



DIIN:

Rocketdyne Division
Rockwell International Corporation
6633 Canoga Avenue
Canoga Park, California 91304

Rockwell
International

Telex: 698478
ROCKETDYN CNPK

June 24, 1992

In reply refer to 92RC05016

Department of Energy
San Francisco Operations Office
1333 Broadway
Oakland, CA 94612

Attention: Ms. Aundra Richards

Subject: Contract No. DE-AC03-86SF16021, Equitable
Adjustments for Modifications 030 and 031

- References:
- (a) DOE Letter dated November 8, 1991
Subject: Contract No. DE-AC03-86NE16021,
Modification No. M031
 - (b) DOE Letter dated September 30, 1991
Subject: Contract No. DE-AC03-86NE16021,
Modification A030
 - (c) Rockwell Letter 90RC03645 dated April 4, 1990,
Subject: Rockwell International Estimate to
Complete Proposal
 - (d) Rockwell Letter 90RC07947 dated June 19, 1990
Subject: Rockwell International Estimate to
Complete Proposal
 - (e) Rockwell Letter 90RC11823 dated September 19,
1990, Subject: Rockwell International Proposal
Revision

Dear Ms. Richards:

The Decontamination and Decommissioning (D&D) task of the subject contract has been impacted by a number of Technical Directions (TDs) to the program. Modification M031 [Reference (a)] formalized four of these TDs and requested that a proposal be submitted to DOE/SF reflecting the impact to the program that they caused. Enclosed is our cost proposal in response to Reference (a).

There also remains the residual issue of reaching a negotiated agreement on an equitable adjustment for two other technical directions to which Rockwell has been responsive. These TDs are associated with the added work performed during the delay caused

Rec'd 6/25/92



Rockwell
International

by the potential FFTF Fuel Declad Program and are discussed in Enclosure 2. These TDs were partially recognized by Modification A030 [Reference (b)].

We believe that References (c), (d), and (e) could serve as the basis for finalizing our negotiations on this issue, and we would welcome an opportunity to discuss them with you, particularly since we have not had an opportunity to support a fact-finding session.

The D&D program has also been impacted by other technical and programmatic changes which we believe should result in additional adjustments to the contract, and for which we are in the process of preparing a proposal. We estimate that this proposal will be submitted by July 26, 1992. These changes are summarized in Enclosure 3.

Please contact Mr. Tom Moss at (818) 718-3326 if you have technical questions. For contractual questions, please contact the undersigned at (818) 700-4506 or Mr. Joe Klein at (818) 718-3431.

Very truly yours,

ROCKWELL INTERNATIONAL CORPORATION
Rocketdyne Division

A. J. Burds, Jr., Manager
Contracts and Proposals
Advanced Programs

AJB/ars

- Enclosure: (1) Contract DE-AC03-86SF16021
Modification M031 Cost Proposal
- (2) Fee on Delay Caused by Potential
FFTF Fuel Declad Program
- (3) Additional Technical and Programmatic Changes

**CONTRACT
DE-AC03-86SF16021
MODIFICATION MO31**

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CONTRACT DE-AC-03-86SF16021

MODIFICATION MO31

COST PROPOSAL

The information contained in this document is being submitted on a confidential basis to DOE for evaluation purposes only. Further dissemination is unauthorized without prior written permission of Rockwell International Corporation.

CONTRACT PRICING PROPOSAL COVER SHEET

1. SOLICITATION/CONTRACT/MODIFICATION NO.
DE-AC03-86SF16021

FORM APPROVED OMB NO.
9000-0013

NOTE: This form is used in contract actions if submission of cost or pricing data is required. (See FAR 15.804-6(b))

2. NAME AND ADDRESS OF OFFEROR
(Include ZIP Code)
ROCKWELL INTERNATIONAL CORPORATION
Rocketdyne Division
6633 Canoga Avenue
P. O. Box 7922
Canoga Park, CA 91303-7922

3A. NAME AND TITLE OF OFFEROR'S POINT OF CONTACT
J.A. Klein

3B. TELEPHONE NO.
(818) 718-3431

4. TYPE OF CONTRACT ACTION (Check)

<input type="checkbox"/> A. NEW CONTRACT	<input type="checkbox"/> D. LETTER CONTRACT
<input checked="" type="checkbox"/> B. CHANGE ORDER	<input type="checkbox"/> E. UNPRICED ORDER
<input type="checkbox"/> C. PRICE REVISION/ REDETERMINATION	<input type="checkbox"/> F. OTHER <i>(Specify)</i>

5. TYPE OF CONTRACT (Check)

FFP CPFF CPIF CPAF
 FPI OTHER (Specify)

6. PROPOSED COST (A + B = C)

A. COST \$1,839,266	B. PROFIT/FEE \$172,202	C. TOTAL \$2,011,468
-------------------------------	-----------------------------------	--------------------------------

7. PLACE(S) AND PERIOD(S) OF PERFORMANCE
ROCKWELL INTERNATIONAL CORP., Rocketdyne Division, Canoga Park, CA

8. List and reference the identification, quantity and total price proposed for each contract line item. A line item cost breakdown supporting this recap is required unless otherwise specified by the Contracting Officer. (Continue on reverse, and then on plain paper if necessary. Use same headings.)

A. LINE ITEM NO.	B. IDENTIFICATION	C. QUANTITY	D. TOTAL PRICE	E. REF.
	MODIFICATION M031		\$2,011,468	

9. PROVIDE NAME, ADDRESS, AND TELEPHONE NUMBER FOR THE FOLLOWING *(If available)*

A. CONTRACT ADMINISTRATION OFFICE
James Rose, DPRO, DACO
Rocketdyne Division
6633 Canoga Avenue, P. O. Box 7922
Canoga Park, CA 91303-7922
Telephone: (818) 710-2433

B. AUDIT OFFICE
Ira Kopkin, DCAA, Acting Resident Auditor
Rocketdyne Division
6633 Canoga Avenue, P. O. Box 7922
Canoga Park, CA 91303-7922
Telephone: (818) 710-2405

10. WILL YOU REQUIRE THE USE OF ANY GOVERNMENT PROPERTY IN THE PERFORMANCE OF THIS WORK?
(If "Yes," identify)

YES NO

11A. DO YOU REQUIRE GOVERNMENT CONTRACT FINANCING TO PERFORM THIS PROPOSED CONTRACT?
(If "Yes," complete item 11B)

YES NO

11B. TYPE OF FINANCING
(Check one)

ADVANCE PROGRESS PAYMENTS
 GUARANTEED LOANS

12. HAVE YOU BEEN AWARDED ANY CONTRACTS OR SUBCONTRACTS FOR THE SAME OR SIMILAR ITEMS WITHIN THE PAST 3 YEARS?
(If "Yes," identify item(s), customer(s) and contract number(s))

YES NO

13. IS THIS PROPOSAL CONSISTENT WITH YOUR ESTABLISHED ESTIMATING AND ACCOUNTING PRACTICES AND PROCEDURES AND FAR PART 31 COST PRINCIPLES?
(If "No," explain)

YES NO

14. COST ACCOUNTING STANDARDS BOARD (CASB) DATA *(Public Law 91-375 as amended and FAR PART 30)*

A. WILL THIS CONTRACT ACTION BE SUBJECT TO CASB REGULATIONS?
(If "No," explain in proposal)

YES NO

B. HAVE YOU SUBMITTED A CASB DISCLOSURE STATEMENT (CASB DS-1 or 2)?
(If "Yes," specify in proposal the office to which submitted and if determined to be adequate)

YES NO

C. HAVE YOU BEEN NOTIFIED THAT YOU ARE OR MAY BE IN NON-COMPLIANCE WITH YOUR DISCLOSURE STATEMENT OR COST ACCOUNTING STANDARDS?
(If "Yes," explain in proposal)

YES NO

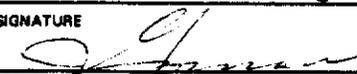
D. IS ANY ASPECT OF THIS PROPOSAL INCONSISTENT WITH YOUR DISCLOSED PRACTICES OR APPLICABLE COST ACCOUNTING STANDARDS?
(If "Yes," explain in proposal)

YES NO

This proposal is submitted in response to the RFP, contract, modification, etc in Item 1 and reflects our best estimates and/or actual costs as of this date and conforms with the instructions in FAR 15.804-6(b) (2), Table 15-2. By submitting this proposal, the offeror, if selected for negotiation, grants the contracting officer or an authorized representative the right to examine, at any time before award, those books, records, documents and other types of factual information, regardless of form or whether such supporting information is specifically referenced or included in the proposal as the basis for pricing, that will permit an adequate evaluation of the proposed price.

15. NAME AND TITLE *(Type)*
J.J. Gorman, Director
Contracts and Pricing

16. NAME OF FIRM
ROCKWELL INTERNATIONAL CORPORATION
Rocketdyne Division

17. SIGNATURE


18. DATE OF SUBMISSION
6/27/92

NSN 7540-01-42-9848
U.S. GPO: 1988-201-790/50174

1411-102
USE OR DISCLOSURE OF THIS DATA IS SUBJECT TO THE RESTRICTION ON THE TITLE PAGE

STANDARD FORM 1411 (Rev 7-87)
Prescribed by GSA
FAR (48 CFR) 53.218-2(c)

DOC: MSTR1411

6/23/92

MODIFICATION M031 SUMMARY
 CONTRACT DE-AC03-86SF16021

TASK	ESTIMATED TOTAL COST	FIXED FEE	EST. COST AND FIXED FEE	SCHEDULE IMPACT
MOD M031 STATEMENT OF WORK (SOW)				
SUPPORT TO OMB (PARA C.6.b)	\$ 1,324	\$ 125	\$ 1,449	0.1 MO.
SUPPORT TO ICE (PARA C.6.c)	\$ 3,388	\$ 318	\$ 3,706	0.1 MO.
TIGER TEAM IMPACT (PARA C.6.d)	\$ 743,878	\$ 69,048	\$ 812,926	2.5 MO.
DEMOLITION ESTIMATE (PARA 7)	\$1,090,676	\$ 102,711	\$1,193,387	5.0 MO.
MOD M031 TOTAL	\$1,839,266	\$ 172,202	\$2,011,468	7.7 MO.

ROCKWELL INTERNATIONAL CORPORATION
 ROCKETDYNE DIVISION
 CANOGA PARK, CALIFORNIA
 06/24/92

COST PROPOSAL
 D&D OF HOT LABORATORY (ACTUALS) MOD M031
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

10029

SUPPORT TO OMB-FY92 PARA C.6.B

	DEC '91	TOTAL
** COMMON ON-SITE **		
PROG/BUS MGMT (41) HRS	24	24
LBR\$	991	991
COMMON ON-SITE * HRS	24	24
LABOR \$	991	991
O/HEAD \$	197	197
TOTAL LABOR/OVERHEAD HRS	24	24
LABOR \$	991	991
O/HEAD \$	197	197
TOTAL G&A BASE	1,188	1,188
GENERAL & ADMIN EXPENSE	128	128
TOTAL PROFIT/FEE BASE	1,316	1,316
COST OF MONEY (RU)	8	8
TOTAL ESTIMATED COST	1,324	1,324
PROFIT/FEE	125	125
TOTAL ESTIMATED PRICE **	1,449	1,449

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DDDEMOAC ET ACTUALS

ROCKWELL INTERNATIONAL CORPORATION
 ROCKETDYNE DIVISION
 CANOGA PARK, CALIFORNIA
 06/24/92

COST PROPOSAL
 D&D OF HOT LABORATORY (ACTUALS) MOD M031
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

10028 SUPPORT TO ICE-FY92 PARA C.6.C

	OCT '91	TOTAL
** ENGINEERING **		
ENGINEERING (01)	HRS 20	20
	LBR\$ 594	594
ENGINEERING *	HRS 20	20
	LABOR \$ 594	594
	O/HEAD \$ 588	588
** COMMON ON-SITE **		
PROG/BUS MGMT (41)	HRS 40	40
	LBR\$ 1,348	1,348
COMMON ON-SITE *	HRS 40	40
	LABOR \$ 1,348	1,348
	O/HEAD \$ 489	489
TOTAL LABOR/OVERHEAD	HRS 60	60
	LABOR \$ 1,942	1,942
	O/HEAD \$ 1,077	1,077
TOTAL G&A BASE	3,019	3,019
GENERAL & ADMIN EXPENSE	325	325
TOTAL PROFIT/FEE BASE	3,344	3,344
COST OF MONEY (RD)	44	44
TOTAL ESTIMATED COST	3,388	3,388
PROFIT/FEE	318	318
TOTAL ESTIMATED PRICE **	3,706	3,706

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6/23/92

TIGER TEAM IMPACT SUMMARY (PARA C.6.d)

MODIFICATION M031 SUMMARY
CONTRACT DE-AC03-86SF16021

TASK	ESTIMATED TOTAL COST	FIXED FEE	EST. COST AND FIXED FEE	SCHEDULE IMPACT
TIGER TEAM HOT LAB	\$ 220,208	\$ 20,378	\$ 240,586	
TIGER TEAM ETEC	124,315	11,661	135,976	
EFFECT OF HOLD - FIGURE 1	59,292	5,495	64,787	
SCHEDULE IMPACT - FIGURE 2	340,063	31,514	371,577	
TIGER TEAM TOTAL	\$ 743,878	\$ 69,048	\$ 812,926	2.5 MO.

