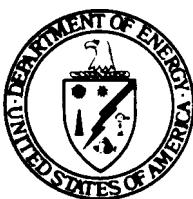


# **MONTHLY AWAY-FROM-REACTOR SPENT FUEL STORAGE REPORT AFR PROGRAM**

**SEPTEMBER 1-30, 1980**



**U. S. Department of Energy  
Savannah River Operations Office  
Aiken, South Carolina 29801**

**DISCLAIMER**

This book was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise, does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

## **DISCLAIMER**

**This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor any of their employees, makes any warranty, express or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.**

---

## **DISCLAIMER**

**Portions of this document may be illegible in electronic image products. Images are produced from the best available original document.**

## CONTENTS

	<u>Page</u>
<b>SUMMARY</b>	2
<b>I 1: Planning and Management</b>	14
<b>I 2: Facility Acquisition</b>	46
<b>I 3: Legislative Requirements</b>	54
<b>I 4: Technical Support</b>	64
<b>I 5: Transportation</b>	96
<b>I 6: International Activities</b>	106
<b>AFR GLOSSARY</b>	119

## SUMMARY

### II: PLANNING AND MANAGEMENT

This section provides a general statement of monthly activities which are itemized under the applicable program area. Specific program objectives, associated project activity and cost and milestone charts are provided in subsequent status sections; e.g., II: PLANNING AND MANAGEMENT -- see page 5.

An AFR Monthly Program Review was presented to DOE/HQ on September 22 and 23. Special presentations were made, items of interest were discussed, and completed milestones and milestone exceptions were reviewed.

Publication of the revised AFR Program Plan has been scheduled for November. An additional \$10 million of 79-I-P money has been appropriated for the program during FY 1981.

Individual letters, an agenda and registration forms for the AFR Contractor Review Meeting on October 29 and 30 have been published, assembled and mailed to contractors, interest groups and AFR personnel. A detailed agenda and instructions have been prepared and mailed to individuals speaking at the meeting.

A task force has been formed to determine the economic value of the potential acquisition facilities to the AFR Program.

The analysis of 10CFR2 that resulted in a schedule of 32 months for licensing an AFR facility in a contested proceeding (May report) was reviewed by NRC and considered to be satisfactory.

Cross-statements filed by additional participants on NRC Waste Confidence Rulemaking have been analyzed and considered for possible new issues pertaining to spent fuel storage. A listing of all previous issues has been prepared by E. R. Johnson Associates.

E. R. Johnson Associates has completed review of transcripts of NRC proceedings related to the licensing of spent fuel storage facilities. Draft final report preparation has been initiated.

A program review meeting has been scheduled by the Southern States Energy Board for October 6 and 7 in Atlanta.

Assistance was provided in publicizing the extension of the comment period on the scope and outline for a draft environmental impact statement. Representatives contacted local newspapers and radio stations in areas surrounding three potential acquisition sites -- Barnwell, SC; Morris, IL; and West Valley, NY. Ads and announcements were run for three consecutive days. Libraries in the areas were also contacted to ensure that a copy of the Federal Register Notice of Intent was available to the public.

## 12: FACILITY ACQUISITION

A reinforced concrete buttress outside of the basin wall has been selected as the best method for supporting the south wall in the event of add-on pool construction at the Morris operation.

Preliminary storage basket designs for Morris operation are being reviewed by GE rack fabricators in Wilmington, NC to ensure a readily fabricated and cost effective design.

Design work for facility modifications at AGNS-BNPF has been completed and a final report is being compiled.

## 13: LEGISLATIVE REQUIREMENTS

A formal draft of the fee report for Congress, "Department of Energy Fee and Cost Studies of Spent Nuclear Fuel Storage and Disposal," DPSP-AFR-80-8-7, Revision 1, September 1980, has been issued and is being reviewed internally. Volume II, a collection of reports used in fee determination has been deleted because these reports are available to the public.

Preparation of the draft near-term AFR-EIS continues. Preliminary drafts of supporting material from S. M. Stoller Corp. and Sandia National Laboratories have been reviewed, and comments have been referred back to originators. A working copy of the draft AFR-EIS should be available in December.

## 14: TECHNICAL SUPPORT

The Technical Data Summary for AFR safeguards and nonproliferation concerns (DPSTD-AFR-80-43) has been issued. An activities schedule to meet the 1985 facility startup date is being prepared.

A preliminary assessment of results of destructive and nondestructive examination of Shippingport fuel indicates that none of the cladding properties have changed substantially during 21 years of water storage.

Fabrication of fuel bundle disassembly equipment at Offshore Power Systems for NAC is currently behind schedule; however, they expect to return to the original schedule.

Westinghouse has submitted the final draft of a program plan for dry storage studies to be conducted at the Nevada Test Site. Contract activity for this work is in progress.

John Hopkins University is continuing work on streamlining computer programs and developing and testing methods to address timing and capacity considerations in AFR site selection.

Experimental data from the first of five rod criticality cores have been obtained by Babcock and Wilcox.

#### 15: TRANSPORTATION

Sandia Laboratories conducted high-velocity impact tests on spent fuel to determine released product dispersion. Data analysis is underway.

A computer model has been developed by Sandia to evaluate the thermal transient inside a spent fuel cask during and after an accident.

Transportation interface data sheets have been prepared for each foreign nuclear reactor. A final report will be complete in November.

#### 16: INTERNATIONAL ACTIVITY

Work on the fuel transfer studies is essentially completed; reports are scheduled for release in early October.

A U. S. proposal for a work plan and allocation of tasks for the Pacific Basin Feasibility Study has been transmitted to the Japanese team to prepare for the initial joint working level meeting in October.

The draft report for Term of Reference 3 (Study of AFR and transporation costs) of the International Spent Fuel Management (ISFM) study has been transmitted to the International Atomic Energy Agency.

The International Cooperation Plan and discussion papers for three potential participants (countries) are being reviewed.

FORM DOE 536

(1/78)

VPI MODIFICATION

**U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION SPENT FUEL STORAGE		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1										
4. CONTRACTOR NAME AND ADDRESS UPPER LEVEL WORK BREAKDOWN STRUCTURE		79-1P FUNDING		5. CONTRACT START DATE 1 OCT 79										
6. CONTRACTOR NAME AND ADDRESS				6. CONTRACT COMPLETION DATE 30 SEP 85										
7. MONTHS	O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	B. FY 80
8. COST STATUS														
<b>81 B AND R NUMBERS</b>  <b>ITM</b> <b>39-AS0</b>	9000												9. COST PLAN DATE 21 OCT 80	
	8500												10. PLANNED COSTS PRIOR FYS	
	8000												N/A	
	7500												11. ACTUAL COSTS PRIOR FYS	
	7000												N/A	
	6500												12. TOTAL ESTIMATE FY COSTS FOR CONTRACT	
	6000												4448	
	5500												13. TOTAL CONTRACT VALUE	
	5000												N/A	
	4500												14. UNFILLED ORDERS OUTSTANDING	
	4000												N/A	
	3500												15. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD	
	3000												N/A	
	2500												16. ACTUAL COSTS SUBSEQUENT REPORTING PERIOD	
2000												4055		
1750												17. TOTAL ESTIMATE FY COSTS FOR CONTRACT		
1500												4883		
1250												18. TOTAL CONTRACT VALUE		
1000												N/A		
750												19. UNFILLED ORDERS OUTSTANDING		
500												N/A		
250												20. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD		
0												N/A		
REMARKS														
CONFLICT - FINANCIAL PLAN IS 4883 FY ESTIMATE IS 4448														

