GAF 000003

PC-000388/1

U. S. DEPARTMENT OF ENERGY

NORTHWESTERN AREA PROGRAMS

OPERATIONS OFFICE, OAKLAND

ENVIRONMENTAL RESTORATION DIVISION

PROJECT PLAN/ PROJECT MANAGEMENT PLAN - Phase I

prepared for

GENERAL ATOMICS HOT CELL D&D PROJECT

CONTRACT NO. DE-AC03-84SF11962

MODIFICATION NOS. A040 & A041

JANUARY 1995

DOE F 1325.8
(08-93)

United States Government **Department of Energy**

memorandum

DATE: January 25,1995

REPLY TO ATTN OF: EM-443 (T. Kluk, 427-1794)

SUBJECT: Headquarters Concurrence on the General Atomics' Final Project Plan/Project Management Plan

TO: Director, Environmental Restoration Division, Oakland Operations Office

This memorandum is written to officially inform the Oakland Operations Office that Headquarters concurs on the subject document. General Atomics Hot Cell Facility D&D Project staff and the responsible Department of Energy staff at the field and headquarters should be commended for the work and effort that went into publishing the Final Project Plan/Project Management Plan (PP/PMP). All outstanding issues and comments from previous PP/PMP drafts have been satisfactorily addressed and resolved in the final.

Attached is a copy of the final General Atomics PP/PMP with the requested signatures for Headquarters concurrence. If you have any questions concerning this response, please contact Rod Cummings of my staff at 301-427-1625.

Tony Kluk

Anthony F. Kluk, Ph.D., Director
Oakland Operations Division
Office of Northwestern Area Programs
Environmental Restoration

Attachment

cc:
J. Cullen, DOE/OAK
J. Davis III, DOE/OAK

Printed on recycled paper

Program Plan/Project Management Plan Approval Page

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Date 01/13/95

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Date 1/24/95

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FOREWORD

This document has been prepared as required by the Statement of Work for the General Atomics Hot Cell Decontamination and Decommissioning Project contained in Modification A040, and Modification A041 to Contract Number DE-AC03-84SF11962.

There are two parts in the PP/PMP. Part I is the Project Plan (PP). Part II is the Project Management Plan (PMP). The PP/PMP addresses the Phase 1 activities only. It is anticipated that this document will form the basis of the PP/PMP for Phases 2 and 3.

The purpose of the PP is to define the essential elements of the Project and to guide the Project execution. The PMP sets forth the plans, organization, and systems which will be used in the management and implementation of the PP. The PP/PMP will be updated as needed.

PART I
PROJECT PLAN

1. MISSION NEED AND OBJECTIVES

General Atomics (GA) Hot Cell Facility (HCF) has been used for over 30 years to perform numerous post irradiative examinations on DOE fuels, structural materials, and Project instrumentation. Reduced demand and continuing private industrial development around the site has resulted in the requirement to remove and dispose of DOE/NE fuel and waste; and to decontaminate and decommission (D&D) the Hot Cell facility and environmentally remediate, if necessary, the surrounding site for release to unrestricted use.

The D&D Project is planned to be accomplished in three phases. The first phase will provide surveillance, maintenance and environmental monitoring support to assure that the HCF maintains the Nuclear Regulatory Commission (NRC) and the State of California Department of Health Services (DOHS) health and safety levels; remove and dispose of DOE/NE fuel and waste; provide data to define the overall scope of the D&D Project; ascertain the magnitude and extent of radiological, hazardous and asbestos contamination through characterization; and establish the Project management/Project documentation and controls required by DOE, the NRC, and DOHS for the second phase. Phase 2 is the implementation of HCF D&D activities, HCF surrounding site remediation, if necessary, and HCF waste handling and disposal. Phase 3 will be to perform confirmatory studies and final facility and site NRC/DOHS certification for release to unrestricted use.

This Project supports DOE objectives for Environmental Restoration and Waste Management by providing:

- Credible decision making through sound planning
- Facility decommissioning
- Elimination of unacceptable risk
- Regulatory compliance
- Pollution prevention
- Ensure sufficient infrastructure
- Efficient use of resources
- Assurance of public and worker safety and health
- Waste minimization (mixed waste, recycle and reuse of uncontaminated materials including steel).
- Removal of irradiated fuel, radioactive contaminated waste, and industrial waste from the Hot Cell Facility and Site.
- Public involvement through the availability of DOE ADSs.
- Public involvement in the NEPA process.

The specific measurable objectives of the GA Hot Cell Facility D&D Project (Phase 1) that serve as a basis for evaluating overall Project success are:

a. Technical and Economic Objectives of Phase 1 to remove and dispose of DOE/NE waste and irradiated fuel stored in the HCF; execution of a Site and Facility Characterization with associated report to identify, quantify and locate radiological, hazardous and asbestos contamination; preparation, submittal and approval of a D&D Plan and Phases 2 and 3 Project Baselines.

b. The Schedule Objective of Phase 1 is to complete the Technical and Economic Objectives by August1995. This schedule includes the removal of the irradiated fuel materials (IFM) from the Hot Cell. The IFM will either be transferred directly to ORNL from the Hot Cell (preferred), or may be stored at GA Building 30 for up to 12 months.

c. The Phase 1 Quality and Reliability Objective is the implementation of a Quality Assurance Program defined by a Quality Assurance Project Plan applying applicable standards and regulations including 10 CFR 50, Appendix B (QA Criteria for Nuclear Power Plants and Reprocessing Plants); ASME NQA-1-1989 (QA Requirements for Nuclear Facilities); Regulatory Guide 1.28 (QA Program Requirements—Design and Construction, Rev. 3, 8/1/85); and ASQC E4-1993 (Quality Systems Requirements for Environmental Programs).

d. The Phase 1 Cost Objective is to complete Technical, Economic, Schedule, and Quality and Reliability Objectives within a total estimated cost of $10.1 million; of this amount, $9.0 million is DOE's share and $1.1 million is General Atomics' share.

2. TECHNICAL PLAN

2.1 Technical Objectives

Technical Objectives of Phase 1 include the disposition of DOE/NE waste and irradiated fuel stored in the HCF; execution of a Site and Facility Characterization with associated report; surveillance and maintenance of the Hot Cell site and facility; preparation, submittal and approval of a D&D Plan; preparation of a Baseline Change Proposal for Phases 2 and 3; and project management.

2.1.1 DOE/NE Waste and Irradiated Fuel Disposition

DOE/NE waste and irradiated fuel disposition will include an inventory of the waste/fuel; characterizing the waste/fuel; acquiring approval of designated disposal/disposition sites; processing and packaging the waste/fuel to applicable acceptance criteria; and shipment of waste/fuel to designated disposal/disposition sites. DOE/NE waste is comprised of High Temperature Gas Cooled Reactor (HTGR) waste; Thermionic Fuel Element (TFE) waste; Engineering Scale Tritium Extraction System (ESTES) waste; and Facility Waste. This waste will be disposed of at the Hanford Site Treatment, Storage, and Disposal (TSD) Facilities. The irradiated DOE/NE fuel is comprised of HTGR fuel and Reduced Enrichment Research Test Reactor (RERTR) fuel. The ORNL has been determined as the site chosen as the preferred alternative for storage of the irradiated fuel.

2.1.2 Site and Facility Characterization

Site and Facility Characterization will encompass the HCF (Building 23) and surrounding yard enclosed by the security fence (see Figs. I-1 and I-2) and address radiological, hazardous, and asbestos contaminants. Characterization will commence with the preparation of a Site and Facility Characterization Plan, supported by Sampling and Analysis (S&A) Documents for Facility, Soil and Asbestos. Implementing procedures will be executed for each S&A document. A Site and Facility Characterization Report will be prepared which will include:

a. Drawings, photographs, and other records reflecting the as-built and as-modified condition of the facility and surrounding grounds.

GENERAL ATOMICS

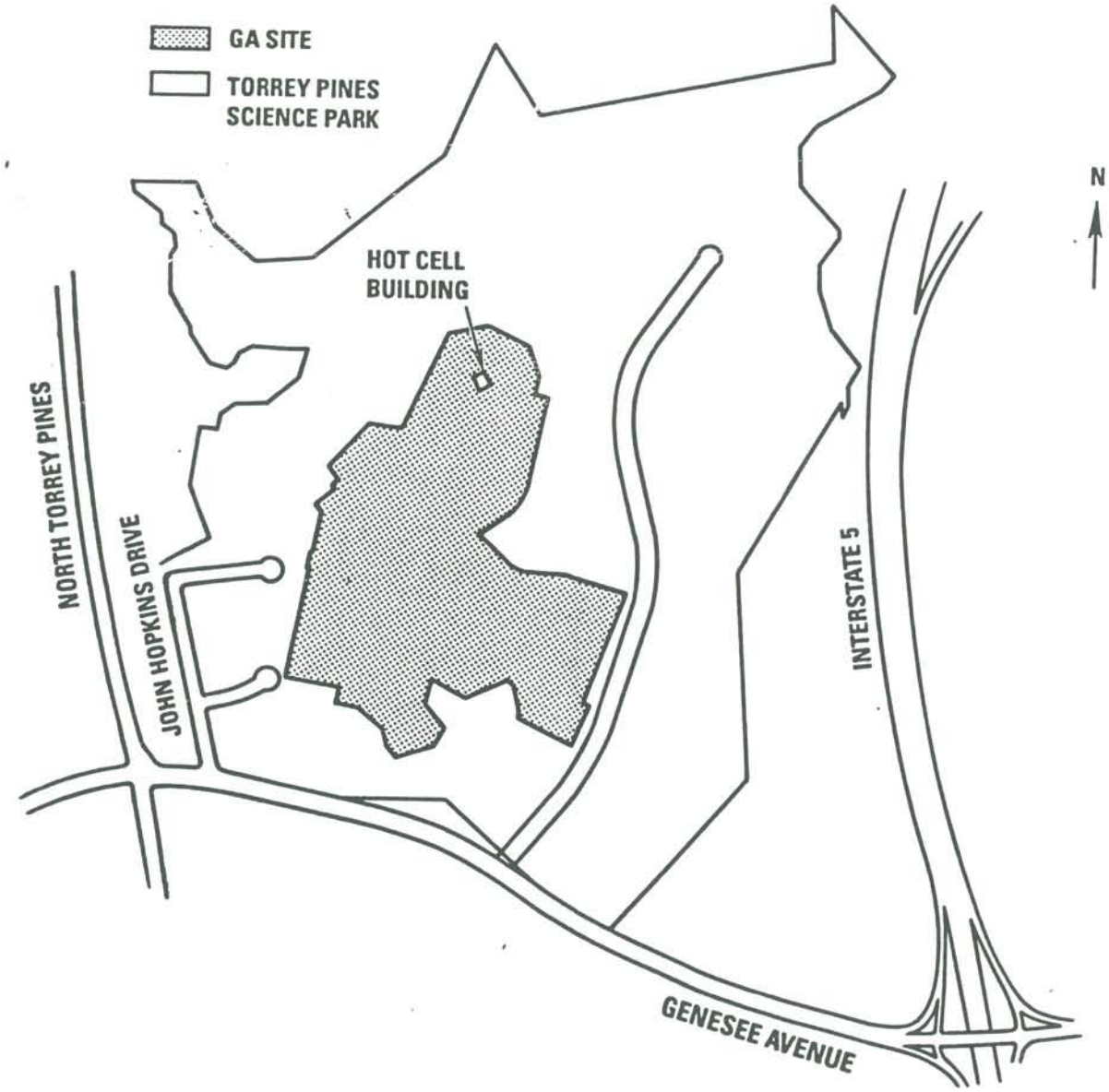

Fig. I-1. Hot Cell Location Within the GA Site

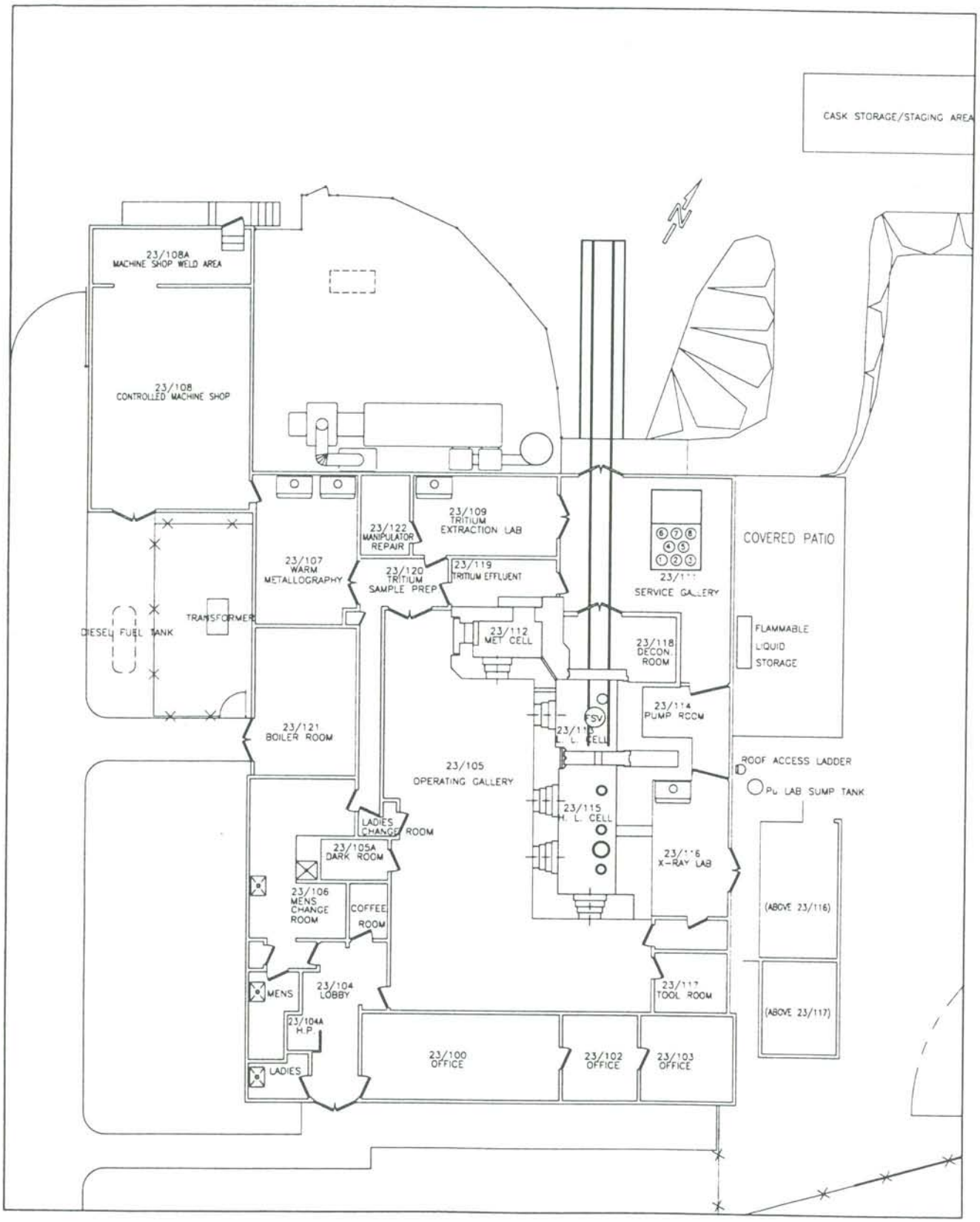

Fig. I-2. GA Hot Cell Plan View

b. Condition of all structures, existing protective barriers, and systems installed to ensure public, occupational, and environmental safety.

c. Type, form, quantity, and location of asbestos, hazardous chemicals, and radioactive materials present from past operations at the site and within the building.

d. Summary of results from the physical, chemical, and radiological characterization data.

e. Review of past characterization data, i. e., partial verification done to validate data collected by GA.

f. Information on factors that could influence the selection of decommissioning alternatives (safe storage, entombment, dismantlement) such as potential future use, long-range site plans, facility condition, and potential health, safety, and environmental hazards.

2.1.3 Surveillance and Maintenance

The Hot Cell Site and Facility Surveillance and Maintenance Program will be included as an appendix to the Characterization Plans (ref. PC-000382 and PC-000395). The Surveillance and Maintenance Program will:

1. Ensure that the Hot Cell Site and Facility is maintained in a manner that will assure safety of the general public and D&D personnel of General Atomics, its Contractors and Visitors.

2. Ensure that the Hot Cell Site and Facility is maintained and operated in compliance with the NRC License and the applicable Federal, State and local regulations.

3. Ensure that the Hot Cell Site and Facility is maintained throughout the project in a cost effective manner.

2.1.4 Decontamination and Decommissioning Plan

A D&D Plan will be prepared for DOE, NRC and CA-DOHS review and approval. This Plan will include:

a. Summary of results from the physical, chemical, and radiological characterization data from the Site and Facility Characterization Report.

b. A summary evaluation of decontamination alternatives for the facility including the preferred alternative, Engineering Plan. The Engineering Plan shall be included in the D&D Plan as a chapter instead of being issued as a stand-alone document. The preferred alternative for decontamination shall be state-of-the-art, where technically feasible and cost effective.

c. Plans for meeting requirements from the environmental and regulatory review process (National Environmental Policy Act, State of California Department of Health Services, the Resource Conservation Recovery Act, the Comprehensive Environmental Response Compensation Liability Act, and the Superfund Amendments and Re-authorization Act) including all necessary permits.

d. Radiological criteria to be used.

e. Projections of occupational exposure during S&M, site and facility characterization, and routine D&D operations. ALARA exposure objectives will be applied to the project.

f. Estimated quantities of radioactive and mixed waste to be generated. A waste minimization chapter in the D&D Work Plan shall take the place of the usual Waste Minimization Plan requirement for operating facilities.

g. An Environmental Monitoring Plan shall be included as a chapter in the D&D Plan instead of being issued as a stand-alone Environmental Monitoring Plan.

h. Safety Analyses shall be included as a chapter instead of a stand-alone Safety Analysis Report.

i. Detailed administrative, cost, schedule, and management information.

j. Waste packaging and transportation activities will be defined in the Waste Certification Plan which will be referenced in the D&D Plan.

2.1.5 Phases 2 and 3 Project Baselines

A Project Baseline Change Proposal for Phases 2 and 3 will be prepared based on the Characterization Report and D&D Plan recognized contamination levels, waste estimates and D&D approach. The Project Baseline Change Proposal will include labor hours, cost and schedule.

2.2 Technical Readiness

All irradiated fuel, waste disposition, and site and facility characterization activities will utilize existing technology. This Project does not include development activity.

2.3 Technical Approach

DOE/NE irradiated fuel materials waste will be disposed of at the Hanford Site TSD Facilities. A Waste Certification Plan will be developed in accordance with the Westinghouse Hanford Waste Acceptance Criteria (WHC-EP-0063-4). ORNL has been designated as the preferred alternative site for the storage of irradiated fuel materials. The technical approaches for meeting Site and Facility Characterization and Decontamination and Decommissioning performance objectives will be selected by a process of identifying and screening applicable, relevant, and appropriate requirements (ARAR) criteria from federal, state and local regulations addressing contaminants of concern and anticipated D&D activities (see Fig. I-3). Table I-1 is a Compliance Applicability Matrix of Federal and State Regulations.

2.4 Alternative Technical Approaches

Alternative Technical Approaches to D&D will be addressed in the ARAR process (see Fig. I-3). These alternative D&D approaches include: a) Leave in Place (SAFSTOR); b) Entombment (ENTOMB); c) Dismantlement (DECON); and Decommissioning in Place (DECON). The selection of a D&D alternative will be based on the strategic plans of DOE and GA, cost and chemical/location/action specific regulatory requirements.

2.5 Project Phase Description

The Hot Cell D&D Project will be accomplished in three (3) phases. Phase 1 will: 1) remove the abandoned DOE/NE irradiated fuel and pre-D&D waste from the facility; 2) assure that the facility meets the Nuclear Regulatory Commission (NRC) and the State of California Department of Health Services (DOHS) health and safety levels and will provide data to define the overall scope of the D&D Project; 3) ascertain the magnitude and extent of contamination through characterization; and 4) establish the Project management/Project documentation and controls required by DOE, the NRC, and DOHS for the second phase. Phase 2 is the implementation of D&D activities, surrounding site remediation, if necessary, and waste handling and disposal. Phase 3 is confirmatory studies and final facility and site certification.

Major Project events/deliverables requiring DOE approval authority and their planned dates are:

a.	DOE/NE Waste Disposition at Westinghouse Hanford	03/30/95
b.	DOE/NE Irradiated Fuel Transfer to ORNL	07/15/95
c.	Project Baseline	05/31/95
d.	Final Project Plan/Project Management Plan	11/30/94 -? Jan '95
e.	Final D&D Plan Approval	08/31/95
f.	Final Environmental Assessment (D&D)	11/30/94
g.	Final Environmental Assessment (Irradiated Fuel Transfer)	05/15/95

2.6 Work Breakdown Structure (WBS)

The Phase 1 WBS is shown in Table I-2. The WBS is task oriented and presents work elements to the fifth level. This WBS conforms to the manner in which the work shall be performed and in which Project cost and schedule are controlled and reported, including separation of tasks which are cost shared activities or 100% DOE responsibility activities.