COST PROPOSAL
 D&D OF HOT LABORATORY (ACTUALS) MOD M031
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

10026

TIGER TEAM - FY91 PARA C.6.D

		DEC '90	JAN '91	FEB '91	MAR '91	APR '91	MAY '91	TOTAL
** ENGINEERING **								
ENGINEERING (01)	HRS	508	508	508	509	508	508	3,049
	LBR\$	11,826	11,826	11,826	11,826	11,826	11,826	70,956
ENGINEERING *	HRS	508	508	508	509	508	508	3,049
	LABOR \$	11,826	11,826	11,826	11,826	11,826	11,826	70,956
	O/HEAD \$	14,855	14,854	14,855	14,855	14,854	14,855	89,128
** COMMON ON-SITE **								
PROG/BUS MGMT (41)	HRS	49	48	49	48	49	48	291
	LBR\$	909	909	908	909	909	909	5,453
COMMON ON-SITE *	HRS	49	48	49	48	49	48	291
	LABOR \$	909	909	908	909	909	909	5,453
	O/HEAD \$	4,405	4,405	4,405	4,405	4,405	4,405	26,430
TOTAL LABOR/OVERHEAD HRS		557	556	557	557	557	556	3,340
	LABOR \$	12,735	12,735	12,734	12,735	12,735	12,735	76,409
	O/HEAD \$	19,260	19,259	19,260	19,260	19,259	19,260	115,558
TOTAL G&A BASE		31,995	31,994	31,994	31,995	31,994	31,995	191,967
GENERAL & ADMIN EXPENSE		3,756	3,755	3,756	3,756	3,755	3,756	22,534
TOTAL PROFIT/FEE BASE		35,751	35,749	35,750	35,751	35,749	35,751	214,501
COST OF MONEY (RD)		951	952	950	951	952	951	5,707
TOTAL ESTIMATED COST		36,702	36,701	36,700	36,702	36,701	36,702	220,208
PROFIT/FEE		3,396	3,397	3,396	3,396	3,397	3,396	20,378
TOTAL ESTIMATED PRICE **		40,098	40,098	40,096	40,098	40,098	40,098	240,586

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DDDEMOAC ET ACTUALS

ROCKWELL INTERNATIONAL CORPORATION
 ROCKETDYNE DIVISION
 CANOGA PARK, CALIFORNIA
 06/24/92

COST PROPOSAL
 D&D OF HOT LABORATORY (ACTUALS) MOD M031
 CONTRACT #DE-AC03-B6SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

10027

ETEC TIGER TEAM - FY91 PARA C.6.D

		DEC '90	JAN '91	FEB '91	MAR '91	APR '91	TOTAL
** ETEC **							
ETEC - ENGR (14)	HRS	368	368	369	368	368	1,841
	LBR\$	10,617	10,617	10,616	10,617	10,617	53,084
ETEC *							
	HRS	368	368	369	368	368	1,841
	LABOR \$	10,617	10,617	10,616	10,617	10,617	53,084
	O/HEAD \$	11,355	11,354	11,354	11,354	11,355	56,772
TOTAL LABOR/OVERHEAD	HRS	368	368	369	368	368	1,841
	LABOR \$	10,617	10,617	10,616	10,617	10,617	53,084
	O/HEAD \$	11,355	11,354	11,354	11,354	11,355	56,772
TOTAL G&A BASE		21,972	21,971	21,970	21,971	21,972	109,856
GENERAL & ADMIN EXPENSE		2,579	2,579	2,580	2,579	2,579	12,896
TOTAL PROFIT/FEE BASE		24,551	24,550	24,550	24,550	24,551	122,752
COST OF MONEY (RD)		312	314	311	314	312	1,563
TOTAL ESTIMATED COST		24,863	24,864	24,861	24,864	24,863	124,315
PROFIT/FEE		2,332	2,332	2,332	2,332	2,332	11,661
TOTAL ESTIMATED PRICE **		27,195	27,196	27,194	27,196	27,195	135,976

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DDDEMOAC ET ACTUALS

Figure 1 ESTIMATE OF MAN HOURS FOR TIGER TEAM HOLD ON HOT LABORATORY BUILDING OPERATION

					ESTIMATED COST	COST OF MONEY	TOTAL COST
FROM MARCH 26TH 1991 TO APRIL 5TH							
Column 1 -	Column 2 x	Column 3 =	Column 4				
Total Hours For Week	Hours for S/A 10026	Fraction of week impacted	Hours on Hold				
Week 14 (March)	731	286	80%	356	\$22,236	\$559	\$22,795
Week 15 (April)	759	189	100%	570	\$35,602	\$895	\$36,497
		TOTAL		926	\$57,838	\$1,454	\$59,292
		FIXED FEE					\$5,495
		EST. COST AND FIXED FEE					\$64,787
FY 1991 LABOR RATE							
LESS C-O-M \$62.46							
WITH C-O-M \$64.03							

8

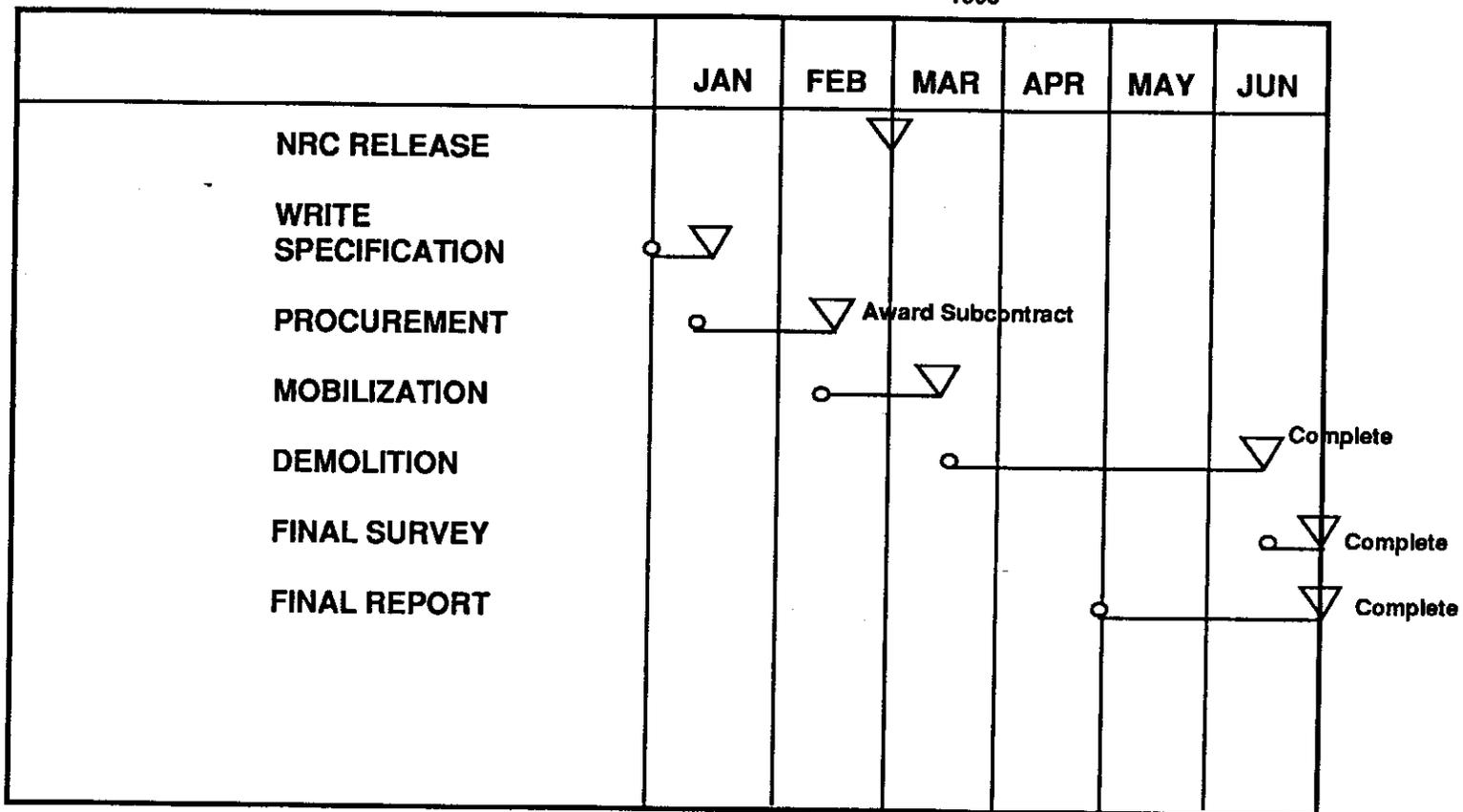
Figure 2 ESTIMATED TIGER TEAM EFFECT ON PRODUCTIVITY - SCHEDULE IMPACT

	Column 1 -	Column 2 -	Column 3 =	Column 4 x	.5 = Column 5	Estimated Actual \$	Cost of Money	Total Est. Actual Cost
			TIGER TEAM Hold MHS	Remaining MHS	50 Percent Impact Man Hours			
	Total Man Hours	S/A 10026 MHS						
Dec-90	1,868	138		1730	865	\$54,030	\$1,356	\$55,386
Jan-91	3,209	1,177		2,032	1,016	\$63,459	\$1,595	\$65,054
Feb-91	3,224	816		2,408	1,204	\$75,202	\$1,890	\$77,092
Mar-91	3,355	876	356	2,123	1,062	\$66,333	\$1,667	\$68,000
Apr-91	3,157	260	570	2,327	1,164	\$72,703	\$1,828	\$74,531
May/Oct 91		73						
TOTAL	14,813	3,340	926	10,620	5,311	\$331,727	\$8,336	\$340,063
								FIXED FEE
								\$31,514
								ESTIMATED COST AND FIXED FEE
								\$371,577
	FY1991 LABOR RATE							
	LESS C-O-M \$62.46							
	WITH C-O-M \$64.03							

6

SCHEDULE FOR DEMOLITION OF HOT LABORATORY

1995



DEMOLITION OF HOT LABORATORY ESTIMATED MANPOWER AND OUT OF PLANT COSTS

	FY 95						
WBS	JAN	FEB	MAR	APR	MAY	JUN	TOTAL
MANHOURS							
10001 PROJECT ENGINEERING		0.5	0.5	0.5	0.5	0.5	2.5
10002 DOCUMENTATION		1.0	1.0	1.0	1.0	1.0	5.0
10003 CREW CHIEF		1.0	1.0	1.0	1.0	1.0	5.0
10004 RMDF OPERATION		0.5	0.5	0.5	0.5	0.5	2.5
70002 DECONTAMINATION SUPPORT & SEGREGATION SUPPORT			2.0	2.0	2.0	2.0	8.0
70003 FACILITIES ENGR.	2.0	1.0	1.0	1.0	1.0	1.0	7.0
70004 FINAL SURVEY						2.0	2.0
20001 HEALTH PHYSICS		1.0	1.0	1.0	1.0	1.0	5.0
20002 INST. CALIBRATION		0.4	0.4	0.2	0.2	0.2	1.4
30001 QA		0.2	0.2	0.2	0.2	0.2	1.0
30002 INSPECTION		0.3	0.3	0.3	0.3	0.3	1.5
40001 PROJECT MANAGEMENT		1.0	1.0	1.0	1.0	1.0	5.0
40002 PROGRAM ADMIN		0.2	0.1	0.1	0.1	0.1	0.6
						SUBTOTAL	46.5
OUT OF PLANT \$K							
50001 OPERATION MAT.		\$6	\$6	\$2	\$2	\$2	\$18
50003 WASTE BURIAL		\$12					\$12
50004 ORNL INSPECTION FEES						\$20	\$20
70001 DEMOLITION SUBCONTRACT			\$395				\$395
						SUBTOTAL	\$445

ROCKWELL INTERNATIONAL CORPORATION
ROCKETDYNE DIVISION
CANOGA PARK, CALIFORNIA
06/24/92

COST PROPOSAL
DEMOLITION OF HOT LABORATORY (ETC)
CONTRACT #DE-AC03-86SF16021
COST DISTRIBUTION (REPT 051)

SUMMARY

NRC INSPECTION FEES	20,000	
ODE ON MATERIAL	8,266	
TOTAL OTHER COSTS		28,266
TOTAL G&A BASE		984,042
GENERAL & ADMIN EXPENSE		97,128
TOTAL PROFIT/FEE BASE		1,081,170
COST OF MONEY (RD)		9,506
TOTAL ESTIMATED COST		1,090,676
PROFIT/FEE		102,711
TOTAL ESTIMATED PRICE		1,193,387

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DDDEMO ET 3D232081 3E272118 (ETC)

ROCKWELL INTERNATIONAL CORPORATION
 ROCKETDYNE DIVISION
 CANOGA PARK, CALIFORNIA
 06/24/92

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-B6SF16021
 FACILITIES CAPITAL COST OF MONEY (REPT 441)

SUMMARY

		FY 1995	TOTAL
ENGINEERING	BASE	5,428	5,428
	EFF. RATE	1.07535	1.07535
	AMOUNT	5,837	5,837
PRODUCTION	BASE	432	432
	EFF. RATE	1.10648	1.10648
	AMOUNT	478	478
COMMON ON-SITE	BASE	2,150	2,150
	EFF. RATE	0.10047	0.10047
	AMOUNT	216	216
PURCHASING	BASE	426,070	426,070
	EFF. RATE	0.00040	0.00040
	AMOUNT	170	170
G & A	BASE	984,042	984,042
	EFF. RATE	0.00285	0.00285
	AMOUNT	2,805	2,805
TOTAL	AMOUNT	9,506	9,506
=====			
DIST OF FACIL CAPITAL			
TREASURY RATE 6.875%			
	LAND	3,898	3,898
	BUILDINGS	58,575	58,575
	EQUIPMENT	75,796	75,796
FACIL CAPITAL EMPLOYED		138,269	138,269

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 FACILITIES CAPITAL COST OF MONEY (REPT 440)

SUMMARY

		FY	TOTAL
		1995	
ENGINEERING	BASE	5,428	5,428
	EFF. RATE	1.07535	1.07535
	AMOUNT	5,837	5,837
	LAND	174	174
	BUILDINGS	2,397	2,397
	EQUIPMENT	3,266	3,266
PRODUCTION	BASE	432	432
	EFF. RATE	1.10648	1.10648
	AMOUNT	476	476
	LAND	17	17
	BUILDINGS	235	235
	EQUIPMENT	226	226
COMMON ON-SITE	BASE	2,150	2,150
	EFF. RATE	0.10047	0.10047
	AMOUNT	216	216
	LAND	8	8
	BUILDINGS	114	114
	EQUIPMENT	94	94
PURCHASING	BASE	426,070	426,070
	EFF. RATE	0.00040	0.00040
	AMOUNT	170	170
	LAND	10	10
	BUILDINGS	136	136
	EQUIPMENT	24	24
G & A	BASE	984,042	984,042
	EFF. RATE	0.00285	0.00285
	AMOUNT	2,805	2,805
	LAND	59	59
	BUILDINGS	1,145	1,145
	EQUIPMENT	1,601	1,601
TOTAL	AMOUNT	9,506	9,506
	LAND	268	268
	BUILDINGS	4,027	4,027
	EQUIPMENT	5,211	5,211

=====

DIST OF FACIL CAPITAL
 TREASURY RATE 6.875%

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DDDEMO ET 3D232081 3E272118 (ETC)

ROCKWELL INTERNATIONAL CORPORATION
ROCKETDYNE DIVISION
CANOGA PARK, CALIFORNIA
06/24/92

COST PROPOSAL
DEMOLITION OF HOT LABORATORY (ETC)
CONTRACT #DE-AC03-86SF16021
FACILITIES CAPITAL COST OF MONEY (REPT 440)

SUMMARY

	FY 1995	TOTAL
LAND	3,898	3,898
BUILDINGS	58,575	58,575
EQUIPMENT	75,796	75,796
FACIL CAPITAL EMPLOYED	138,269	138,269

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HDT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