FORM DOE 536

(1/78)

VPI MODIFICATION

**U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION SPENT FUEL STORAGE		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1										
4. CONTRACTOR NAME AND ADDRESS UPPER LEVEL WORK BREAKDOWN STRUCTURE		DOMESTIC FUNDING		5. CONTRACT START DATE 1 OCT 79										
6. CONTRACTOR NAME AND ADDRESS				6. CONTRACT COMPLETION DATE 30 SEP 85										
7. MONTHS	O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	B. FY 80
8. COST STATUS														
<b>81 B AND R NUMBERS</b>  <b>DOM</b> <b>AS0505</b>	9000												9. COST PLAN DATE 21 OCT 80	
	8500												10. PLANNED COSTS PRIOR FYS	
	8000												N/A	
	7500												11. ACTUAL COSTS PRIOR FYS	
	7000												N/A	
	6500												12. TOTAL ESTIMATE FY COSTS FOR CONTRACT	
	6000												7605	
	5500												13. TOTAL CONTRACT VALUE	
	5000												N/A	
	4500												14. UNFILLED ORDERS OUTSTANDING	
	4000												N/A	
	3500												15. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD	
	3000												N/A	
	2500												16. ACTUAL COSTS SUBSEQUENT REPORTING PERIOD	
2000												7144		
1500												17. TOTAL ESTIMATE FY COSTS FOR CONTRACT		
1000												7170		
500												18. TOTAL CONTRACT VALUE		
0												N/A		
REMARKS														
CONFLICT - FINANCIAL PLAN IS 7170 FY ESTIMATE IS 7605														

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION SPENT FUEL STORAGE		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 1							
4. CONTRACTOR NAME AND ADDRESS UPPER LEVEL WORK BREAKDOWN STRUCTURE		5. INTERNATIONAL FUNDING												6. CONTRACT START DATE 1 OCT 79							
														7. CONTRACT COMPLETION DATE 30 SEP 85							
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FY 80						
9. COST STATUS														10. GL COST PLAN DATE 21 OCT 80							
11. HI PLANNED COSTS THOUSANDS		4500	4250	4000	3750	3500	3250	3000	2750	2500	2250	2000	1750	1500	1250	1000	750	500	250	0	11. HI PLANNED COSTS PRIOR FYS
12. HI ACTUAL COSTS FOR RS0510														12. N/A							
13. HI VARIANCE														13. HI TOTAL ESTIMATE FY COSTS FOR CONTRACT 2992							
14. HI CUM. VARIANCE														14. HI TOTAL CONTRACT VALUE N/A							
15. HI UNFILLED ORDERS OUTSTANDING														15. HI UNFILLED ORDERS OUTSTANDING N/A							
16. HI ESTIMATE FOR SUBSEQUENT REPORTING PERIOD														16. N/A							
17. REMARKS														17. CONFLICT - FINANCIAL PLAN IS 2960 FY ESTIMATE IS 2992							

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION PLANNING AND MANAGEMENT		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 11							
4. CONTRACTOR NAME AND ADDRESS UPPER LEVEL WORK BREAKDOWN STRUCTURE		5. 79-1P FUNDING												6. CONTRACT START DATE 1 OCT 79							
														7. CONTRACT COMPLETION DATE 30 SEP 85							
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FY 80						
9. COST STATUS														10. GL COST PLAN DATE 21 OCT 80							
11. HI PLANNED COSTS THOUSANDS		450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0	11. HI PLANNED COSTS PRIOR FYS
12. HI ACTUAL COSTS ITM 39-AS0														12. N/A							
13. HI VARIANCE														13. HI TOTAL ESTIMATE FY COSTS FOR CONTRACT 204							
14. HI CUM. VARIANCE														14. HI TOTAL CONTRACT VALUE N/A							
15. HI UNFILLED ORDERS OUTSTANDING														15. HI UNFILLED ORDERS OUTSTANDING N/A							
16. HI ESTIMATE FOR SUBSEQUENT REPORTING PERIOD														16. N/A							
17. REMARKS														17. CONFLICT - FINANCIAL PLAN IS 234 FY ESTIMATE IS 204							

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION PLANNING AND MANAGEMENT										2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 11	
4. CONTRACTOR NAME AND ADDRESS UPPER LEVEL WORK BREAKDOWN STRUCTURE										5. CONTRACT START DATE 1 OCT 79			
6. CONTRACT COMPLETION DATE 30 SEP 85										7. MONTHS O N D J F M A M J J A S		8. TOTALS 8. FF 80	
9. COST STATUS													
10. BUDGET NUMBERS DOM AS0505	11. ACTUAL COSTS PRIOR FF'S										12. COST PLAN DATE 21 OCT 80		
	13. PLANNED COSTS PRIOR FF'S										14. PLANNED COSTS FOR CONTRACT 3237		
	15. TOTAL CONTRACT VALUE N/A										16. UNFILLED BUDGETS OUTSTANDING N/A		
	17. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A										18. MARKS		
	19. CONFLICT - FINANCIAL PLAN IS 3015 FY ESTIMATE IS 3437												

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION PLANNING AND MANAGEMENT										2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 11	
4. CONTRACTOR NAME AND ADDRESS UPPER LEVEL WORK BREAKDOWN STRUCTURE										5. CONTRACT START DATE 1 OCT 79			
6. CONTRACT COMPLETION DATE 30 SEP 85										7. MONTHS O N D J F M A M J J A S		8. TOTALS 8. FF 80	
9. COST STATUS													
10. BUDGET NUMBERS FOR AS0510	11. ACTUAL COSTS PRIOR FF'S										12. COST PLAN DATE 21 OCT 80		
	13. PLANNED COSTS PRIOR FF'S										14. PLANNED COSTS FOR CONTRACT 271		
	15. TOTAL CONTRACT VALUE N/A										16. UNFILLED BUDGETS OUTSTANDING N/A		
	17. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A										18. MARKS		
	19. CONFLICT - FINANCIAL PLAN IS 239 FY ESTIMATE IS 271												

