


NRC FORM 189 Page 1 of 3 (3-81)		 U.S. NUCLEAR REGULATORY COMMISSION		DATE OF PROPOSAL 07-11-83														
PROJECT AND BUDGET PROPOSAL FOR NRC WORK				<input checked="" type="checkbox"/> NEW <input type="checkbox"/> REVISION NO.														
PROJECT TITLE: PBF Severe Fuel Damage Series-2 Participation				FIN NUMBER B0827														
NRC OFFICE Nuclear Regulatory Research, Division of Accident Evaluation				NRC S&R NUMBER 60 19 02 01														
DOE CONTRACTOR UNION CARBIDE CORPORATION		PATENT STATUS <i>This proposal is being transmitted in advance of patent review for evaluation purposes only. No further dissemination or publication shall be made without prior approval of the Assistant General Counsel for Patents, DOE.</i>		CONTRACTOR/ORNL ACT. 41 32 00 00 0 DIV. 03														
SITE OAK RIDGE NATIONAL LABORATORY OAK RIDGE, TENNESSEE 37830				DOE S&R NUMBER 40 10 01 06														
COGNIZANT PERSONNEL		ORGANIZATION	FTS PHONE NUMBER	PERIOD OF PERFORMANCE														
NRC PROJECT MANAGER M. Jankowski		FSBR	427-4461	STARTING DATE 10-01-83														
OTHER NRC TECHNICAL STAFF				COMPLETION DATE 09-30-87														
DOE PROJECT MANAGER W. R. Bibb		DOE-ORO	626-0742															
CONTRACTOR/ORNL PROG. DIR.: A.P. Malinauskas PROG. MGR.: R.P. Wichner/T.S. Kress PROJ. MGR.: R. A. Lorenz PRIN. INVESTIGATOR(S): R. A. Lorenz/ A. L. Wright		CMO	624-0422															
		CTD/ETD	624-6863/624-0561															
		CTD	624-6844															
		CTD/ETD	624-6844/624-6878															
STAFF YEARS OF EFFORT (Round to nearest tenth of a year)		FY 1983	FY 1984	FY 1985	FY 1986	FY 1987												
Direct Scientific/Technical		0	1.0	1.0	1.0	1.0												
Other Direct		0	0	0	0	0												
TOTAL DIRECT STAFF YEARS		0	1.0	1.0	1.0	1.0												
COST PROPOSAL (OBLIGATIONS)		(\$ in Thousands)																
Direct Salaries (Cost Centers)		0	80	80	80	80												
Material and Services (Excluding ADP)		0	0	0	0	0												
ADP Support		0	14	22	22	22												
Subcontracts and Consultants		0	0	0	0	0												
Travel Expenses		<table border="1"> <tr> <td>Foreign</td> <td>0</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> <tr> <td>Domestic</td> <td>0</td> <td>10</td> <td>10</td> <td>10</td> <td>10</td> </tr> </table>					Foreign	0	10	10	10	10	Domestic	0	10	10	10	10
Foreign	0	10	10	10	10													
Domestic	0	10	10	10	10													
Indirect Labor Costs (Cost Centers)																		
Other (Specify) GSO Change		0	0	48	0	(48)												
General and Administrative (G&A/GPS)		0	36	38	38	38												
TOTAL OPERATING COST (Obligations)		0	150	208	160	112												
CAPITAL EQUIPMENT																		
FIN CHARGED:		0	0	0	0	0												
TOTAL PROJECT COST (Obligations)		0	150	208	160	112												
FY 1984		OCTOBER 12	NOVEMBER 13	DECEMBER 12	JANUARY 13	FEBRUARY 12												
MONTHLY FORECAST EXPENSE		APRIL 12	MAY 13	JUNE 12	JULY 13	AUGUST 12												
						SEPTEMBER 13												

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 ALVAREZ85-110 PDR

PROJECT AND BUDGET PROPOSAL FOR NRC WORK

B0827

DATE

07-11-83

PROJECT TITLE:

