OFFICE FIELD SUPPORT	0	0	0	0	0	0	0	0	0	1297	-447	0	0	0	850
55700	OFFICE ADMINISTRATIVE EXPENSE	0	0	0	0	0	0	0	0	0	0	0	57	363	0	420
55000	OFFICE ADMINISTRATIVE EXPENSE	0	0	0	0	0	0	0	0	0	0	0	0	32	3	35
55100	OFFICE ADMINISTRATIVE EXPENSE	0	0	0	0	0	0	0	0	0	0	0	0	47	11	53
58700	OFFICE SAFETY & HEALTH	0	0	0	0	0	0	0	0	0	1932	253	349	0	0	1836
58100	OFFICE SAFETY & HEALTH	0	0	0	0	0	0	0	0	0	0	1512	295	82	0	1135
	DIRECT LABOR COSTS	0	0	0	0	0	0	0	0	0	78343	32801	15155	9422	2443	107654
	OVERHEAD ON LABOR	0	0	0	0	0	0	0	0	0	0	0	0	0	782	782
	G & A ON LABOR	0	0	0	0	0	0	0	0	0	0	0	0	0	709	709
	BURDENED LABOR COSTS	0	0	0	0	0	0	0	0	0	78343	32801	15155	9422	3934	109316
	CUMULATIVE BURDENED LABOR COSTS	0	0	0	0	0	0	0	0	0	78343	111144	95989	105411	3934	109316
	DIRECT MATERIAL COSTS															
	MTRL MATERIAL	0	0	0	0	0	0	0	0	0	74	0	0	0	0	74
	DIRECT MATERIAL COSTS	0	0	0	0	0	0	0	0	0	74	0	0	0	0	74
	OVERHEAD ON MATERIAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	G & A ON MATERIAL	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	BURDENED MATERIAL COSTS	0	0	0	0	0	0	0	0	0	74	0	0	0	0	74

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CUMULATIVE BIDDING MATERIAL COST	0	0	0	0	0	0	0	0	0	74	74	74	74	0	74
OTHER DIRECT COSTS (COST)															
INDUSTRIE	0	0	0	0	0	0	0	0	0	15774	10202	-3067	1447	2076	26432
OPCENTER	0	0	0	0	0	0	0	0	0	15143	6397	-3714	3223	-1676	19373
OTHER OTHER	0	0	0	0	0	0	0	0	0	0	70	368	1500	-1500	438
SUBCONAD	0	0	0	0	0	0	0	0	0	5453	25796	55	2562	419	34285
SUBG	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
SUBS SUBCONTRACTOR	0	0	0	0	0	0	0	0	0	0	0	0	17151	0	17151
SUBS WIC	0	0	0	0	0	0	0	0	0	21407	12818	-5943	-5861	5861	28282

PARADE (R)

PROJECT NAME SEP2
COMPANY NAME

FORECAST EXPENDITURE PLAN

REPORT DATE: 6NOV97
STATUS DATE: 10CT95
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CA LEVEL 1 FORECAST

	PREVIOUS													TO	AT
	TOTAL	OCT94	NOV94	DEC94	JAN95	FEB95	MAR95	APR95	MAY95	JUN95	JUL95	AUG95	SEP95	COMPLETE	COMPLETION
OTHER DIRECT COSTS	0	0	0	0	0	0	0	0	0	57777	55283	12301	20022	5180	125961
OVERHEAD ON ODC	0	0	0	0	0	0	0	0	0	15680	6202	-2378	0	224	19280
G & A ON ODC	0	0	0	0	0	0	0	0	0	8049	4998	1581	0	1090	12556
BURDENED ODC	0	0	0	0	0	0	0	0	0	81506	66483	-16260	20022	6046	157796
CUMULATIVE OTHER BURDENED COSTS	0	0	0	0	0	0	0	0	0	81506	147989	131729	151751	6046	157796
TOTAL LABOR AND OTHER COSTS	0	0	0	0	0	0	0	0	0	159923	99284	-31415	29444	9980	267215
CUMULATIVE COSTS	0	0	0	0	0	0	0	0	0	159923	259207	227792	<u>257236</u>	9980	267215

ALL COSTS IN 1

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