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION FACILITY ACQUISITIONS		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 12				
4. CONTRACTOR (NAME AND ADDRESS)		79-1P FUNDING												5. CONTRACT START DATE 1 OCT 79				
														6. CONTRACT COMPLETION DATE 30 SEP 89				
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		8. FY 80		
9. COST STATUS																		
RI  THOUSANDS  S. I. AND R. NUMBERS ITM 39-RSO															9.1 COST PLAN DATE 21 OCT 80			
															9.2 PLANNED COSTS PRIOR FY'S			
															N/A			
															9.3 ACTUAL COSTS PRIOR FY'S			
															N/A			
															9.4 TOTAL ESTIMATE FY COSTS FOR CONTRACT 2309			
															9.5 TOTAL CONTRACT VALUE			
															N/A			
															9.6 UNFILLED ORDERS OUTSTANDING			
															N/A			
	ACCURRED COSTS		CI PLANNED	45	68	78	108	148	163	265	301	346	359	373	300	2554	9.7 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD	
			DI ACTUAL	45	68	78	108	148	163	265	260	286	258	180	315	2174	N/A	
			EI VARIANCE	0	0	0	0	0	0	0	41	60	101	193	-15		9.8 CUM. VARIANCE	
			FI CUM. VARIANCE	0	0	0	0	0	0	0	41	101	202	395	380		N/A	
	REMARKS																	
CONFLICT - FINANCIAL PLAN IS 2554 FY ESTIMATE IS 2309																		

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION FACILITY ACQUISITIONS		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 12				
4. CONTRACTOR (NAME AND ADDRESS)		DOMESTIC FUNDING												5. CONTRACT START DATE 1 OCT 79				
														6. CONTRACT COMPLETION DATE 30 SEP 89				
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		8. FY 80		
9. COST STATUS																		
RI  THOUSANDS  S. I. AND R. NUMBERS DOM AS0505															9.1 COST PLAN DATE 21 OCT 80			
															9.2 PLANNED COSTS PRIOR FY'S			
															N/A			
															9.3 ACTUAL COSTS PRIOR FY'S			
															N/A			
															9.4 TOTAL ESTIMATE FY COSTS FOR CONTRACT 217			
															9.5 TOTAL CONTRACT VALUE			
															N/A			
															9.6 UNFILLED ORDERS OUTSTANDING			
	ACCURRED COSTS		CI PLANNED	0	0	0	0	0	26	6	6	6	6	7	7	64	9.7 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD	
			DI ACTUAL	0	0	0	0	0	26	0	0	15	0	0	153	194	N/A	
			EI VARIANCE	0	0	0	0	0	0	6	6	-9	6	7	-146		9.8 CUM. VARIANCE	
			FI CUM. VARIANCE	0	0	0	0	0	0	6	12	3	-9	16	-130		N/A	
	REMARKS																	
	CONFLICT - FINANCIAL PLAN IS 64 FY ESTIMATE IS 217																	

FORM DOE 536

(1/78)

VPI MODIFICATION

**U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION		2. REPORTING PERIOD												3. CONTRACT NUMBER																	
		01 SEP 80 THROUGH 30 SEP 80												13																	
4. CONTRACTOR NAME AND ADDRESS		79-1P FUNDING												5. CONTRACT START DATE																	
														1 OCT 79																	
6. UPPER LEVEL WORK BREAKDOWN STRUCTURE														7. CONTRACT COMPLETION DATE																	
														30 APR 81																	
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		8. FY 80															
9. COST STATUS																															
10. B AND R NUMBERS  ITM 39-AS0														11. COST PLAN DATE		21 OCT 80															
														12. PLANNED COSTS PRIOR FYS		N/A															
														13. ACTUAL COSTS PRIOR FYS		N/A															
														14. TOTAL ESTIMATE FY COSTS FOR CONTRACT		150															
														15. TOTAL CONTRACT VALUE		N/A															
														16. UNFILLED ORDERS OUTSTANDING		N/A															
														17. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD		N/A															
														18. REMARKS																	

FORM DOE 536

(1/78)

VPI MODIFICATION

**U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION		2. REPORTING PERIOD												3. CONTRACT NUMBER															
		01 SEP 80 THROUGH 30 SEP 80												13															
4. CONTRACTOR NAME AND ADDRESS		DOMESTIC FUNDING												5. CONTRACT START DATE															
														1 OCT 79															
6. UPPER LEVEL WORK BREAKDOWN STRUCTURE														7. CONTRACT COMPLETION DATE															
														30 APR 81															
8. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		8. FY 80													
9. COST STATUS																													
10. B AND R NUMBERS  DOM AS0505														11. COST PLAN DATE		21 OCT 80													
														12. PLANNED COSTS PRIOR FYS		N/A													
														13. ACTUAL COSTS PRIOR FYS		N/A													
														14. TOTAL ESTIMATE FY COSTS FOR CONTRACT		851													
														15. TOTAL CONTRACT VALUE		N/A													
														16. UNFILLED ORDERS OUTSTANDING		N/A													
														17. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD		N/A													
														18. REMARKS															
														CONFLICT - FINANCIAL PLAN IS 816 FY ESTIMATE IS 851															

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION TECHNICAL SUPPORT		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 14								
4. CONTRACTOR NAME AND ADDRESS: UPPER LEVEL WORK BREAKDOWN STRUCTURE		79-1P FUNDING												5. CONTRACT START DATE 1 OCT 79								
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		B. FY 80						
8. COST STATUS														6. COST PLAN DATE 21 OCT 80								
9. B AND R NUMBERS ITM 39-AS0	THOUSANDS	2250	2125	2000	1875	1750	1625	1500	1375	1250	1125	1000	875	750	625	500	375	250	125	0	10. PLANNED COSTS PRIOR FY'S	
													N/A									
													11. ACTUAL COSTS PRIOR FY'S									
													N/A									
													12. TOTAL ESTIMATE FY COSTS FOR CONTRACT									
													1785									
													13. TOTAL CONTRACT VALUE									
													N/A									
													14. UNFILLED ORDERS OUTSTANDING									
													N/A									
15. REVENUES														16. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD								
CONFLICT - FINANCIAL PLAN IS 1945 FY ESTIMATE IS 1785														N/A								

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION TECHNICAL SUPPORT		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 14								
4. CONTRACTOR NAME AND ADDRESS: UPPER LEVEL WORK BREAKDOWN STRUCTURE		DOMESTIC FUNDING												5. CONTRACT START DATE 1 OCT 79								
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		B. FY 80						
8. COST STATUS														6. COST PLAN DATE 21 OCT 80								
9. B AND R NUMBERS DOM AS0505	THOUSANDS	2250	2125	2000	1875	1750	1625	1500	1375	1250	1125	1000	875	750	625	500	375	250	125	0	10. PLANNED COSTS PRIOR FY'S	
													N/A									
													11. ACTUAL COSTS PRIOR FY'S									
													N/A									
													12. TOTAL ESTIMATE FY COSTS FOR CONTRACT									
													2300									
													13. TOTAL CONTRACT VALUE									
													N/A									
													14. UNFILLED ORDERS OUTSTANDING									
													N/A									
15. REVENUES														16. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD								
CONFLICT - FINANCIAL PLAN IS 2275 FY ESTIMATE IS 2300														N/A								