2.7 Project Element Sequencing

Major Phase 1 elements must be completed prior to the completion of major dependent elements; however, there will be significant overlap in the interest of levelizing staff, limiting schedule, and minimizing costs. The following major elements must be completed prior to next major dependent element:

a. DOE/NE Waste/Fuel Disposition

b. Site and Facility Characterization

c. Project Baseline Change Proposal for Phases 2 and 3

d. D&D Plan

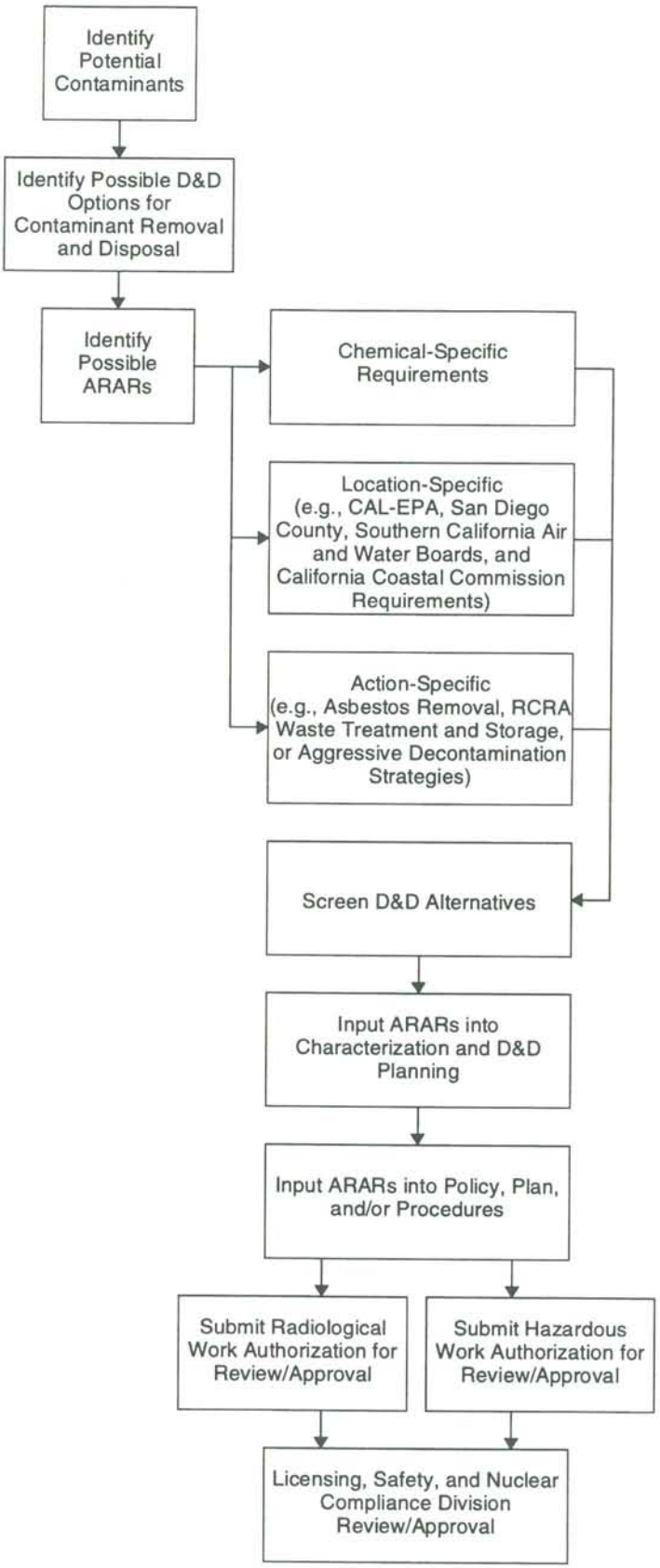

Fig. I-3. ARARs Criteria Process

TABLE I-1
Compliance Applicability Matrix

	FEDERAL
10 CFR Parts:	ENERGY
2	Rules of practice for domestic licensing proceedings
19	Notices, instructions and reports to workers: inspections and investigations
20	Standards for protection against radiation
21	Reporting of defects and noncompliance
25	Access authorization for licensee personnel
30	Rules of general applicability to domestic licensing of byproduct material
31	General domestic licenses for byproduct material
70	Domestic licensing of special nuclear material
71	Packaging of radioactive material for transport
73	Physical protection of plants and special nuclear materials
74	Material control and accounting of special nuclear material
1021	Compliance with the National Environmental Policy Act (NEPA)
29 CFR Parts:	LABOR
1910	Occupational Safety and Health Act (OSHA)
40 CFR Parts:	PROTECTION OF THE ENVIRONMENT
50	National primary and secondary ambient air quality standards
52	Approval and promulgation of implementation plans
60	Standards of performance for new stationary sources
61	National emission standards for hazardous air pollutants
121	State certification of activities requiring a Federal license or permit
191	Environmental radiation protection standards for management and disposal of spent nuclear fuel, high-level and transuranic radioactive wastes
260	Solid Waste - Hazardous waste management system; general
261	Identification and listing of hazardous waste
262	Standards applicable to generators of hazardous waste
263	Standards applicable to transporters of hazardous waste
268	Land disposal restrictions
270	EPA administered permit programs
300	National oil and hazardous substances pollution contingency plan
302	designation, reportable quantities, and notification
355	Emergency planning and notification
761	PCB manufacturing, processing, distribution, and use prohibitions
1500-1508	Final National Environmental Policy Act (NEPA) requirements
49 CFR Parts:	TRANSPORTATION
171-179	Hazardous material transportation act regulations
	STATE OF CALIFORNIA
CCR Title 17	HEALTH
4	Radiation
CCR Title 26	TOXICS
1	State Lands Commission
4	California Occupational Safety and Health Regs. (CAL/OSHA)
4.1	Division of Industrial Safety
5.1	Department of Motor Vehicles
6	California Highway Patrol
7	Air Resources Board
17	Department of Health Services
18	Air Resources Board
19	State Fire MARSHAL
19.1	Office of Emergency Services
21	Department of Transportation
21.5	Health and Welfare Agency
22	Department of health Services
23	State Water Resources Control Board

3. RISK ASSESSMENT

The probability for unsuccessful completion of Phase 1 Waste/Fuel Disposition, Site and Facility Characterization, and D&D Plan preparation activities within technical, schedule and cost constraints is judged to be low. The basis for this assessment includes:

1. Proven technology will be utilized.
2. Preliminary site characterization suggests soil contamination, if found during site characterization activities, is expected to be minor.
3. Historical records for the operation of the facility are complete.
4. The facility has been operated by GA under an NRC license throughout its history.
5. Proven planning and procedural approaches will be utilized.

A full assessment of risks does not exist. Site characterization will be conducted as part of the Phase 1 activities. This work effort includes planning, environmental media sampling and analysis, and report preparation. The outcome of this characterization will determine the magnitude of any radioactive or hazardous materials in the environment and will be used to define the extent of any site remedial actions which may be required as part of this Project.

There are several potential risks which could affect the cost, time of completion, and success of this Project:

1. Removal of DOE/NE Irradiated Fuel Materials (IFM) and waste materials.

   Removal of the waste materials has been scheduled so that it will not interfere with site and facility characterization. Arrangements have been made to dispose of this waste at the Hanford Site TSD Facilities. The IFM is scheduled to be removed from the Hot Cell after completion of characterization. The IFM will be transferred directly from the Hot Cell to ORNL or alternatively, temporarily stored in a separate facility at GA (Building 30).

2. Groundwater quality has not been established.

   No groundwater wells are present at or immediately adjacent to the HCF. Groundwater beneath the HCF is approximately 300 feet below ground surface. Previous test borings on the GA site ranging from approximately 6 to 30 feet (1.8 - 9.1 m) did not encounter groundwater. There is currently no reason to suspect that any groundwater contamination exists under the HCF. Further studies will be conducted if warranted during site characterization and D&D activities. The Site and Facility Characterization Report will document the groundwater analysis.

3. Soils contamination.

   Soils will be sampled and analyzed as described in the Site and Facility Characterization Plan (PC-000415) and associated documents. If found to be necessary, soil remediation will be performed during Phase 2.

4. DOE/EM-40 Funding

   The schedule presented in Appendix B for Phase 1 has been developed to utilize the projected funding as efficiently as possible and to permit a smooth transition into Phase 2. The overall project schedule will be developed within the confines of the outyear budgets established by the ADS process.

The Phase 1 risks are not perceived as requiring research, development of new methods, or development of special techniques to solve.

TABLE I-2
WORK BREAKDOWN STRUCTURE

PROJECT TITLE/PARTICIPANT	2. DATE	3. IDENTIFICATION NUMBER
General Atomics Hot Cell D&D Project	4/11/94	DE-AC03-84SF11962

4 LINE NO.	5 WBS ELEMENTS INDENTURE LEVEL 1	2	3	4	5	6	7	8	TITLE	6 PARTICIPANT WBS ELEMENT CODE	7 BUDGET AND REPORTING NO.	8	9
1	X								Phase 1, Hot Cell D&D	1.4.8.4			
2		X							Decontamination & Decommissioning	1.4.8.4.2			
3			X						D&D, Shared Activity	1.4.8.4.2.1			
4				X					Site & Facility Characterization & Report	1.4.8.4.2.1.1			
5					X				Hazardous Materials Characterization	1.4.8.4.2.1.1.1			
6					X				Asbestos Characterization	1.4.8.4.2.1.1.2			
7					X				Radiological Characterization	1.4.8.4.2.1.1.3			
8				X					Technical Plans	1.4.8.4.2.1.2			
9					X				Waste Certification/Minimization	1.4.8.4.2.1.2.1			
10					X				Characterization Plan	1.4.8.4.2.1.2.2			
11					X				QA Plan	1.4.8.4.2.1.2.3			
12				X					D&D Plan	1.4.8.4.2.1.3			
13					X				Draft	1.4.8.4.2.1.3.1			
14					X				Plan Approvals	1.4.8.4.2.1.3.2			
15				X					Procedures	1.4.8.4.2.1.4			
16					X				D&D Operations (Engineering)	1.4.8.4.2.1.4.1			
17					X				Radiation Safety	1.4.8.4.2.1.4.2			
18					X				Industrial Safety	1.4.8.4.2.1.4.3			
19					X				Waste Processing & Packaging	1.4.8.4.2.1.4.4			
20				X					Regulatory Compliance & Env. Mon.	1.4.8.4.2.1.5			
21				X					QA Support	1.4.8.4.2.1.6			
22				X					Health & Safety Support	1.4.8.4.2.1.7			
23					X				Industrial	1.4.8.4.2.1.7.1			
24					X				Radiological	1.4.8.4.2.1.7.2			
25				X					Surveillance & Facility Maintenance	1.4.8.4.2.1.8			
26					X				Surveillance	1.4.8.4.2.1.8.1			
27					X				Maintenance	1.4.8.4.2.1.8.2			
28					X				Industrial Security	1.4.8.4.2.1.8.3			
29			X						D&D, 100% DOE Activity	1.4.8.4.2.2			
30				X					Technical Plans	1.4.8.4.2.2.1			
31					X				Surveillance & Maintenance Plan*	1.4.8.4.2.2.1.1			
32					X				Engineering Plan*	1.4.8.4.2.2.1.2			
33					X				Environmental Assessment/FONSI	1.4.8.4.2.2.1.3			
34					X				Health & Safety Plan*	1.4.8.4.2.2.1.4			
35					X				Environmental Monitoring Plan*	1.4.8.4.2.2.1.5			
36					X				Safety Analysis	1.4.8.4.2.2.1.6			
37			X						Waste & Irradiated Fuel Disposition**	1.4.8.4.2.3			
38				X					HTGR Waste	1.4.8.4.2.3.1			
39				X					TFE Waste	1.4.8.4.2.3.2			
40				X					ESTES Waste	1.4.8.4.2.3.3			

* Cancelled as individual plans.

** Waste & Irradiated Fuel Disposition is 100% DOE except for Facility Waste 1.4.8.4.2.3.5, which is shared.

TABLE I-2
WORK BREAKDOWN STRUCTURE

PROJECT TITLE/PARTICIPANT	2. DATE	3. IDENTIFICATION NUMBER
General Atomics Hot Cell D&D Project	4/11/94	DE-AC03-84SF11962

4 LINE NO.	5 WBS ELEMENTS INDENTURE LEVEL 1	2	3	4	5	6	7	8	TITLE	6 PARTICIPANT WBS ELEMENT CODE	7 BUDGET AND REPORTING NO.	8	9
41				X					Irradiated Fuel	1.4.8.4.2.3.4			
42					X				Irradiated Fuel Removal to Building 30	1.4.8.4.2.3.4.1			
43					X				Irradiated Fuel Storage	1.4.8.4.2.3.4.2			
44				X					Facility Waste (Shared Cost)	1.4.8.4.2.3.5			
45					X				Facility Waste Disposal	1.4.8.4.2.3.5.1			
46					X				Storm Water Management	1.4.8.4.2.3.5.2			
47				X					Technical Plans	1.4.8.4.2.3.6			
48					X				Environmental Assessment/FONSI	1.4.8.4.2.3.6.1			
49					X				Waste Certification/Minimization	1.4.8.4.2.3.6.2			
50					X				Characterization	1.4.8.4.2.3.6.3			
51					X				QAPP	1.4.8.4.2.3.6.4			
52					X				Safety Analysis	1.4.8.4.2.3.6.5			
53				X					Procedures	1.4.8.4.2.3.7			
54				X					Regulatory Compliance & Env. Mon.	1.4.8.4.2.3.8			
55				X					QA Support	1.4.8.4.2.3.9			
56				X					Health & Safety Support	1.4.8.4.2.3.10			
57				X					Surveillance & Facility Maintenance	1.4.8.4.2.3.11			
58					X				Surveillance	1.4.8.4.2.3.11.1			
59					X				Maintenance	1.4.8.4.2.3.11.2			
60					X				Security	1.4.8.4.2.3.11.3			
61		X							Project Management	1.4.8.4.3			
62			X						Proj. Mgmt., Phase 1, Shared Activities	1.4.8.4.3.1			
63				X					Project Management	1.4.8.4.3.1.1			
64					X				Administration	1.4.8.4.3.1.1.1			
65					X				Operations	1.4.8.4.3.1.1.2			
66				X					Procedures	1.4.8.4.3.1.2			
67			X						Project Management, Phase 1, 100% DOE	1.4.8.4.3.2			
68				X					DOE Requirements Support	1.4.8.4.3.2.1			
69					X				Communications Interface	1.4.8.4.3.2.1.1			
70					X				Records Maintenance	1.4.8.4.3.2.1.2			
71					X				EM-40 Requests	1.4.8.4.3.2.1.3			
72					X				Contract Modification Activity	1.4.8.4.3.2.1.4			
73				X					Project Plan/Project Management Plan	1.4.8.4.3.2.2			
74			X						Proj. Mgmt., Fuel & Waste Disp. 100% DOE	1.4.8.4.3.3			
75				X					Project Management	1.4.8.4.3.3.1			
76				X					DOE Requirements Support	1.4.8.4.3.3.2			
77				X					Project Plan/Project Management Plan	1.4.8.4.3.3.3			

Significant information from pages Thru 13

Entire document not scanned.

4. MANAGEMENT APPROACH

Overall DOE Project responsibilities lie with the Assistant Secretary of Environmental Management (EM-1) who has further delegated authority to manage the Project to the Deputy Assistant Secretary of the Office of Environmental Restoration (EM-40) who assigned specific project management and oversight responsibilities to the DOE-HQ Program Manager, Northwestern Area Program (EM-44), Oakland Operation Division (EM-443). The management approach follows the principle of decentralization of project activities to a field office, in this case the DOE Oakland Operations Office (OAK), while providing for an appropriate level of approval oversight and reporting of project activities to DOE-HQ.

Within DOE-OAK, responsibility for management of the GA Hot Cell ER Project has been assigned to the Assistance Manager for Environmental Management and Support. Responsibility flows through the Director, Division of Environmental Restoration and Waste Management. The DOE-OAK Hot Cell ER Project Manager is James Davis III. DOE-OAK provides full support for the Project including Budget, Finance, Procurement, Quality Assurance, Environmental, Health and Safety, Personnel, External Affairs, Engineering, and Counsel. DOE-OAK has contracted with General Atomics to provide technical and operational management and services for the Project.

4.1 DOE Headquarters (HQ)

The Assistant Secretary to the Office of Environmental Management (EM-1) is the approving official who has overall responsibility and authority for the GA Hot Cell D&D Project. Some of the project responsibilities are delegated to the Northwest Area Program Office (EM-44) and further delegated to the Oakland Operations Division (EM-443) who will review and approve the Total Project Cost Estimate and changes thereto, the major headquarters approved milestones, the financial plan, any project scope changes above and beyond scope contractually agreed to, the D&D Work Plan and the Environmental Assessment. The Assistant Secretary to the Office of Environmental Management (EM-1) and the Deputy Assistant Secretary to the Office of Environmental Management (EM-40) have delegated these responsibilities to the Program Manager, Rod Cummings, for the GA Hot Cell Facility D&D Project. The Oakland Operations Division (EM-443) Director Anthony Kluk, through his program manager, acting as the HQ focal point and formal point of contact, shall perform the following:

- Review and approve the Project Plan and recommend this document for approval by the Director, ~~Division of D&D~~. Oakland Operations Division
- Provide overall technical and financial guidance to the Project, as necessary.
- Establish and monitor the HQ-controlled milestones and approved changes thereto.
- Obtain approval of Project schedule, cost, contingency, and technical baseline.
- Manage the independent verification contractor. Review and approve the final site certification and issue the Federal Register notice.
- Obtain approval for provision of funds through the Controller's office in the Approved Funding Program plan (AFP) issued monthly and changes thereto during the course of the Project. The AFP is the primary budget document for the current year.
- Periodically review and/or perform independent assessments of Project progress with respect to cost, schedule, and technical performance baselines, policies, HQ-

controlled milestones, and provide the results of these reviews to management, as appropriate.

- Establish guidance regarding public, state, and federal interactions. Serve as focal point for contacts with the Office of Management and Budget, Congress, DOE-HQ offices, and international agencies.
- Participate in negotiations of all DOE Project agreements with state, university, local, and federal agencies to assure that programmatic goals and concerns are satisfied.
- Provide guidance with regard to release criteria and remedial action guidelines and approve site-specific guidelines, supplemental limits or exceptions, and ARAR selection.
- Review and concur with the Project Plan. Establish, review, and approve Project documents as required by Departmental Orders and other federal regulations.
- With the Project Manager's assistance, prepare HQ documentation as required for the Project. Coordinate HQ review and approval activities (e. g., major Project acquisition items, plans, reports) and expedite HQ interface activities and follow-up actions.
- Review relevant DOE orders and D&D guidance documents that pertain to this project, impose and implement those that are deemed necessary using a graded approach. Establish and implement any new DOE policy that is introduced to expedite the removal and cleanup action.

4.2 Oakland Operations Office (OAK)

The Assistant Manager for Environmental Management and Support has the responsibility and authority for the field management of the GA Hot Cell D&D Project, which includes the line management authority, interfacing with EM/HQ, responsibility and accountability for overall Project implementation and contract administration in a manner consistent with the approved Project Plan and other applicable documents and Department of Energy policies and orders.

4.2.1 Director for Environmental Restoration and Waste Management

The Director has the responsibility for the following:

- Select, monitor, and supervise the performance of the Project Manager and appropriate staff, and delegate to the Project Manager the authority for day-to-day implementation management and direction of the Project.
- Review and approve the Project Plan/Project Management Plan and methods to be used by the Project Manager.
- Review and approve all documents, as required, including Project environmental and safety documents prescribed by Departmental Orders or other federal regulations.
- Obtain approval of NEPA/environmental compliance documents and DOE agreements with local, state and federal agencies.

4.2.2 Project Manager

The Project Manager shall do the following:

- Serve as the DOE implementing official for the Project, responsible for executing the scope of work in accordance with the approved Project Plan and applicable HQ guidance.

- Establish and implement technical, cost, and schedule baselines. Achieve Project objectives in a cost-effective, safe, technically sound and environmentally acceptable manner, insuring the DOE policies and orders are fulfilled. Develop and obtain HQ concurrence in the Project Change-Control Board Policy and ensure implementation.
- Establish regularly scheduled Project reviews for HQ and OAK Management.
- Coordinate with the DOE-OAK Contracting Officer regarding the execution of procurement actions by the DOE-OAK Contracting Officer.
- Provide technical management and direction to the prime ER contractor (GA) as the Contracting Officer's technical representative and evaluate unsolicited proposals relating to the Project.
- Direct GA in the development and approval of the GA Hot Cell D&D Project planning documents necessary for effective implementation of the Project.
- Through the established budgetary system, prepare and submit for HQ approval annual budget requests with supporting data, and request financial plan changes, site specific plan updates and ADS when necessary.
- Interact with the ER Contractor's Project Manager and the HQ Program Manager on Project activities, as appropriate. Maintain public/private sector interface and liaison, including interfaces with state, regional, and federal agencies on matters concerning the GA Hot Cell D&D Project. This will be done in concert with the DOE/GA Contract Amendments, in coordination with the HQ Program Manager, as appropriate, and in accordance with established HQ guidance.
- Review NEPA documents and submit to DOE-HQ and the NRC for review and approval, and propose remedial actions/response actions and submit supporting documents to ER/D&D for approval.
- Assist in the preparation and negotiations of all agreements with state, local, and federal agencies. Implement the program consistent with the signed agreements in concert with the DOE/GA Contract Amendments.
- Provide for implementation of Department Orders and policies on Project management, environmental, health, safety, engineering standards, quality assurance, security and safeguards, and other areas and ensure proper implementation by the contractor. Assure the preparation and review of all necessary safety, environmental, and otherwise required analyses and assessments. Review and approve other documents and plans to assure compliance with relevant DOE Orders and policies, as promulgated by DOE-OAK, after appropriate consultation with others (e. g., DOE-OAK staff and DOE-HQ).
- Administer, monitor, evaluate, and report progress through the development and use of appropriate Project management control systems.
- Provide for public communication and information dissemination as required in the Contract Modifications and by using the procedures to be developed in the Community Relations Plan. Coordinate and participate in Project conferences, symposiums, and workshops. Provide HQ the opportunity for informal review and concurrent, as appropriate. Support the international technology exchange by development of Project input for HQ use.
- Provide the DOE-OAK Management and the HQ Program Manager with timely information on significant Project events.
- Ensure that all items requiring HQ review and/or approval are submitted on a timely basis to permit adequate evaluations.

- Provide required reports in a timely manner to DOE-OAK Management and the HQ Program Manager.
- Submit the Project Plan to HQ Program Manager for approval and provide comment responses to all project documentation and plans reviewed by HQ.
- Provide the final certification docket for HQ approval and signature, certifying the radiological condition of the site following D&D and site remediation activities.
- Prepare all close out documentation for the site, assisting the DOE-OAK Manager and HQ Program Manager to bring the Project to completion.

4.3 Organization Chart

Figs. I-4 and I-5 depict all participating organizations.

4.4 Industry Partner

DOE has contracted with General Atomics in a cost sharing arrangement as Prime Contractor and Site Manager of the General Atomics Hot Cell D&D Project.

The DOE-OAK Project Manager has delegated responsibilities to the General Atomics Project Manager, which include:

- DOE delegated official for the Project, responsible for executing the scope of work in accordance with the approved PP/PMP and applicable HQ guidance.
- Establish and implement technical, cost and schedule baselines. Achieve Project objectives in a cost effective, safe, technically sound and environmentally acceptable manner, insuring that DOE policies are fulfilled.
- Prepare Project reviews for HQ and DOE-OAK Management.
- Provide technical management and services as prime D&D contractor.
- Participate in the development and approval of the GA D&D Project planning documents necessary for effective implementation of the Project.
- Prepare and submit for DOE-OAK approval annual budget requests with supporting data, and request financial plan changes, when necessary.
- Interact as D&D Contractor with the DOE-OAK Program Manager on Project activities, as appropriate. Maintain public/private sector interface and liaison, including interface with state and regional federal agencies on matters concerning the GA D&D Project, coordinating with DOE-OAK Project Manager, as appropriate, and in accordance with established HQ guidance.
- Prepare NEPA documents and submit to DOE-OAK Project Manager for review and approval including coordination with ASEH for their review and approval.
- Assist DOE-OAK in the preparation and negotiations of all agreements with state, local and federal agencies. Implement the program consistent with the signed agreements.