SUMMARY

	JAN '95	FEB '95	MAR '95	APR '95	MAY '95	JUN '95	TOTAL
DIRECT PURCHASES SUMMARY							
A. MATERIAL *							
MATERIAL		6,000	6,000	2,000	2,000	2,000	18,000
TOTAL MATERIAL *		6,000	6,000	2,000	2,000	2,000	18,000
C. OTHER PURCHASES * -							
CONSTRUCTION SERV			395,400				395,400
WASTE DISPOSAL		12,000					12,000
TOTAL OTHER PURCHASES *		12,000	395,400				407,400
TOTAL DIRECT PURCHASES		18,000	401,400	2,000	2,000	2,000	425,400
MATERIAL ADJUSTMENTS		223	223	75	74	75	670
MATERIAL OVERHEAD		1,392	30,685	159	157	159	32,552
LABOR & OVERHEAD SUMMARY							
** ENGINEERING **							
ENGINEERING (01)	HRS	704	1,280	942	1,190	1,312	5,428
	LBR\$	19,937	36,250	26,959	34,059	37,549	154,754
ENGINEERING *	HRS	704	1,280	942	1,190	1,312	5,428
	LABOR \$	19,937	36,250	26,959	34,059	37,549	154,754
	O/HEAD \$	30,527	55,501	40,842	51,599	56,890	235,359
** PRODUCTION **							
QC-PRODUCTION (23)	HRS	48	60	46	58	48	260
	LBR\$	1,046	1,308	1,010	1,274	1,054	5,692
QUALITY ASSUR (25)	HRS	32	40	30	38	32	172
	LBR\$	766	958	725	919	774	4,142
PRODUCTION *	HRS	80	100	76	96	80	432
	LABOR \$	1,812	2,266	1,735	2,193	1,828	9,834
	O/HEAD \$	4,042	5,053	3,841	4,850	4,043	21,829
** COMMON ON-SITE **							
PROG/BUS MGMT (41)	HRS	192	220	167	211	176	966
	LBR\$	5,455	6,250	4,799	6,064	5,058	27,626
FACIL & PLT OPS (51)	HRS	320	160	200	152	160	1,184
	LBR\$	7,898	3,949	4,936	3,783	3,982	29,327
COMMON ON-SITE *	HRS	320	352	420	319	336	2,150

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DDDEMO ET 3D232081 3E272118 (ETC)

ROCKWELL INTERNATIONAL CORPORATION
 ROCKETDYNE DIVISION
 CANOGA PARK, CALIFORNIA
 06/24/92

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

SUMMARY

	JAN '95	FEB '95	MAR '95	APR '95	MAY '95	JUN '95	TOTAL
LABOR \$	7,898	9,404	11,186	8,582	10,843	9,040	56,953
O/HEAD \$	2,742	3,017	3,600	2,733	3,454	2,879	18,425
TOTAL LABOR/OVERHEAD HRS	320	1,136	1,800	1,337	1,689	1,728	8,010
LABOR \$	7,898	31,153	49,702	37,276	47,095	48,417	221,541
O/HEAD \$	2,742	37,586	64,154	47,416	59,903	63,812	275,613
OTHER DIRECT COSTS							
NRC INSPECTION FEES						20,000	20,000
ODE ON MATERIAL		353	7,793	40	40	40	8,266
TOTAL ODC *		353	7,793	40	40	20,040	28,266
TOTAL G&A BASE	10,640	88,707	553,957	86,966	109,269	134,503	984,042
GENERAL & ADMIN EXPENSE	1,051	8,754	54,674	8,590	10,778	13,291	97,129
TOTAL PROFIT/FEE BASE	11,691	97,461	608,631	95,556	120,047	147,784	1,081,170
COST OF MONEY (RD)	62	1,139	3,272	1,379	1,737	1,917	9,506
TOTAL ESTIMATED COST	11,753	98,600	611,903	96,935	121,784	149,701	1,090,676
PROFIT/FEE	1,111	9,259	57,818	9,077	11,405	14,041	102,711
TOTAL ESTIMATED PRICE **	12,864	107,859	669,721	106,012	133,189	163,742	1,193,387

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-B6SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

10001		PROJECT ENGINEERING					
		FEB	MAR	APR	MAY	JUN	TOTAL
		'95	'95	'95	'95	'95	
** ENGINEERING **							
ENGINEERING (01)	HRS	80	100	76	96	80	432
	LBR\$	2,266	2,832	2,175	2,748	2,290	12,311
ENGINEERING *	HRS	80	100	76	96	80	432
	LABOR \$	2,266	2,832	2,175	2,748	2,290	12,311
	O/HEAD \$	3,469	4,336	3,295	4,163	3,469	18,732
TOTAL LABOR/OVERHEAD HRS		80	100	76	96	80	432
	LABOR \$	2,266	2,832	2,175	2,748	2,290	12,311
	O/HEAD \$	3,469	4,336	3,295	4,163	3,469	18,732
TOTAL G&A BASE		5,735	7,168	5,470	6,911	5,759	31,043
GENERAL & ADMIN EXPENSE		566	707	541	681	569	3,064
TOTAL PROFIT/FEE BASE		6,301	7,875	6,011	7,592	6,328	34,107
COST OF MONEY (RD)		102	129	96	124	102	553
TOTAL ESTIMATED COST		6,403	8,004	6,107	7,716	6,430	34,660
PROFIT/FEE		599	748	570	722	601	3,240
TOTAL ESTIMATED PRICE **		7,002	8,752	6,677	8,438	7,031	37,900

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DDDEMO ET 302320B1 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-B6SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

10002		DOCUMENTATION					
		FEB	MAR	APR	MAY	JUN	TOTAL
		'95	'95	'95	'95	'95	
** ENGINEERING **							
ENGINEERING (01)	HRS	160	200	152	192	160	864
	LBR\$	4,531	5,664	4,350	5,495	4,579	24,619
ENGINEERING *	HRS	160	200	152	192	160	864
	LABOR-\$	4,531	5,664	4,350	5,495	4,579	24,619
	O/HEAD \$	6,938	8,672	6,590	8,325	6,938	37,463
TOTAL LABOR/OVERHEAD	HRS	160	200	152	192	160	864
	LABOR \$	4,531	5,664	4,350	5,495	4,579	24,619
	O/HEAD \$	6,938	8,672	6,590	8,325	6,938	37,463
TOTAL G&A BASE		11,469	14,336	10,940	13,820	11,517	62,082
GENERAL & ADMIN EXPENSE		1,132	1,415	1,080	1,364	1,137	6,128
TOTAL PROFIT/FEE BASE		12,601	15,751	12,020	15,184	12,654	68,210
COST OF MONEY (RD)		205	256	195	245	205	1,106
TOTAL ESTIMATED COST		12,806	16,007	12,215	15,429	12,859	69,316
PROFIT/FEE		1,198	1,495	1,143	1,442	1,202	6,480
TOTAL ESTIMATED PRICE **		14,004	17,502	13,358	16,871	14,061	75,796

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DDDEMO ET 3D2320B1 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

10003		CREW CHIEF					
		FEB	MAR	APR	MAY	JUN	TOTAL
		'95	'95	'95	'95	'95	
** ENGINEERING **							
ENGINEERING (01)	HRS	160	200	152	192	160	864
	LBR\$	4,531	5,664	4,350	5,495	4,579	24,619
ENGINEERING *							
	HRS	160	200	152	192	160	864
	LABOR-\$	4,531	5,664	4,350	5,495	4,579	24,619
	O/HEAD \$	6,938	8,672	6,590	8,325	6,938	37,463
TOTAL LABOR/OVERHEAD HRS							
	HRS	160	200	152	192	160	864
	LABOR \$	4,531	5,664	4,350	5,495	4,579	24,619
	O/HEAD \$	6,938	8,672	6,590	8,325	6,938	37,463
TOTAL G&A BASE							
		11,469	14,336	10,940	13,820	11,517	62,082
GENERAL & ADMIN EXPENSE							
		1,132	1,415	1,080	1,364	1,137	6,128
TOTAL PROFIT/FEE BASE							
		12,601	15,751	12,020	15,184	12,654	68,210
COST OF MONEY (RD)							
		205	256	195	245	205	1,106
TOTAL ESTIMATED COST							
		12,806	16,007	12,215	15,429	12,859	69,316
PROFIT/FEE							
		1,198	1,495	1,143	1,442	1,202	6,480
TOTAL ESTIMATED PRICE **							
		14,004	17,502	13,358	16,871	14,061	75,796

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

10004	RMDP OPERATION					TOTAL
	FEB '95	MAR '95	APR '95	MAY '95	JUN '95	
** ENGINEERING **						
ENGINEERING (01)	HRS 80	100	76	96	80	432
	LBR\$ 2,266	2,832	2,175	2,748	2,290	12,311
ENGINEERING *	HRS 80	100	76	96	80	432
	LABOR-\$ 2,266	2,832	2,175	2,748	2,290	12,311
	O/HEAD \$ 3,469	4,336	3,295	4,163	3,469	18,732
TOTAL LABOR/OVERHEAD HRS	80	100	76	96	80	432
	LABOR \$ 2,266	2,832	2,175	2,748	2,290	12,311
	O/HEAD \$ 3,469	4,336	3,295	4,163	3,469	18,732
TOTAL G&A BASE	5,735	7,168	5,470	6,911	5,759	31,043
GENERAL & ADMIN EXPENSE	566	707	541	681	569	3,064
TOTAL PROFIT/FEE BASE	6,301	7,875	6,011	7,592	6,328	34,107
COST OF MONEY (RD)	102	129	96	124	102	553
TOTAL ESTIMATED COST	6,403	8,004	6,107	7,716	6,430	34,660
PROFIT/FEE	599	748	570	722	601	3,240
TOTAL ESTIMATED PRICE **	7,002	8,752	6,677	8,438	7,031	37,900

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

20001		HEALTH PHYSICS					
		FEB '95	MAR '95	APR '95	MAY '95	JUN '95	TOTAL
** ENGINEERING **							
ENGINEERING (01)	HRS	160	200	152	192	160	864
	LBR\$	4,531	5,664	4,350	5,495	4,579	24,619
ENGINEERING *	HRS	160	200	152	192	160	864
	LABOR-\$	4,531	5,664	4,350	5,495	4,579	24,619
	O/HEAD \$	6,938	8,672	6,590	8,325	6,938	37,463
TOTAL LABOR/OVERHEAD HRS		160	200	152	192	160	864
	LABOR \$	4,531	5,664	4,350	5,495	4,579	24,619
	O/HEAD \$	6,938	8,672	6,590	8,325	6,938	37,463
TOTAL G&A BASE		11,469	14,336	10,940	13,820	11,517	62,082
GENERAL & ADMIN EXPENSE		1,132	1,415	1,080	1,364	1,137	6,128
TOTAL PROFIT/FEE BASE		12,601	15,751	12,020	15,184	12,654	68,210
COST OF MONEY (RD)		205	256	195	245	205	1,106
TOTAL ESTIMATED COST		12,806	16,007	12,215	15,429	12,859	69,316
PROFIT/FEE		1,198	1,495	1,143	1,442	1,202	6,480
TOTAL ESTIMATED PRICE **		14,004	17,502	13,358	16,871	14,061	75,796

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

20002		INST. CALIBRATION					
		FEB	MAR	APR	MAY	JUN	TOTAL
		'95	'95	'95	'95	'95	
** ENGINEERING **							
ENGINEERING (01)	HRS	64	80	30	38	32	244
	LBR\$	1,812	2,266	859	1,088	916	6,941
ENGINEERING *	HRS	64	80	30	38	32	244
	LABOR-\$	1,812	2,266	859	1,088	916	6,941
	O/HEAD \$	2,775	3,469	1,301	1,647	1,388	10,580
TOTAL LABOR/OVERHEAD	HRS	64	80	30	38	32	244
	LABOR \$	1,812	2,266	859	1,088	916	6,941
	O/HEAD \$	2,775	3,469	1,301	1,647	1,388	10,580
TOTAL G&A BASE		4,587	5,735	2,160	2,735	2,304	17,521
GENERAL & ADMIN EXPENSE		453	565	214	270	227	1,729
TOTAL PROFIT/FEE BASE		5,040	6,300	2,374	3,005	2,531	19,250
COST OF MONEY (RD)		82	102	39	48	41	312
TOTAL ESTIMATED COST		5,122	6,402	2,413	3,053	2,572	19,562
PROFIT/FEE		479	599	225	286	239	1,828
TOTAL ESTIMATED PRICE **		5,601	7,001	2,638	3,339	2,811	21,390

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

30001		QA					
		FEB	MAR	APR	MAY	JUN	TOTAL
		'95	'95	'95	'95	'95	
** PRODUCTION **							
QUALITY ASSUR (25)	HRS	32	40	30	38	32	172
	LBR\$	766	958	725	919	774	4,142
PRODUCTION *	HRS	32	40	30	38	32	172
	LABOR-\$	766	958	725	919	774	4,142
	O/HEAD \$	1,617	2,021	1,516	1,920	1,617	8,691
TOTAL LABOR/OVERHEAD HRS		32	40	30	38	32	172
	LABOR \$	766	958	725	919	774	4,142
	O/HEAD \$	1,617	2,021	1,516	1,920	1,617	8,691
TOTAL G&A BASE		2,383	2,979	2,241	2,839	2,391	12,833
GENERAL & ADMIN EXPENSE		236	293	222	279	237	1,267
TOTAL PROFIT/FEE BASE		2,619	3,272	2,463	3,118	2,628	14,100
COST OF MONEY (RD)		42	53	40	50	42	227
TOTAL ESTIMATED COST		2,661	3,325	2,503	3,168	2,670	14,327
PROFIT/FEE		248	311	234	297	249	1,339
TOTAL ESTIMATED PRICE **		2,909	3,636	2,737	3,465	2,919	15,666

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

30002		INSPECTION					
		FEB	MAR	APR	MAY	JUN	TOTAL
		'95	'95	'95	'95	'95	
** PRODUCTION **							
QC-PRODUCTION (23)	HRS	48	60	46	58	48	260
	LBR\$	1,046	1,308	1,010	1,274	1,054	5,692
PRODUCTION *	HRS	48	60	46	58	48	260
	LABOR \$	1,046	1,308	1,010	1,274	1,054	5,692
	O/HEAD \$	2,425	3,032	2,325	2,930	2,426	13,138
TOTAL LABOR/OVERHEAD	HRS	48	60	46	58	48	260
	LABOR \$	1,046	1,308	1,010	1,274	1,054	5,692
	O/HEAD \$	2,425	3,032	2,325	2,930	2,426	13,138
TOTAL G&A BASE		3,471	4,340	3,335	4,204	3,480	18,830
GENERAL & ADMIN EXPENSE		342	429	329	415	344	1,859
TOTAL PROFIT/FEE BASE		3,813	4,769	3,664	4,619	3,824	20,689
COST OF MONEY (RD)		63	76	61	76	64	342
TOTAL ESTIMATED COST		3,876	4,847	3,725	4,695	3,888	21,031
PROFIT/FEE		362	453	348	439	364	1,966
TOTAL ESTIMATED PRICE **		4,238	5,300	4,073	5,134	4,252	22,997

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DDDEMO ET 30232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

40001	PROJECT MANAGEMENT					
	FEB '95	MAR '95	APR '95	MAY '95	JUN '95	TOTAL
** COMMON ON-SITE **						
PROG/BUS MGMT (41) HRS	160	200	152	192	160	864
LBR\$	4,546	5,682	4,368	5,518	4,598	24,712
COMMON ON-SITE * HRS	160	200	152	192	160	864
LABOR-\$	4,546	5,682	4,368	5,518	4,598	24,712
O/HEAD \$	1,371	1,714	1,303	1,645	1,371	7,404
TOTAL LABOR/OVERHEAD HRS	160	200	152	192	160	864
LABOR \$	4,546	5,682	4,368	5,518	4,598	24,712
O/HEAD \$	1,371	1,714	1,303	1,645	1,371	7,404
TOTAL G&A BASE	5,917	7,396	5,671	7,163	5,969	32,116
GENERAL & ADMIN EXPENSE	584	730	560	706	590	3,170
TOTAL PROFIT/FEE BASE	6,501	8,126	6,231	7,869	6,559	35,286
COST OF MONEY (RD)	33	41	32	40	33	179
TOTAL ESTIMATED COST	6,534	8,167	6,263	7,909	6,592	35,465
PROFIT/FEE	617	773	591	748	623	3,352
TOTAL ESTIMATED PRICE **	7,151	8,940	6,854	8,657	7,215	38,817

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

40002

PROGRAM ADMIN

	FEB '95	MAR '95	APR '95	MAY '95	JUN '95	TOTAL
** COMMON ON-SITE **						
PROG/BUS MGMT (41) HRS	32	20	15	19	16	102
LBR\$	909	568	431	546	460	2,914
COMMON ON-SITE * HRS	32	20	15	19	16	102
LABOR -\$	909	568	431	546	460	2,914
O/HEAD \$	274	172	128	163	137	874
TOTAL LABOR/OVERHEAD HRS	32	20	15	19	16	102
LABOR \$	909	568	431	546	460	2,914
O/HEAD \$	274	172	128	163	137	874
TOTAL G&A BASE	1,183	740	559	709	597	3,788
GENERAL & ADMJN EXPENSE	117	73	55	70	59	374
TOTAL PROFIT/FEE BASE	1,300	813	614	779	656	4,162
COST OF MONEY (RD)	6	4	4	4	3	21
TOTAL ESTIMATED COST	1,306	817	618	783	659	4,183
PROFIT/FEE	123	78	58	74	63	396
TOTAL ESTIMATED PRICE **	1,429	895	676	857	722	4,579

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 RESTRICTION ON THE PROPRIETARY INFORMATION PAGE OF THIS PROPOSAL.

DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

50001	OPERATING MATERIAL					
	FEB '95	MAR '95	APR '95	MAY '95	JUN '95	TOTAL
DIRECT PURCHASES SUMMARY						
A. MATERIAL *						
MATERIAL	6,000	6,000	2,000	2,000	2,000	18,000
TOTAL MATERIAL *	6,000	6,000	2,000	2,000	2,000	18,000
TOTAL DIRECT PURCHASES -	6,000	6,000	2,000	2,000	2,000	18,000
MATERIAL ADJUSTMENTS	223	223	75	74	75	670
MATERIAL OVERHEAD	475	476	159	157	159	1,426
OTHER DIRECT COSTS						
ODE ON MATERIAL	120	122	40	40	40	362
TOTAL ODC *	120	122	40	40	40	362
TOTAL G&A BASE	6,818	6,821	2,274	2,271	2,274	20,458
GENERAL & ADMIN EXPENSE	672	674	225	223	225	2,019
TOTAL PROFIT/FEE BASE	7,490	7,495	2,499	2,494	2,499	22,477
COST OF MONEY (RD)	21	23	7	7	7	65
TOTAL ESTIMATED COST	7,511	7,518	2,506	2,501	2,506	22,542
PROFIT/FEE	711	712	237	237	239	2,136
TOTAL ESTIMATED PRICE **	8,222	8,230	2,743	2,738	2,745	24,678

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

50003	WASTE BURIAL	
	FEB '95	TOTAL
DIRECT PURCHASES SUMMARY		
C. OTHER PURCHASES *		
WASTE DISPOSAL	12,000	12,000
TOTAL OTHER PURCHASES *	12,000	12,000
TOTAL DIRECT PURCHASES - MATERIAL OVERHEAD	12,000 917	12,000 917
OTHER DIRECT COSTS		
ODE ON MATERIAL	233	233
TOTAL ODC *	233	233
TOTAL G&A BASE	13,150	13,150
GENERAL & ADMIN EXPENSE	1,298	1,298
TOTAL PROFIT/FEE BASE	14,448	14,448
COST OF MONEY (RD)	42	42
TOTAL ESTIMATED COST	14,490	14,490
PROFIT/FEE	1,372	1,372
TOTAL ESTIMATED PRICE **	15,862	15,862

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USE OR DISCLOSURE OF THE DATA CONTAINED ON THIS SHEET IS SUBJECT TO THE
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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
DEMOLITION OF HOT LABORATORY (ETC)
CONTRACT #DE-AC03-B6SF16021
TIMEPHASED COST BREAKDOWN (REPT 400)

50004

NRC & ORNL INSPECTION FEES

	JUN '95	TOTAL
LABOR & OVERHEAD SUMMARY		
OTHER DIRECT COSTS		
NRC INSPECTION FEES -	20,000	20,000
TOTAL ODC *	20,000	20,000
TOTAL G&A BASE	20,000	20,000
GENERAL & ADMIN EXPENSE	1,974	1,974
TOTAL PROFIT/FEE BASE	21,974	21,974
COST OF MONEY (RD)	57	57
TOTAL ESTIMATED COST	22,031	22,031
PROFIT/FEE	2,088	2,088
TOTAL ESTIMATED PRICE **	24,119	24,119

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

70001 DEMOLITION SUBCONTRACT

	MAR '95	TOTAL
DIRECT PURCHASES SUMMARY		
C. OTHER PURCHASES *		
CONSTRUCTION SERV	395,400	395,400
TOTAL OTHER PURCHASES *	395,400	395,400
TOTAL DIRECT PURCHASES -	395,400	395,400
MATERIAL OVERHEAD	30,209	30,209
OTHER DIRECT COSTS		
ODE ON MATERIAL	7,671	7,671
TOTAL ODC *	7,671	7,671
TOTAL G&A BASE	433,280	433,280
GENERAL & ADMIN EXPENSE	42,765	42,765
TOTAL PROFIT/FEE BASE	476,045	476,045
COST OF MONEY (RD)	1,393	1,393
TOTAL ESTIMATED COST	477,438	477,438
PROFIT/FEE	45,224	45,224
TOTAL ESTIMATED PRICE **	522,662	522,662

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

70002		DEMOLISH SUPPORT				
		MAR '95	APR '95	MAY '95	JUN '95	TOTAL
** ENGINEERING **						
ENGINEERING (01)	HRS	400	304	384	320	1,408
	LBR\$	11,328	8,700	10,990	9,158	40,176
ENGINEERING *	HRS	400	304	384	320	1,408
	LABOR \$	11,328	8,700	10,990	9,158	40,176
	O/HEAD \$	17,344	13,181	16,651	13,875	61,051
TOTAL LABOR/OVERHEAD HRS		400	304	384	320	1,408
	LABOR \$	11,328	8,700	10,990	9,158	40,176
	O/HEAD \$	17,344	13,181	16,651	13,875	61,051
TOTAL G&A BASE		28,672	21,881	27,641	23,033	101,227
GENERAL & ADMIN EXPENSE		2,830	2,160	2,727	2,274	9,991
TOTAL PROFIT/FEE BASE		31,502	24,041	30,368	25,307	111,218
COST OF MONEY (RD)		512	389	492	409	1,802
TOTAL ESTIMATED COST		32,014	24,430	30,860	25,716	113,020
PROFIT/FEE		2,993	2,284	2,884	2,405	10,566
TOTAL ESTIMATED PRICE **		35,007	26,714	33,744	28,121	123,586

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

70003 FACILITIES ENGINEERING

	JAN '95	FEB '95	MAR '95	APR '95	MAY '95	JUN '95	TOTAL
** COMMON ON-SITE **							
FACIL & PLT OPS (51) HRS	320	160	200	152	192	160	1,184
LBR\$	7,898	3,949	4,936	3,783	4,779	3,982	29,327
COMMON ON-SITE * HRS	320	160	200	152	192	160	1,184
LABOR \$	7,898	3,949	4,936	3,783	4,779	3,982	29,327
O/HEAD \$	2,742	1,372	1,714	1,302	1,646	1,371	10,147
TOTAL LABOR/OVERHEAD HRS	320	160	200	152	192	160	1,184
LABOR \$	7,898	3,949	4,936	3,783	4,779	3,982	29,327
O/HEAD \$	2,742	1,372	1,714	1,302	1,646	1,371	10,147
TOTAL G&A BASE	10,640	5,321	6,650	5,085	6,425	5,353	39,474
GENERAL & ADMIN EXPENSE	1,051	524	656	503	634	529	3,897
TOTAL PROFIT/FEE BASE	11,691	5,845	7,306	5,588	7,059	5,882	43,371
COST OF MONEY (RD)	62	31	40	30	37	32	232
TOTAL ESTIMATED COST	11,753	5,876	7,346	5,618	7,096	5,914	43,603
PROFIT/FEE	1,111	555	694	531	670	559	4,120
TOTAL ESTIMATED PRICE **	12,864	6,431	8,040	6,149	7,766	6,473	47,723

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DDDEMO ET 30232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-B6SF16021
 TIMEPHASED COST BREAKDOWN (REPT 400)

70004

FINAL SURVEY

		JUN '95	TOTAL
** ENGINEERING **			
ENGINEERING (01)	HRS	320	320
	LBR\$	9,158	9,158
ENGINEERING *	HRS	320	320
	LABOR \$	9,158	9,158
	O/HEAD \$	13,875	13,875
TOTAL LABOR/OVERHEAD	HRS	320	320
	LABOR \$	9,158	9,158
	O/HEAD \$	13,875	13,875
TOTAL G&A BASE		23,033	23,033
GENERAL & ADMIN EXPENSE		2,273	2,273
TOTAL PROFIT/FEE BASE		25,306	25,306
COST OF MONEY (RD)		410	410
TOTAL ESTIMATED COST		25,716	25,716
PROFIT/FEE		2,404	2,404
TOTAL ESTIMATED PRICE **		28,120	28,120

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DDDEMO ET 3D232081 3E272118 (ETC)

06-11-92

CONTRACT DE-AC03-86SF16021
MODIFICATION M031 - DEMOLITION

OUT-OF-PLANT SUMMARY

	Estimated Cost
Operating Material (50001) Miscellaneous Consumables	\$18,000
Construction Services	\$395,400
Quote from BHL for demolition and removal of Building 020 dated 09-20-91 escalated to 03-95 (\$395,400).	
Waste Disposal	\$12,000
Estimate for burial of R/A/waste (S/A 50003)	
NRC Inspection Fees	\$20,000

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**MATERIAL COST ESTIMATE RATIONALE
(ENGINEERING ESTIMATES)**

PROPOSAL: Hot Lab. Bldg #020

DATE: 06-10-92

PHASE: Demolition

WBS ELEMENT: 50001

ESTIMATOR: John Chavez

EXT: 3422 (P)

ITEM: Operating Material

QUANTITY: Varies

NEED/DELIVERY DATE: Feb. - June 1995

SUGGESTED SUPPLIER (S) : Varies

SUPPLIER ADDRESS:

SUPPLIER PHONE NO:

PRICE: \$18,000 :

EE - Rationale for Engineering Estimate (see attached supporting data for D&D and Demolition Effort)

It is anticipated that approximately \$18,000 will be spent for miscellaneous consumable operating materials based upon past historical experience.



industries incorporated

11201 SANTA FE AVENUE • LYNWOOD, CALIFORNIA 90262

(213) 321-1710

September 20, 1991

Rockwell International
Rocketdyne Division

Attention: Jeff Goldberg

Please be advised that our budget figure of THREE HUNDRED TWENTY FIVE THOUSAND TWO HUNDRED FIFTY DOLLARS AND NO CENTS (\$325,250.00) still stands for the demolition and removal of building #20 located at your Santa Suzanna facility.

If you have any questions regarding our proposal feel free to contact us.

Sincerely,

B.H.L. INDUSTRIES INCORPORATED

Patrick Laureno Jr.
Vice President

PL/tp

\$ 325,250⁰⁰ WAS ESCALATED TO DEC. 1992 BY OUR MATERIAL ESTIMATING DEPT. TO \$ 364,120 USING A PPI INFLATION INDEX. THIS HAS BEEN APPROVED BY OUR LOCAL DCAA OFFICE.

THE SAME INDEX WAS USED TO ESCALATE THE 1992 \$ 364,120 TO MARCH 1995. THE FOLLOWING IS THE CALCULATION:

$$\begin{array}{r} \$ 364,120 \\ \hline 1.235 \end{array} \times 1.341 = 395,372 \approx 395,400$$

John Henry P... 3/6/92

MATERIAL COST ESTIMATE RATIONALE
(ENGINEERING ESTIMATES)

PROPOSAL: Bldg. 020, Hot Lab.

DATE: 06-10-92

PHASE: Demolition

WBS ELEMENT: 50003

ESTIMATOR: F. Schmidt/P. Horton

EXT: 180-5310,5384

ITEM: Waste Burial

QUANTITY:

NEED/DELIVERY DATE:

SUGGESTED SUPPLIER(S): TBD

SUPPLIER ADDRESS:

SUPPLIER PHONE NO:

PRICE:\$12,000 EACH:

TOTAL:\$12,000 DELIVERY TIME:TBD

EE - RATIONALE FOR ENGINEERING ESTIMATE (ATTACH SUPPORTING DATA AS NECESSARY):

R/A waste will be disposed of at the DOE/NV site in Nevada. Current costs are \$10/ft.³, and while costs have remained stable, it is anticipated the out year costs will escalate to ~\$12.50/ft.³ for FY94 & 95. Anticipated volumes for the balance of the project are:

<u>FY</u>	<u>Volume(cu.ft.)</u>	<u>\$/ft.³</u>	<u>Cost</u>
95	960	\$12.50	\$ 12,000

Volumes are based on container volume, not actual waste volume. Containers will be 2/3 B-12 (56 cu.ft. external volume) and 1/3 B-25 (138 Cu.ft. external volume). Internal volume is 44 & 120 cu.ft. respectively.

MATERIAL COST ESTIMATE RATIONALE
(ENGINEERING ESTIMATES)

PROPOSAL: Hot Lab Building #020

DATE: 06-10-92

PHASE: Demolition

WBS ELEMENT: 50004

ESTIMATOR: Phil Rutherford

EXT: 6140

ITEM: NRC Inspection Fees

QUANTITY:

NEED/DELIVERY DATE: Feb. - June 1995

SUGGESTED SUPPLIER(S): U. S. Nuclear Regulatory Commission
Oak Ridge Associated Universities

PRICE: \$20,000

EE - RATIONALE FOR ENGINEERING ESTIMATE (ATTACH SUPPORTING DATA
AS NECESSARY):

Review of NRC license and inspection fees paid for the period
January 1989 to June 1991 indicates a total of \$66,022 paid.
This is equivalent to an average annual cost of \$26,400 per year.
No invoices have yet been received for July 1991 to the present.

Estimated fees for the balance of the contract are therefore:

<u>FY</u>	<u>Estimated Fees</u>
95	20,000 associated with license termination.

It is estimated that the final verification survey of the Hot
Lab, to be conducted by Oak Ridge Associated Universities (ORAU)
as a contractor to the NRC, will utilize perhaps 7 people for 3
weeks.