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION TECHNICAL SUPPORT												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80	3. CONTRACT NUMBER 14																																																																			
4. CONTRACTOR NAME AND ADDRESS UPPER LEVEL WORK BREAKDOWN STRUCTURE												INTERNATIONAL FUNDING	5. CONTRACT START DATE 1 OCT 79																																																																			
7. MONTHS O N D J F M A M J J A S												TOTALS	8. FY 80																																																																			
9. COST STATUS																																																																																
												10. COST PLAN DATE 21 OCT 80																																																																				
																								11. PLANNED COSTS PRIOR FYS N/A																																																								
																								12. ACTUAL COSTS PRIOR FYS N/A																																																								
																								13. TOTAL ESTIMATE FY COSTS FOR CONTRACT 401																																																								
																								14. TOTAL CONTRACT VALUE N/A																																																								
																								15. UNFILLED ORDERS OUTSTANDING N/A																																																								
																								16. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A																																																								
																								17. REMARKS																																																								
												<table border="1"> <tr> <td>RECORDED COSTS</td> <td>13</td><td>13</td><td>14</td><td>14</td><td>15</td><td>25</td><td>25</td><td>44</td><td>45</td><td>50</td><td>71</td><td>72</td><td>401</td> </tr> <tr> <td>RECORDED COSTS</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>48</td><td>25</td><td>14</td><td>18</td><td>39</td><td>34</td><td>52</td><td>171</td><td>401</td> </tr> <tr> <td>RECORDED COSTS</td> <td>13</td><td>13</td><td>14</td><td>14</td><td>-33</td><td>0</td><td>11</td><td>26</td><td>6</td><td>16</td><td>19</td><td>-99</td><td></td> </tr> <tr> <td>RECORDED COSTS</td> <td>13</td><td>26</td><td>40</td><td>54</td><td>21</td><td>21</td><td>32</td><td>58</td><td>64</td><td>80</td><td>99</td><td>0</td><td></td> </tr> </table>												RECORDED COSTS	13	13	14	14	15	25	25	44	45	50	71	72	401	RECORDED COSTS	0	0	0	0	48	25	14	18	39	34	52	171	401	RECORDED COSTS	13	13	14	14	-33	0	11	26	6	16	19	-99		RECORDED COSTS	13	26	40	54	21	21	32	58	64	80	99	0		RECORDED COSTS
												RECORDED COSTS	13	13	14	14	15	25	25	44	45	50	71	72	401																																																							
												RECORDED COSTS	0	0	0	0	48	25	14	18	39	34	52	171	401																																																							
												RECORDED COSTS	13	13	14	14	-33	0	11	26	6	16	19	-99																																																								
												RECORDED COSTS	13	26	40	54	21	21	32	58	64	80	99	0																																																								

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION TRANSPORTATION												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80	3. CONTRACT NUMBER 15																																																																			
4. CONTRACTOR NAME AND ADDRESS UPPER LEVEL WORK BREAKDOWN STRUCTURE												INTERNATIONAL FUNDING	5. CONTRACT START DATE 1 OCT 79																																																																			
7. MONTHS O N D J F M A M J J A S												TOTALS	8. FY 80																																																																			
9. COST STATUS																																																																																
												10. COST PLAN DATE 21 OCT 80																																																																				
																								11. PLANNED COSTS PRIOR FYS N/A																																																								
																								12. ACTUAL COSTS PRIOR FYS N/A																																																								
																								13. TOTAL ESTIMATE FY COSTS FOR CONTRACT 1000																																																								
																								14. TOTAL CONTRACT VALUE N/A																																																								
																								15. UNFILLED ORDERS OUTSTANDING N/A																																																								
																								16. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A																																																								
																								17. REMARKS																																																								
												<table border="1"> <tr> <td>ACCUMULATED COSTS</td> <td>66</td><td>76</td><td>86</td><td>86</td><td>92</td><td>97</td><td>98</td><td>83</td><td>83</td><td>63</td><td>73</td><td>73</td><td>1000</td> </tr> <tr> <td>ACCUMULATED COSTS</td> <td>0</td><td>0</td><td>0</td><td>31</td><td>95</td><td>61</td><td>26</td><td>75</td><td>35</td><td>99</td><td>73</td><td>83</td><td>1000</td> </tr> <tr> <td>ACCUMULATED COSTS</td> <td>66</td><td>76</td><td>86</td><td>-230</td><td>-3</td><td>16</td><td>11</td><td>23</td><td>-2</td><td>-16</td><td>-15</td><td>-12</td><td></td> </tr> <tr> <td>ACCUMULATED COSTS</td> <td>66</td><td>142</td><td>228</td><td>-2</td><td>-5</td><td>11</td><td>22</td><td>45</td><td>43</td><td>27</td><td>12</td><td>0</td><td></td> </tr> </table>												ACCUMULATED COSTS	66	76	86	86	92	97	98	83	83	63	73	73	1000	ACCUMULATED COSTS	0	0	0	31	95	61	26	75	35	99	73	83	1000	ACCUMULATED COSTS	66	76	86	-230	-3	16	11	23	-2	-16	-15	-12		ACCUMULATED COSTS	66	142	228	-2	-5	11	22	45	43	27	12	0		ACCUMULATED COSTS
												ACCUMULATED COSTS	66	76	86	86	92	97	98	83	83	63	73	73	1000																																																							
												ACCUMULATED COSTS	0	0	0	31	95	61	26	75	35	99	73	83	1000																																																							
												ACCUMULATED COSTS	66	76	86	-230	-3	16	11	23	-2	-16	-15	-12																																																								
												ACCUMULATED COSTS	66	142	228	-2	-5	11	22	45	43	27	12	0																																																								

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION TRANSPORTATION		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 15		
4. CONTRACTOR NAME AND ADDRESS UPPER LEVEL WORK BREAKDOWN STRUCTURE		INTERNATIONAL FUNDING												5. CONTRACT START DATE 1 OCT 79		
7. MONTHS		G	N	D	J	F	M	A	M	J	J	A	S	TOTALS		B. FT 80
8. COST STATUS														9. COST PLAN DATE 21 OCT 80		
B1. B AND R NUMBERS FOR AS0510		THOUSANDS												B10. PLANNED COSTS PRIOR F15 N/A		
450 425 400 375 350 325 300 275 250 225 200 175 150 125 100 75 50 25 0														B11. ACTUAL COSTS PRIOR F15 N/A		
														B12. TOTAL ESTIMATE FT COSTS FOR CONTRACT 500		
														B13. TOTAL CONTRACT VALUE N/A		
														B14. UNFILLED ORDERS OUTSTANDING N/A		
REMARKS														B15. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A		

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION INTERNATIONAL ACTIVITIES		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 16		
4. CONTRACTOR NAME AND ADDRESS UPPER LEVEL WORK BREAKDOWN STRUCTURE		INTERNATIONAL FUNDING												5. CONTRACT START DATE 1 OCT 79		
7. MONTHS		G	N	D	J	F	M	A	M	J	J	A	S	TOTALS		B. FT 80
8. COST STATUS														9. COST PLAN DATE 21 OCT 80		
B1. B AND R NUMBERS FOR AS0510		THOUSANDS												B10. PLANNED COSTS PRIOR F15 N/A		
2250 2125 2000 1875 1750 1625 1500 1375 1250 1125 1000 875 750 625 500 375 250 125 0														B11. ACTUAL COSTS PRIOR F15 N/A		
														B12. TOTAL ESTIMATE FT COSTS FOR CONTRACT 1820		
														B13. TOTAL CONTRACT VALUE N/A		
														B14. UNFILLED ORDERS OUTSTANDING N/A		
REMARKS														B15. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A		



## II: PLANNING AND MANAGEMENT

### III: PLANNING

#### III: Facility Planning

##### OBJECTIVE

Provide planning required for evaluation and timely acquisition of spent fuel storage facilities (both existing and new) to meet the anticipated requirements for AFR spent fuel storage.