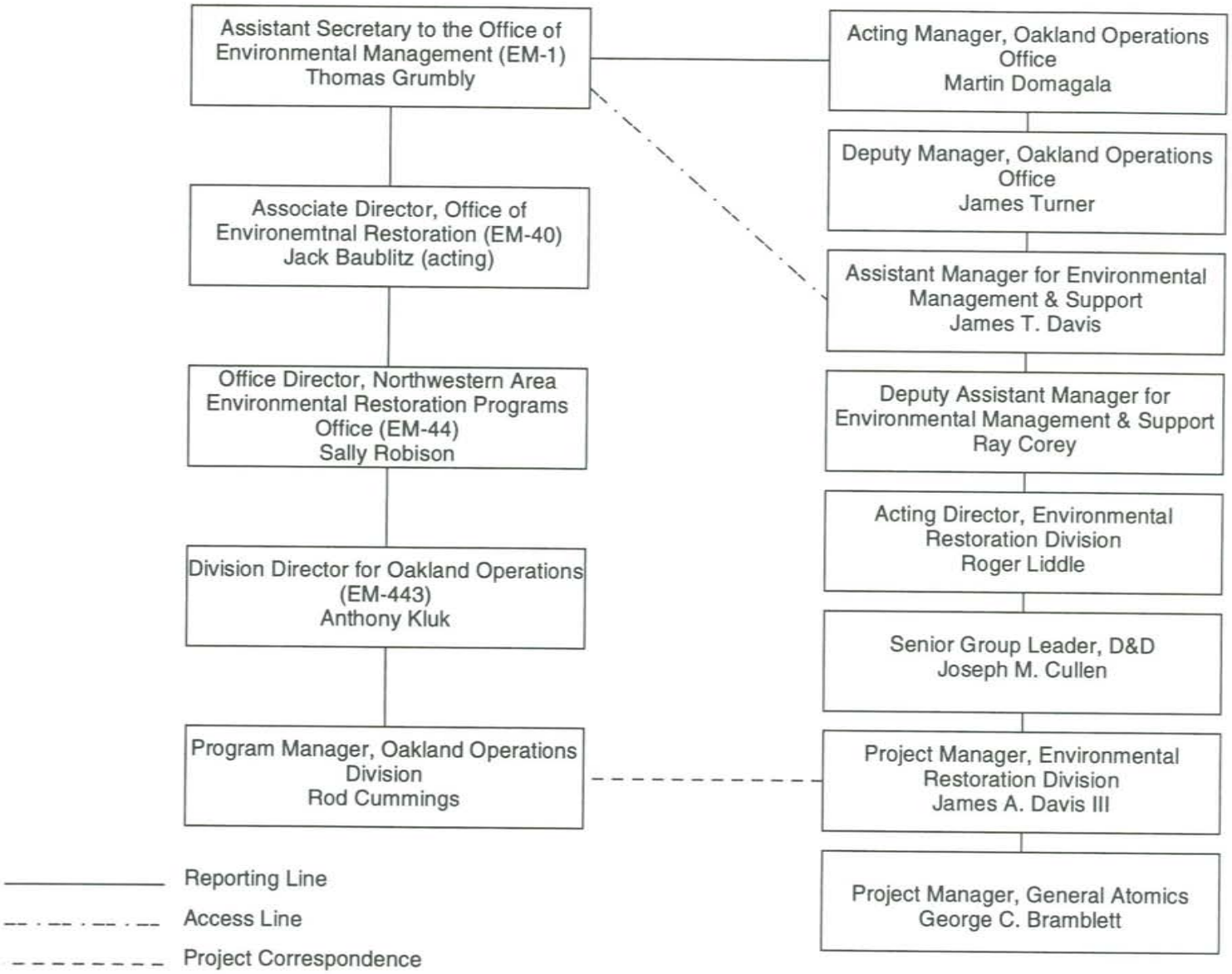

Fig. I-4. DOE-HQ/Oakland Operations Office/GA D&D Project Organization

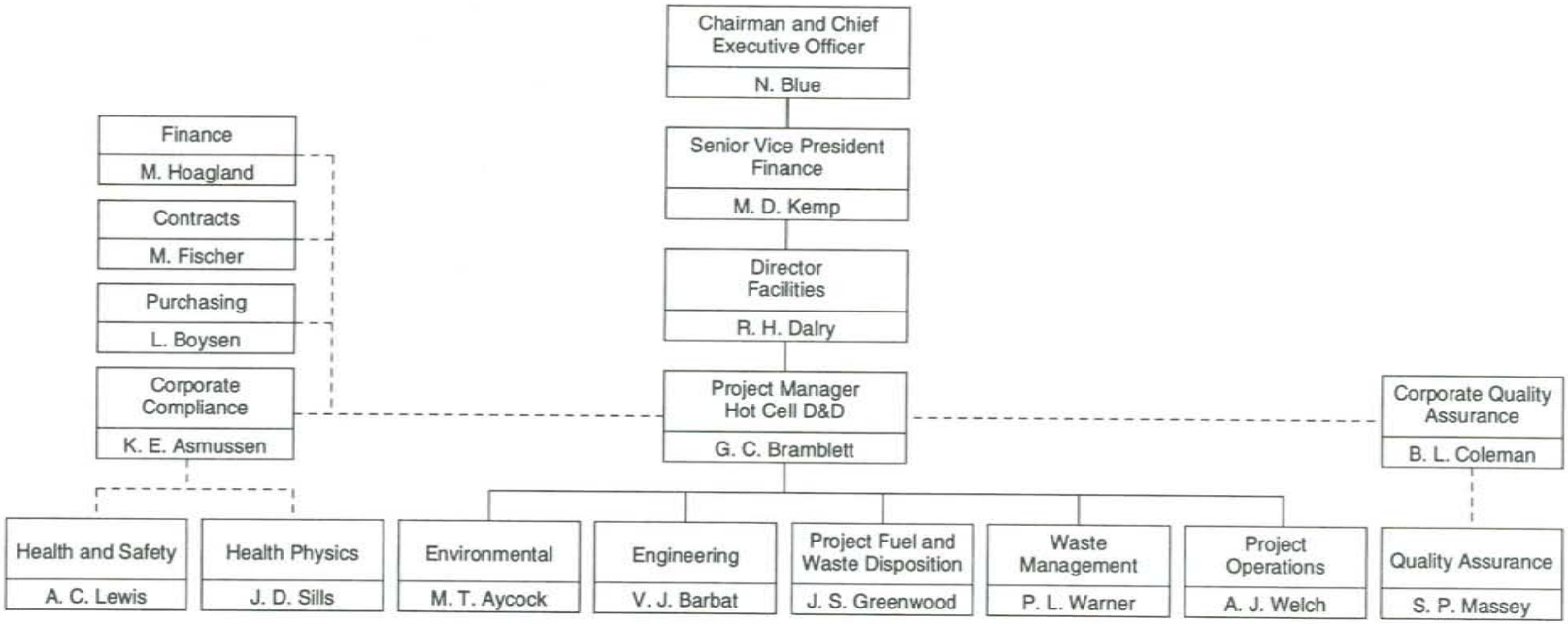

Fig. I-5. GA Project Organization

- Provide for implementation of Department policies on Project management, environmental, health, safety, engineering standards, quality assurance, security and safeguards, and other areas and ensure proper implementation by the contractor. Assure the preparation and review of all necessary safety, environmental, and otherwise required analyses and assessment. Review and approve other documents and plans to assure compliance with relevant DOE policies, as promulgated by DOE-OAK, after appropriate consultation with others (e. g., DOE-OAK staff and DOE-HQ).
- Administer, monitor, evaluate, and report progress through the development and use of appropriate Project management control systems.
- Provide for public communication and information dissemination. Coordinate and participate in Project conferences, symposiums, and workshops. Provide DOE-OAK the opportunity for informal review and concurrence, as appropriate. Support the international technology exchange by development of Project input for DOE-OAK use.
- Provide the DOE-OAK Project Manager with timely information on significant Project events.
- Ensure that all items requiring DOE-OAK review and/or approval are submitted on a timely basis to permit adequate evaluations.
- Provide required reports in a timely manner to DOE-OAK Project Manager.
- Prepare and submit the PP/PMP to the DOE-OAK Project Manager.
- Provide the final certification docket for HQ approval and signature, certifying the radiological condition of the site following D&D activities.
- Prepare all close out documentation for the site, assisting the DOE-OAK Manager to bring the Project to completion.

4.5 Product Transition

(Not Applicable)

4.6 Plant Disposition

(Not Applicable)

4.7 Cleanup

The Project Scope is Facility D&D and Site Remediation, as required. There will be no "Site Cleanup" requirements at the completion of the Project.

4.8 Project Management Control/Reporting/Data Analysis

4.8.1 Controls

GA utilizes a Program/Resource Procedures Manual (P/RPM) which meets the requirements of government regulations and industry standards and has specific operating instructions for project, engineering, and support personnel. The GA P/RPM provides instructions and guidance for implementing program management, administration, planning, budgeting, scheduling, design, control, configuration management, design verification and support, research and development, procurement, roles and responsibilities of program resource personnel, and regulatory requirements.

Administrative procedures have been prepared for use in controlling the project, as follows:

HCD-1.1	Procedure Preparation
HCD-1.2	Document Control
HCD-1.3	Indoctrination and Training
HCD-1.4	Communications Control
HCD-1.5	Operational Readiness Review

In addition, Project Directives will be issued by the Project Manager to provide specific guidelines for technical and programmatic issues.

4.8.2 Reporting

A Project Manager's Progress Report will be prepared each week and transmitted via fax to the DOE Program Manager and Contracts Officer. This report will assess the general project status, summary activities for the week, and planned activities.

A Monthly Report will be prepared and submitted by the 20th of the month following the reporting month. Two copies will be sent to the DOE Program Manager and one copy each to the DOE Finance Office and Contracts Officer. This report will be structured to follow the guidelines contained in the contract SOW. Appendix A shows the format used for the Cost Plan, Cost Performance Report, Labor Plan, Labor Management Report, and Milestone Schedule Status, which are included in the report.

4.8.3 Data Analysis

GA has in place a performance measurement system (PMS) for Contract Performance Measurement. The PMS is used to inform program and resource management of work progress and to highlight potential cost and schedule problems. Performance reports are generated by the GA PMS on a monthly basis. Labor hour reports are prepared each week and will be analyzed by the Operations Manager and Task Leaders against planned activities. Project costs by WBS number are reported each month by Finance. These cost reports form the basis for performance monitoring and preparation of the Cost Performance Report. Progress to scheduled milestones will be analyzed using the Microsoft Project management planning system software.

5. ACQUISITION STRATEGY

5.1 Acquisition Strategy

The DOE-OAK with DOE HQ approval has contracted with GA for the removal of DOE/NE fuel and waste, characterization of the site and facility, D&D, soil remediation, and groundwater monitoring, if necessary, of GA's Hot Cell Facility. This facility has been surplused but over its 30 years of operation has supported DOE and private activities that have represented a facility utilization of 76% DOE and 24% private.

DOE-OAK and DOE-HQ have reviewed the Project Mission Objectives and have concluded this Project is a close out responsibility of DOE Development Contract DE-AC03-84SF11962. It is recognized the HCF is a privately operated facility located on private property and operates under a NRC and CA-DOHS license (GA). It was determined that it would be in the best interest of the Government to assign GA as Prime Contractor and contract for GA services through contract modifications to DOE Contract DE-AC03-84SF11962.

5.2 Management Concepts

Acquisition strategy Project planning will incorporate technical, business, resource and miscellaneous management concepts in all documents required for Project approval and execution.

5.2.1 Management Information

Management information is limited in all areas of activity to information essential for effective control. This information will be obtained from the same databases used by the Contractor and that information will provide the data to be input into the DOE Progress Tracking System developed for proper project management, tracking oversight. A WBS has been developed as a framework for planning and assignment of responsibilities, contracting, and reporting progress.

5.2.2 Governmental Organization Utilization

DOE management and operating contractors, Government laboratories and R&D research centers will not be used in competition with private industry.

5.2.3 Affordability

Request for Proposal responses have been provided by GA to DOE describing the technical and financial magnitude of the resource commitment required to complete Phase 1 (waste/fuel disposition, characterization). A Project Baseline will be prepared by GA for Phase 2 (D&D) and Phase 3 (Facility and Site Release) during Phase 1.

5.2.4 Timeliness

Cost risks and technical (regulatory) risks will be minimized by expediting Project cycle time through reducing reviews and review cycles and minimizing documentation requirements through the use of a graded approach in the implementation of DOE orders that will help reduce duplication of reports, plans and documents.

5.2.5 Competitive Concept Development

(Not Applicable)

5.2.6 Cost Estimates

Cost, schedule and technical estimates will be revised as required by change in scope (addition of DOE/NE fuel disposition) or generation of additional definitive data (contamination characterization report).

5.2.7 Cost Participation

The contract arrangement with GA for allowable cost reimbursement is cost sharing. DOE is to reimburse GA for 76% of the shared allowable costs and 100% of the 100% DOE allowable costs. This sharing percentage is based on the proportion of nuclear material throughput in the HCF funded by DOE Development Projects. All overruns on the Project will be the 100% responsibility of the Party at fault. There will be no net income generated from this Project in that the contract is cost reimbursable without fee. ADS activities will reflect DOE's commitment to complete this Project.

5.3 Project Acquisition Strategy Implementation

DOE HQ, following the principle of decentralization, has delegated major Project responsibility to the Oakland Operations Office.

DOE-OAK maintains site management control through the Terms and Conditions of the Contract Modifications, and various planning documents (i. e., PP/PMP, D&D Plan, and Status Reports).

5.4 Cost Share Agreement

A Cost Sharing Agreement exists for Phase 1 between DOE and GA, executed through Contract Modifications A038 through A041 to DOE Contract DE-AC03-84SF11962. DOE's cost share is comprised of those costs which are to be born 100% by DOE and 76% of those costs which are to be shared. The 100% DOE cost activity is associated with the disposition of the DOE/NE fuel and waste stored in the HCF, DOE Requirements Support, and DOE specific technical plans/assessments/documents/reports. The cost shared activities are facility related including Project Management, Site and Facility Characterization, Plans, Procedures, Regulatory Compliance, and Environmental Monitoring, QA Support, Health and Safety Support, Surveillance and Facility Maintenance, Industrial Security, and Facility Waste Disposition. The share percentages are based on HCF historical throughput of DOE-owned nuclear material with 76% related to the DOE funded activity and 24% related to privately funded activity.

There is no treatment of future changes in Project scope of an early termination. DOE retains the right of Termination for Convenience.

5.5 Major Contract Status

Contractor:	General Atomics
Work Performed:	Prime Contractor
Award Date:	April 12, 1993
Current Contract Amount:	$9.0 million (DOE share)
Contract Number:	DE-AC03-84SF11962
Contract Type:	Cost Reimbursable—No Fee

5.6 Subcontract Management

No subcontracts by the Prime Contractor are anticipated in Phase 1. GA will utilize outside services for specialized work such as a survey of asbestos within the HC structure, sample analyses, and installation of a stack monitor. The Prime Contractor (GA) will procure materials and services utilizing GA's purchasing system, which has been approved by DOE. As required by FAR 44.3 and DEAR 944.3, a Contractor Purchasing System Review (CPSR) was performed at GA during the period January 6 - 7, 1992. Subsequent to that review, an approval of the GA purchasing system through June 30, 1995 was provided. An on-site surveillance review was performed April 5 - 7, 1993. The purpose of the surveillance review was two-fold:

- To evaluate the efficiency and effectiveness with which GA spends Government funds and complies with Government policy and the terms and conditions of its DOE prime contracts when subcontracting; and

- To provide DOE-OAK's cognizant administrative contracting officer a basis for granting, continuing, withholding, or withdrawing approval of GA's purchasing system.

Continuation of DOE's approval of GA's purchasing system through June 30, 1995 in accordance with the CPSR report was granted. As required by FAR 44.3, in the period between complete CPSRs a determination will be made annually to continue approval of the purchasing system. The next annual determination will be January 1995. This continuation of system approval:

- Applies to all DOE prime contracts at GA (i.e., those administered by DOE-OAK, the DOE Chicago Field Office, or any other DOE Headquarters or Field Element);
- Applies to all other Federal Government contracts at GA to the extent that cross-servicing arrangements exist;
- Waives the cognizant DOE-OAK Contracting Officer's consent requirements with respect to the following procurement actions under DOE prime contracts administered by DOE-OAK:

  (1) Fixed-price actions not exceeding $1,000,000 with standard approved items and conditions (a) when the price is based on adequate price competition or based on catalog or market prices of commercial items sold in substantial quantities to the general public or set by law or regulation and (b) when the action is not an incentive, award fee, single source, or sole source action (see (4) below);

  (2) Fixed-price actions not exceeding $500,000 with standard approved terms and conditions (a) when the price is established by cost analysis or price analysis and (b) when the action is not an incentive, award fee, single source, or sole source action (see (4) below);

  (3) Cost-reimbursement, time-and-materials, or labor-hour actions not exceeding $500,000 with standard approved terms and conditions when the action is not an incentive, award fee, single source, or sole source action (see (4) below);

  (4) Fixed-price or cost reimbursement, time-and-materials, or labor-hour actions not exceeding $100,000 with standard approved terms and conditions when the actions are incentive, award fee, single source, or sole source actions;

  (5) Consultant agreements (including extensions or other modifications thereto) where the daily rate (exclusive of travel costs) does not exceed $500 or where the anticipated consulting services do not exceed either 60 days in any calendar year or a total value of $25,000; and

  (6) Letter subcontracts where the not-to-exceed amount of the non-definitized action when definitized, including options, does not exceed the applicable approval threshold specified in (1), (2), (3), or (4) above.

- Shall automatically terminate at the end of the approval period specified above (or the approval period as extended);
- Shall automatically terminate when any significant change occurs in the system unless approved by DOE-OAK's cognizant administrative contracting officer; and
- May be withdrawn at any time at the discretion of DOE-OAK's cognizant administrative contracting officer.

The above waiver of certain cognizant DOE-OAK Contracting Officer's consent requirements:

- Does not apply to procurement actions under DOE prime contracts administered by the DOE Chicago Field Office or any other DOE Headquarters or Field Element or under other Federal Government contracts at GA; any waivers applicable to such procurement actions should be established by separate letters issued to GA by the respective cognizant contracting officers;
- Does not apply to procurement actions requiring approval for other reasons (such as deviations to standard approved terms and conditions);
- Shall not be construed to constitute an approval of any subcontractor/vendor/ consultant or any subcontract/purchase order/Consultant Agreement terms or conditions;
- Shall not be construed to constitute a determination of the allowability of any cost, procurement action price, or amount paid; and
- Shall not relieve GA of any contractual requirement or obligation under the various DOE-OAK administered prime contracts, except as specified herein.

6. PROJECT SCHEDULE

The Phase 1 tasks (with the exception of storage and transfer of irradiated fuel) will be completed in August 1995 with the issuance of the D&D Plan. This schedule includes the removal of the IFM from the Hot Cell. The IFM is scheduled to be transferred directly to ORNL. Alternatively, the IFM may be stored in GA Building 30 for up to twelve months. A detailed schedule is provided in Appendix B. The Project Critical Path leads through removal of DOE/NE Irradiated Fuel/Waste, Site and Facility Characterization, issuance of the Characterization Report, and the Decontamination/ Decommissioning Plan submission to the NRC, CAL-DOHS, DOE-HQ and DOE-Oakland for approval.

7. RESOURCES PLAN

The Phase 1 (Waste/Fuel Disposition and Site and Facility Characterization) Resources (Cost, Labor) Plans are shown in Appendix A. These Resources Plans correlate with Mission and Objectives Sections of this Project Plan. It should be noted the Plans reflect negotiated values of Contract Modifications A038 through A041 for Contract DE-AC03-84SF11962. Specifically excluded are Phase 2 (D&D) and Phase 3 (Site Release) activities. Also excluded are all non-contract activity including DOE Field Office, DOE Headquarters and DOE sponsored regulatory and state coordination activities.

The Resources Plans represent contractor estimated operating expenses of the Prime Contractor (GA). No plant or capital equipment expenditures are anticipated. The Resources Plans (Appendix A) reflect by WBS, prior year, current year, and balance of Phase 1 activity for the Period of Performance (April 1993 through November 1, 1995). The total negotiated cost estimate for Phase 1 is $10.1 million, of which $9.0 million is DOE's share and $1.1 million is GA's share. The total negotiated labor hour estimate for Phase 1 is 92,215 hours, of which 81,757 hours are DOE's share and 10,458 hours are GA's share.

8. CONTROLLED ITEMS/BASELINES

The Project baseline information shown is for Phase 1 only. Project baselines for Phases 2 and 3 will be developed during the course of Phase 1.

8.1 Controlled Baselines

The controlled baselines are performance (technical scope), schedule, and cost estimates.

Baseline				
Performance (Technical Scope)	1.	Surveillance and Facility Maintenance		
	2.	Irradiated Fuel Removal and Transfer		
	3.	Waste Disposal		
	4.	DOE Requirements Support		
	5.	Site and Facility Characterization		
	6.	Phase 1 Technical Plans and Procedures		
	7.	D&D Plan		
	8.	Regulatory Compliance and Environmental Monitoring		
	9.	QA Support		
	10.	Health and Safety Support		
	11.	Project Management		
Schedule		Project Start Date—April 1993		
		Phase 1 Scheduled Completion Date*—May 26, 1995		
Cost		Total Phase 1 Cost Estimate:	DOE	$ 8,996,816
			GA	1,149,086
			Total	$10,145,899

* Scheduled completion date for Irradiated Fuel Storage in Building 30 and Off-Site Transfer is November 1, 1995. This task will not interfere with Phase 2 commencing on May 27, 1995.

8.2 Baseline Change Control Board (BCCB)

The following thresholds will determine the requirement for a Baseline Change Control Board (BCCB) meeting.

Thresholds	
Technical (Scope)	Changes which impact the Scope of Work
Schedule	>± 2 months to Phase 1 completion date
Cost	>± 10% of Phase 1 contract value

8.3 Performance Objective Changes

Changes to performance objectives as expressed in Project Baselines (performance scope, schedule, cost estimate) will be formally documented by the Prime Contractor or Project Manager, describing the changes in performance scope, schedule and/or cost estimate. These documented changes will be forwarded to DOE-OAK for implementation and execution through contract modifications.

9. SCHEDULED DECISION POINTS

Key DOE decision and approval points for the Project are summarized in Table I-3.

Table I-3

DOE Decision/Approval Points

PP/PMP
Waste Disposal Site Authorization
Fuel Disposition Site Authorization
Site and Facility Characterization Initiation
Project Baselines (Phases 1, 2 and 3)
D&D Plan
Action Description Memorandum (ADM)
Environmental Assessments (EA)
Finding of No Significant Impact (FONSI)
Authorization to Commence Phase 2
Completion of Phase 2
Authorization to Commence Phase 3
Approval of Final Closure Report to release HC Site and Facility for unrestricted use

10. PROJECT CHARTER

The GA Hot Cell D&D Project charter delineates management responsibility, authority and accountability for the Project. It establishes the operational management relationships between Headquarters and Field Project Management organizations.

10.1 DOE Managing Organization

Environmental Restoration and Waste Management Division, Oakland Operations Office and Office of Environmental Restoration (EM-40).

10.2 DOE Project Manager

Effective April 1993, James A. Davis III is the DOE-OAK Project Manager for the GA Hot Cell D&D Project.

10.3 DOE Project Management Office

The DOE Project Management Office is located at the Oakland Operations Office.

10.4 Support

The DOE Project Manager will receive support from:

- Environment and Safety Support, Oakland Operations Office
- Waste Management, Oakland Operations Office
- Financial Management Division, Oakland Operations Office
- Contracts Management Division, Oakland Operations Office
- DOE/RL, Waste Management Division
- DOE/ORNL, Operations Office
- General Atomics (Site Prime Contractor)

10.5 Authority

The DOE Project Manager authorities include:

- DOE Order 4700.1 (guidance only)
- Project Plan/Project Management Plan

10.6 Reporting Channel

See Fig. I-4.

10.7 Special Instructions/Delegations

None.

10.8 Transition/Termination Plan

The GA Hot Cell D&D Project will be terminated (complete) upon NRC/CA-DOHS certification for release to unrestricted use.

PART II
PROJECT MANAGEMENT PLAN

1. INTRODUCTION

1.1 Background

In support of company efforts involving predominantly government funded nuclear research and development (R&D), General Atomics (GA) has continuously maintained a fully operational Hot Cell facility for over 30 years. Built in 1958 as a heavily shielded remote-handling laboratory, the facility has supported a wide variety of radiologically hazardous and/or toxic experimental operations.

The hot cells have been used to perform post-irradiation examinations on fuels, structural materials, and instrumentation and for dosimetry. Most of the Projects involved examination of irradiated fuel and graphite for High Temperature Gas-Cooled Reactors (HTGR). Some of the very earliest examinations involved Hastelloy X-clad uranium oxide-beryllium oxide fuel for the Marine Gas Cooled Reactor (MGCR), which later was called the Experimental Beryllium Oxide Reactor (EBOR). The UO_2-BeO fuel for the EBOR was made in the part of the GA Hot Cell building that is currently the machine shop.

More recently, the Hot Cell facility has been used for the examination of thermionic fuel elements (TFE) for space power application and fuel for GA's own training, research, and isotope reactor (TRIGA).

Usage of the Hot Cell has dropped significantly over the past years. This in conjunction with the continuing private industrial development around the site prompted the decision to decontaminate and decommission (D&D) the facility and remediate the surrounding area, if necessary for release to unrestricted use. It is the DOE's goal to clean the facility to acceptable standards without demolishing the facility.