At a rate of \$75/hr., this would cost approximately \$65,000.

Following release of the building for unrestricted use and
termination of license SNM-21, the building would be demolished
and a final survey performed of the remaining ground. This would
also be performed by an independent contractor (ORAU).

It is estimated that this would take approximately 1/3 the effort
of the building final verification survey and cost ~\$20,000.

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-ACD3-86SF16021
 RATE DEMONSTRATION TABLE

LABOR RATES FROM TABLE B1 USED FOR THE FOLLOWING ELEMENT(S)

FY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1AA 1995	ENGINEERING (01)				*	COMPOSITE RATE:		28.510				
					28.32	28.32	28.62	28.62	28.62			
3AA 1995	PROG/BUS MGMT (41)				*	COMPOSITE RATE:		28.598				
					28.41	28.41	28.74	28.74	28.74			
3DA 1995	FACIL & PLT OPS (51)				*	COMPOSITE RATE:		24.769				
			24.68	24.68	24.68	24.89	24.89	24.89	24.89			
4IA 1995	QC-PRODUCTION (23)				*	COMPOSITE RATE:		21.892				
					21.80	21.80	21.96	21.96	21.96			
4KA 1995	QUALITY ASSUR (25)				*	COMPOSITE RATE:		24.081				
					23.94	23.94	24.18	24.18	24.18			

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DDDEMO ET 3D232081 3E272118 (ETC)

COST PROPOSAL
 DEMOLITION OF HOT LABORATORY (ETC)
 CONTRACT #DE-AC03-86SF16021
 RATE DEMONSTRATION TABLE

INDIRECT/OVERHEAD RATES FROM TABLE 116

FY	ENGR'G + COMMON BURDEN	COMMON ON-SITE BURDEN	PROD + COMMON BURDEN	GEN & ADMIN EXPENSE	ENGR'G + COMMON COST OF MONEY
1995	43.359985	8.570000	50.529999	0.098700	1.075480

FY	COMMON ON-SITE COST OF MONEY	PROD + COMMON COST OF MONEY	MATERIAL ADJUSTMENTS	MATL PROCUREMENT EXPENSE	OTHER DIRECT EXPENSE
1995	0.100900	1.106039	0.037200	0.076400	0.019400

FY	MATERIAL COST OF MONEY	GEN & ADMIN COST OF MONEY
1995	0.000400	0.002850

DIRECT LABOR RATES CONTAINED IN THIS PROPOSAL ARE TOTAL TIME RATES INCLUDING AN AMOUNT FOR OVERTIME. ONLY THE STRAIGHT-TIME PORTION OF THE RATES WILL BE NEGOTIATED WITH THE LOCAL DPRO. DPRO RECOMMENDS THAT THE PROCURING PROJECT/ CONTRACTING OFFICE ASSESS THE APPROPRIATE OVERTIME ALLOWANCE. THE STRAIGHT TIME PORTION OF THE RATES USED IN THIS PROPOSAL ARE BASED ON THE REFERENCES NOTED BELOW.

STATUS OF DIRECT LABOR RATES, OVERHEADS AND COST OF MONEY RATES CONTAINED HEREIN ARE AS FOLLOWS:

ITEM	PERIOD	STATUS	REFERENCE LETTER
DIR. LABOR	FY 92-96	APRV	005454RC -05/20/92
OVERHEADS	FY 92-96	SUB.	91RC14417-12/03/91
CST OF MONY	FY 92-96	SUB.	92RC05445-05/18/92
OVERHEADS	FY 97-12	EST.	ILBK0100 -12/03/91
O.D.E.	FY ALL	SUB.	91RC13050-12/03/91

USE OR DISCLOSURE OF THE DATA CONTAINED ON THIS SHEET IS SUBJECT TO THE RESTRICTION ON THE PROPRIETARY INFORMATION PAGE OF THIS PROPOSAL.

DDDEMO ET 3D232081 3E272118 (ETC)

LABOR RATIONALES

LABOR RATIONALE

PROPOSAL TITLE: Support to OMB

WBS: 10029

WBS TITLE: Support to OMB Review of DOE ERWM Program

PERIOD OF PERFORMANCE (MO/YR-MO/YR): October/November 1991

FUNCTIONAL ORGANIZATION/DISCIPLINE: Engineering

TASK DESCRIPTION:

OMB conducted a review of DOE ERWM Programs in the October-November 1991 period, and the D&D of the Hot Laboratory was included in the review process. At the request of the DOE Program Manager, ERWM questionnaires were filled out and provided to DOE-SAN for incorporation into the submittal to OMB. A special S/A (10029) was established to collect the cost associated with this effort and a total of 24 hours were expended.

ESTIMATE: (Hours) 24 (Manmonths)

BASIS OF ESTIMATE

Standards Factor Similarity Work Plan Level-of-Effort
Actuals

T.A. Moss 6-29-92

ESTIMATOR DATE PHONE

T.A. Moss 6-29-92

APPROVED DATE PHONE

LABOR RATIONALE

PROPOSAL TITLE: Support to ICE

WBS: 10028

WBS TITLE: Support to the Independent Cost Estimate (ICE) Team

PERIOD OF PERFORMANCE (MO/YR-MO/YR): October-November 1991

FUNCTIONAL ORGANIZATION/DISCIPLINE: Engineering

TASK DESCRIPTION:

DOE-SAN advised Rockwell on October 9th, 1991 that they had received a request from DOE-Headquarters for assistance in developing independent cost estimates for the Environmental Restoration and Waste Management Five-Year Plan. Rockwell was requested to provide information on the D&D of the Hot Laboratory. A special subaccount (10028) was established to collect the cost associated with the ICE Team Support. A total of 59.5 hours were expended.

ESTIMATE: (Hours) 59.5 (Manmonths)

BASIS OF ESTIMATE

Standards	<input type="checkbox"/>	Factor	<input type="checkbox"/>	Similarity	<input type="checkbox"/>	Work Plan	<input type="checkbox"/>	Level-of-Effort	<input type="checkbox"/>
Actuals	<input checked="" type="checkbox"/>								

T.A. Moss 6-29-92

T.A. Moss 6-24-92

ESTIMATOR DATE PHONE

APPROVED DATE PHONE

LABOR RATIONALE

PROPOSAL TITLE: Tiger Team Support Summary

WBS: 10026, 10027 and others

WBS TITLE:

PERIOD OF PERFORMANCE (MO/YR-MO/YR): December 90 to April 1991

FUNCTIONAL ORGANIZATION/DISCIPLINE: Engineering

TASK DESCRIPTION:

Preparations for the Tiger Team Audit of the ETEC began in December 1990. In January 1991, DOE-SAN decided to include the D&D of the Hot Laboratory within the scope of the DOE Tiger Team that was scheduled to audit ETEC beginning on March 18th, 1991 as shown in the Chronology of Tiger Team activities, page 2 of 9.

This task consists of 4 separate tasks: a. Tiger Team meetings and action lists; b. Hold on Building Operations; c. effect of Tiger Team on D&D productivity; and d. Transfer of ETEC Tiger Team support to Hot Laboratory D&D.

As shown in page 3 of 9 the total assessed impact of the Tiger Team audit to the program is estimated at \$11,417 man hours. The impact of the Tiger Team was reported in the monthly reports and in letters to the DOE-SAN Program Manager and to Contracts as the impact to the program occurred.

ESTIMATE: (Hours) 11,418.0 (Manmonths)

BASIS OF ESTIMATE

Standards Factor Similarity Work Plan Level-of-Effort
Actuals

T.A. Moss 6-22-92

ESTIMATOR DATE PHONE

T.A. Moss 6-22-92

APPROVED DATE PHONE

CHRONOLOGY OF TIGER TEAM ACTIVITIES

- December 10th, 1990 - Tiger Team Preparation Begun**
- January 18th , 1991 - Formal Decision to Include Hot Laboratory in Tiger Team Review**
- January - Tiger Team Preparation heavily impacts D&D Activities**
- February - Tiger Team Preparation heavily impacts D&D Activities**
- February 26th - Informed DOE-SAN Technical Personnel of heavy tiger team impact on program**
- March 11th - Informed DOE-SAN Contracts of heavy Tiger Team impact**
- March 18th - Tiger Team Review begins - heavy impact on D&D activities**
- March 26th - All activities in Hot Laboratory put on hold pending resolution of airborne contamination**
- April 5th - Activities in Hot Laboratory restarted**
- April 8th - Exit Report Review**
- April 12th - Team exits - Continue to work off action items**
- April 30th - Action Items Completed**

SUMMARY OF ESTIMATED TIGER TEAM HOURS

		SUMMARY OF ESTIMATED TIGER TEAM HOURS						
TASKS		Dec.90	Jan.91	Feb.91	Mar-91	Apr-91	May/Oct. 91	SUBTOTAL
A. Tiger Team Meetings and Action Item Lists SA 10026	Hours	138	1177	816	876	260	73	3340
B. Hold on Building Operations March 26 to April 5 (see Figure 10)	Hrs				356	570		926
C. Effect on Productivity and Schedule - 50 percent Effectivity on Remaining Manhours for Dec - April (see figure 11)	Hrs	865	1016	1204	1062	1,164		5311
D. Tiger Team - ETEC Support S/A 10027	Hrs							1841
						Total	Hrs.	11418
ESTIMATED SCHEDULE IMPACT = 2.5 MONTHS								

LABOR RATIONALE

PROPOSAL TITLE: a. Tiger Team Meetings and Action Lists

WBS: 10026

WBS TITLE: Tiger Team Meetings and Action Lists

PERIOD OF PERFORMANCE (MO/YR-MO/YR): December 90 to October 1991

FUNCTIONAL ORGANIZATION/DISCIPLINE: Engineering

TASK DESCRIPTION:

A special subaccount (10026) was established to collect costs directly associated with Tiger Team meetings and action item activities. A total of 3340 man hours were collected in this subaccount.

ESTIMATE: (Hours) 3340 (Manmonths)

BASIS OF ESTIMATE

Standards Factor Similarity Work Plan Level-of-Effort
Actual

T.A. Moss 6-23-92

T.A. Moss 6-24-92

ESTIMATOR DATE PHONE

APPROVED DATE PHONE

LABOR RATIONALE

PROPOSAL TITLE: b. Tiger Team Hold on Building Operations

WBS: Multi WBS levels

WBS TITLE:

PERIOD OF PERFORMANCE (MO/YR-MO/YR): March 26 to April 5, 1991

FUNCTIONAL ORGANIZATION/DISCIPLINE: Multi

TASK DESCRIPTION:

While the Tiger Team as at ETEC, they placed a hold on all Hot Laboratory operations from March 26th to April 5th, 1991. The estimated impact for this slippage was 926 man hours as shown on page 6 of 9.

ESTIMATE: (Hours) 926 (Manmonths)

BASIS OF ESTIMATE

Standards Factor Similarity Work Plan Level-of-Effort
Actual

See page 6 of 9

T.A. Moss 6-23-92

ESTIMATOR DATE PHONE

T.A. Moss 6-23-92

APPROVED DATE PHONE

ESTIMATE OF MAN HOURS FOR TIGER TEAM HOLD ON HOT LABORATORY BUILDING OPERATION

	FROM MARCH 26TH 1991 TO APRIL 5TH			
	Column 1 -	Column 2 x	Column 3 =	Column 4
	Total Hours For Week	Hours for S/A 10026	Fraction of week impacted	Hours on Hold
Week 14 (March)	731	286	80%	356
Week 15 (April)	759	189	100%	570
		TOTAL	MANHOURS	926

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6/23/92

LABOR RATIONALE

PROPOSAL TITLE: c. Tiger Team Effect on D&D Productivity & schedule

WBS: Multi

WBS TITLE: NA

PERIOD OF PERFORMANCE (MO/YR-MO/YR): Dec 90 to May 91

FUNCTIONAL ORGANIZATION/DISCIPLINE: Multi

TASK DESCRIPTION:

The Tiger Team had a profound impact on reducing worker productivity during the preparation for the audit and during the audit from December 1990 to May 1991. The Monday, Wednesday, and Friday morning tiger team meetings were attended by the Building Manager who is in charge of issuing the D&D daily work tasks. As the tiger team preparation and actual audit progressed the work assignments and worker productivity suffered accordingly. Also many of the corrective actions were assigned to the D&D radiation workers and Health Physics personnel because they were trained to conduct work in the Hot Laboratory. This sometimes left the remaining crew sizes too small to be effective. The net result was an estimated 50 percent reduction in the radiation workers and Health Physics personnel productivity to perform D&D activities.

ESTIMATE: (Hours) 5311 (Manmonths)

BASIS OF ESTIMATE

Standards Factor Similarity Work Plan Level-of-Effort

The first column on page 8 of 9 shows the total actual man hours expended for each of the months during the period impacted by the Tiger Team. The second column shows the actual man hours collected in the special subaccount for Tiger Team activities, and the third column shows the man hours associated with the Tiger Team imposed hold on building operations. Column 4 is obtained by subcontracting columns 2 and 3 from column 1. The remaining man hours in column 4 are then assumed to be less than 50 percent effective, and the result is shown in column 5. This less than 50 percent effectivity is then charged to the impact of the Tiger Team Audit. This estimated impact was 5311 man hours.

T.A. Moss 6-23-92

ESTIMATOR DATE PHONE

T.A. Moss 6-24-92

APPROVED DATE PHONE

ESTIMATED TIGER TEAM EFFECT ON PRODUCTIVITY

	Column 1 -	Column 2 -	Column 3 =	Column 4 x	.5 = Column 5
			TIGER TEAM		50 Percent Impact
	Total Man Hours	S/A 10026 MHS	Hold MHS (FIG.10)	Remaining MHS	Man Hours
Dec-90	1,868	138		1730	865
Jan-91	3,209	1,177		2,032	1,016
Feb-91	3,224	816		2,408	1,204
Mar-91	3,355	876	356	2,123	1,062
Apr-91	3,157	260	570	2,327	1,164
May/Oct 91		73			
TOTAL	14,813	3,340	926	10,620	5,311

53

LABOR RATIONALE

PROPOSAL TITLE: d. Tiger Team ETEC Support

WBS: 10027

WBS TITLE: Tiger Team ETEC Support

PERIOD OF PERFORMANCE (MO/YR-MO/YR): August - September 1991

FUNCTIONAL ORGANIZATION/DISCIPLINE: Multi

TASK DESCRIPTION:

At the direction of DOE-SAN a total of 1840 hours that was associated with ETEC supporting the Tiger Team Audit was transferred to the Hot Laboratory D&D Contract under subaccount 10027 in Aug-Sept., 1991.