PBF Severe Fuel Damage Series-2 Participation

DOE PROPOSING ORGANIZATION:

UNION CARBIDE CORPORATION
OAK RIDGE NATIONAL LABORATORY
OAK RIDGE, TENNESSEE 37830

FORECAST MILESTONE CHART: Schedule to Start— —Completed (Shown in Quarter Year)

PROVIDE ESTIMATED DOLLAR COST FOR EACH TASK FOR EACH FISCAL YEAR

TASK		FY 1983				FY 1984				FY 1985				FY 1986				FY 1987			
		1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th	1st	2nd	3rd	4th
1. Analysis Support	SCHEDULE																				
	COST	0				130				100											
2. Data Evaluation	SCHEDULE																				
	COST	0				0				40				140				140			
3. Program Review and Evaluation	SCHEDULE																				
	COST	0				20				20				20				20			
	SCHEDULE																				
	COST																				
	SCHEDULE																				
	COST																				
TOTAL ESTIMATED PROJECT COST		0				150				160				160				160			

PROJECT DESCRIPTION: (Provide narrative descriptions on NRC Form 189 page 3 of 3 for the following topics in the order listed. Check applicable block. If an item is not applicable, so state.)

- | | |
|--|---|
| <input checked="" type="checkbox"/> 1. OBJECTIVE OR PROPOSED WORK | <input checked="" type="checkbox"/> 9. DESCRIBE SPECIAL FACILITIES REQUIRED |
| <input checked="" type="checkbox"/> 2. SUMMARY OF PRIOR EFFORTS | <input checked="" type="checkbox"/> 10. CONFLICT OF INTEREST INFORMATION |
| <input checked="" type="checkbox"/> 3. WORK TO BE PERFORMED AND EXPECTED RESULTS | <input checked="" type="checkbox"/> 11. OBLIGATION ESTIMATES |
| <input checked="" type="checkbox"/> 4. DESCRIPTION OF ANY FOLLOW-ON EFFORTS | <input checked="" type="checkbox"/> 12. OTHER (SPECIFY): |
| <input checked="" type="checkbox"/> 5. RELATIONSHIP TO OTHER PROJECTS | a. Quality assurance and control |
| <input checked="" type="checkbox"/> 6. REPORTING SCHEDULE | b. Cost and milestone charts |
| <input checked="" type="checkbox"/> 7. SUBCONTRACTOR INFORMATION | |
| <input checked="" type="checkbox"/> 8. LIST NEW CAPITAL EQUIPMENT REQUIRED | |

APPROVAL AUTHORITY-SIGNATURE

Q. P. Malian

DATE

9-14-83

PROJECT AND BUDGET PROPOSAL FOR NRC WORK

B0827

PROJECT TITLE:

PBF Severe Fuel Damage Series-2 Participation

ITEM NO.

1. OBJECTIVE OF PROPOSED WORK:

Summary

This task provides fission product and aerosol transport analysis support and data evaluation for the PBF Severe Fuel Damage Series 2 tests. The motivation for this support work is to (1) coordinate the PBF test results with analogous but smaller scale tests being conducted at ORNL and (2) apply experience and expertise developed at ORNL under the auspices of the NRC Source Term Research to the design and analysis of PBF SFD Series 2 tests.

2. SUMMARY OF PRIOR EFFORTS:

Summary

Oak Ridge National Laboratory has provided program and design evaluations to the NRC relevant to the SFD Series 2 tests.

3. WORK TO BE PERFORMED AND EXPECTED RESULTS:

Summary

Support for the PBF SFD Series 2 tests will be provided in the following three subtask areas:

Subtask 1. Analytical Support. Estimates and analyses of fission product and aerosol transport will be provided for conditions within the In Pile Tube (IPT) and external lines. Methods will be developed for later use in data analysis.