##### ACTIVITY STATUS

.02 Facility Evaluation. An outline for the Congressional Cost Report requested by the House Interstate and Foreign Commerce Committee was drafted and is being reviewed. A venture analysis cost team was established to provide input into the facility value studies. A list of independent appraisers certified by the Corps of Engineers was compiled. One or more of these appraisers will be selected to provide an appraisal of the three existing commercial facilities. A schedule has been developed showing near-term interaction of appraisals, venture analysis, and congressional report preparation. The schedule will be expanded to show all aspects of the acquisition-negotiation process.

FORM DOE 535  
(1/1/78)  
VPI FACS(MIL)

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION <b>FACILITY PLANNING</b>		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 1111.																							
4. CONTRACTOR (NAME, ADDRESS) <b>SAVANNAH RIVER PLANT</b> <b>AIKEN</b> <b>SOUTH CAROLINA</b>														5. CONTRACT START DATE 1 APRIL 79																							
7. IDENT. NUMBER		8. REPORTING CATEGORY		9. FISCAL YEARS												6. CONT. COMPLETION DATE INDEFINITE																					
				FY 1979						FY 1980						FY 1981																					
				1	2	3	4	0	N	D	J	F	M	R	M	J	J	A	1	2	3	4	1	2	3	4	1	2	3	4	10. PERCENT COMPLETE						
. 1		STORAGE REQUIREMENTS		[REDACTED]												[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		0					
. 2		FACILITY EVALUATION		[REDACTED]												[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		0			
. 3		FACILITY SELECTION		[REDACTED]												[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		[REDACTED]		0	
																				</td																	

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>FACILITY PLANNING</b>	2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>	3. CONTRACT NUMBER <b>1111.</b>																								
4. CONTRACTOR (NAME AND ADDRESS) <b>SAVANNAH RIVER PLANT AIKEN SOUTH CAROLINA</b>	5. CONTRACT START DATE <b>1 APR 79</b>	6. CONTRACT COMPLETION DATE <b>CONTINUING</b>																								
7. MONTHS	ALL FUNDING																									
8. COST STATUS																										
9.1													G1 COST PLAN DATE <b>21 OCT 80</b>													
THOUSANDS	450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0	H1 PLANNED COSTS PRIOR FY'S <b>N/A</b>						
9.2	450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0	H2 ACTUAL COSTS PRIOR FY'S <b>N/A</b>						
9.3	450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0	H3 TOTAL ESTIMATE FY COSTS FOR CONTRACT <b>150</b>						
9.4	450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0	H4 TOTAL CONTRACT VALUE <b>N/A</b>						
9.5	450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0	H5 UNFILLED BUDGETS OUTSTANDING <b>N/A</b>						
9.6	450	425	400	375	350	325	300	275	250	225	200	175	150	125	100	75	50	25	0	H6 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD <b>N/A</b>						
10.1													I1 PLANNED	10	10	11	11	11	6	6	6	7	7	7	8	100
10.2													I2 ACTUAL	0	0	0	0	53	6	6	6	4	7	26	23	131
10.3													I3 VARIANCE	10	10	11	11	-42	0	0	0	3	0	-19	-15	N/A
10.4													I4 CUM. VARIANCE	10	20	31	42	0	0	0	0	3	3	-16	-31	N/A
11.1													J1 CONFLICT	CONFlict - FINANCIAL PLAN IS <b>100</b> FY ESTIMATE IS <b>150</b>												
12.1													J2 SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE	J3 SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE												

CONFLICT - FINANCIAL PLAN IS 100 FY ESTIMATE IS 150

13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE

14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE FOR THE

### III: PLANNING

#### III2: Program/Budget Plans

##### OBJECTIVE

Provide a plan to implement the AFR Spent Fuel Storage Program, manage funding allocated to the program, and direct technical effort to achieve the program goals.

##### ACTIVITY STATUS

.01 **Program Plans.** The first revision to the AFR program plan has been delayed. Publication is now scheduled for November.

.02 **Budget.** The following appropriation levels were specified for the fiscal year 1981 AFR program.

<u>Funding Type</u>	<u>(\$1,000)</u>
Domestic	8,000
International	3,000
79-1-P	10,000
Capital Equipment	1,000

.03 **Steering.** The October monthly program review for DOE/HQ personnel will be held at SRP on October 31. The program scope for this month is limited since the review follows immediately after the AFR program contractor review sessions.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

CONFLICT - FINANCIAL PLAN IS 1863 FY ESTIMATE IS 1946

13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE \_\_\_\_\_

### III: PLANNING

#### III3: Business Services

##### OBJECTIVE

Develop economic criteria and determine economic value of potential AFR sites. Provide planning and services required for the commercial business office aspects of the AFR program. Assist with facility negotiations -- preliminary and final.

##### ACTIVITY STATUS

- .01 Facility Value. A list of tasks was developed to aid in identifying those activities that must be accomplished to complete the evaluation study. A task force has been formed and assignments issued. The major steps to completion of the evaluation are:
  - Define alternatives to existing facilities
  - Develop life cycle costs of alternatives
  - Determine facility cost component of alternatives
  - Develop life cycle costs of existing facilities utilizing the Fair Market Value provided by a contract appraiser
  - Utilize facility cost component from alternative in a revenue value study to determine existing facility values
- .03 Contract Office. The Du Pont model contract and the DOE/OGC version were submitted to S. M. Stoller for summarization of differences and recommendations as to a model contract based on a combination of the two.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION <b>BUSINESS SERVICES</b>				2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 1113.						
4. CONTRACTOR NAME, ADDRESS <b>SAVANNAH RIVER PLANT</b> <b>AIKEN</b> <b>SOUTH CAROLINA</b>																5. CONTRACT START DATE 1 APRIL 79						
																6. CONTRACT COMPLETION DATE INDEFINITE						
7. IDENT. NUMBER	8. REPORTING CATEGORY	9. FISCAL YEARS FY 1978				FY 1980				FY 1981				10. PERCENT COMPLETE								
		1	2	3	4	0	N	D	J	F	M	A	M		J	J	P	S	1	2	3	4
1. 1	FACILITY VALUE																					0
1. 2	BUSINESS OFFICE																					
1. 3	CONTRACT OFFICE PCT																					
1. 4	OPERATIONS MANAGEMENT																					0
11. REMARKS																						
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE										13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE												