ESTIMATE: (Hours) 1841 (Manmonths)

BASIS OF ESTIMATE

Standards Factor Similarity Work Plan Level-of-Effort
Actuals

T.A. Moss 6-23-92

ESTIMATOR DATE PHONE

T.A. Moss - 6-24-92

APPROVED DATE PHONE

LABOR RATIONALE

PROPOSAL TITLE: Demolition of Bldg. 020 Summary

WBS: Multi

WBS TITLE:

PERIOD OF PERFORMANCE (MO/YR-MO/YR): January to June 1995

FUNCTIONAL ORGANIZATION/DISCIPLINE: Multi

TASK DESCRIPTION:

The Hot Laboratory will be demolished by a subcontractor once the building has been decontaminated and has been released for unrestricted use by the NRC. As shown in the schedule for Demolition (see page 2 of 11), NRC release is scheduled to occur at the end of February, 1995. Prior to facility release, Facilities Engineering and Purchasing will award a subcontract for the actual demolition and the subcontractor will start mobilization. Demolition will begin in March 1995, and will be complete in June as shown on the schedule on page 2 of 11. Once the building debris has been removed from the site, a final survey by an independent source from Oak Ridge will be conducted. When the site has been released the remaining hole will be filled with clean dirt and the site graded.

ESTIMATE: (Hours) 8013 (Manmonths)

BASIS OF ESTIMATE

Standards Factor Similarity Work Plan Level-of-Effort

The manpower spread and out of plant costs for the demolition effort are shown on page 3 of 11.

Rockwell personnel will provide oversight and monitoring of the demolition effort to assure that no radioactive waste is uncovered as sent to commercial waste disposal. The total estimated number of manhours for demolition effort is 8013 hours.

T.A. Moss 6-23-92

T.A. Moss 6-24-92

APPROVED DATE PHONE

ESTIMATOR DATE PHONE

LABOR RATIONALE

PROPOSAL TITLE: Demolition of Bldg. #020

WBS: 10001, 10002, 10003, and 10004

WBS TITLE: Facility Mgr. Engr/Documentation, Crew Chief and RMDF Operation

PERIOD OF PERFORMANCE (MO/YR-MO/YR): February - June 1995

FUNCTIONAL ORGANIZATION/DISCIPLINE: Engineering

TASK DESCRIPTION:

10001 - Facility Manager: Provide facility management and operational planning for demolition and final survey phases of Building 020 D&D. Provide liaison with Rocketdyne and DOE program management functions.

10002 - Documentation: Prepare demolition plans and final facility D&D report.

10003 - Crew Chief: Provide day-to-day- direction of Rocketdyne personnel supporting demolition contractor and final site survey.

10004 - RMDF Operation: Provide support for D&D operations for equipment decontamination and radioactive waste disposal.

ESTIMATE: (Hours) 2,592 (Manmonths)

BASIS OF ESTIMATE

Standards Factor Similarity Work Plan Level-of-Effort

<u>WBS</u>	<u>Hours</u>	<u>Rationale/Personnel</u>
10001	432	Experienced facility manager to oversee mobilizing demolition activities, document review, and oversight of demolition phase of work during the five month demolition effort (see page 9 of cost proposal)
10002	864	Experienced D&D engineer to prepare demolition plan, detailed work procedures, revision of procedures, and final demolition report during demolition phase. Also provide engineering design support to five month demolition effort.
10003	864	Experienced crew chief to coordinate D/642 support of final facility clean up and demolition contractor support during the 5 month effort.
10004	432	Experienced D&D engineer to coordinate final shipment of radioactive wastes and decontamination of equipment from the demolition effort.
Total	2592	

T.A. Moss 6/17/92 3326

ESTIMATOR DATE PHONE

J. A. Moss 6-24-92

APPROVED DATE PHONE

LABOR RATIONALE

PROPOSAL TITLE: Demolition Bldg.#020 - Mod M031

WBS: 20001 and 20002

WBS TITLE: Health Physics and Instrument Calibration

PERIOD OF PERFORMANCE (MO/YR-MO/YR): February - June 1995

FUNCTIONAL ORGANIZATION/DISCIPLINE:

TASK DESCRIPTION:

20001 Health Physics: This task provides support for health physics monitoring and oversight of D&D operations including: routine surveys of the facility, identification and characterization of radioactive wastes generated during D&D and survey of decontaminated areas for release as "clean". Funding also supports preparation and review of facility procedures for final release of facility for unrestricted use prior to demolition.

20002 Instrument Calibration: Provides support for calibration of radiation instrumentation used to verify absence of residual contamination during demolition.

ESTIMATE: (Hours) 1,108 (Manmonths)

BASIS OF ESTIMATE

Standards	<input type="checkbox"/>	Factor	<input checked="" type="checkbox"/>	Similarity	<input type="checkbox"/>	Work Plan	<input type="checkbox"/>	Level-of-Effort	<input type="checkbox"/>
<u>WBS</u>		<u>Hours</u>				<u>Rationale/Personnel</u>			
20001		864				Trained Health Physicist (HP) to perform radiological surveys and monitor equipment and waste removed from facility during the five month demolition effort (see page 9 of cost proposal)			
20002		244				Trained technician to perform instrument calibration of radiation detection meters used by HP's in WBS 20001.			
		<u>Total 1108</u>							

T.A. MOSS 6/17/92 3326

ESTIMATOR DATE PHONE

T.A. Moss 6 24 92

APPROVED DATE PHONE

LABOR RATIONALE

PROPOSAL TITLE: Demolition Bldg. #020 - Mod M031

WBS: 30001 and 30002

WBS TITLE: QA and Inspection

PERIOD OF PERFORMANCE (MO/YR-MO/YR): February - June 1995

FUNCTIONAL ORGANIZATION/DISCIPLINE: QA

TASK DESCRIPTION:

30001 QA Engineer: Provide Quality Assurance oversight including document review and approval of demolition and final survey phases of D&D program.

30002 QA Inspection: Provide inspection support for D&D operations including certification of radioactive waste packaging and shipments to DOT and disposal site criteria.

ESTIMATE: (Hours) 432 (Manmonths)

BASIS OF ESTIMATE

Standards	<input type="checkbox"/>	Factor	<input checked="" type="checkbox"/>	Similarity	<input type="checkbox"/>	Work Plan	<input type="checkbox"/>	Level-of-Effort	<input type="checkbox"/>
<u>WBS</u>	<u>Hours</u>					<u>Rationale/Personnel</u>			
30001	172					Certified and experienced QA engineer to perform independent document reviews and perform audits to assure that work is performed in proper manner during the 5 month demolition effort (see page 9 of cost proposal)			
30002	<u>260</u>					Trained inspector to verify documentation for radioactive waste shipments per Federal Regulations			
Total 432									

T.A. Moss 6-17-92 3326

ESTIMATOR DATE PHONE

T.A. Moss - 6-22-92

APPROVED DATE PHONE

LABOR RATIONALE

PROPOSAL TITLE: Demolition Bldg. #020
WBS: 40001 and 40002
WBS TITLE: Project Management and Program Business Management
PERIOD OF PERFORMANCE (MO/YR-MO/YR): February - June 1995
FUNCTIONAL ORGANIZATION/DISCIPLINE: Project Management
TASK DESCRIPTION:

40001 Project Manager: Provide project management to ensure technical, cost, and schedule objectives of demolition phase of project are satisfactorily completed. Maintain liaison with DOE customer.

40002 Prog. Business Manager: Provide project manager with cost data for demolition phase and project close out.

ESTIMATE: (Hours) 966 (Manmonths)

BASIS OF ESTIMATE

Standards	<input type="checkbox"/>	Factor	<input checked="" type="checkbox"/> x	Similarity	<input type="checkbox"/>	Work Plan	<input type="checkbox"/>	Level-of-Effort	<input type="checkbox"/>
<u>WBS</u>		<u>Hours</u>				<u>Rationale/Personnel</u>			
40001		864				Experienced project manager to oversee final phase of project during the 5 month demolition period. (see page 9 of cost proposal).			
40002		102				Experienced cost control and accounting personnel to administer project funds to assure that a viable cost control and budget system is maintained during the five month demolition period.			
		966							

T.A. Moss 6/17/92 3326

ESTIMATOR DATE PHONE

20,223-62492

APPROVED DATE PHONE

LABOR RATIONALE

PROPOSAL TITLE: Demolition Bldg. #020

WBS: 70002 and 70003, 70004

WBS TITLE: Decontamination Support and Facilities Engr.

PERIOD OF PERFORMANCE (MO/YR-MO/YR): January - June 1995

FUNCTIONAL ORGANIZATION/DISCIPLINE: Engineering & Facilities & Final Survey

TASK DESCRIPTION:

70002 Demolition Support: Provide D/642 engineering coordination and support for demolition phase of facility D&D. Provide contractor with technical support and structural information.

70003 Final Survey: Provide final "release for unrestricted use" radiological survey of site and facility rubble and removed equipment.

70004 Facility Engineer: Coordinate demolition contractor activities. Provide day-to-day liaison between Rocketdyne and contractor.

ESTIMATE: (Hours) 2912 (Manmonths)

BASIS OF ESTIMATE

Standards	<input type="checkbox"/>	Factor	<input checked="" type="checkbox"/>	Similarity	<input type="checkbox"/>	Work Plan	<input type="checkbox"/>	Level-of-Effort	<input type="checkbox"/>
<u>WBS</u>		<u>Hours</u>				<u>Rationale/Personnel</u>			
70002		1408				Building 020 staff personnel to assist in providing contractor with structural information on facility and rubble disposal during the five month demolition period (see page 9 of cost proposal.			
70003		1184				D/564 Facilities engineers to provide administrative liaison with demolition contractor during the contracting mobilization and demolition effort which covers a period of 6 months.			
70004		320				Certified Health Physicists to perform final radiological survey of site and facility rubble during the final 2 months of the program.			
Total		2912							

T.A. Moss 6/17/92 3326

ESTIMATOR DATE PHONE

D.C. Moss - 6-24-92

APPROVED DATE PHONE

TECHNICAL RATIONALES

TECHNICAL RATIONALE FOR MOD 031 PROPOSAL

BACKGROUND

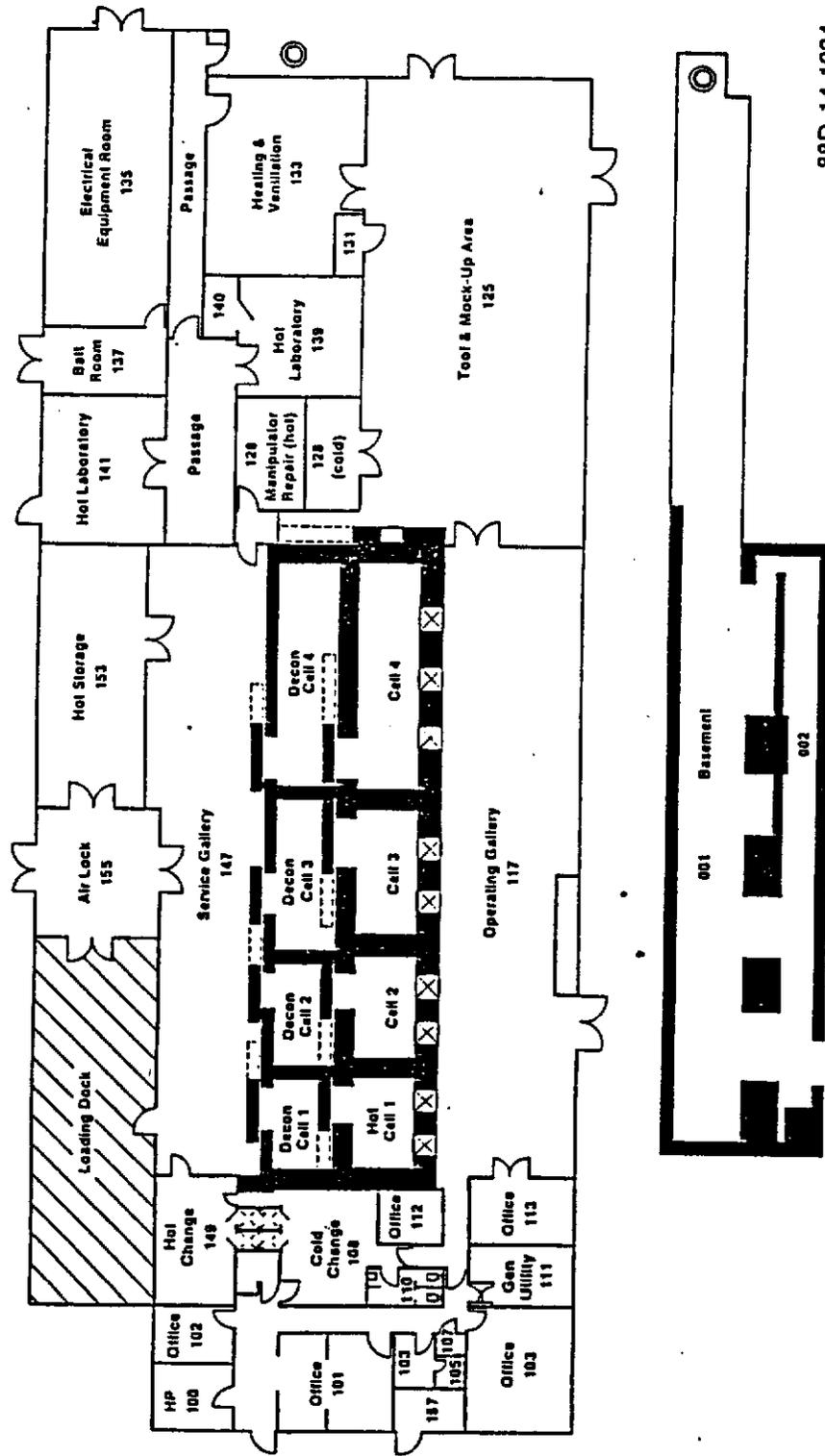
The Hot Laboratory, Building 020 of the Santa Susana Field Laboratory, shown in Figure 1 will be decontaminated. Once the facility is decontaminated to below the acceptance levels, NRC will be requested to survey the facility and release it for unrestricted use. The final verification survey will be conducted by Oakridge Associated University (ORAU) under contract to NRC. After the facility is released, the facility will be demolished and all the rubble will be removed from the site. The remaining hole in the ground will be surveyed by Oak Ridge Associated University (ORAU) under contract to Rockwell and released for final grading. The site will then be restored to its original grade level. A final report will be written documenting the total D&D activity.

The schedule for the program is shown in Figure 2. FY92 is devoted to finish the decontamination of the hot cells and decontamination rooms. The radioactive drain system is removed in FY 93 and the basement and RA exhaust system is removed in FY 94. The final NRC survey and release of the building for unrestricted use occurs in February of FY 95. Demolition of the facility is completed in June FY 95, and the site is returned to natural grade and vegetation.

The work breakdown structure (WBS) for the program is shown in Figure 3. The WBS is broken down into 6 areas: Nuclear Operations, Demolition, Compliance Support, Operations Support Program Management, and Out-of-Plant costs. The actual decontamination, packaging, and shipment of the radioactive waste is performed by nuclear operations under the 10,000 subaccounts. Demolition of the facility after the building is released for unrestricted use is performed under the 70000 subaccounts. Compliance support assures that the program is conducted to the required DOE, NRC, Federal and State and Local regulations, and is under the 20,000 series subaccounts. Program Management is under the 40,000 and out-of-plant costs are primarily in the 50000 series.