1.2 Scope

The scope of the D&D effort will be accomplished in three (3) phases. The scope of this Project Management Plan (PMP) covers the first phase which includes:

1. Providing such facility maintenance as may be required to assure that the facility is maintained in "safe shut-down" conditions until D&D commences in compliance with the NRC license and applicable Federal, State and local regulations.

2. Assembling, reviewing, and evaluating existing site data, and developing new information to define the D&D Project.

3. Performing site and facility characterization activities to determine the magnitude and extent of contamination.

4. Supporting the U. S. Department of Energy—Oakland Operations Office (DOE-OAK) in responding to Office of Environmental Restoration (EM-40) requests for technical, financial, and contractual services.

5. Preparing basic Project management documents/Project documents as required by DOE-OAK, the Nuclear Regulatory Commission (NRC), and State of California Department of Health Services (DOHS) guidance for Project reporting, tracking, and monitoring.

6. Preparing all operational and waste processing and packaging procedures applicable to the D&D (Phases I, 2, and 3).

7. Removal and disposition of DOE-NE waste materials to Hanford in accordance with the requirements of the Westinghouse Hanford Waste Acceptance Criteria (WHC-EP-0063-4).

8. Removal from the Hot Cell of irradiated fuel materials and transfer to ORNL.

9. Preparation of the D&D Plan and approval by the NRC, CAL-DOHS, and DOE.

Phase 2 is the implementation of HC D&D activities, HC surrounding site remediation, if necessary, and waste handling and disposal. Phase 3 will be to perform confirmatory studies and final facility and site certification. It is anticipated that this PMP will form the basis for the PMPs for Phases 2 and 3.

1.3 Primary Participants and Contracts

The DOE-OAK, has contracted with GA (DE-AC03-84SF11962 Modifications A038, A039, A040 and A041) to perform Phase 1 of this D&D effort.

1.4 Plan Organization

This PMP is organized in accordance with the requirements of Contract Modification A040.

Related documents are listed in Section 21.0, References.

1.5 Implementation

After review and approval by GA, approval is required by DOE-OAK.

Copies of the PMP and revisions thereto will be distributed in a controlled manner. The initial issue of the PMP and all changes will be provided to personnel identified on a distribution list approved by the Hot Cell D&D Project Manager.

Revisions to the PMP will be reviewed, approved, and controlled in the same manner as the original issue.

2. OBJECTIVES

2.1 Hot Cell D&D Objectives

The objective of the DOE is to remove the contamination in the facility resulting from past and present DOE funded activities. The DOE's goal is to clean the facility to acceptable standards without demolishing the facility. The surrounding site will be environmentally remediated, if necessary, for release to unrestricted use.

The subject of this PMP is the first phase of the D&D effort and will:

1. Assure that the facility meets the NRC and DOHS health and safety levels and will provide data to define the overall scope of the D&D Project.

2. Provide surveillance and maintenance to maintain the site and facility in compliance with the NRC license and applicable Federal, State and local regulations.
3. Ascertain the magnitude and extent of contamination through characterization.
4. Include the removal of waste materials and irradiated fuel materials from the facility and site.
5. Establish the Project management/Project documentation and controls required by DOE-OAK, NRC, Environmental Protection Agency (EPA), California-EPA (CAL-EPA), and CA-DOHS in preparation for the second phase.

2.2 Technical Objectives

1. Removal of irradiated fuel from the Hot Cell and eventual transfer off-site to a DOE designated location.
2. Removal and disposal of pre-D&D waste.
3. Prevent the creation of additional waste streams during D&D operations.
4. Minimize the volume of LLW through decontamination activities.
5. Preparation and approval of a D&D Plan.

2.3 Economic Objectives

It is the objective of this Project to minimize the D&D costs as much as possible while assuring the health and safety of the Project staff and the public. The estimate at completion for Phase 1 is shown in the Cost Plan (see Appendix A). Phases 2 and 3 Baseline Costs will be prepared during Phase 1.

2.4 Schedule Objectives

The Phase 1 objective is to prepare for the next phase of the Project (Phase 2) which is the D&D of the Hot Cell Site and Facility. A detailed schedule for the Project is presented in Appendix B.

Major milestones for the Project are:

Removal from Hot Cell of HTGR/RERTR Fuel
Removal from Hot Cell of Waste Materials
ORR for Characterization
Characterization Report
Transfer Off-Site of HTGR/RERTR Fuel
D&D Plan
Phases 2 and 3 Baselines

3. MANAGEMENT ORGANIZATION AND RESPONSIBILITIES

3.1 Project Overview

DOE has contracted with General Atomics in a cost sharing arrangement as Prime Contractor and Site Manager of the General Atomics Hot Cell D&D Project. The DOE organization and the DOE Project Manager's ties with the GA Project Manager is depicted in Fig. II-1.

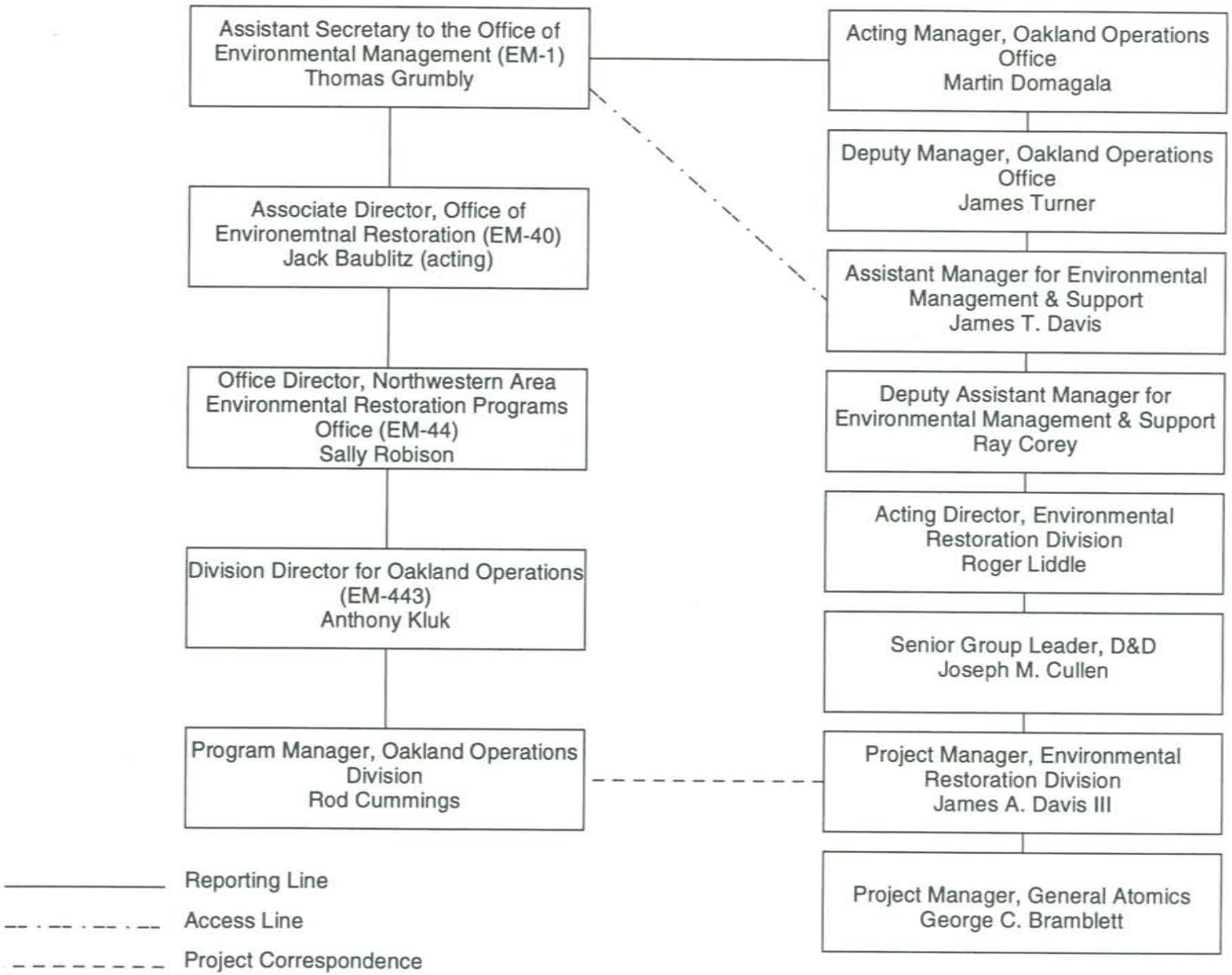

Fig. II-1. DOE-HQ/Oakland Operations Office/GA D&D Project Organization

The GA Hot Cell D&D Project management philosophy incorporates lessons learned from prior decommissioning Projects, good management practices, and direct lines of communication. Emphasis is placed on clear, concise Project task definitions including responsibilities of task leaders, specifications, criteria, costs, schedule, and resource requirements.

3.2 Project Organization

The Project organization chart for the work discussed in this PMP is shown in Fig. II-2. This Project is organized within the GA corporate structure to assure high management visibility and priority. It is organized along functional lines with specific task responsibilities assigned to specific Task Managers who are directly responsible for task cost/schedule control. The Task Managers will be supported by technical and administrative personnel either directly assigned to the task or from the Engineering Organization. Overall responsibility for the Project lies with the Project Manager.

The roles of the GA Project staff are described below:

- Alan Lewis is responsible for the Health and Safety (H&S) function. He reports to Mr. Keith Asmussen, Director of Licensing , Safety and Nuclear Compliance (LSNC), and also has a direct line of communication with Mr. George Bramblett, Hot Cell D&D Project Manager. In this Project capacity, Alan receives appropriate H&S assignments directly from the Project Manager.

- Judd Sills is responsible for all Health Physics related tasks. He also reports to Mr. Keith Asmussen (LSNC) and has a direct line of communication with the Project Manager. Judd is responsible for surveillance, radiological characterization, and will be a major contributor to the D&D Plan.

- Mary Aycock reports directly to the Project Manager and has overall responsibility for characterization with particular emphasis on hazardous materials. In her role, Mary directly interfaces with Judd Sills.

- Virgil Barbat is responsible for maintenance of the Hot Cell site and facility and project related engineering tasks. He reports directly to the Project Manager.

- John Greenwood is responsible for the disposal of the IFM and DOE-NE waste from the Hot Cell. He reports directly to the Project Manager. John is also Principal Engineer for the Hot Cell.

- Phil Warner is responsible for waste management. He reports directly to the Project Manager. In his capacity, Phil interfaces directly with John Greenwood.

- Alan Welch is responsible for records management, configuration control, planning and scheduling, and supporting DOE requests on project administrative tasks. He reports directly to the Project Manager.

- Steve Massey represents Quality Assurance (QA) on the Project. He reports to Mr. Billy Coleman, Director of QA and also has a direct line of communication with the Project Manager. Steve is responsible for assuring that the Project staff comply with GA site and project specific plans and procedures through observations and audits.

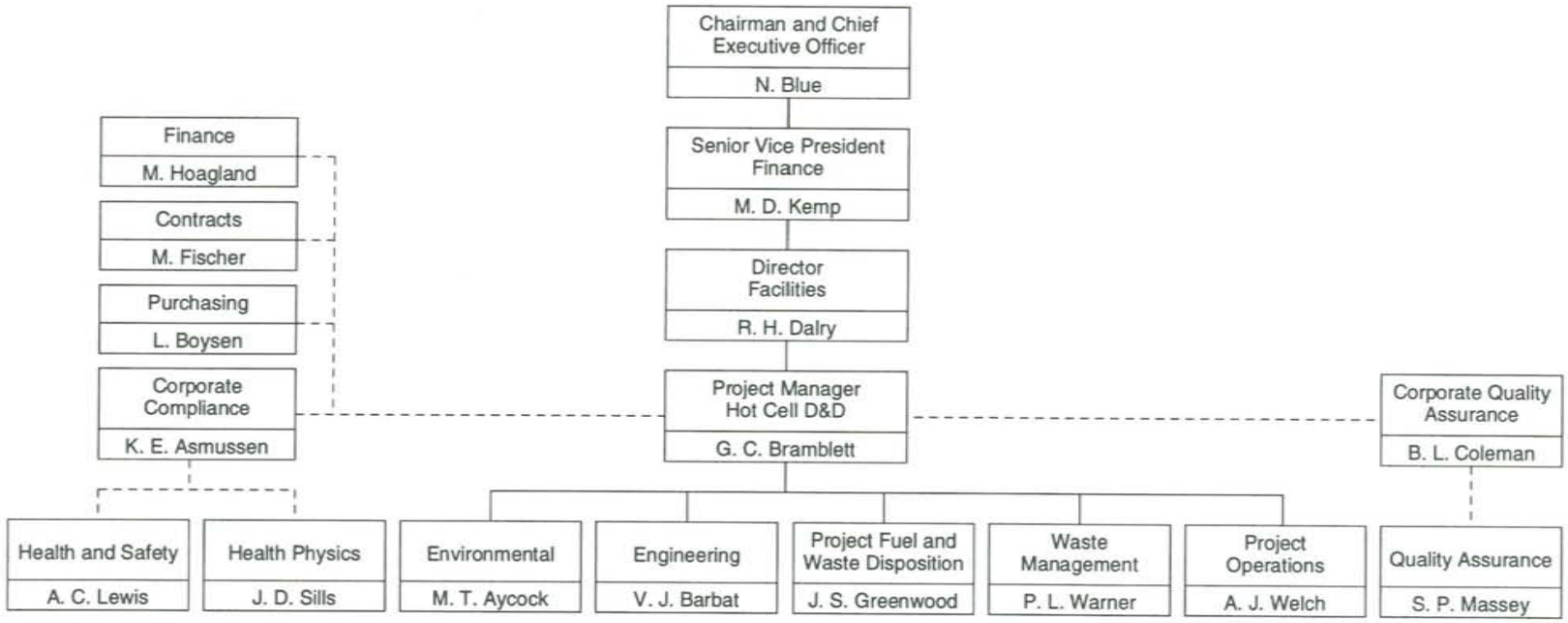

Fig. II-2. Project Organization

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All of the above mentioned staff interface on a daily basis as needed. Each week the Project Manager holds a staff meeting which also includes representatives from Finance, Contracts, and Purchasing for an update on progress and general discussions. Separate meetings are called on specific topics on an as needed basis for appropriate staff members and other GA support groups and/or subcontractors.

The principal support functions at GA for the Hot Cell D&D Project are part of the Licensing, Safety, and Nuclear Compliance Division which includes Health Physics, Nuclear Materials Accountability, Nuclear Safety, Statistics and Measurement Control, Criticality and Radiation Safety Committee, Emergency Services, Industrial Safety, and Industrial Hygiene. Their support requirements are listed below. The LSNC organization is shown in Fig. II-3.

- Director, Licensing, Safety, and Nuclear Compliance (LSNC)
  - Administering licenses and review and approval of all Work Authorizations (WAs).
  - Interpreting licensing requirements and regulations.
  - Administers NMA, NS, IS, IH, and HMM.
  - Focal point for interface with governmental regulating agencies on compliance issues.
- Health Physics (HP)
  - Assuring compliance with Title 10 Code of Federal Regulations, Parts 19 and 20.
  - Providing personnel for reviewing WAs.
  - Personnel radiation monitoring.
  - Maintaining a laboratory of monitoring equipment.
- Nuclear Materials Accountability (NMA)
  - Assuring compliance with SNM custody.
  - Maintaining and operating storage areas for interim and long term storage of radioactive materials.
  - Assuring the safe and proper transport of radioactive material.
- Nuclear Safety (NS)
  - Assuring nuclear criticality safety.
- Statistics and Measurement Control (SMC)
  - Overseeing all measurement processes directly related to the accountability of SNM.
- Criticality and Radiation Safety Committee (CRSC)
  - Reviewing and auditing policies and activities involving source, special nuclear and other radioactive material.
  - Acting as a radiological safety advisory committee.

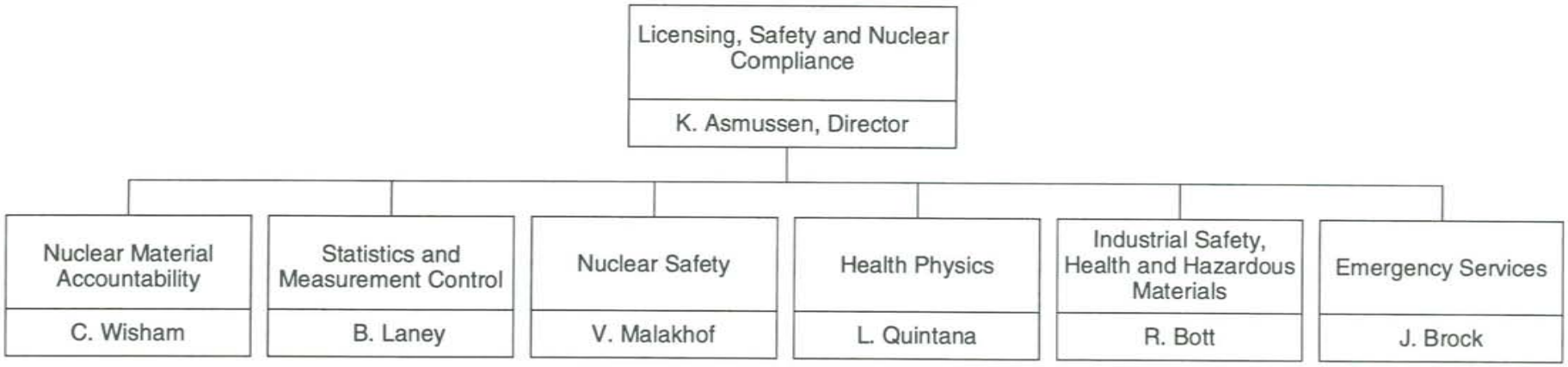

Fig. II-3. Licensing, Safety and Nuclear Compliance Organization

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- Emergency Services (ES)
  - Assuring adequate fire and safety protection.
  - Responding to all emergencies.
- Industrial Safety (IS)
  - Reviewing operations involving hazardous work, employee training, and safety inspections.
  - Organizing safety committees and conducting regular meetings.
- Industrial Hygiene (IH)
  - Maintaining a master file of Material Safety Data Sheets (MSDS).
  - Training personnel in the handling of hazardous materials.

3.3 Staffing

A labor plan which utilizes the employee levels described below is shown in Appendix A.

EMPLOYEE LEVELS		
Employee Level	**Typical Title**	**Typical Qualifications**
M	Division Director Project Manager	M.S., Ph.D., or equivalent plus 20 years of pertinent experience. Recognized senior expert in field. Responsible for directing, planning, and managing major programs.
5	Senior Technical Advisor Senior Principal Engineer Department Manager	M.S., Ph.D., or equivalent plus 20 years of pertinent experience. Internationally recognized authority in field, or responsible for planning and management.
6	Senior Staff Engineer Principal Engineer Branch Manager	M.S., Ph.D., or equivalent plus 15 to 20 years of pertinent experience. Recognized expert in field. Responsible for planning and management.
7	Staff Engineer Senior Section Leader	B.S., M.S., Ph.D., or equivalent plus 10 to 15 years of pertinent experience. Recognized specialist in field. Mature professional.
8	Senior Engineer Section Leader	B.S., M.S., Ph.D., or equivalent plus 5 years of pertinent experience. Maturing professional.
9	Engineer	B.S., M.S., or equivalent plus 2 years of pertinent experience. Emerging professional.
10	Associate Engineer	B.S. or equivalent with minimal pertinent experience. Junior professional.
Senior non-exempt (SN)	Senior Technician	Specialized schooling and training plus 10 years of pertinent experience. Works under minimal supervision of senior exempt technical/management personnel.
Non-exempt (NE)	Technician	Specialized schooling and training plus 5 years of pertinent experience. Works under general guidance and supervision of more senior technical personnel.

4. WORK PLAN

The logical steps toward a successful completion of Phase 1 are:

- Removal of HTGR/RERTR fuel from the Hot Cell

- Removal of waste materials from the Hot Cell
- Preparation for Characterization
- ORR for Site and Facility Characterization
- Facility Characterization
- Characterization Report
- Submittal and approval of D&D Plan
- Preparation of Phases 2 and 3 Project Baselines

The Site and Facility Characterization Plan and associated sampling and analysis plans (PC-000395) and Fuel and Waste Disposition Characterization Plan (PC-000382), Waste Certification and Minimization Plan (PC-000389), and Quality Assurance Project Plan (QAPP-7320) provide the work plan methods to be used in achieving these steps. Other supporting documents are: the Environmental Assessments (PC-000414 and PC-000416), the Safety Analysis Document (PC-000420), Sampling and Analysis Document (PC-000413), and Soil Assessment Sampling and Analysis Document (PC-000415).

The applicable quality assurance regulations and standards which apply to the Hot Cell D&D Project are:

- Code of Federal Regulations Title 10, Part 50, Appendix B (10 CFR 50, Appendix B).
- ASME NQA-1-1989, "Quality Assurance Program Requirements for Nuclear Facilities," as endorsed by Regulatory Guide 1.28, Rev. 3.
- ASQC E4-1993, "Quality Systems Requirements for Environmental Programs."

The QAPP addresses implementation of controls to meet these regulations and standards.

The Licensing, Safety and Nuclear Compliance Division oversees compliance with federal, state, and local regulatory requirements, environmental monitoring activities, and health and safety practices.

5. WORK BREAKDOWN STRUCTURE

The WBS is a multi-tiered frame work which is used to organize and accomplish elements of work in logical relationships. Each WBS element is essentially a work package which is scheduled, budgeted and performance tracked by WBS element code number. The cost and schedule performance is reported at WBS level four each month on the Cost Performance Report and Labor Management Report. Each of the WBS tasks is described in the Technical Proposals (ref. GACP 633-036 and GACP 633-050). The cost and labor content of each WBS element was used in developing the Cost Plan and Labor Plan shown in Appendix A. The WBS also allows for segregation of costs by that which is a DOE responsibility and that which is a GA responsibility and by ADS (ADS SF-1484-02 and -03).

This Project is defined as WBS Element 1.4.8.4, General Atomics Hot Cell Facility D&D Project in the statement of work for contract DE-AC03-84SF11962, Modification A040. This element is defined as the top level WBS for setting up accounts on this Project.

The WBS is shown as Table I-2 in the Project Plan.

6. SCHEDULE

The schedule developed for this Project is shown in Appendix B.

7. LOGIC DIAGRAM

A logic diagram is included as Appendix C.

8. PERFORMANCE CRITERIA

Project performance criteria will be based on guidelines established in Section 11. Project Management, Measurement, and Planning and Control Systems.

9. COST AND MANPOWER ESTIMATES

The cost plan and labor plans are included in Appendix A.

10. PROJECT FUNCTIONAL SUPPORT REQUIREMENTS

The relationships between the project office, field office, and headquarters with respect to project functional support requirements is described in Part 1, Section 10.

11. PROJECT MANAGEMENT, MEASUREMENT, AND PLANNING AND CONTROL SYSTEMS

11.1 Project Management

The management approach for the Decontamination and Decommissioning of the Hot Cell will be consistent with the requirements of the Contract Statement of Work (SOW).

General Atomics uses a Program/Resource Procedures Manual (P/RPM) which meets the requirements of government regulations and industry standards and has specific operating instructions for Project, engineering, and support personnel. The GA P/RPM provides instructions and guidance for implementing program management, administration, planning, budgeting, scheduling, design, control, configuration management, design verification and support, research and development, procurement, roles and responsibilities of program resource personnel, and regulatory requirements and how they influence design engineering operations.

Section 3 of this PMP discusses the Project's management organization and responsibilities. This management organization will be responsible for the execution of the Project.