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION <b>BUSINESS SERVICES</b>				2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 1113.			
4. CONTRACTOR NAME AND ADDRESS <b>SAVANNAH RIVER PLANT</b> <b>AIKEN</b> <b>SOUTH CAROLINA</b>																5. CONTRACT START DATE 1 APR 79			
																6. CONTRACT COMPLETION DATE CONTINUING			
7. MONTHS		ALL FUNDING											TOTALS	8. FY 80					
		O	N	D	J	F	M	A	M	J	J	A			S				
9. COST STATUS																			
10. BUDGET NUMBERS	THOUSANDS												11. COST PLAN DATE 21 OCT 80						
		90	85	80	75	70	65	60	55	50	45	40	35	30	25	20	15	10	5
11. BUDGET NUMBERS	ALL												12. PLANNED COSTS PRIOR FYS N/A						
		50	45	40	35	30	25	20	15	10	5	0	0	0	0	0	0	0	0
12. ACCURRED COSTS	PERIODS												13. RETURN COSTS PRIOR FYS N/A						
		6	4	4	6	6	3	7	7	7	10	10	10	80	6	6	6	6	6
14. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE													15. TOTAL ESTIMATE FOR COSTS FOR CONTRACT 60						
													16. TOTAL CONTRACT VALUE N/A						
													17. UNFULFILLED ORDERS OUTSTANDING N/A						
													18. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A						
19. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE																			

## 112: PLANNING SUPPORT

### 1122: Storage Logistics

#### OBJECTIVE

Develop and maintain a computer code which will calculate AFR storage requirements. This code should calculate spent fuel discharges, analyze onsite storage capacities, and determine the amount of fuel to be shipped to a potential AFR for a wide range of conditions and parameters. The data base should contain reactor and pool information in all operating and planned domestic power reactors, and be updated periodically with information obtained from the utilities.

Capability of calculating the number of fuel casks needed in any given year to transport the spent fuel is possible.

#### ACTIVITY STATUS

- .03.2 Uncommitted Reactor Discharges. Programming is about 80% complete and is being tested. A reactor model for uncommitted PWR and BWR reactors and their fuel pools has been developed. Provision was made to incorporate three nuclear growth scenarios into the code. These scenarios will be those developed by the Energy Information Administration.
- .03.13 Update Data Base. Work continued on coding information from the 1980 data base confirmation forms supplied by utilities. To date, information from 150 reactors has been recorded on punched cards. Responses have not been received for 28 reactors and 14 reactors were cancelled or deferred.

A detailed check of punched cards is underway and utility responses are being rechecked for completeness, consistency, and accuracy. About 68 were completed. Utilities were contacted as required to resolve questions

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>STORAGE LOGISTICS</b>										2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1122.						
4. CONTRACTOR (NAME AND ADDRESS) <b>S. M. STOLLER CORP.</b> <b>NEW YORK</b> <b>NEW YORK</b>										ALL FUNDING		5. CONTRACT START DATE 20 JUN 78						
7. MONTHS		O	N	D	J	F	M	A	R	M	J	J	A	S	TOTALS		6. FY 80	
8. COST STATUS																		
9. BUDGET NUMBERS  THOUSANDS		450													11. COST PLAN DATE 21 OCT 80			
		425														12. PLANNED COSTS PRIOR FYS		
		400														13. ACTUAL COSTS PRIOR FYS		
		375														14. TOTAL ESTIMATE FY COSTS FOR CONTRACT		
		350														15. TOTAL CONTRACT VALUE		
		325														16. UNFULLED ORDERS OUTSTANDING		
		300														17. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD		
		275														18. CUM. VARIANCE N/A		
		250														19. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		
		225														20. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE		
10. ALL		200													21. CONTRACT COMPLETION DATE CONTINUING			
		175														22. CUM. VARIANCE N/A		
		150														23. CUM. VARIANCE N/A		
		125														24. CUM. VARIANCE N/A		
		100														25. CUM. VARIANCE N/A		
		75														26. CUM. VARIANCE N/A		
		50														27. CUM. VARIANCE N/A		
		25														28. CUM. VARIANCE N/A		
		0														29. CUM. VARIANCE N/A		
		11. ACCURRED COSTS		DI PLANNED	22	22	22	22	22	23	23	24	24	24	24	24	276	30. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD
DI ACTUAL	0			0	0	0	70	10	35	-5	0	23	0	122	255	31. CUM. VARIANCE N/A		
EI VARIANCE	22			22	22	22	-48	13	-12	29	24	1	24	-98		32. CUM. VARIANCE N/A		
FI CUM. VARIANCE	22			44	66	88	40	53	41	70	94	95	119	21		33. CUM. VARIANCE N/A		
REMARKS																		
CONFlict - FINANCIAL PLAN IS 276 FY ESTIMATE IS 305																		

II2: PLANNING SUPPORT

II24: Economic Assistance

OBJECTIVE

Perform economic studies to assist in program planning.

ACTIVITY STATUS

.04 Facility value. A task force has been established to aid the Accounting and Business Analysis (A&BA) Department in evaluating existing fuel storage facilities. An outline of the proposed A&BA report has been reviewed and revisions have been proposed.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM 00E 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>ECONOMIC ASSISTANCE</b>		2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>										3. CONTRACT NUMBER <b>1124.</b>					
4. CONTRACTOR NAME AND ADDRESS <b>SAVANNAH RIVER LABORATORY</b> <b>AIKEN</b> <b>SOUTH CAROLINA</b>		ALL FUNDING										5. CONTRACT START DATE <b>1 SEP 79</b>					
7. MONTHS		G	N	D	J	F	M	A	M	J	J	A	S	TOTALS		e. FY	80
8. COST STATUS														6) COST PLAN DATE <b>21 OCT 80</b>			
9) B AND R NUMBERS														10) PLANNED COSTS PRIOR FYS <b>N/A</b>			
11) ACTUAL COSTS PRIOR FYS <b>N/A</b>														12) TOTAL ESTIMATE FY COSTS FOR CONTRACT <b>N/A</b>			
13) TOTAL CONTRACT VALUE <b>N/A</b>														14) UNFILLED ORDERS OUTSTANDING <b>N/A</b>			
15) ESTIMATE FOR SUBSEQUENT REPORTING PERIOD <b>N/A</b>														16) SIGNATURE OF THE GOVERNMENT REPRESENTATIVE AND DATE			
REMARKS																	
17. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE																	

## II2: PLANNING SUPPORT

### II26: Licensing Assistance

#### OBJECTIVE

Provide assistance for acquisition of existing AFR(s), technical reviews of proposed documents, guides, standards related to AFR licensing and regulation, and reviews of the licensing status of existing AFR(s) to determine the suitability for transfer to DOE.