Figure 1

Rockwell International Hot Laboratory, Building 020



88D-14-1094
111-67

FIGURE 2 SCHEDULE FOR D&D OF HOT LABORATORY

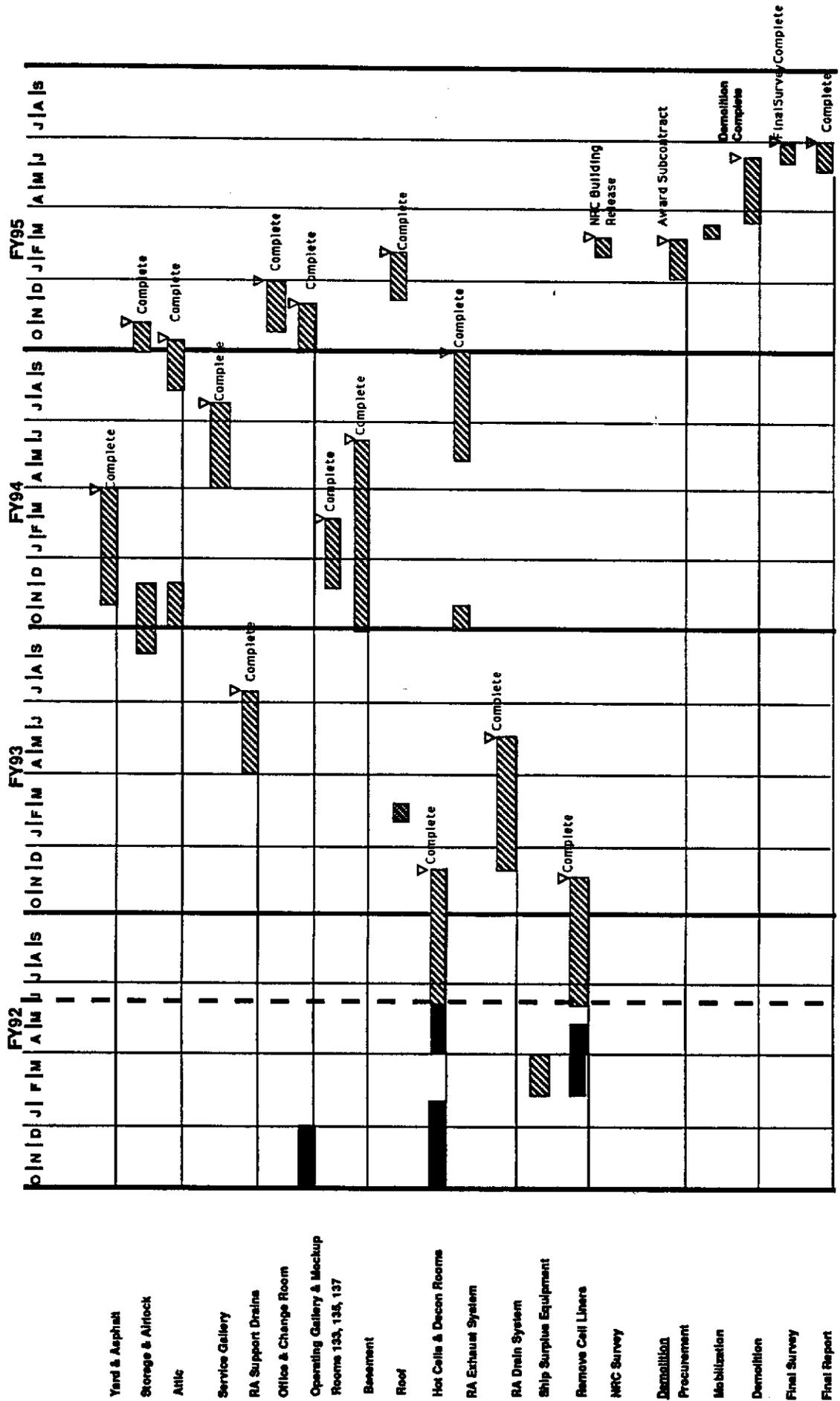
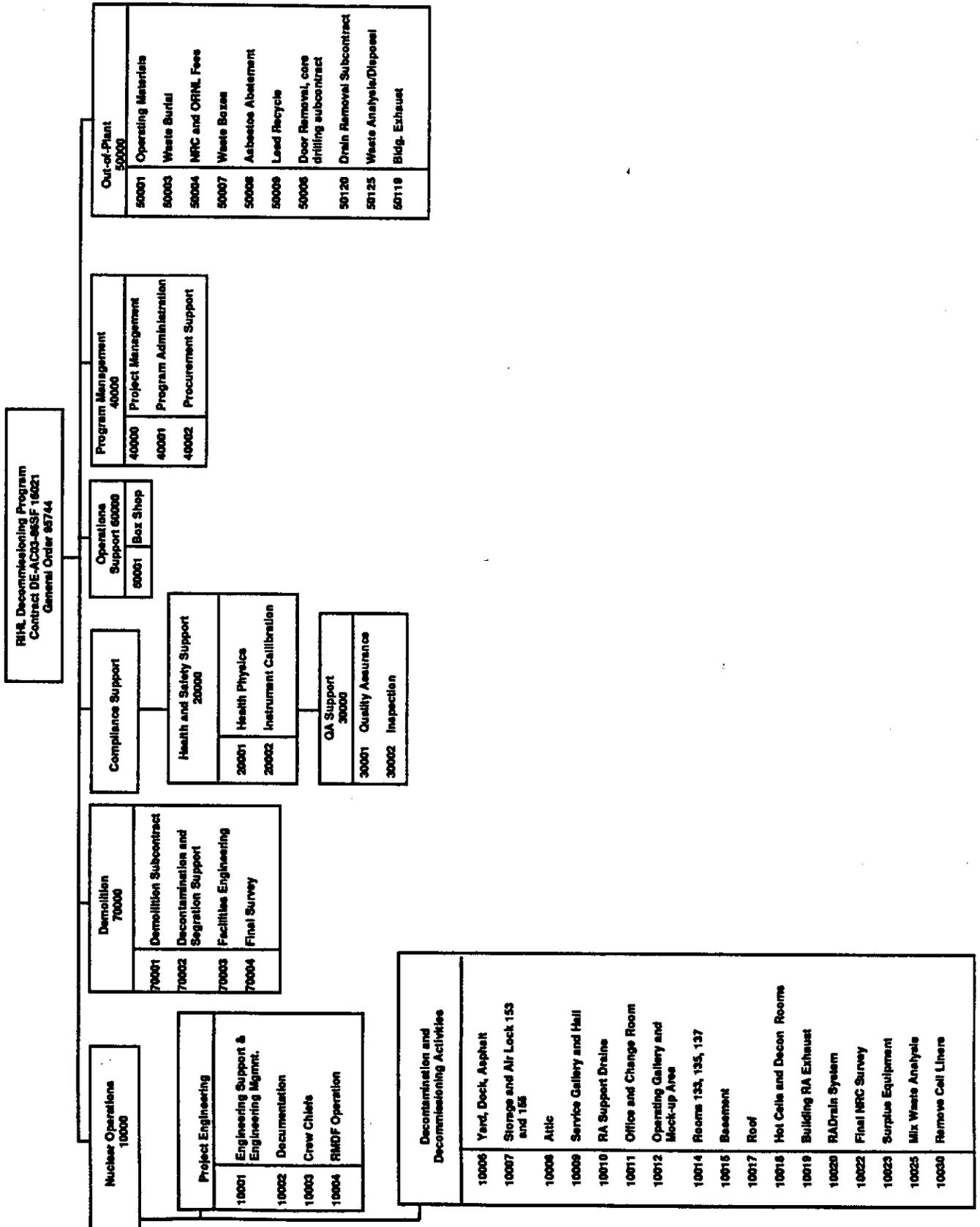


Figure 3. Work Breakdown Structure



**FEE ON ADDED WORK PERFORMED DURING DELAY CAUSED BY POTENTIAL
FFTF FUEL DECLAD PROGRAM**

In the 4-4-90 proposal for D&D of the Hot Laboratory, Rockwell requested that fee be granted on the delay caused by the potential FFTF fuel declad program. Decommissioning of the Hot Laboratory started in March 1987 at the completion of the Fermi Fuel Declad Program. However, there was the possibility that the FFTF fuel would be declad in the Hot Laboratory. The D&D was delayed on May 29th, 1987 with a directive from the DOE-SAN Project Office (see attachment 1).

The delay was requested by DOE because it was in the best interest of the government. The Rockwell Hot Laboratory was uniquely equipped to perform the declad operation on this special fuel and had a highly trained crew to operate the hot cells. Rockwell was capable of performing the FFTF declad operation in the most cost effective manner because of this unique capability.

Decommissioning activities that would affect the ability of the Hot Laboratory to conduct the FFTF fuel declad program were stopped, or not initiated on schedule, once the May 29, 1987 directive was received. Cognizant DOE and Rockwell personnel knew that there would be a delay in deciding if the FFTF fuel would be decladded and where it would be decladded, but no one could determine how long the delay would be. The directive to stop decommissioning allowed time for the FFTF fuel declad decision to be made by DOE.

The delay in deciding the FFTF fuel decladding program extended longer than anticipated. This resulted in a problem in maintaining the trained crew of approximately 25 people for future hot cell operations. In September 1987, a meeting was held with DOE to discuss the possibility of conducting decontamination process development activities in support of the future D&D tasks pending the FFTF decision (See attachment 2-Briefing Document). Development work on in situ decontamination methods were initiated as a result of the September meeting.

The decision not to declad the FFTF fuel in the Hot Laboratory was made on September 30, 1988 in a directive from DOE (See attachments 3 and 4).

There was a total of 16 months delay in DOE's FFTF decision, which resulted in approximately a 1-year delay in the D&D program since some of the effort, such as removal of surplus equipment from the Cells and other D&D tasks, was accomplished during the delay. Activities performed on both the decontamination process development and the reduced level D&D program were reported in each monthly report which was submitted to DOE/SF.

During the DOE-directed delay (May 29, 1987 to September 30, 1988), and after Rockwell was informed that the D&D efforts were to be re-initiated, Rockwell

(enc. 2)

attempted to find a commercial market for the unique facility such that maintaining it as a viable Hot Cell would be economically feasible. As a part of that effort, Rockwell explored the possibility of an assumption by Rockwell of DOE's responsibility for D&D. Rockwell management reviewed this one-time settlement approach on August 21, 1989 and it was decided that the Rockwell owned building would be completely decommissioned. At this point the Hot Lab's capability had been significantly impacted by the D&D effort, and it would have taken approximately \$1 million in capital to restore it to a usable condition.

It is our understanding that there may be some sentiment to the effect that Rockwell did not commence expeditiously or proceed industriously with the decontamination work after DOE's direction to resume. Please be assured that this was not so. From September 30, 1988 to the present, Rockwell has continued to perform the required D&D of the Hot Lab with full crew, and both the efforts proposed and the work accomplished were reported monthly to DOE.

In the April 4, 1990 proposal, Rockwell had calculated a 16 month delay to the D&D effort as a result of the FFTF decision delay and had proposed a fee on the resulting cost. During negotiation of the proposal with Peggy Woods of DOE/SF in September 1991, Rockwell reassessed the impact of the delay as being only 12 months and proposed a correspondingly reduced fee. However, closure on fee proposal was not reached during the September negotiations. DOE/SF letter dated September 20, 1991 indicates that we had not shown adequate justification for DOE to pay additional fee. Hopefully this chronology provides the additional justification needed. Rockwell believes that the delay was in the best interests of the Government at the time, and that Rockwell operated in good faith with the government to achieve their goals. We do not believe that the two technical directions associates with this delay should be treated differently for fee purposes than the other four TDs included in this proposal. As a result, Rockwell requests a fee of \$319,645 covering this change to the contract workscope at the direction of the Government. See Figure 1.

(enc. 2)

Figure 1 - ROCKETDYNE FEE POSITION ON FFTF FUEL DECLAD DECISION DELAY

Item No.	Activity	September 19, 1990 Proposal		Revised Estimate - Added Work & Delay Impact	
		<u>Estimated Cost</u>	<u>Fixed Fee</u>	<u>Estimated Cost*</u>	<u>Fixed Fee*</u>
1.	Process procedure development during 16-month FFTF hold resulting in 12 month impact.	\$2,950,233	\$273,681	\$2,212,675	
2.	Escalation of basic-D&D effort because of FFTF decision.	451,172	41,853	338,379	
3.	New Government Regulations and new interpretation of existing regulations requiring added effort.				
	Nuclear Operations	565,665	52,474	424,249	
	Health Physics	250,008	23,192	187,506	
	QA Support	169,384	15,713	127,038	
	Increase in Waste Burial & Transportation Cost	207,844	19,281	155,883	
	TOTAL	\$4,594,306	\$426,194	\$3,445,730	\$319,645

* A Review of the monthly reports during this period reflects that on the average, an estimated 25% of the work performed was productive towards the originally negotiated D&D work for which fee has already been established. These figures reflect the remaining 75% which represents the added work on development of in situ decontamination methods for which additional fee should be assigned.



Department of Energy
 San Francisco Operations Office
 1333 Broadway
 Oakland, California-94612

May 29, 1987

Mr. William F. Dennison
 Rocketdyne Division
 Rockwell International
 Corporation
 6633 Canoga Avenue
 Canoga Park, California 91304

SUBJECT: Directed Change - Start Decontamination and Decommissioning in FY 1987

Dear Mr. Dennison:

You are directed to start the Decontamination and Decommissioning (D&D) Task in FY 1987 rather than in FY 1988 as originally scheduled in Contract DE-AC03-86SF16021 Mod 4. Earlier completion of the FERMI fuel effort allows the earlier start of the D&D effort.

The D&D effort is limited to the funding currently available for FY 1987. The tasks to be performed are:

1. Conducting detailed planning for the decontamination and decommissioning of the hot lab facility.
2. Writing detailed procedures for the decontamination and decommissioning activities.
3. Initiating decontamination activities of the four hot cells, the facility ventilation system, and the radioactive floor drains and liquid hold up tank. Decommissioning activities will not be initiated.
4. Packaging and shipping radioactive equipment and waste to the burial ground at the Nevada Test Site.