In performing these functions, the Project Management Organization will:

1. Establish the Project Cost and Labor Baselines for the purpose of reporting cost and schedule performance.

2. Integrate all activities (such as organization, planning and budgeting accounting, analysis, and change control) directly related to or supporting the Project to meet the Project objectives.

3. Manage all interfaces during execution of the Project.

11.2 Planning

11.2.1 Scheduling

The tasks will be indentured to establish measurable milestones in terms of cost, schedule, and product for both small and large tasks. Interdependency of these milestones amongst tasks will then be established. Each task involving a deliverable item will show the completion of a draft of the deliverable, time and budget for the review of the deliverable and finally, time and budget for incorporation of the comments and formal copying and shipping of the deliverables.

11.2.2 Budgeting

In establishing the work assignments, all resources will have cost rates associated with them. Once the schedule, resources, and budget are all acceptable, a Project baseline will be established. This baseline will be the basis for the cost plan, the labor plan, and schedule reporting to the customer, and for establishing the final staffing plan.

11.3 Measurement

11.3.1 Earned Value Method, Calculation and Use

Detailed variance analysis is essential for proper Project cost and schedule control, and provides the ability for the Task Managers to take effective corrective action in a timely manner. The basis of this process will be the WBS which will provide the breakdown of the work into manageable size elements. Each of these elements will allow the Project Manager to assess who is working on the individual tasks and establish the costs associated with the tasks.

Progress will be measured by the application of consistent methods for determining earned value, i.e., "Budgeted Cost of Work Performed" (BCWP). This is based on the percent of baseline work achieved. The Operations Manager will be responsible for selecting the most applicable earned value method for a work package or task. All earned value methods will be tied to deliverables/products or internal milestones except for level of effort tasks such as management functions, QA support and Health Physics support.

Cost and schedule performance measurement data will be reported to the DOE-OAK monthly through the Monthly Report and electronically into the DOE Progress Tracking System (PTS).

Two (2) basic earned value methods (Milestones and Level of Effort) will be implemented on this Project. Descriptions of these methods are provided in the following paragraphs.

11.3.1.1 Milestone Method

Discrete work will have milestones that are planned to occur during the course of the effort. Full credit of the BCWP will only be earned after completion of the milestones. Partial credit can be earned for tasks that have been started but not completed. An

example of this method of earned credit is the preparation of an initial issue of a program document that will involve four (4) stages. The BCWP can be apportioned as:

	Cumulative %
Complete Initial Draft	50%
Complete Internal Review	70%
Incorporate Comments	90%
Release & Distribute	100%

11.3.1.2 Level of Effort Method

The Level of Effort is a non-measurable type of BCWP. Level of effort work packages "earn" BCWP equal to the planned Budgeted Cost of Work Scheduled (BCWS) with the passage of time. Budgeted cost for work scheduled for Level of Effort tasks is planned based on anticipated resource requirements to perform management, administration, or continuously repetitive type of tasks or activities.

11.3.2 Comparison of Actual Versus Planned Performance.

The generation of cost performance reports produced by the GA management control system will provide a numerical calculation of actual versus planned performance based on the earned value calculations for each individual task element, i.e., cost account. These calculations will be rolled up to level 3 of the WBS for reporting purposes to the DOE-OAK. Progress will be reported graphically as discussed in Section 12.0, Information and Reporting.

11.3.3 Variance Analysis

Cost and schedule variances occur when a deviation from the established baseline exceeds certain threshold values (in percent or dollars). A Cost Variance (CV) is the difference between the earned value of the budgeted cost of work performed (BCWP) and the actual costs reported (Actual Cost of Work Performed, [ACWP]) for the same item of work. A Schedule Variance (SV) is the difference between the BCWP and the budgeted cost of work scheduled (BCWS) to be accomplished. These variances can be expressed as follows:

$$CV = BCWP - ACWP, \qquad SV = BCWP - BCWS$$

Whenever a cost and schedule variance condition exists exceeding 10% of the budgeted value for a task, a Variance Analysis will be prepared and reported in the Monthly Cost Report. This report will include the dollar value and percent of the variance, as well as analysis of the problem, the impact on the scope, schedule and/or cost, and, where appropriate, a description of the corrective action to be initiated.

11.3.4 Estimate at Completion

An important function of the Cost Performance Reports is the reporting and determination of the Estimate at Completion (EAC) data. The EAC is a summary of the actual total direct and indirect costs (ACWP), expended through a specified date, plus the estimate of costs (direct and indirect) to complete the remaining authorized work (Estimate to Complete, ETC).

At the beginning of the Project, the baseline cost is equal to the EAC. As the Project work continues, the EAC becomes the ACWP plus the ETC. The EAC must consider the

performance to date and an update of the Projections of future performance. In other words, for example, if a task is 50% complete but 60% of the funds are expended, but the task leader feels that the future performance will increase, the EAC for the task will remain the baseline EAC. However, if the task leader feels that the future performance will remain the same or will decrease, the estimated total effort will be increased thereby increasing the EAC. On the other hand, if tasks can be accomplished under the budgeted effort, the estimated effort will be decreased thus reducing the EAC for the task.

The EAC will be developed on the following basis:

- A monthly review of the EAC for each reporting task will be made based on the Task Managers' analysis and will be updated as warranted.

The EAC will be monitored to provide identification of any potential cost problems in time for corrective action to be taken by the Project Manager. An EAC will be developed for each Level 3 WBS task.

The EAC data will be included in the Monthly Cost Performance Report.

12. INFORMATION AND REPORTING

12.1 Project Documentation

Contract No. DE-AC03-84SF11962, Modification A038, dated June 2, 1993

Contract No. DE-AC03-84SF11962, Modification A039, dated September 30, 1993

Contract No. DE-AC03-84SF11962, Modification A040, dated April 29, 1994

Contract No. DE-AC03-84SF11962, Modification A041, dated June 30, 1994

GA Proposal GACP 633-036, dated May 21, 1993

Update to Proposal GACP 633-036, dated March 11, 1994

GA Proposal GACP 633-050, dated November 10, 1993

Update to Proposal GACP 633-050, dated March 11, 1994

12.2 Reporting Requirements

12.2.1 Project Manager's Progress Report

The Project Manager will provide to the DOE a weekly Project status report. This report will assess the general Project status, summary of activities for the week, and planned activities.

12.2.2 Monthly Cost Report

The monthly cost report will be structured in the following format:

12.2.2.1 Status Report

The status report is the Project Manager's narrative assessment of the work being performed under the contractual agreement. The report includes funding status, a description of activities, and variance analysis.

12.2.2.2 Cost Performance Report

A table showing the status of each WBS. The baseline for this report is the Cost Plan. The table will include the following for the month being reported, and cumulative to date:

a. Actual Cost against each cost account for the month (ACWP).

b. Planned budget expenditure to complete the work actually performed to date in the cost account (BCWP).

c. The budgeted cost expenditure to complete the work originally scheduled for completion by the end of the month (BCWS).

d. The variance between the work actually performed and the work scheduled to be performed (SV).

e. The variance between the money actually spent in performance of the work and the money budgeted to be spent in performance of the work (CV).

The table will also include an estimate of the budget and estimated cost at the completion of the work.

12.2.2.3 Labor Management Report

This is a table which reports the status of actual and Projected labor expenditures and their variances. The basis for the Labor Management Report is the Labor Plan.

12.2.2.4 Cost Plan

The Cost Plan establishes the plan for accruing total costs for the life of the contractual agreement. The time-phased baseline plan establishes the basis for the measurement of actual cost accumulation and provides basic information for updating and forecasting budget requirements. The Cost Plan itemizes accrued costs for prior fiscal years, the current fiscal year by month, and future fiscal years until completion of the contractual agreement.

12.2.2.5 Labor Plan

The Labor Plan establishes the planned utilization of labor for the term of the contract and addresses the total labor to be utilized to perform the agreed work. It itemizes labor requirements for prior fiscal years, the current fiscal year by month, and future fiscal years until contract completion.

12.2.2.6 Milestone Schedule Status Report

Provides the WBS overall task durations, the associated milestone completion dates, and the progress to schedule.

12.2.2.7 Progress Tracking System (PTS) Report

GA will provide input to the DOE PTS. The basis for the input will be the Cost Plan (ref. Appendix A) and actual costs.

12.3 Review Meetings

Project reviews will be held periodically between the Project Manager and the Task Managers. In addition, review meetings will be held between GA and the DOE-OAK as requested by the DOE-OAK.

12.4 Records Management Plan

Technical documents are subject to the requirements of the GA Program/Resource Procedures Manual (P/RPM), QAPP-7320 and project administrative procedures. After a technical document is issued or released, the original is kept in the Records Center vault and a microfilm is made and filed in an independent fire proof vault. Changes to the documents are subject to rigorous controls as discussed in the procedures.

Contractual and Project documents and correspondence is maintained in the files of the GA Contracts Departments and/or Project Manager's files. All technical data contained in these files is incorporated in technical documents and controlled as discussed above.

12.5 Security Plan

General Atomics has in place a plan which identifies those security controls and physical protection measures which are employed to meet the requirements of 10 CFR 73.60 and those of 10 CFR 73.67 for the protection of all locations having SNM of moderate and low strategic significance. This plan will be reviewed and updated, if appropriate.

12.6 Public Information on the Project

GA will provide information to interested parties such as information packets and fact sheets as appropriate. Also, as required by the DOE and NEPA, the availability of Hot Cell D&D Project Activity Data Sheets for public review at the Oakland Operations Office, Reading Room and a public comment period on the draft Environmental Assessment (EA).

13. SYSTEMS ENGINEERING MANAGEMENT

This section is not applicable to the Hot Cell D&D Project.

14. CONFIGURATION MANAGEMENT

GA uses a Program/Resource Procedures Manual (P/RPM) which meets the requirements of government regulations and industry standards. Included in the P/RPM is the Configuration Management Plan. The Configuration Management Plan ensures that documentation is controlled to meet contractual and legal requirements and industrial code standards. Four areas of work comprise the Configuration Management System: 1) Configuration Identification, 2) Configuration Control, 3) Configuration Status Accounting, and 4) Configuration Audits. The Configuration Management Plan is further supplemented by project specific administration procedures.

Control of Project documentation (monthly reports, QAPP, plans, technical reports) will be handled as described in QAPP 7320 and administrative procedures. In addition all GA contract related internal correspondence and all contract related outgoing external correspondence will be filed, indexed, and stored in the Engineering Data File (EDF).

15. CONTINGENCY

The GA budgeting process provides for establishing budgets at a task level for all authorized work without inclusion of a contingency. Information will be provided to the DOE-OAK to facilitate determination of a need for a contingency in their budget.

The Contract Administrator assigned to the Hot Cell D&D task is responsible for negotiating changes with the DOE-OAK Contracting Officer. If the need arises for changes in schedule or budget, the Project Manager will provide details of the change, with justification, to the Contract Administrator. Preliminary discussions on changes may be held between the GA and DOE-OAK to help clarify and define the required changes. However, all formal negotiations for changes are the responsibility of the Contract Administrator assigned to this task.

16. QUALITY ASSURANCE

The GA QA program for this Project is described in GA Document QAPP-7320 and in the GA Quality Assurance Manual. It establishes the basic quality assurance requirements and approach governing activities performed by GA in providing services for the Hot Cell D&D effort.

The GA QA program was last reviewed and accepted by the NRC Performance and Quality Evaluation Branch, Division of Reactor Inspection and Licensee Performance, Office of Nuclear Reactor Regulation on December 21, 1993. (GA Document No. GA-A13010A, GA-LTR-11, Amendment 12, General Atomics Quality Assurance Program, November 1993.)

QAPP-7320 meets the requirements of the following quality assurance regulations and standards which apply to the Hot Cell D&D Project:

- Code of Federal Regulations Title 10, Part 50, Appendix B (10 CFR 50, Appendix B).
- ASME NQA-1-1989, "Quality Assurance Program Requirements for Nuclear Facilities," as endorsed by Regulatory Guide 1.28, Rev. 3.
- ASQC E4-1993, "Quality Systems Requirements for Environmental Programs."

17. UTILITY SERVICES

Sufficient services are currently available to meet Project needs. Utility requirements and maintenance are more fully discussed in the Engineering Plan and Surveillance and Maintenance Plan, which are appendices to the two Characterization Plans (PC-000382 and PC-000395).

18. RESPONSIBILITY MATRIX

Table II-1 presents a responsibility matrix at WBS Level 3. Responsibilities are defined at the Task Manager level.

TABLE II-1

Responsibility Matrix

Decision	DOE-HQ	DOE-OAK	Project Manager	Task Managers	Contract Administrator*	Financial Representative
Change in Budget	A	A	R, A	C, I	A	I
Allocate Manpower	—	—	R, A	C, I	—	—
Change in Work Scope	C, A	R, A	R, A	C, I	A	—
Change in Schedule	A	A	R, A	C, I	A	I

R = Responsible
A = Approve
C = Consult
I = Inform
* Approves via contract modification.

19. ANNEXES

19.1 Advance Acquisition or Assistance Plan (AAAP)

(Not Applicable)

19.2 Test and Evaluation Plan

(Not Applicable)

19.3 Environmental, Safety and Health Protection

The following documents address Environmental, Safety, and Health Protection:

a. Fuel and Waste Disposition Characterization Plan—PC-000382 (Health and Safety Plan, and Environmental Monitoring Plan)

b. Site and Facility Characterization Plan—PC-000395 (Health and Safety Plan, and Environmental Monitoring Plan)

c. Safety Analysis Document—PC-000420

d. Environmental Assessment—PC-000414 (Site and Facility)

e. Environmental Assessment—PC-000416 (Fuel Transfer)

20. SUBMISSION AND APPROVAL

The Project Control Issue Summary form GA-2175 at the front of this document is used for obtaining approval of appropriate GA Management. After approval by GA management, this document will be submitted to DOE-OAK for approval.

21. REFERENCES

Contract No. DE-AC03-84SF11962, Modification A038, dated June 2, 1993

Contract No. DE-AC03-84SF11962, Modification A039, dated September 30, 1993

Contract No. DE-AC03-84SF11962, Modification A040, dated April 29, 1994

Contract No. DE-AC03-84SF11962, Modification A041, dated June 30, 1994

GA Proposal GACP 633-036, dated May 21, 1993

Update to Proposal GACP 633-036, dated March 11, 1994

GA Proposal GACP 633-050, dated November 10, 1993

Update to Proposal GACP 633-050, dated March 11, 1994

Fuel and Waste Disposition Characterization Plan—PC-000382

Site and Facility Characterization Plan—PC-000395

Quality Assurance Project Plan—QAPP-7320

Waste Certification Plan—PC-000389

D&D Plan—PC-000423

Environmental Assessment (Site and Facility)—PC-000414

Environmental Assessment (Fuel Transfer)—PC-000416

Safety Analysis Document—PC-000420

Sampling and Analysis Document—PC-000413

Soil Assessment Sampling and Analysis Document—PC-000415

APPENDIX A—COST AND SCHEDULE REPORTING FORMS

U.S. DEPAR ENERGY

COST PERFORMANCE REPORT - WORK BREAKDOWN STRUCTURE (Format 1)

1. TITLE	2. REPORTING PERIOD	3. IDENTIFICATION NUMBER
D & D GENERAL ATOMICS HOT CELL	MAY 28,1994 THROUGH JUNE 24,1994	DE-AC03-84SF11962
4. PARTICIPANT NAME & ADDRESS	5. COST PLAN DATE	6. START DATE
GENERAL ATOMICS 3550 GENERAL ATOMICS COURT SAN DIEGO, CA 92121	APRIL 1,1994	APRIL 12, 1993
		7. COMPLETION DATE
		NOVEMBER 1,1995

8. NEGOTIATED COST	9. ESTIMATED COST OF AUTHORIZED UNPRICED WORK	10. TARGET PROFIT/FEE PROFIT/FEE %	11. TARGET PRICE	12. ESTIMATED PRICE	13. SHARE RATIO	14. CONTRACT CEILING	15. ESTIMATED CEILING
$10,145,899	N/A	$	$10,145,899	$10,145,899		$4,888,000	$8,996,816

16. WBS ELEMENT		CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
		BUDGETED COST		Actual Cost of Work Performed	VARIANCE		BUDGETED COST		Actual Cost of Work Performed	VARIANCE				
		Work Scheduled	Work Performed		Schedule	Cost	Work Scheduled	Work Performed		Schedule	Cost	Budgeted	Revised Estimate	Variance
4.2	D&D													
	D&D SHARED													
4.2.1.1	Site & Facility Characterization/Report													
4.2.1.2	Technical Plan													
4.2.1.3	D&D													
4.2.1.4	Procedures													
4.2.1.5	Reg.Comp. & Env.Monitoring													
4.2.1.6	QA Support													
4.2.1.7	Health and Safety Support													
4.2.1.8	Surveillance and Facility Maintenance													
4.2.3.5	Facility Waste													
	TOTAL D&D SHARED													
	DOE 100% D&D													
4.2.2.1	Technical Plans													
4.2.3.1	HTGR Waste													
4.2.3.2	TFE Waste													
4.2.3.3	ESTES Process Equipment													
4.2.3.4	HTGR/RERTR Fuel													
4.2.3.6	Technical Plans													
4.2.3.7	Procedures													
4.2.3.8	Regulatory Compl & Env.Monitoring													
4.2.3.9	QA Support													
4.2.3.10	Health and Safety Support													
4.2.3.11	Surveillance and Facility Maintenance													
	TOTAL DOE 100% D&D													
	TOTAL D&D													

A-2

PC-000388/1

U.S. DEPAR ENERGY

COST PERFORMANCE REPORT - WORK BREAKDOWN STRUCTURE (Format 1)

1. TITLE D & D GENERAL ATOMICS HOT CELL		2. REPORTING PERIOD MAY 28,1994 THROUGH JUNE 24,1994	3. IDENTIFICATION NUMBER DE-AC03-84SF11962
4. PARTICIPANT NAME & ADDRESS GENERAL ATOMICS 3550 GENERAL ATOMICS COURT SAN DIEGO, CA 92121		5. COST PLAN DATE APRIL 1,1994	6. START DATE APRIL 12, 1993 7. COMPLETION DATE NOVEMBER 1,1995

8. NEGOTIATED COST	9. ESTIMATED COST OF AUTHORIZED UNPRICED WORK	10. TARGET PROFIT/FEE PROFIT/FEE %	11. TARGET PRICE	12. ESTIMATED PRICE	13. SHARE RATIO	14. CONTRACT CEILING	15. ESTIMATED CEILING
$10,145,899	N/A	$	$10,145,899	$10,145,899		$4,888,000	$8,996,816

16. WBS ELEMENT	CURRENT PERIOD					CUMULATIVE TO DATE					AT COMPLETION		
	BUDGETED COST		Actual Cost of Work Performed	VARIANCE		BUDGETED COST		Actual Cost of Work Performed	VARIANCE				
	Work Scheduled	Work Performed		Schedule	Cost	Work Scheduled	Work Performed		Schedule	Cost	Budgeted	Revised Estimate	Variance
4.3 Project Management													
Project Management Shared													
4.3.1.1 Project Management													
4.3.1.2 Procedures-Administration													
Total Proj.Management Shared													
Project Management DOE 100%													
4.3.2.1 DOE Requirments Support													
4.3.2.2 Technical Plans-PP/PMP													
4.3.3.1 Project Management													
4.3.3.2 DOE Requirments Support													
4.3.3.3 Technical Plans-PP/PMP													
Total Proj.Management DOE 100%													
Total Project Management													
Grand Total Shared													
Grand Total DOE 100%													
GA Responsibility													
DOE Responsibilty													
17. WBS TOTAL													
18. VARIANCE ADJUSTMENT													
19. TOTAL CONTRACT VARIANCE													

20. DOLLARS EXPRESSED IN	21. SIGNATURE OF PARTICIPANT'S PROJECT MANAGER	22. SIGNATURE OF PARTICIPANT'S FINANCIAL REPRESENTATIVE
Thousands		

A-3

PC-000388/1

LABOR MANAG ENT REPORT

1. TITLE		2. REPORTING PERIOD	3. IDENTIFICATION NUMBER
	D&D GENERAL ATOMICS HOT CELL(PHASE I)	28 MAY thru 24 JUNE 1994	DE-ACO3-84SF11962
4. PARTICIPANT NAME AND ADDRESS		5. LABOR PLAN DATE	6. START DATE
	GENERAL ATOMICS 3550 GENERAL ATOMICS CT SAN DIEGO, CA 92121	APRIL 1,1994	12 APRIL 1993 1 NOV 1995

8. ELEMENT CODE	9. REPORTING ELEMENT	10. LABOR EXPENDED				11. ESTIMATED LABOR EXPENDITURES					12. Total Contract Labor	13. Variance
		Reporting Period		Cumulative to Date		a. Subseq. Reporting Period	b. Balance of Fiscal Year	Fiscal	d.Fiscal Years to Completion	e. Total		
		a. Actual	b. Plan	c. Actual	d. Plan							
4.2	D&D											
4.2.1	D&D SHARED											
4.2.1.1	Site & Facility Characterization/Report											
4.2.1.2	Technical Plan											
4.2.1.3	D&D											
4.2.1.4	Procedures											
4.2.1.5	Reg.Comp. & Env.Monitoring											
4.2.1.6	QA Support											
4.2.1.7	Health and Safety Support											
4.2.1.8	Surveillance and Facility Maintenance											
4.2.3.5	Facility Waste											
	TOTAL D&D SHARED											
	DOE 100% D&D											
4.2.2.1	Technical Plans											
4.2.3.1	HTGR Waste											
4.2.3.2	TFE Waste											
4.2.3.3	ESTES Process Equipment											
4.2.3.4	HTGR/RERTR Fuel											
4.2.3.6	Technical Plans											
4.2.3.7	Procedures											
4.2.3.8	Regulatory Compl & Env.Monitoring											
4.2.3.9	QA Support											
4.2.3.10	Health and Safety Support											
4.2.3.11	Surveillance and Facility Maintenance											
	TOTAL DOE 100% D&D											
	TOTAL D&D											
4.3	Project Management											
4.3.1	Project Management Shared											
4.3.1.1	Project Management											
4.3.1.2	Procedures-Administration											
	Total Proj.Management Shared											
	Project Management DOE 100%											
4.3.2.1	DOE Requirments Support											
4.3.2.2	Technical Plans-PP/PMP											
4.3.3.1	Project Management											
4.3.3.2	DOE Requirments Support											
4.3.3.3	Technical Plans-PP/PMP											
	Total Proj.Management DOE 100%											
	Total Project Management											
	Grand Total Shared											
	Grand Total DOE 100%											
	GA Responsibility											
	DOE Responsibilty											
TOTAL												

15. LABOR EXPRESSED IN:	16. SIGNATURE OF PARTICIPANT'S PROJECT MANAGER AND DATE	17.FINANCIAL REPRESENTATIVE AND DATE
HOURS		