Subtask 2. Data Evaluation. Fission product release and aerosol transport data generated by the SFD Series 2 tests will be reviewed and analyzed in order to assess agreement with existing models and other test results.

Subtask 3. Program Review/Planning. This subtask provides input to the ongoing NRC review activity.

4. DESCRIPTION OF ANY FOLLOW-ON EFFORTS:

Not applicable.

5. RELATIONSHIP TO OTHER PROJECTS:

An intention of this task is to provide a formal link between the PBF tests and the following NRC research programs:

TRAP/MELT Verification	B0488
Fission Product Release from Fuel	B0127
Post-Accident Fission Product Chemistry	B0453
Fission Product Deposition on Aerosols	B0815

PROJECT AND BUDGET PROPOSAL FOR NRC WORK

80827

PROJECT TITLE:

PSF Severe Fuel Damage Series-2 Participation

ITEM NO.

6. REPORTING SCHEDULE:

See milestone chart.

7. SUBCONTRACTOR INFORMATION:

Not applicable.

8. LIST NEW CAPITAL EQUIPMENT REQUIRED:

Not applicable.

9. DESCRIBE SPECIAL FACILITIES REQUIRED:

Not applicable.

10. CONFLICT OF INTEREST INFORMATION:

There are no known relationships between this organization or its employees with industries regulated by the NRC and suppliers thereof that might give rise to an apparent or actual conflict of interest regarding the work described in this proposal.

11. OBLIGATION ESTIMATES:

Operating Expenses	Obligation Estimates				
	FY-1983	FY-1984	FY-1985	FY-1986	FY-1987
(1) Cost Estimates		150	160	160	160
(2) Goods and Services on Order-GSO Estimate		0*	48	48	0
Less: Uncosted Balance 9/30		0	0	48	48
GSO Change		0	48	0	(48)
(3) TOTAL OBLIGATIONS-CHANGE		150	208	160	112

*Please note that an additional \$48 K is required in FY-1984 for adequate forward financing.

12. OTHER:

12(a). QUALITY ASSURANCE AND QUALITY CONTROL: The tasks in this project are performed under the Quality Assurance requirements specified in the QA standards QA-L-3-100 (rev. 2), QA-L-14-100 (rev. 2), and QA-CT-20-100.

PROJECT AND BUDGET PROPOSAL FOR NRC WORK

B0827

PROJECT TITLE:

PBF Severe Fuel Damage Series-2 Participation

ITEM NO.

12. OTHER (Continued):

12(b). COST AND MILESTONE CHARTS

A. PROJECTED COST SCHEDULE

<u>Costs</u>	<u>Prior Years</u>	<u>1983</u>	<u>1984</u>	<u>1985</u>	<u>1986</u>	<u>1987</u>	<u>Total Estimated Cost</u>
Subtask 1	0	0	130	100	0	0	230
Subtask 2	0	0	0	40	140	140	320
Subtask 3	0	0	20	20	20	20	80

TITLE: PBF Severe Fuel Damage Series-2
Participation

ACTIVITY NO. 41 32 55 13 8
189A NO. _____
or
FTP/A NO. 30827

SUBTASK/MILESTONE SCHEDULE

NO. 12(b)

SUBTASK/MILESTONE	FY83				FY84				FY 85				FY 86	FY 87	FY88	FY89	FY90	BEYOND FY90
	1	2	3	4	1	2	3	4	1	2	3	4						
Subtask 1. <u>Analysis Support</u>																		
a. Provide aerosol transport analyses								▽					△					
b. Provide fission product transport evaluation								▽					△					
c. Provide evaluation of radiochemical procedures								△										
Subtask 2. <u>Data Evaluation</u>																		
a. Review fission product release from fuel data													▽		△			
b. Review aerosol transport data and aerosol production information													▽		△			
c. Review fission product transport data													▽		△			
Subtask 3. <u>Program Review and Planning</u>																		
Ongoing activity																		