Sincerely,

Kenneth R. Qutoriano
 Kenneth R. Qutoriano
 Project Manager
 Magnetic Fusion and Nuclear
 Division

03903 RC

cc:
 H. C. Hover, RI
 L. R. Willett, DOE-HQ

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FUEL DECLAD PROGRAM
DOE - ROCKETDYNE MEETING
AT ROCKETDYNE
SEPTEMBER 29, 1987

G

DECLADDING OF SELECTED DOE-OWNED SPENT FUEL

CONTRACT DE-AT03-81SF11519 AND DE-AC03-86SF16021

PURPOSE

**PROVIDE REPROCESSABLE MATERIAL
FOR THE MATERIAL PROCESSING DIVISION - DOE DEFENSE PROGRAMS**

71



Rockwell International
Rockodyne Division

OBJECTIVE

CONDUCT SPECIAL HEAD-END PROCESSING ON SPENT FUEL RODS AND ASSEMBLIES THAT DO NOT LEND THEMSELVES TO CONVENTIONAL REPROCESSING METHODS

1. DISASSEMBLE FUEL BUNDLES AND REMOVE CLADDING FROM FUEL RODS
2. REMOVE ANY THERMAL BONDING MATERIAL FROM FUEL (Na, NaK, ETC.)
3. CONSOLIDATE AND RECAN FUEL IN ALUMINUM
4. SHIP DECLAD FUEL TO SAVANNAH RIVER
5. SHIP R/A WASTE TO APPROVED BURIAL SITE

FUEL DECLAD PROJECTS

PROJECT	SRE	HALLAM	EDR-I	SEFOR	EBR-II BLANKET	FERMI
TIME	7/74 - 9/76	8/78 - 9/79	2/80 - 10/80	2/81 - 3/84	3/83 - 4/86	4/85 - 8/87
CONTRACT OFFICE	DOE-SAN	DOE-SAN	DOE-ID	DOE-SAN	DOE-SAN	DOE-SAN
COST	\$1.2M	\$4.6M	\$0.6M (\$21/gm Pu)	\$7.3M	~\$10.9M	~\$8.4M
PROCESSED	88 ASSEMBLIES (340 RODS)	150 ASSEMBLIES (2600 RODS)	319 PINS	646 RODS	357 ASSEMBLIES (6,783 RODS)	214 ASSEMBLIES (~29,960 PINS)
FUEL AND FORM	U-Th-U METAL U - 1685 kg 235U - 180 kg .. Th - 1972 kg Pu - 0.8 kg NET - 3,879 kg (4 tons)	UC & U Mo METAL 235U - 125 kg 235U - 1,020 kg .. Pu - 13.2 kg NET - 32,347 kg (35.7 tons)	Pu-Al METAL DU - 47.7 kg Pu - 28.0 kg .. NET - 76.1 kg	MIXED UO ₂ & PuO ₂ 235U - 3.5 kg .. Pu - 386.4 kg NET - 2,231 kg (2.5 tons)	DU METAL 235U - 37.4 kg .. Pu - 76.1 kg NET - 16,829 kg (18.5 tons)	U - 10 Mo ~235U - 1,013 kg .. ~Pu - 2 kg ~NET - 4,644 kg (5.1 tons)
BONDING	NaK	Na	NaK	NONE	Na	

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DECLADDING OF SELECTED DOE-OWNED SPENT FUEL
CONTRACT DE-AC03-86SF16021

FERMI

- DISASSEMBLY OF 214 FUEL ELEMENTS COMPLETED
- POST OPERATIONS CLEANUP OF THE HOT CELL IN PROGRESS
- SHIPMENT OF THE RECOVERED FUEL PINS TO THE ICPP, SCHEDULED FOR AUGUST & SEPTEMBER, DEFERRED
 - HOMEMADE CASK LIFTING YOKE AT ICPP FAILED PROOF LOAD TEST AND MUST BE REPLACED
 - WILL SHIP FUEL IN JANUARY & FEBRUARY 1988 WHEN CASK AGAIN BECOMES AVAILABLE FROM SAVANNAH RIVER FUEL MOVEMENT PROGRAM
 - NO SIGNIFICANT IMPACT

ROCKWELL HOT LAB DECOMMISSIONING

- DETAILED PLANNING IN PROGRESS
- DETAILED WORK PROCEDURES BEING GENERATED
 - APPROXIMATELY 40 REQUIRED
- OBSOLETE EQUIPMENT AND PIPING BEING REMOVED
 - WILL NOT AFFECT FUNCTION OF THE FACILITY UNTIL A DECISION ON A POSSIBLE FFTF FUEL DECLAD PROJECT IS OBTAINED
- WORK BEING STRETCHED AS MUCH AS POSSIBLE

- STATUS OF FFTF DECLAD DECISION?
- CBD - REQUEST FOR STATEMENTS OF INTEREST?
- CONTRACT MODIFICATION
 - 20 MARCH 1987 C&F PROPOSAL

CANDIDATE HOT LAB TASKS

HOT CELL DECONTAMINATION DEMONSTRATION

SCOPE:

- 0 DECONTAMINATE ONE HOT CELL TO UNCONDITIONAL USE CRITERIA.
- 0 CELL MUST BE USABLE AS A HOT CELL.

TECHNOLOGY ENHANCEMENT:

- 0 DEVELOP AND DEMONSTRATE "STATE OF THE ART" DECONTAMINATION METHODS.
- 0 INSITU ELECTROPOLISHING OF DRAINS
- 0 INSITU PENETRATION HONING.
- 0 CONTROLLED GRIT BLAST PAINT STRIPPING.

BACKGROUND:

- 0 D/D OPERATIONS GENERAL DESTRUCTIVE.
- 0 GENERALLY EXTENSIVE RECONSTRUCTION IS REQUIRED FOR REUSE OF THE FACILITY.
- 0 USUAL METHOD IS TO REMOVE CONTAMINATED DRAINS AND PENETRATIONS.
- 0 NON-DESTRUCTIVE DECONTAMINATION METHODS WILL MINIMIZE FACILITY RECTIFICATION.

HOT CELL DECONTAMINATION DEMONSTRATION

APPROACH:

- 0 REMOVE FACILITY EQUIPMENT AND DECONTAMINATE ACCESSIBLE SURFACES. PACKAGE AND STORE FOR REUSE.
- 0 AIR CONDITION UNIT--CRANE--MANIPULATORS--THRU TUBES--PERISCOPE.
- 0 WASH CELL WALLS, CEILING, AND FLOOR.
 - 0 85 PENETRATIONS.
- 0 REMOVE CONTAMINATED PAINT AND CORROSION BY CONTROLLED GRIT BLASTING--MINIMIZE AIRBORNE CONTAMINATION.
- 0 DECONTAMINATE DRAINS AND STORAGE TUBE BY ELECTROPOLISHING.
- 0 RADIATION SURVEY.
- 0 WRITE REPORT.

HOT CELL
DECONTAMINATION DEMONSTRATION

REMOVE HARDWARE AND
DECONTAMINATE SELECTED EQUIPMENT

CRANE
WINDOWS
AIR CONDITIONING
LIGHTS
MANIPULATORS
THRU TUBES

DECONTAMINATE ACCESSIBLE SURFACES

CEILING
WALLS
FLOORS
STORAGE TUNNEL
TRANSFER TUNNEL
CELL DOOR
TRENCH

DECONTAMINATE PENETRATIONS
TEST PLAN (HONING)

95 PENETRATIONS

DECONTAMINATE
WALL, FLOOR, AND CEILING
TEST PLAN (GRIT BLASTING)

DECONTAMINATE
DRAINS & STORAGE TUBES
TEST PLAN (ELECTROPOLISHING)

3" DIAMETER
SCHEDULE 40
STAINLESS STEEL

DECONTAMINATE
EXHAUST PORTS

RADIATION SURVEY

UNCONDITIONAL
USE CRITERIA

LASER DECLADDING - IRRADIATED MIXED OXIDE FUEL

SCOPE:

- 0 DEVELOP AND DEMONSTRATE LASER CUTTING SYSTEM--PRODUCTION DECLAD DEMONSTRATION RUN 150 MIXED OXIDE ADVANCED FUEL PINS;

TECHNICAL ENHANCEMENT:

- 0 DEMONSTRATE OPERATION OF LASER CUTTING ALPHA CONTAINMENT BOX--NEW.
- 0 DEVELOP TOOLING TO MOVE FUEL PINS PAST A STATIONARY LASER BEAM--NEW
- 0 DEMONSTRATE, ON A PRODUCTION BASIS, FEASIBILITY OF FIRING A LASER BEAM THROUGH A WINDOW IN THE CONTAINMENT BOX--NEW.

BACKGROUND:

- 0 EFFICIENCY OF LASER CUTTING METAL FUEL PINS WAS DEMONSTRATED WITH EBR BLANKET PINS.
- 0 LOGICAL NEXT STEP--LASER CUTTING MIXED OXIDE PINS WITH ALPHA CONTAINMENT.

FISSION GAS PROCESSING TECHNOLOGY

SCOPE:

- 0 PERFORM TRADE STUDIES - FISSION GAS COLLECTION METHODS & SEPARATION METHODS.
- 0 DESIGN/BUILD/DEMONSTRATE A SYSTEM FOR FISSION GAS COLLECTION/SEPARATION.

TECHNICAL ENHANCEMENT:

- 0 DETERMINE & DEMONSTRATE THE MOST EFFICIENT METHOD OF COLLECTION & SEPARATION OF FISSION GAS - RADIOACTIVE ISOTOPES FROM NON RADIOACTIVE Xe.

BACKGROUND:

- 0 PRIMARY FISSION GAS COLLECTION METHODS ARE
 - 0 ABSORBED ON CHARCOAL
 - 0 UNCOMPRESSED GAS CONTAINERS
- 0 ABOUT 90% OF FISSION GAS IS NON RADIOACTIVE XENON.
- 0 ABOUT 50°C BOILING DIFFERENCE BETWEEN Kr & Xe.

FISSION GAS PROCESSING TECHNOLOGY

TECHNICAL APPROACH:

- O TRADE STUDY - CHARCOAL ABSORPTION Vs UNCOMPRESSED GAS.
- O TRADE STUDY - CRYOGENIC Vs MOLECULAR SIEVE FOR KRYPTON/XENON SEPARATION.
- O COLD EXPERIMENTS TO SUPPORT TRADE STUDIES.
- O BUILD & DEMONSTRATE INTEGRATED GAS HANDLING SYSTEM.

LASER EQUIPMENT EVALUATION

SCOPE:

- 0 ESTABLISH COST & AVAILABILITY OF LASER EQUIPMENT FOR CUTTING IRRADIATED MIXED OXIDE FUEL RODS. GENERATE AN EQUIPMENT SPECIFICATION.

TECHNICAL ENHANCEMENT:

- 0 DETERMINE CURRENT "STATE OF THE ART" IN LASER EQUIPMENT SUITABLE FOR DECLADDING IRRADIATED FUEL.
- 0 ESTABLISH AVAILABILITY/COST/DELIVERY LEAD TIME.

BACKGROUND:

- 0 LASER FOR FUEL DECLADDING WAS DEMONSTRATED ON EBR II BLANKET DISASSEMBLY.
- 0 EBR LASER EQUIPMENT IS ABOUT 5 YRS OLD.
- 0 SIGNIFICANT ADVANCES BEING MADE IN LASER TECHNOLOGY.

LASER EQUIPMENT EVALUATION

TECHNICAL APPROACH:

- O TECHNICAL DISCUSSIONS WITH LASER USERS & EQUIPMENT SUPPLIERS
- O PREPARE EQUIPMENT SPECIFICATION
- O ISSUE REQUEST FOR QUOTATIONS
- O EVALUATE BIDS

LASER CUTTING ALPHA CONTAINMENT MOCKUP

SCOPE:

- 0 DEMONSTRATE LASER CUTTING OF SIMULATED FUEL RODS IN A MOCKUP ALPHA CONTAINMENT BOX WITH MOCKUP FUEL ROD HANDLING TOOLING.

TECHNICAL ENHANCEMENT:

- 0 DEMONSTRATE OPERATION OF AN ALPHA CONTAINMENT BOX IN A HOT CELL.
- 0 DEVELOP TOOLING TO MOVE SIMULATED FUEL RODS PAST A STATIONARY LASER HEAD.
- 0 DEMONSTRATE THE FEASIBILITY OF FIRING A LASER BEAM THROUGH A WINDOW IN ALPHA CONTAINMENT BOX.

BACKGROUND:

- 0 EFFICIENCY OF LASER DECLADDING METALLIC FUEL WAS DEMONSTRATED WITH EBR II DECLAD PROGRAM.
- 0 LOGICAL NEXT STEP IS TO EVALUATE LASER CUTTING THROUGH A WINDOW IN ALPHA CONTAINMENT FOR MIXED OXIDE FUELS.

LASER CUTTING ALPHA CONTAINMENT MOCKUP

TECHNICAL APPROACH:

- O DESIGN/FAB ALPHA CONTAINMENT MOCKUP BOX.
- O DESIGN/FAB MOCKUP FUEL PIN HANDLING TOOLING.
- O CHECK OUT BOX & TOOLING.
- O DEMONSTRATE SIMULATED FUEL PIN LASER CUTTING WITH A LASER BEAM THROUGH A WINDOW IN THE CONTAINMENT.



Department of Energy
Washington, D.C. 20585



AUG 17 1988

Mr. Richard Schwartz
President, Rocketdyne Division
Rockwell International Corporation
8900 DeSoto Avenue
Canoga Park, CA 91303

Immediate
Copies
Mr. [unclear]
Mr. [unclear]
Mr. [unclear]
Mr. [unclear]

Dear Mr. Schwartz: *Dick*

During the past several months, your staff has provided valuable information as we have evaluated options for the processing of fuel from the Fast Flux Test Facility (FFTF) at the Department of Energy's (DOE) Hanford site. The evaluation has been completed with the decision that the FFTF fuel will be processed at the Hanford site. Accordingly, you will be receiving revised program direction from our San Francisco Operations Office that our office no longer requires the use of the Rockwell International Corporation's fuel decladding capability.

As we reflect on the decladding and processing of fuel from DOE's research and test reactor programs, we realize and appreciate the valuable contribution of the Rockwell International Corporation. Your capability has been innovative and your performance outstanding. The Rockwell personnel who have contributed to these programs are to be commended for making them successful. We would like to take this opportunity to wish you and all Rockwell personnel who have worked on our programs the very best in your corporate and personal endeavors.

Sincerely,

Troy E. Wade II
Acting Assistant Secretary
for Defense Programs

cc: J. S. Elferink, SAN

07:150 *EC*

MAY 03 '89 14:41 PLUMMER B/019 3507



Department of Energy
San Francisco Operations Office
1333 Broadway
Oakland, California 94612



September 30, 1988

Mr. William F. Dennison
Rocketdyne Division
Rockwell International
Corporation
6633 Canoga Avenue
Canoga Park, California 91304

SUBJECT: Contract No. DE-AC03-86SF16021

Dear Mr. Dennison:

Please continue to work toward completing the Statement of Work for the subject contract, including any and all decommissioning efforts.

Sincerely,

Anthony J. Adduci
Project Manager
Nuclear Energy Division

08018 RC

RECEIVED
OCT 07 1988
CONTRACT ADM

ADDITIONAL TECHNICAL AND PROGRAMMATIC CHANGES

- a) Funding originally planned for FY92 was reduced \$718K by DOE.
- b) The Radioactive (RA) drain systems could not be decontaminated in situ using electropolishing and they must be removed by diamond saw cutting and other techniques.
- c) Through tubes and storage tubes could not be cleaned in situ and they must be removed by diamond core drilling.
- d) The laboratory contained nine large heavy shielding doors which also could not be cleaned in situ and they must be removed and decontaminated at RMDF. Four decontaminated doors have already been removed to RMDF, and five cell shield doors remain to be moved in FY92.
- e) Contamination was found behind the cell steel liners and the liners have to be removed and the concrete behind them decontaminated.