U.S. D' TMENT OF ENERGY

C 'PLAN

1. TITLE
D & D GENERAL ATOMICS HOT CELL(PHASE I)

2. IDENTIFICATION NUMBER
DE-AC03-84SF11962

3. PARTICIPANT NAME AND ADDRESS
GENERAL ATOMICS
3550 GENERAL ATOMICS COURT
SAN DIEGO, CA 92121

4. COST PLAN DATE
1 OCTOBER 1994

5. START DATE
12 APRIL 1993

6. COMPLETION DATE
1 NOV 1995

7. ELEMENT CODE	8. REPORTING ELEMENT	9. Plan Prior Fiscal Years	10. Actual Prior Fiscal Years	11. Current Fiscal Year (1994) O	N	D	J	F	M	A	M	J	J	A	S	Total	12. FUTURE FISCAL YEARS 95	13. Sub-sequent Fiscal Years	14 Total
4.2	D&D																		
	D&D SHARED																		
4.2.1.1	Site & Facility Characterization/Report	272.3	272.3	138.8	124.2	129.5	111.7	87.4	65.7	18.6	18.0	3.3	3.1	3.2		703.5			975.8
4.2.1.2	Technical Plan	420.2	420.2	6.9	3.7	7.8	7.8	6.9	9.4	5.6	1.6	2.5				52.2			472.4
4.2.1.3	D&D	73.9	73.9	7.5	7.4	15.2	27.3	30.4	36.6	35.9	23.4	19.7	18.6	18.7		240.7			314.6
4.2.1.4	Procedures	150.8	150.8	14.7	20.5	28.9	28.1	32.8	26.9	19.1	15.6	2.1	4.5			193.2			344.0
4.2.1.5	Reg.Comp. & Env.Monitoring	201.5	201.5	15.8	15.7	15.7	9.2	9.2	9.2	9.2	9.2	9.2	9.2	9.1		120.7			322.2
4.2.1.6	QA Support	99.8	99.8	9.1	7.9	9.1	7.6	7.6	10.7	12.6	3.3	14.7	5.3	5.6		93.5			193.3
4.2.1.7	Health and Safety Support	57.2	57.2	6.6	7.4	6.3	4.4	5.2	5.2	5.2	5.2	5.2	5.2	5.2		61.1			118.3
4.2.1.8	Surveillance and Facility Maintenance	405.2	405.2	43.5	33.0	42.4	23.2	24.6	52.4	42.9	42.9	52.6	48.3	49.9		455.7			860.9
4.2.3.5	Facility Waste	570.7	570.7	34.0	39.3	39.5	20.8	12.5	9.1							155.2			725.9
	TOTAL D&D SHARED	2,251.6	2,251.6	276.9	259.1	294.4	240.1	216.6	225.2	149.1	119.2	109.3	94.2	91.7		2,075.8			4,327.4
	DOE 100% D&D																		
4.2.2.1	Technical Plans	207.0	207.0	1.2	0.8	0.8	0.8	0.8	0.7							5.1			212.1
4.2.3.1	HTGR Waste	237.4	237.4	11.6	22.7	38.8	62.5	59.4	51.5	12.4						258.9			496.3
4.2.3.2	TFE Waste	195.4	195.4	9.6	11.6	8.8	15.0	8.2	1.5							54.7			250.1
4.2.3.3	ESTES Process Equipment	302.3	302.3	36.6	26.7	10.0										73.3			375.6
4.2.3.4	HTGR/RERTR Fuel	311.4	311.4	35.3	29.0	19.0	14.5	8.1	5.0	8.2	17.9	14.1				151.1			462.5
4.2.3.6	Technical Plans	480.2	480.2	23.6	8.2	8.0	1.6	1.2	1.2	1.6	0.8	0.7	3.5	3.5		53.9			534.1
4.2.3.7	Procedures	295.4	295.4	6.2												6.2			301.6
4.2.3.8	Regulatory Compl & Env.Monitoring	77.9	77.9	5.9	5.9	5.9	5.9	5.9	5.7							35.2			113.1
4.2.3.9	QA Support	185.4	185.4	15.8	15.8	15.8	15.8	15.8	15.4							94.4			279.8
4.2.3.10	Health and Safety Support	56.8	56.8	4.5	4.5	4.5	4.5	2.9	2.1							23.0			79.8
4.2.3.11	Surveillance and Facility Maintenance	721.9	721.9	45.5	66.8	64.1	53.2	33.4	8.3							271.3			993.2
	TOTAL DOE 100% D&D	3,071.1	3,071.1	195.8	192.0	175.7	173.8	135.7	91.4	22.2	18.7	14.8	3.5	3.5		1,027.1			4,098.2
	TOTAL D&D	5,322.7	5,322.7	472.7	451.1	470.1	413.9	352.3	316.6	171.3	137.9	124.1	97.7	95.2		3,102.9			8,425.6
4.3	Project Management																		
	Project Management Shared																		
4.3.1.1	Project Management	256.5	256.5	15.6	14.0	15.1	15.4	15.4	25.4	28.1	15.6	36.3	11.4	11.0		203.3			459.8
4.3.1.2	Procedures-Administration	19.9	19.9	2.2												2.2			22.1
	Total Proj.Management Shared	276.4	276.4	17.8	14.0	15.1	15.4	15.4	25.4	28.1	15.6	36.3	11.4	11.0		205.5			481.9
	Project Management DOE 100%																		
4.3.2.1	DOE Requirments Support	288.9	288.9	5.8	5.8	6.8	5.8	5.8	7.8	5.8	5.8	5.8	3.0	5.5		63.7			352.6
4.3.2.2	Technical Plans-PP/PMP	107.1	107.1	5.3					4.7	10.9	12.5	10.4	10.5			54.3			161.4
4.3.3.1	Project Management	220.4	220.4	17.0	25.0	28.4	28.4	26.8	25.3							150.9			371.3
4.3.3.2	DOE Requirments Support	105.9	105.9	4.8	4.7	4.8	4.7	4.8	4.7	3.8						32.3			138.2
4.3.3.3	Technical Plans-PP/PMP	31.6	31.6	4.6												4.6			36.2
	Total Proj.Management DOE 100%	753.9	753.9	37.5	35.5	40.0	38.9	37.4	42.5	20.5	18.3	16.2	13.5	5.5		305.8			1,059.7
	Total Project Management	1,030.3	1,030.3	55.3	49.5	55.1	54.3	52.8	67.9	48.6	33.9	52.5	24.9	16.5		511.3			1,541.6
	Grand Total Shared	2,528.0	2,528.0	294.7	273.1	309.5	255.5	232.0	250.6	177.2	134.8	145.6	105.6	102.7		2,281.3			4,809.3
	Grand Total DOE 100%	3,825.0	3,825.0	233.3	227.5	215.7	212.7	173.1	133.9	42.7	37.0	31.0	17.0	9.0		1,332.9			5,157.9
	GA Responsibility			70.7	65.5	74.3	61.3	55.7	60.1	42.5	32.4	34.9	25.3	24.6		547.5			1,154.2
	DOE Responsibilty			457.3	435.1	450.9	406.9	349.4	324.4	177.4	139.4	141.7	97.3	87.1		3,066.7			8,813.0
15. GRAND TOTAL		6,353.0	6,353.0	528.0	500.6	525.2	468.2	405.1	384.5	219.9	171.8	176.6	122.6	111.7		3,614.2			9,967.2

16. DOLLARS EXPRESSED IN:
THOUSANDS

17. SIGNATURE OF PARTICIPANT'S PROJECT MANAGER AND DATE
11-21-94

18. SIGNATURE OF PARTICIPANT'S AUTHORIZED FINANCIAL REPRESENTATIVE AND DATE
11/20/94

U.S. DEPARTMENT OF ENERGY

COST PLAN

1. TITLE: D & D GENERAL ATOMICS HOT CELL(PHASE I)

2. IDENTIFICATION NUMBER: DE-AC03-84SF11962

3. PARTICIPANT NAME AND ADDRESS: GENERAL ATOMICS, 3550 GENERAL ATOMICS COURT, SAN DIEGO, CA 92121

4. COST PLAN DATE: 1 OCTOBER 1994

5. START DATE: 12 APRIL 1993

6. COMPLETION DATE: 1 NOV 1995

7. ELEMENT CODE	8. REPORTING ELEMENT	9. Plan Prior Fiscal Years	10. Actual Prior Fiscal Years	11. CURRENT FISCAL YEAR (1994) O	N	D	J	F	M	A	M	J	J	A	S	Total	12. FUTURE FISCAL YEARS 95	13. Subsequent Fiscal Years	14. Total
4.2	D&D																		
	D&D SHARED																		
4.2.1.1	Site & Facility Characterization/Report	2451	2451	1790	1275	1350	1143	798	775	132	132	22	22	24		7463			9914
4.2.1.2	Technical Plan	2947	2947	83	48	100	100	88	120	72	20	33				664			3611
4.2.1.3	D&D	143	143	60	60	160	190	230	270	300	140	92	40	80		1622			1765
4.2.1.4	Procedures	1563	1563	140	214	320	320	368	292	192	160		32			2038			3601
4.2.1.5	Reg.Comp. & Env.Monitoring	37	37																37
4.2.1.6	QA Support	1086	1086	117	101	117	97	97	137	162	42	189	68	72		1199			2285
4.2.1.7	Health and Safety Support	49	49		14											14			63
4.2.1.8	Surveillance and Facility Maintenance	3727	3727	427	294	414	212	230	586	464	464	589	533	552		4765			8492
4.2.3.5	Facility Waste	5483	5483	256	324	455	216	80	40							1371			6854
	TOTAL D&D SHARED	17486	17486	2873	2330	2916	2278	1891	2220	1322	958	925	695	728		19136			36622
	DOE 100% D&D																		
4.2.2.1	Technical Plans	1719	1719	16	10	10	10	10	10							66			1785
4.2.3.1	HTGR Waste	1915	1915	85	214	420	724	620	658	160						2881			4796
4.2.3.2	TFE Waste	1687	1687	20	20		134	80	20							274			1961
4.2.3.3	ESTES Process Equipment	2087	2087	330	214											544			2631
4.2.3.4	HTGR/RERTR Fuel	2555	2555	389	308	180	80	40			160	110				1267			3822
4.2.3.6	Technical Plans	3780	3780	243	69	49	15	10	15	15	7	7	41	46		517			4297
4.2.3.7	Procedures	2944	2944	80												80			3024
4.2.3.8	Regulatory Compl & Env.Monitoring	235	235																235
4.2.3.9	QA Support	1923	1923	202	202	202	202	202	200							1210			3133
4.2.3.10	Health and Safety Support	38	38																38
4.2.3.11	Surveillance and Facility Maintenance	10462	10462	534	799	764	624	422	100							3243			13705
	TOTAL DOE 100% D&D	29345	29345	1899	1836	1625	1789	1384	1003	175	167	117	41	46		10082			39148
	TOTAL D&D	46831	46831	4772	4166	4541	4067	3275	3223	1497	1125	1042	736	774		29218			75770
4.3	Project Management																		
	Project Management Shared																		
4.3.1.1	Project Management	2200	2200	170	154	168	172	172	300	334	174	440	120	116		2320			4520
4.3.1.2	Procedures-Administration	225	225	28												28			253
	Total Proj.Management Shared	2425	2425	198	154	168	172	172	300	334	174	440	120	116		2348			4773
	Project Management DOE 100%																		
4.3.2.1	DOE Requirments Support	2782	2782	74	74	74	74	74	74	74	74	74	26	74		766			3548
4.3.2.2	Technical Plans-PP/PMP	1066	1066	68					60	140	160	120	120			668			1734
4.3.3.1	Project Management	2016	2016	218	320	364	364	344	324							1934			3950
4.3.3.2	DOE Requirments Support	1062	1062	60	60	60	60	60	60	50						410			1472
4.3.3.3	Technical Plans-PP/PMP	304	304	44												44			348
	Total Proj.Management DOE 100%	7230	7230	464	454	498	498	478	518	264	234	194	146	74		3822			11052
	Total Project Management	9655	9655	662	608	666	670	650	818	598	408	634	266	190		6170			15825
	Grand Total Shared	19911	19911	3071	2484	3084	2450	2063	2520	1656	1132	1365	815	844		21484			41395
	Grand Total DOE 100%	36575	36575	2363	2290	2123	2287	1862	1521	439	401	311	187	120		13904			50200
	GA Responsibility			737	596	740	588	495	605	397	272	328	196	203		5156			9935
	DOE Responsibilty			4697	4178	4467	4149	3430	3436	1698	1261	1348	806	761		30232			81660
Total		56486	56486	5434	4774	5207	4737	3925	4041	2095	1533	1676	1002	964		35388			91595

16. LABOR EXPRESSED IN: MANHOURS

17. SIGNATURE OF PARTICIPANT'S PROJECT MANAGER AND DATE: D C Bramblett 11-21-94

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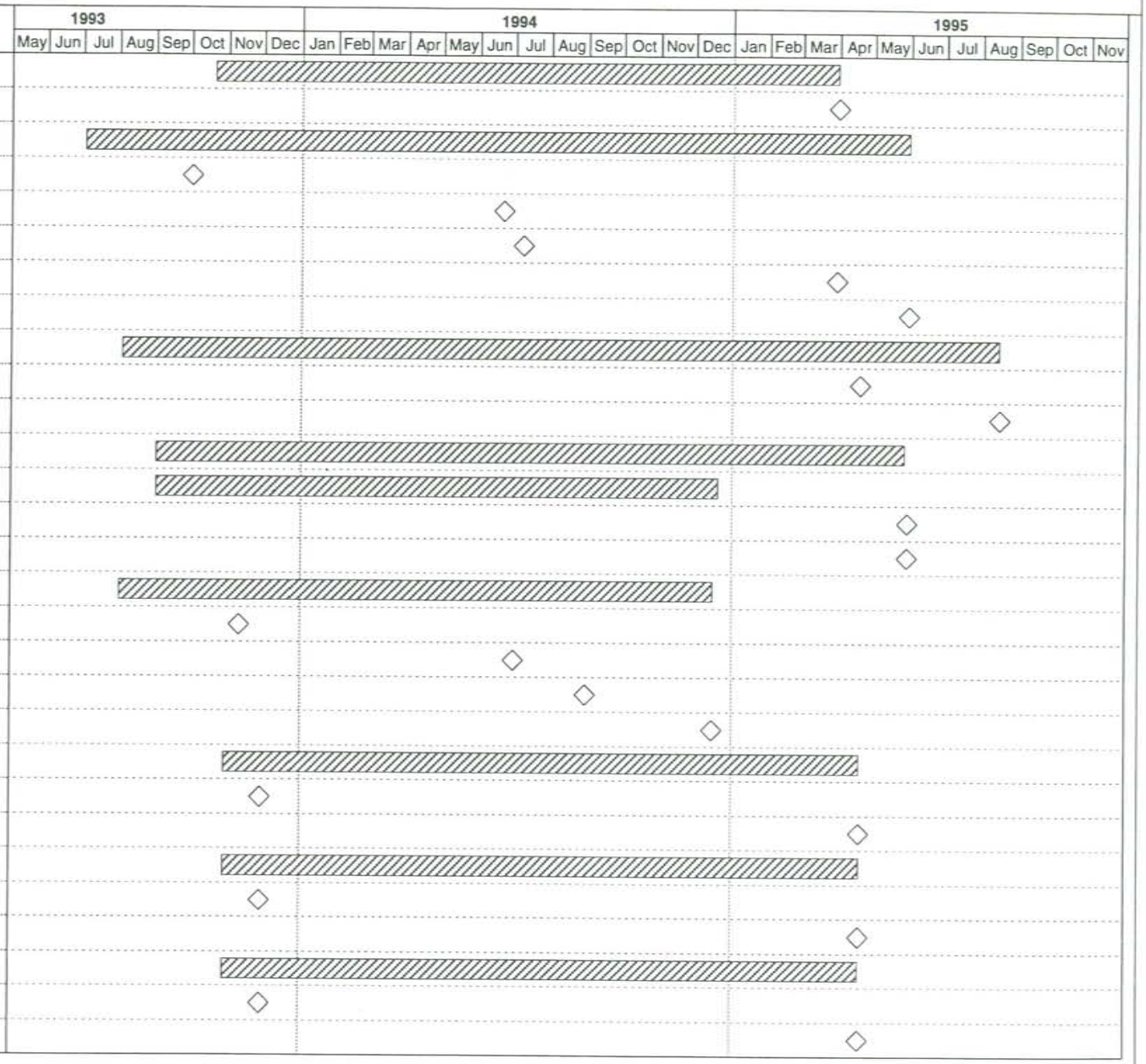
MILESTONE SCHEDULE STATUS REPORT
HOT CELL D&D - PHASE I

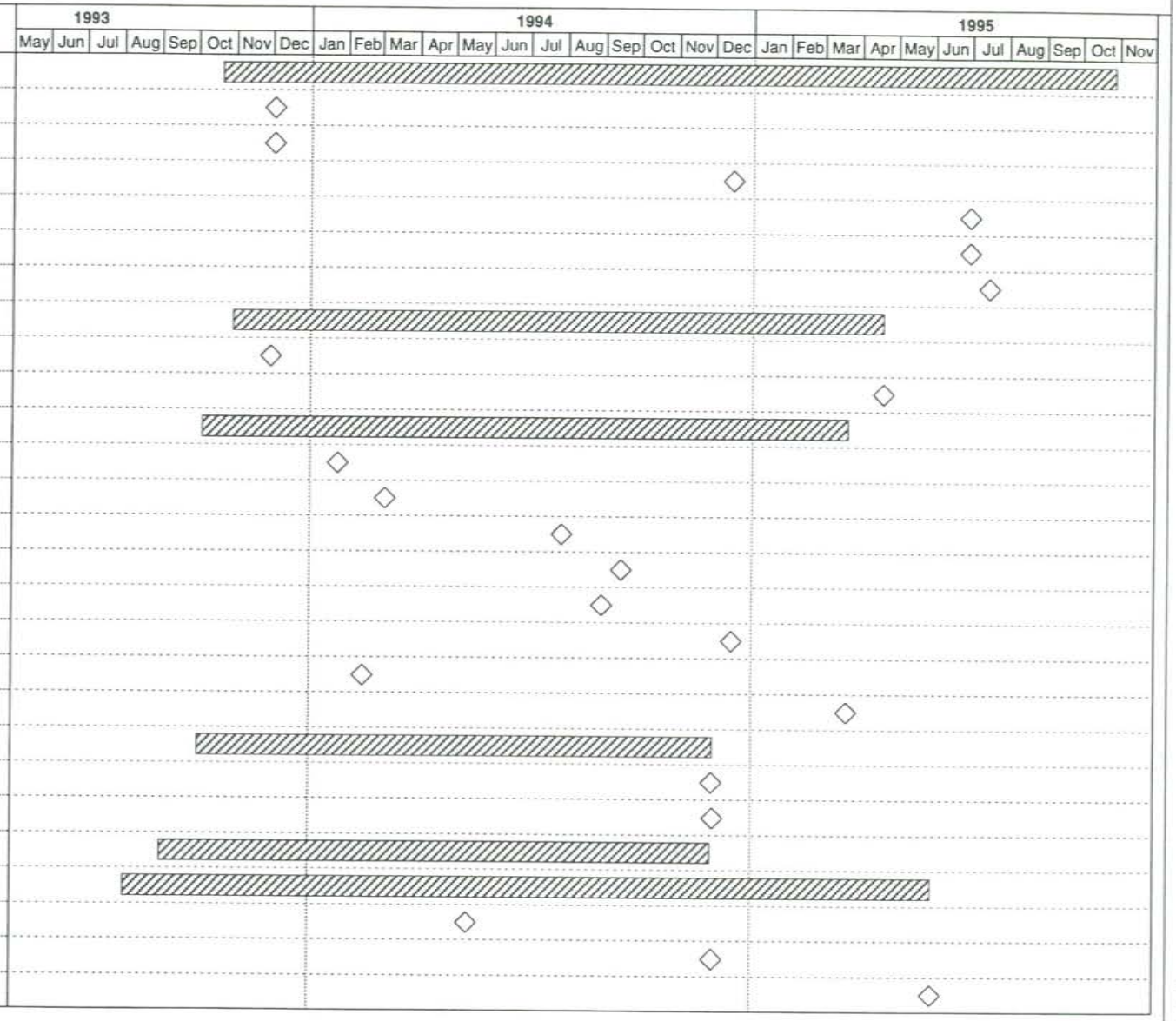
ID	Name	W.B.S.
1	Site & Facility Characterization & Report	1.4.8.4.2.1.1
2	Site & Facility Characterization Report	
3	Technical Plans (A040-Shared)	1.4.8.4.2.1.2
4	QA Plan	
5	Characterization Plan	
6	ORR Report Approval	
7	Draft Waste Certification Plan	
8	Final Waste Certification Plan (LLW)	
9	D&D Plan	1.4.8.4.2.1.3
10	Draft D&D Plan	
11	Final D&D Plan	
12	Procedures	1.4.8.4.2.1.4
13	Site & Facility Characterization Procs	
14	D&D Operational Procedures	
15	Final Waste Processing & Pkg Procs	
16	Technical Plans (A040-100% DOE)	1.4.8.4.2.2.1
17	Draft Environmental Assessment	
18	Final Environmental Assessment	
19	Draft Safety Analysis Document	
20	Final Safety Analysis Document	
21	HTGR Waste	1.4.8.4.2.3.1
22	Inventory	
23	Characterization Report/Ship Waste	
24	TFE Waste	1.4.8.4.2.3.2
25	Inventory	
26	Characterization Report/Ship Waste	
27	ESTES Waste	1.4.8.4.2.3.3
28	Inventory	
29	Characterization Report/Ship Waste	



Scheduled
Milestone

MILESTONE SCHEDULE STATUS REPORT
HOT CELL D&D - PHASE I

ID	Name	W.B.S.
30	Irradiated Fuel	1.4.8.4.2.3.4
31	Logic Diag. of On-Site/Off-Site Storage	
32	HCF Stored Irrad Fuel Mtls Inventory Rpt	
33	Characterization Rpt of Irrad Fuels	
34	Storage & Transfer Procedures	
35	ORR Report	
36	Transfer to ORNL	
37	Facility Waste	1.4.8.4.2.3.5
38	Inventory	
39	Characterization Report/Ship Waste	
40	Technical Plans (A041)	1.4.8.4.2.3.6
41	QAPD	
42	Characterization Plan	
43	Draft Environmental Assessment	
44	Final Environmental Assessment	
45	Draft Safety Analysis	
46	Final Safety Analysis	
47	Waste Cert & Minimization Plan(Draft)	
48	Waste Cert & Min. Plan(Final)/SDARs	
49	Procedures (A041)	1.4.8.4.2.3.7
50	Characterization Procedures	
51	Waste Processing & Pkg Procedures	
52	Procedures-Administration	1.4.8.4.3.1.2
53	Project Plan/Project Management Plan	1.4.8.4.3.2.2
54	Draft PP/PMP	
55	Final PP/PMP	
56	Project Baseline	