#### ACTIVITY STATUS

.02 **AFR Licensing Studies.** A meeting was held with NRC to discuss questions related to licensing of AFR storage facilities and an analysis of 10 CFR part 2 as the basis for AFR licensing schedules. NRC indicated that the analysis and the resulting license schedules were satisfactory.

Assistance was given to the AFR group on questions about possible partial acquisition of a site and the effects on licensing of doing so.

.02 **AFR Licensing Schedules.** The draft report applying 10 CFR part 2 to AFR licensing is undergoing final editing.

A paper, Licensing of Away-From-Reactor (AFR) Installations, was presented at the Gatlinburg meeting, Fuel Cycles for the 80's (an ANS topical meeting).

.03 **Review of Licensing Documents.** A midprogram review of the current AGNS licensing program was held during August. The major finding was that the DOE-operating contractor interface at a DOE-owned AFR needs to be resolved and specific relationships on various responsibilities decided. These arrangements should then be addressed in the licensing documents. Responsibilities for preparing those sections of a license application that covered DOE functions will be assigned.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>LICENSING ASSISTANCE</b>		2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>		3. CONTRACT NUMBER <b>1126.</b>													
4. CONTRACTOR NAME AND ADDRESS <b>SAVANNAH RIVER LABORATORY</b> <b>AIKEN</b> <b>SOUTH CAROLINA</b>		5. CONTRACT START DATE <b>1 APR 79</b>		6. CONTRACT COMPLETION DATE <b>CONTINUING</b>													
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		8. FY	90
9. COST STATUS														10. COST PREDICTION			
11. C AND R NUMBERS		11. ACTUAL COSTS PRIOR FYS												12. TOTAL ESTIMATE FY COSTS FOR CONTRACT			
13. ALL		13. TOTAL CONTRACT VALUE												14. UNFILLED ORDERS OUTSTANDING			
15. ACCRUED COSTS		16. ESTIMATE FOR SUPPLEMENT REPORTING PERIOD												17. REMARKS			
18. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		19. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE												20. APPROVAL			

## II2: PLANNING SUPPORT

### II27: General Assistance

#### OBJECTIVE

Provide DOE general technical assistance with the NRC licensing of interim facilities for spent fuel storage and shall identify public concerns that could arise during the construction and operation of these facilities.

#### ACTIVITY STATUS

- .01 General Assistance. All work completed.
- .02 Identification of Public Concerns. Work was completed on the review of transcripts of NRC proceedings related to licensing spent fuel storage facilities. Preparation of a summary of identified public concerns about spent fuel storage continued. A review of hearing transcripts from Congressional committees involved in developing bills relating to the design and construction of AFR storage continued to further identify public concerns. Preparation of a draft final report was initiated.

FORM DOE 535  
11/1/78  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION <b>GENERAL ASSISTANCE</b>		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1127																					
4. CONTRACTOR (NAME, ADDRESS) <b>E. R. JOHNSON ASSOCIATES, INC</b> VIENNA VIRGINIA				5. CONTRACT START DATE 12 FEBRUARY 79																					
				6. CONTRACT COMPLETION DATE 30 SEPTEMBER 80																					
7. IDENT. NUMBER	8. REPORTING CATEGORY	9. FISCAL YEARS		10. PERCENT COMPLETE																					
		FY 1979		FY 1980		FY 1981																			
		1	2	3	4	0	N	D	J	F	M	A	M	J	J	S	1	2	3	4	82	83	84		
	<b>PROVIDE GEN TECH ASS</b>																							100	
2	<b>IDENTIFICATION OF PUB</b>																							U	
11. REMARKS																									
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		13. SIGNATURE OF THE GOVERNMENT TECHNICIAN, REPRESENTATIVE AND DATE																							

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION <b>GENERAL ASSISTANCE</b>		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1127																			
4. CONTRACTOR (NAME AND ADDRESS) <b>E. R. JOHNSON ASSOCIATES, INC</b> VIENNA VIRGINIA				5. CONTRACT START DATE 12 FEB 79																			
				6. CONTRACT COMPLETION DATE 30 SEP 80																			
7. MONTHS	O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FY 80									
9. COST STATUS																							
10. BUDGET NUMBERS	ALL FUNDING												11. COST PLAN DATE 21 OCT 80										
	ALL FUNDING												11. PLANNED COSTS PREDICTED										
11. BUDGET NUMBERS	N/A												12. ACTUAL COSTS PREDICTED										
	N/A												12. ACTUAL COSTS PREDICTED										
12. ACCRUED COSTS	N/A												13. TOTAL ESTIMATE FY COSTS FOR CONTRACT 136										
	N/A												13. TOTAL CONTRACT VALUE 136										
13. UNFULLED ORDERS OUTSTANDING	N/A												14. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A										
	N/A												14. UNFULLED ORDERS OUTSTANDING N/A										
REMARKS																							
CONFLICT - FINANCIAL PLAN IS 129 FY ESTIMATE IS 136																							
15. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		16. SIGNATURE OF THE GOVERNMENT TECHNICIAN, REPRESENTATIVE AND DATE																					

113: FEE

113I: Fee Methodology

OBJECTIVE

Evaluate the current fee collection mechanisms for economic feasibility and review current methodology used to calculate cash flow. Also, provide a computer program to give projected annual and cumulative cash flow data for various input parameters and guidelines. Periodically update the fee calculations.

ACTIVITY STATUS

.04 Fee Calculations. Spent fuel storage and disposal fees were calculated for current reference requirements and a 1985 AFR facility startup. Results of these fee calculations were transmitted to SRP for inclusion in a report to Congress being drafted.

Modifications were made to the FEAN computer code to implement the fee update method agreed upon in the August meeting at DOE/HQ.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION		2. REPORTING PERIOD												3. CONTRACT NUMBER			
FEE METHODOLOGY		01 SEP 80 THROUGH 30 SEP 80												1131.			
4. CONTRACTOR NAME AND ADDRESS		ALL FUNDING												5. CONTRACT START DATE			
BATTELLE PACIFIC NORTHWEST LABORATORIES RICHLAND WASHINGTON														15 FEB 80			
6. CONTRACT COMPLETION DATE														15 AUG 80			
7. MONTHS		0	N	0	J	F	M	A	M	J	J	A	S	TOTALS		8. FY BO	
9. COST STATUS														9.1 COST PLAN DATE			
10.														21 OCT 80			
11. BUDGET NUMBERS		450												11.1 PLANNED COSTS PRIOR FYS			
		425												N/A			
		400												11.2 ACTUAL COSTS PRIOR FYS			
		375												N/A			
		350												11.3 TOTAL ESTIMATE FY COSTS FOR CONTRACT			
		325												105			
		300												11.4 TOTAL CONTRACT VALUE			
		275												N/A			
		250												11.5 UNFILLED ORDERS OUTSTANDING			
		225												N/A			
		200												11.6 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD			
		175												N/A			
		150												11.7			
		125												11.8			
		100												11.9			
		75												11.10			
		50												11.11			
		25												11.12			
		0												11.13			
12. ACCRUED COSTS		CI PLANNED	0	0	0	18	11	6	8	13	13	12	12	105	11.14		
		CI ACTUAL	0	0	0	18	11	6	8	9	19	10	11	100	11.15		
		EI VARIANCE	0	0	0	0	0	0	0	4	-6	2	1	4	11.16		
		FI CUM. VARIANCE	0	0	0	0	0	0	0	4	-2	0	1	5	11.17		
REMARKS																	
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE								14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE									

II3: FEE

II32: Fee Update

OBJECTIVE

Continue development and revision of a spent fuel storage and disposal fee. The update is necessary due to changes in timing and in the research and development program. The program commenced in FY 79. The fee will be updated annually.