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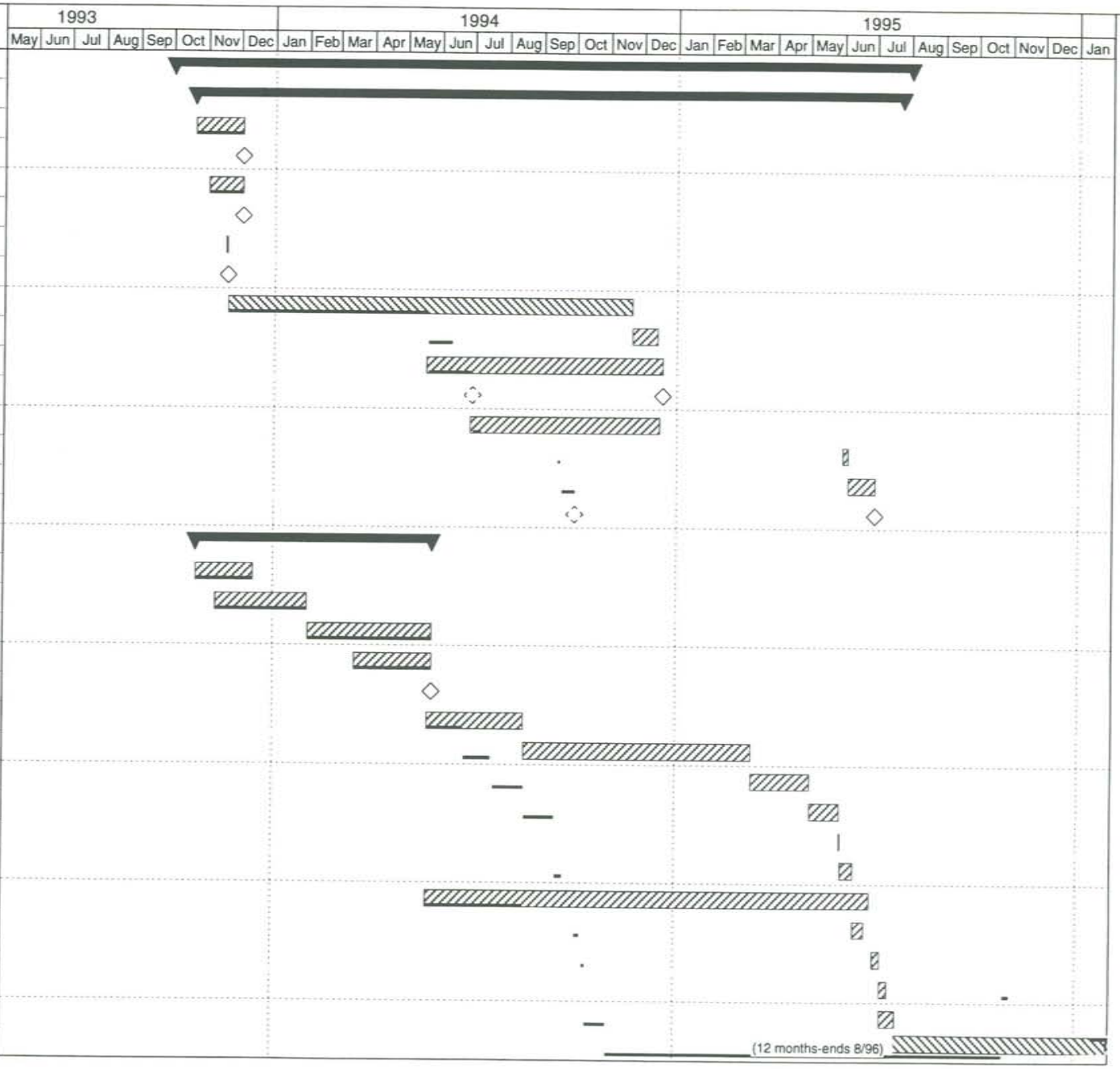
APPENDIX B—SCHEDULE

HOT CELL D - PHASE I

ID	Name
1	FUEL/WASTE DISPOSITION (A041)
2	HTGR/RERTR Fuel Removal
3	Logic Diagram
4	*Logic Diagram to DOE*
5	Inventory Detail
6	*Inventory Detail to DOE*
7	Meet with ORNL
8	*Confirm ORNL is preferred site*
9	Determine ORNL Pkg./Receiving Crit.
10	WA
11	Characterize Fuel/Report
12	*Fuel Characterization Report to DOE*
13	ORNL Verification & Approval
14	ORR
15	ORR Report
16	*ORR Report to DOE*
17	Building 30
18	Bldg. 30 Storage Approval
19	Modify Bldg. 30
20	Surveillance & Maint. Report
21	Safety & Security Report
22	*Deliver reports to DOE*
23	Design Cannisters
24	ORNL Cannister Approval
25	Cannister Manufacture
26	QA Cannister Inspection
27	Dry Runs
28	Fuel Consolidation and P13V
29	Procure & Prepare Cask
30	Load Cannisters
31	Load Casks
32	Prepare & Ship to ORNL
33	Transfer Casks to Bldg. 30 (Alt. Plan)
34	Storage (Alt. Plan)



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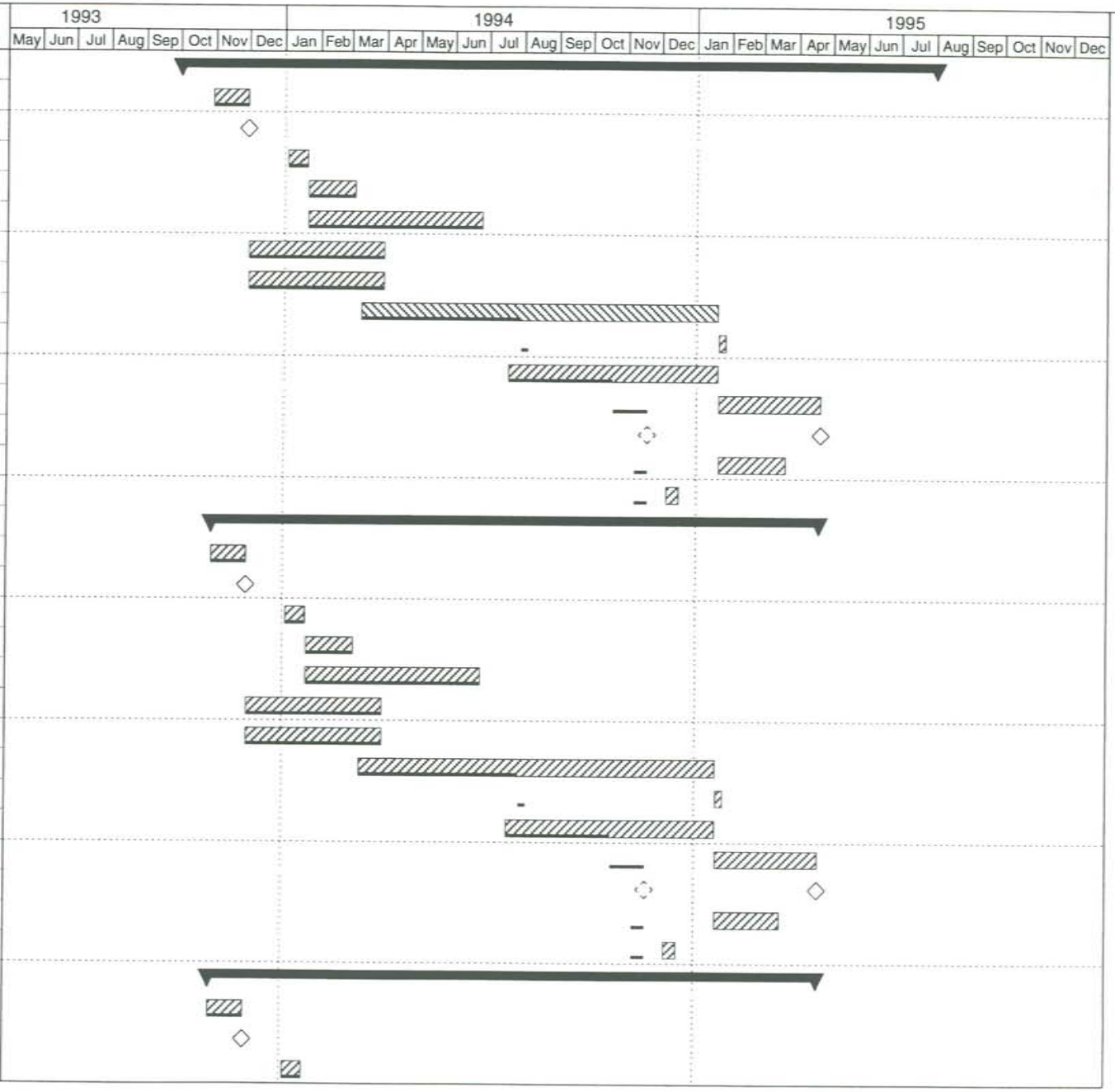
HOT CELL ... D - PHASE I

ID	Name
35	HTGR Waste
36	Inventory Waste
37	*Inventory to DOE*
38	Scoping Characterization
39	Dispose of non-rad waste
40	Decontaminate
41	Procure Boxes (Cat. 1)
42	Procure Liners (Cat. 3)
43	Characterize/Process/Package
44	Prepare Cat 3 LLWSDR
45	Hanford Site Assessment/Approval
46	Prepare Characterization Report
47	*Characterization Report to DOE*
48	Ship Cat. 3 Waste
49	Ship Cat.1 Waste to NWPF
50	TFE Waste
51	Inventory Waste
52	*Inventory to DOE*
53	Scoping Characterization
54	Dispose of non-rad waste
55	Decontaminate
56	Procure Boxes (Cat. 1)
57	Procure Liners (Cat. 3)
58	Characterize/Process/Package
59	Prepare Cat 3 LLWSDR
60	Hanford Site Assessment/Approval
61	Prepare Characterization Report
62	*Characterization Report to DOE*
63	Ship Cat. 3 Waste
64	Ship Cat.1 Waste to NWPF
65	Facility Waste
66	Inventory Waste
67	*Inventory to DOE*
68	Scoping Characterization



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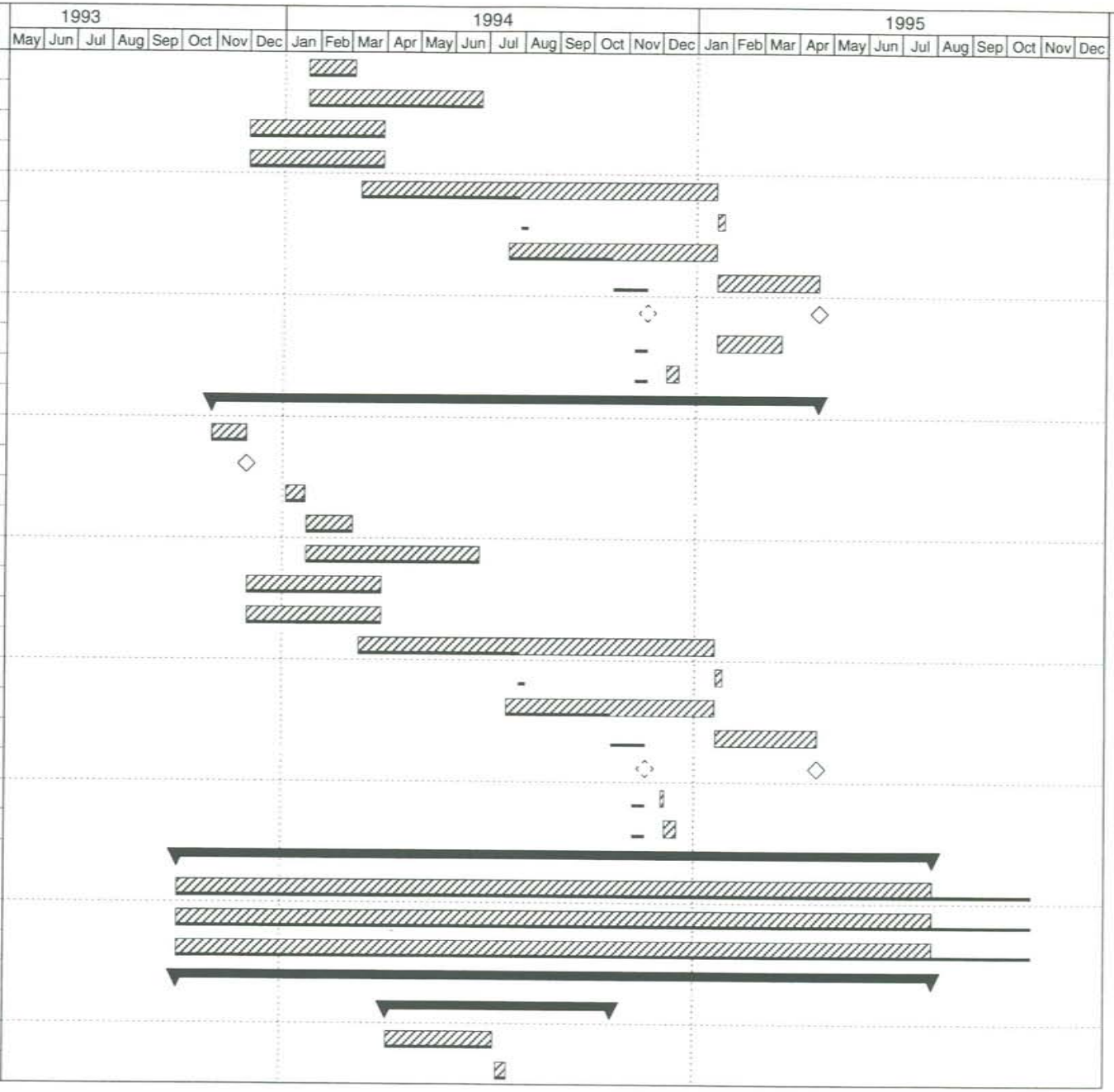
HOT CELL - PHASE I

ID	Name
69	Dispose of non-rad waste
70	Decontaminate
71	Procure Boxes (Cat. 1)
72	Procure Liners (Cat. 3)
73	Characterize/Process/Package
74	Prepare Cat 3 LLWSDR
75	Hanford Site Assessment/Approval
76	Prepare Characterization Report
77	*Characterization Report to DOE*
78	Ship Cat. 3 Waste
79	Ship Cat.1 Waste to NWPF
80	ESTES Process Equipment
81	Inventory Waste
82	*Disposal List to DOE*
83	Scoping Characterization
84	Dispose of non-rad waste
85	Decontaminate
86	Procure Boxes (Cat. 1)
87	Procure Liners
88	Characterize/Process/Package
89	Prepare Cat 3 LLWSDR
90	Hanford Site Assessment/Approval
91	Prepare Characterization Report
92	*Characterization Report to DOE*
93	Prep Ship Cat. 1 Waste to NWPF
94	Ship Cat.1 Waste to NWPF
95	Project Management
96	Weekly Reports
97	Monthly Reports
98	DOE Requirements Support
99	Technical Plans
100	Environmental Assessment(EA)
101	Prepare draft of EA
102	Review draft of EA



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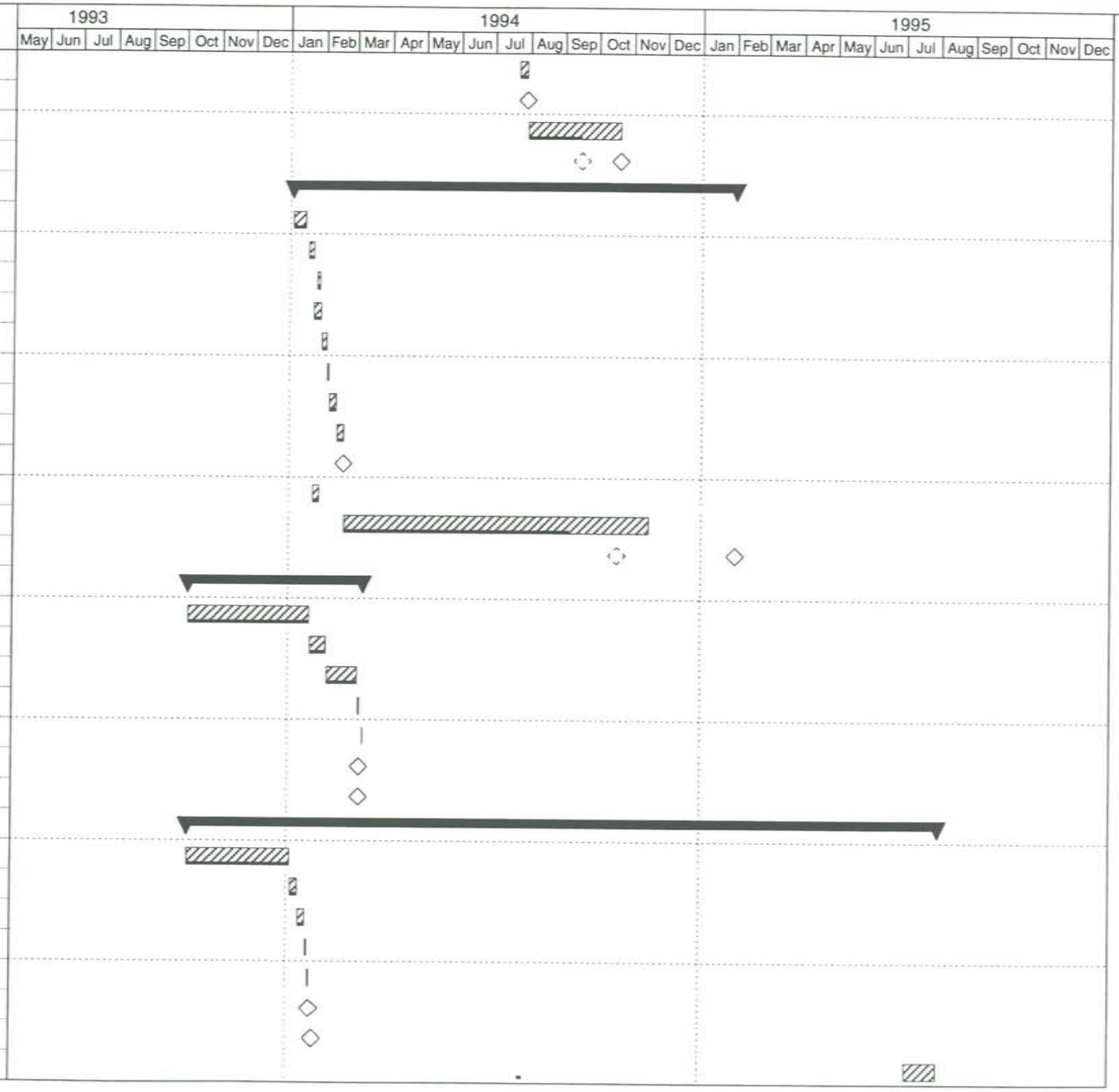
HOT CELL .D - PHASE I

ID	Name
103	Incorporate comments
104	*Draft EA to DOE*
105	DOE Rvw/Incorp comments
106	*Final EA(A041) to DOE*
107	Waste Certification/Minimization
108	Prepare draft
109	Review draft
110	Incorporate comments
111	WHC Review/Pre-Audit
112	Incorporate comments
113	Internal approval
114	DOE Review
115	WHC approval
116	*Release document*
117	Draft WSDR's
118	Final Cat 1 WSDR's
119	*Receive Final SDAR's (Cat 1 & 3)*
120	Characterization Plan
121	Prepare draft
122	Review draft
123	Incorporate comments
124	GA approvals
125	Internal Readiness Review
126	*Draft to DOE*
127	*Release document*
128	QAPD
129	Prepare draft
130	Review draft
131	Incorporate comments
132	Complete draft preparation
133	GA approvals
134	*Release document*
135	*QAPD to DOE*
136	QAPD Revision



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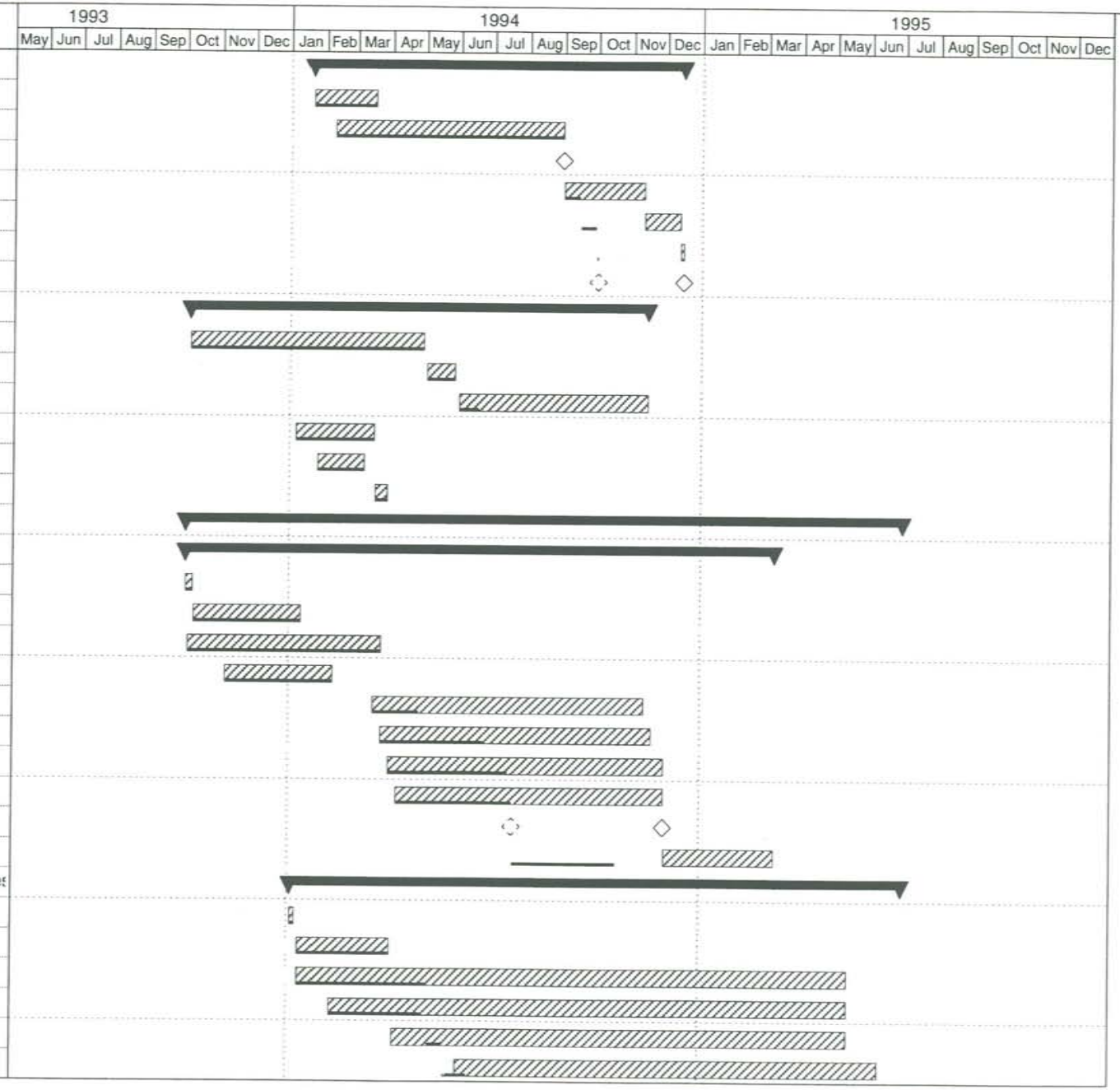
HOT CELL ...D - PHASE I

ID	Name
137	Safety Analysis
138	DOE Directive
139	Prepare draft inputs
140	*Issue Draft Safety Analysis*
141	DOE Review
142	Incorporate comments
143	GA approvals
144	*Issue Final Safety Analysis to DOE*
145	PP/PMP
146	Prepare draft
147	Review draft
148	Incorp. comments/merge with A040
149	Prepare schedule (draft)
150	Staffing Plan (Prelim)
151	Logic Diagram (Prelim)
152	Procedures
153	Characterization Procedures
154	List procedures
155	Review existing procedures
156	Prepare new procedure drafts
157	Revise existing procedures
158	Review
159	Incorporate comments
160	Obtain approvals
161	Release procedures
162	*Procedure copies to DOE*
163	Hanford Approvals
164	Fuel Storage and Transfer Procedures
165	List procedures
166	Review existing procedures
167	Prepare new procedure drafts
168	Revise existing procedures
169	Review
170	Incorporate comments



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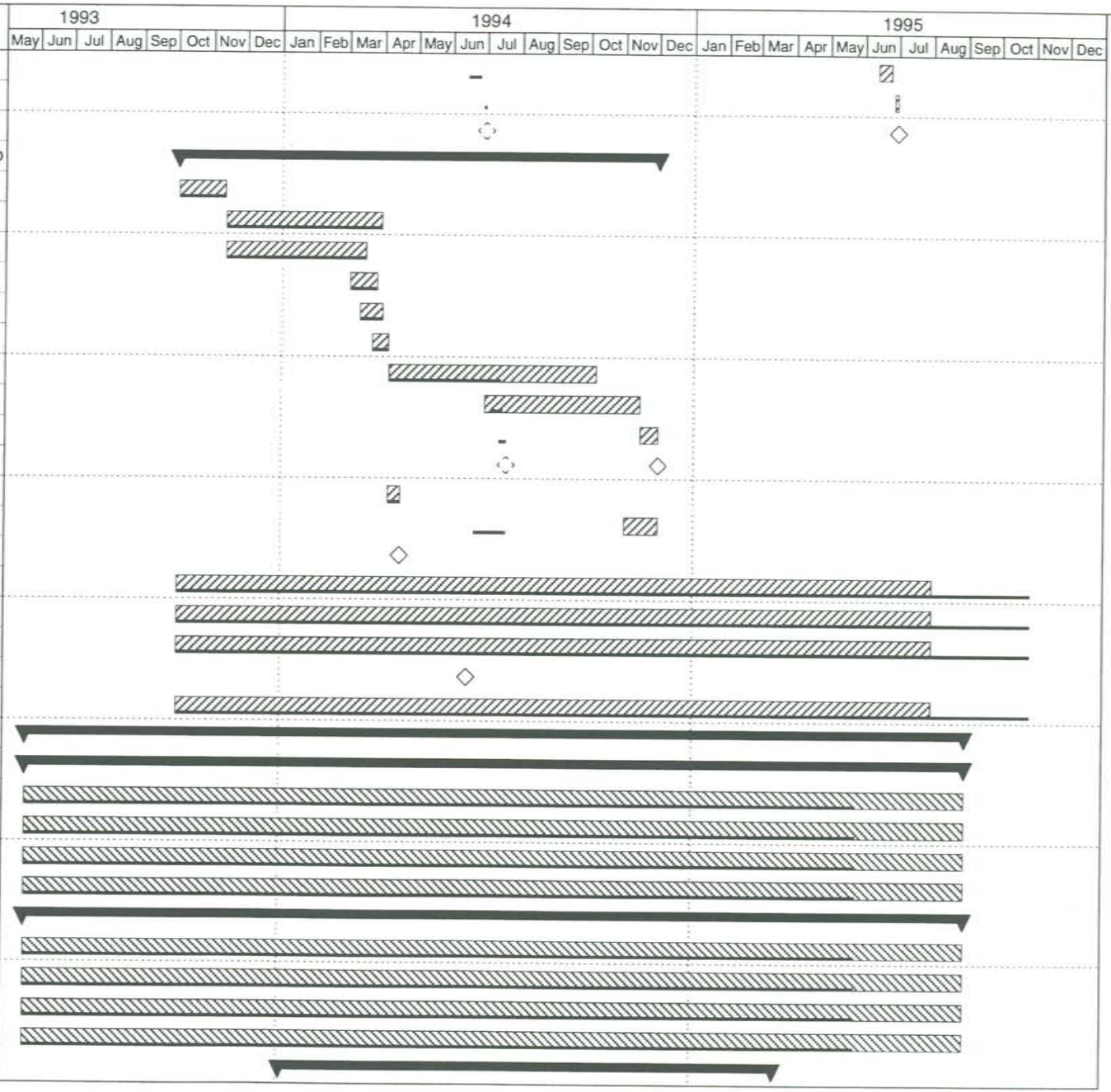
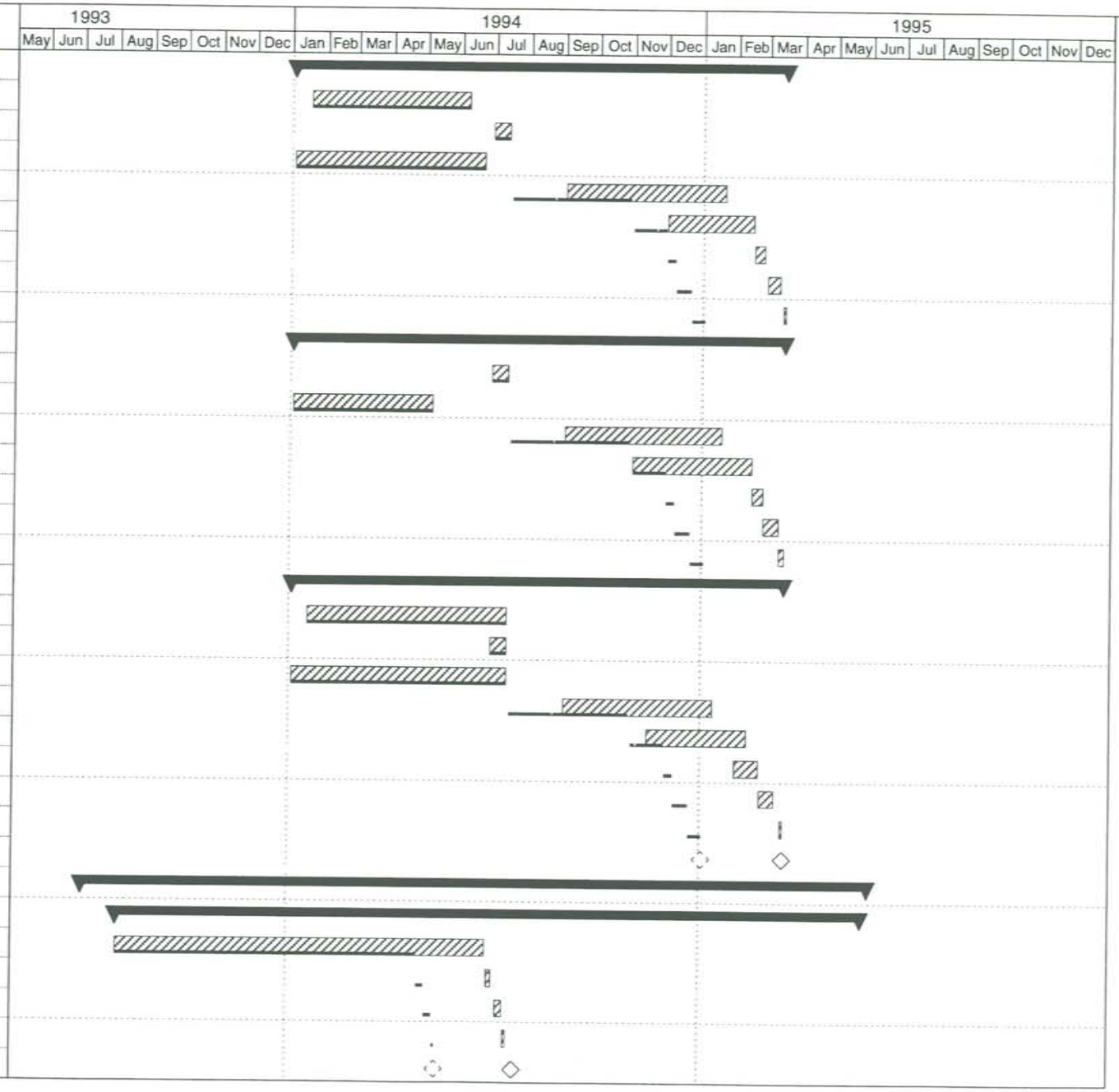
HOT CEL D - PHASE I

ID	Name
171	Obtain approvals
172	Release procedures
173	*Procedure copies to DOE*
174	Waste Processing and Packaging Pro
175	List procedures
176	Prepare procedure drafts (Cat.1)
177	Revise existing procedures(Cat.1)
178	Review (Cat.1)
179	Incorporate comments (Cat.1)
180	Obtain approvals/Release(Cat.1)
181	Prepare procedure drafts (Cat.3)
182	Review/comments (Cat.3)
183	Obtain approvals/Release(Cat.3)
184	*Procedure copies to DOE*
185	WA amendment (Cat. 1)
186	WA amendment (Cat. 3)
187	*IRR (Cat. 1)*
188	Regulatory Compliance & Env. Monitoring
189	QA Support
190	Health and Safety Support
191	*Safety review*
192	Surveillance, Facility Maint. & Security
193	HOT CELL FACILITY D&D (A040)
194	Project Management
195	Administration
196	Weekly progress reports
197	Operations
198	Monthly cost reports
199	DOE Requirements Support
200	Communications Interfaces
201	Records Maintenance
202	EM-40 Requests/Requirements
203	Contract Modification Activity
204	Site & Facility Characterization/Report



HOT CELL ..D - PHASE I

ID	Name
205	Hazardous
206	Staffing
207	Training
208	Service contracts (Lab)
209	Characterization activity
210	Draft report
211	Review report
212	Incorporate comments
213	Approvals and release
214	Asbestos
215	Training
216	Service contracts (Asbestos)
217	Characterization activity
218	Draft report
219	Review report
220	Incorporate comments
221	Approvals and release
222	Radiological
223	Staffing
224	Training
225	Service contracts (Driller)
226	Characterization activity
227	Draft report
228	Assemble report & write summary
229	Review/Incorporate comments
230	Approvals and release
231	*Issue Site & Facil Char Rpt*
232	Technical Plans
233	Project Management Plan
234	Draft
235	Review draft
236	Incorporate comments
237	Final draft approval
238	*Draft to DOE*



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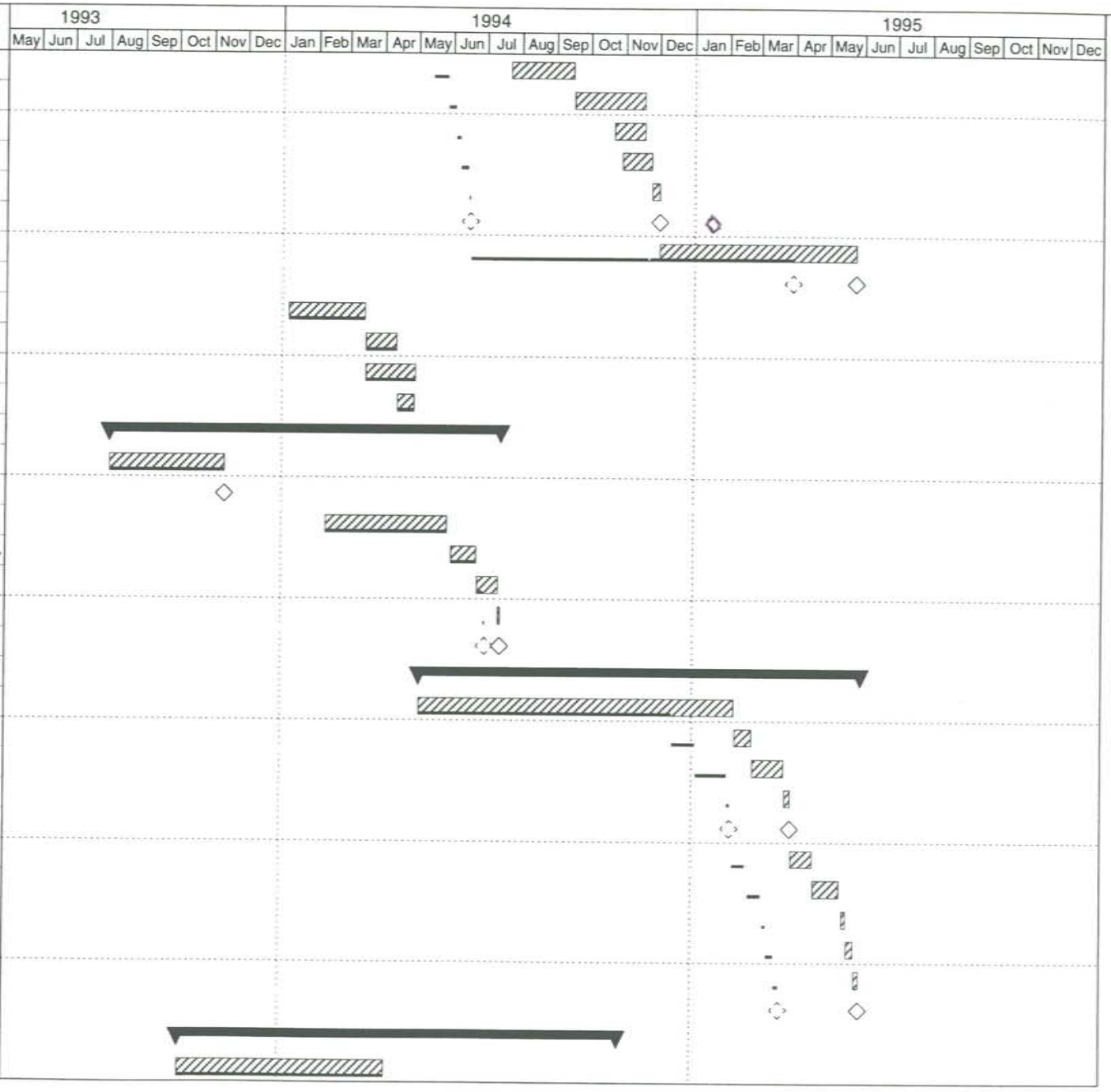
HOT CELL D - PHASE I

ID	Name
239	DOE review
240	Incorporate comments
241	Internal approval
242	DOE approval
243	Release document
244	*Issue Final PP/PMP to DOE*
245	Prepare Project Baseline
246	*Issue Project Baseline to DOE*
247	Prepare Schedule (Draft)
248	Prepare Schedule (Final)
249	Staffing plan
250	Logic Diagram
251	Environmental Assessment
252	Prepare Draft EA
253	*Draft EA to DOE*
254	Prepare Final D&D EA
255	Internal Review
256	Incorporate comments
257	Release thru LSNC
258	*Final Environmental Assmnt to DOE*
259	Waste Certification/Minimization
260	Draft
261	Review draft
262	Incorporate comments
263	Final draft approval
264	*Draft Plans to DOE/Hanford*
265	DOE/Hanford review
266	Incorporate comments
267	Internal approval
268	Hanford approval
269	Release document
270	*Issue Final to DOE/Hanford*
271	Characterization Plan & Appendices
272	Draft



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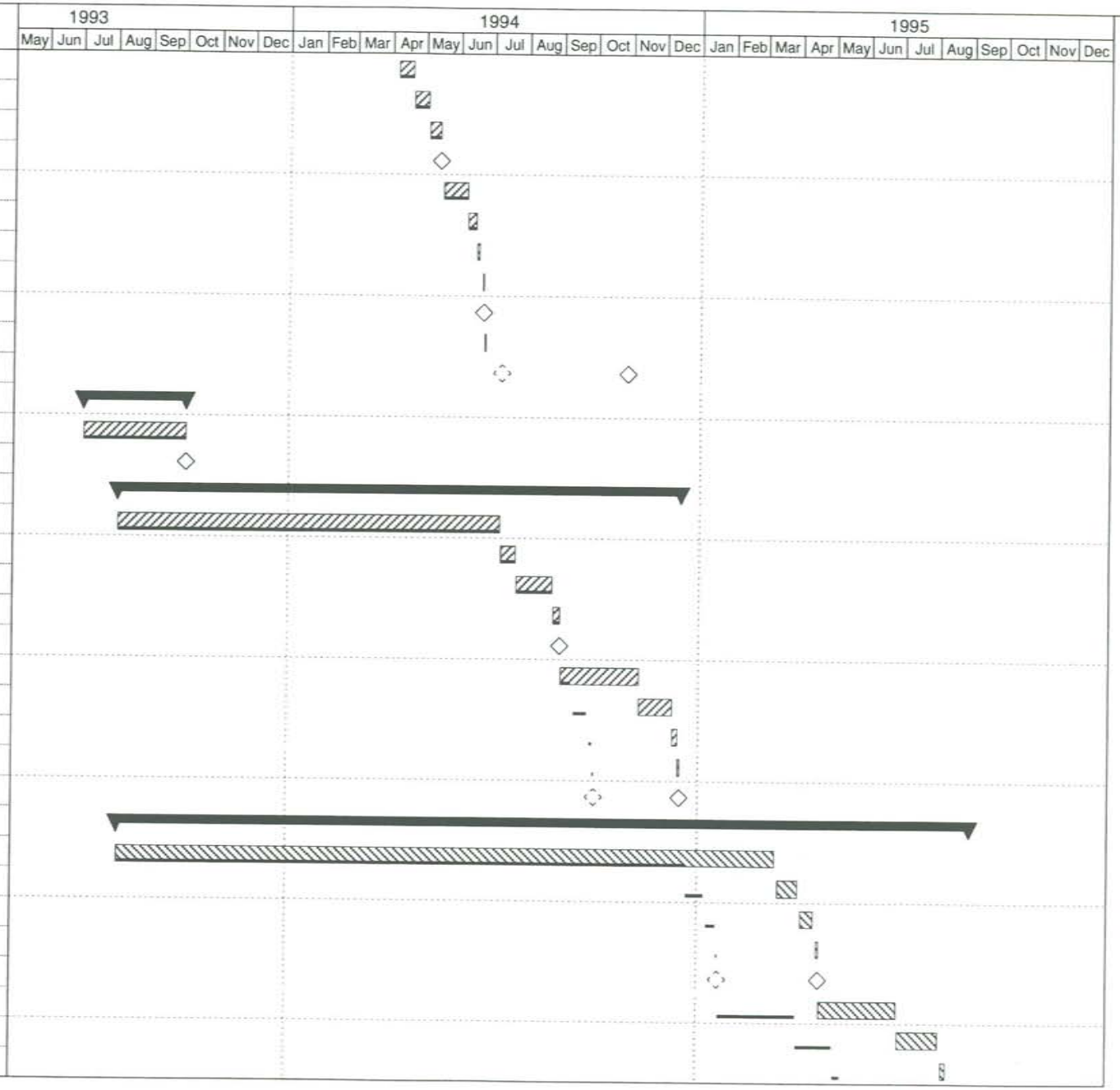
HOT CELL D - PHASE I

ID	Name
273	Review draft
274	Incorporate comments
275	Final draft approval
276	*Draft to DOE*
277	DOE review
278	Incorporate comments
279	Approvals
280	Release plan
281	*Issue Characterization Plan to DOE*
282	ORR
283	*ORR Report - Phase I*
284	QA Plan
285	Develop QA plan
286	*Issue QA plan*
287	Safety Analysis
288	Draft
289	Review draft
290	Incorporate comments
291	Final draft approval
292	*Draft Safety Analysis to DOE*
293	DOE review
294	Incorporate comments
295	Approvals
296	Release document
297	*Final Safety Analysis to DOE*
298	D&D Plan
299	Draft
300	Review draft
301	Incorporate comments
302	Final draft approval
303	*Draft to DOE/NRC/CAL-DHS*
304	Reviews
305	Incorporate comments
306	Internal approvals



HOT CELL - PHASE I

ID	Name
307	Submit for NRC/CAL-DHS Approvals
308	Release plan
309	*Issue to NRC/DOE/CAL-DHS*
310	Procedures (A040)
311	D&D Operations (Engineering)
312	Determine requirements
313	Review existing procedures
314	Revise existing procedures
315	Prepare drafts of new procedures
316	Review
317	Incorporate comments
318	Approvals
319	Release procedures
320	*Issue to DOE*
321	Radiation Safety
322	Determine requirements
323	Review existing procedures
324	Revise existing procedures
325	Prepare drafts of new procedures
326	Review
327	Incorporate comments
328	Approvals/Release procedures
329	Prepare D&D procedures
330	WA amendment
331	Characterization and Industrial Safety
332	Determine requirements
333	Review existing procedures
334	Revise existing procedures
335	Prepare drafts of new procedures
336	Review
337	Incorporate comments
338	Approvals
339	Release procedures
340	Waste Processing and Packaging

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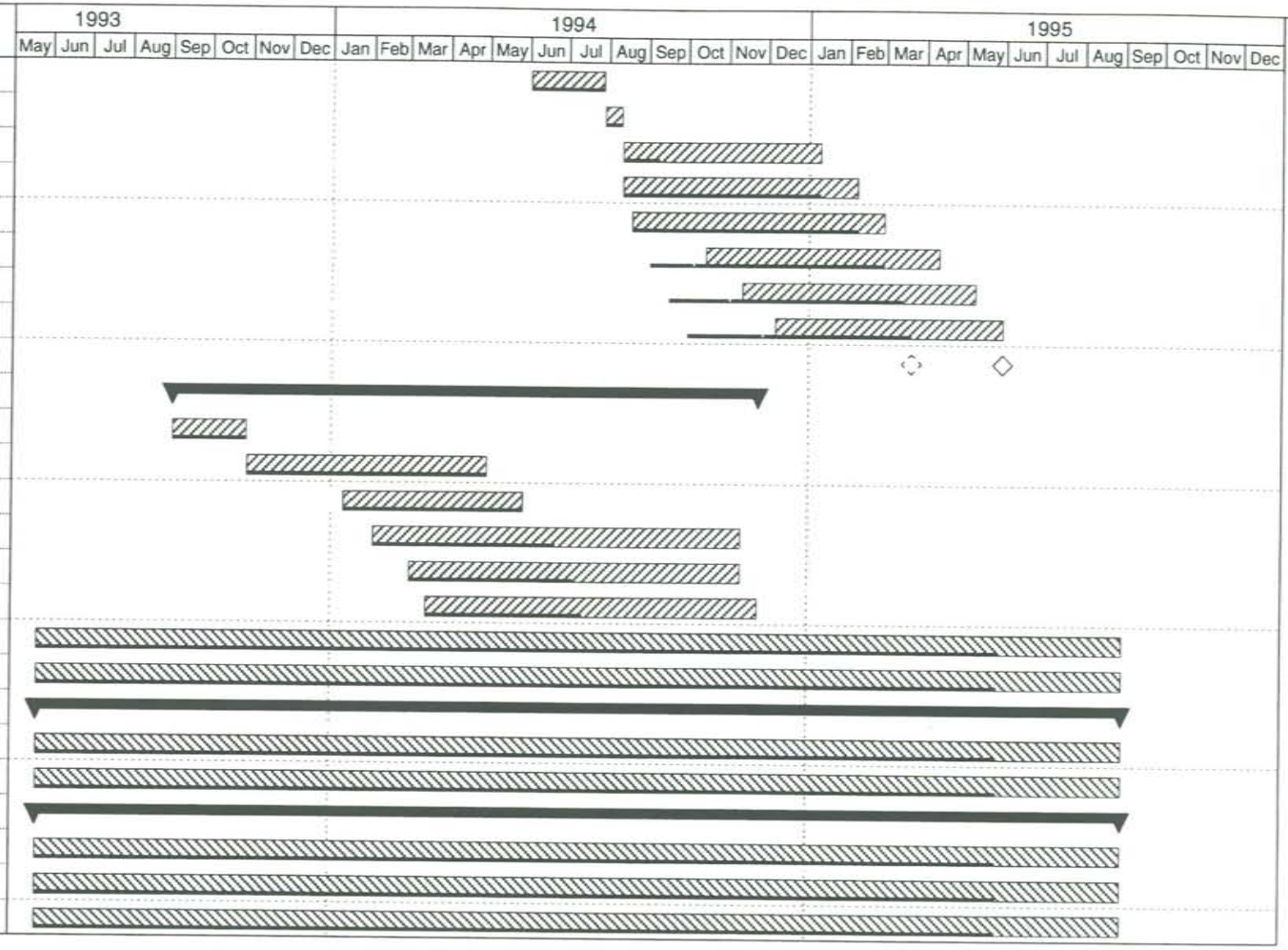
HOT CELL ...D - PHASE I

ID	Name
341	Determine requirements
342	Review existing procedures
343	Revise existing procedures
344	Prepare drafts of new procedures
345	Review
346	Incorporate comments
347	Approvals
348	Release procedures
349	*Issue to DOE*
350	Administration
351	Determine requirements
352	Prepare drafts
353	Review
354	Incorporate comments
355	Approvals
356	Release
357	Regulatory Compliance & Env. Monitoring
358	QA Support
359	Health and Safety Support
360	Industrial
361	Radiological
362	Surveillance, Facility Maint. & Security
363	Surveillance
364	Maintenance
365	Industrial Security



Current Schedule
Planned Milestone
Revised MS Date
Summary
Plan

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