ACTIVITY STATUS

.02 Fee update. A revised estimate of fuel storage requirements was to be available in September, however the availability of this information has slipped one month. The December goal for a draft report should still be met.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>FEES UPDATE</b>										2. REPORTING PERIOD <b>01 SEP 80 THROUGH 30 SEP 80</b>		3. CONTRACT NUMBER <b>1132.</b>			
4. CONTRACTOR NAME AND ADDRESS <b>SAVANNAH RIVER LABORATORY AIKEN SOUTH CAROLINA</b>										ALL FUNDING		5. CONTRACT START DATE <b>1 OCT 78</b>			
												6. CONTRACT COMPLETION DATE <b>CONTINUING</b>			
7. MONTHS	O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	B. FY	80
8. COST STATUS															
9. BUDGET NUMBERS  THOUSANDS	90												10. COST PLAN DATE <b>21 OCT 80</b>		
	85												11. PLANNED COSTS PRIOR FYS		
	80												12. ACTUAL COSTS PRIOR FYS		
	75												13. TOTAL ESTIMATE FY COSTS FOR CONTRACT		
	70												14. TOTAL CONTRACT VALUE <b>82</b>		
	65												15. UNFILLED ORDER OUTSTANDING		
	60												16. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD <b>N/A</b>		
	55												17. REMARKS		
	50												18. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		
	45												19. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE		
40												20. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			
35												21. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			
30												22. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			
25												23. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			
20												24. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			
15												25. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			
10												26. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			
5												27. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			
0												28. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			
29. ACCRUED COSTS		C1 PLANNED	0	0	0	35	8	5	0	8	8	8	5	5	82
		D1 ACTUAL	0	0	0	0	43	5	0	4	7	5	5	5	74
		E1 VARIANCE	0	0	0	35	-35	0	0	4	1	3	0	0	
		F1 CUM. VARIANCE	0	0	0	35	0	0	0	4	5	8	8	8	

113: FEE

1134: Fee Discount Rate Analysis

OBJECTIVE

Assess discount rates related to present worth concepts and recommend a rate that best suits the requirements for developing a spent fuel storage and disposal fee. The calculational method for a storage and disposal fee equates the present worth of costs to the present worth of revenues.

ACTIVITY STATUS

.02 Final Report. The final report has been written and submitted for clearances.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION		FEE DISCOUNT RATE ANALYSIS		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1134			
4. CONTRACTOR NAME, ADDRESS OMNI-TRA MCLEAN VIRGINIA						5. CONTRACT START DATE 25 FEBRUARY 80			
7. ICFH NUMBER		8. REPORTING CATEGORY		9. FISCAL YEARS FT 1979		6. CONT. COMPLETION DATE 30 SEPTEMBER 80			
				FY 1980					
				FY 1981		B2	B3	B4	
						10. PERCENT COMPLETE			
1. 1 FEE DISCOUNT RATE									100
1. 2 FINAL REPORT									0
11. REMARKS									
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE					13. SIGNATURE OF THE DOE PAYMENT TECHNICAL REPRESENTATIVE AND DATE				

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION		FEE DISCOUNT RATE ANALYSIS		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1134																																																																																																																																						
4. CONTRACTOR NAME AND ADDRESS OMNI-TRA MCLEAN VIRGINIA						5. CONTRACT START DATE 25 FEB 80																																																																																																																																						
6. CONTRACT COMPLETION DATE 30 SEP 80																																																																																																																																												
7. MONTHS		O	N	D	J	F	M	A	M	J	J	R	S	TOTALS	B. FT 80																																																																																																																													
8. COST STATUS																																																																																																																																												
<table border="1"> <tr> <td rowspan="2">9.1 B AND R NUMBERS THOUSANDS</td> <td rowspan="2">45</td> <td rowspan="2">43</td> <td rowspan="2">40</td> <td rowspan="2">38</td> <td rowspan="2">35</td> <td rowspan="2">33</td> <td rowspan="2">30</td> <td rowspan="2">28</td> <td rowspan="2">25</td> <td rowspan="2">23</td> <td rowspan="2">20</td> <td rowspan="2">18</td> <td rowspan="2">15</td> <td rowspan="2">13</td> <td rowspan="2">10</td> <td rowspan="2">8</td> <td rowspan="2">5</td> <td rowspan="2">3</td> <td rowspan="2">0</td> <td colspan="2">10.1 COST PLAN DATE 21 OCT 80</td> </tr> <tr> <td colspan="2">10.2 PLANNED COSTS PERIOD FT'S</td> </tr> <tr> <td colspan="15"></td> <td colspan="2">10.3 ACTUAL COSTS PERIOD FT'S</td> </tr> <tr> <td colspan="15"></td> <td colspan="2">10.4 TOTAL ESTIMATE FT COSTS FOR CONTRACT</td> </tr> <tr> <td colspan="15"></td> <td colspan="2">10.5 TOTAL CONTRACT VALUE</td> </tr> <tr> <td colspan="15"></td> <td colspan="2">10.6 UNFILLED ORDERS OUTSTANDING</td> </tr> <tr> <td colspan="15"></td> <td colspan="2">10.7 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD</td> </tr> <tr> <td colspan="15"></td> <td colspan="2">10.8 N/A</td> </tr> </table>															9.1 B AND R NUMBERS THOUSANDS	45	43	40	38	35	33	30	28	25	23	20	18	15	13	10	8	5	3	0	10.1 COST PLAN DATE 21 OCT 80		10.2 PLANNED COSTS PERIOD FT'S																	10.3 ACTUAL COSTS PERIOD FT'S																	10.4 TOTAL ESTIMATE FT COSTS FOR CONTRACT																	10.5 TOTAL CONTRACT VALUE																	10.6 UNFILLED ORDERS OUTSTANDING																	10.7 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD																	10.8 N/A	
9.1 B AND R NUMBERS THOUSANDS	45	43	40	38	35	33	30	28	25	23	20	18	15	13																					10	8	5	3	0	10.1 COST PLAN DATE 21 OCT 80																																																																																																				
															10.2 PLANNED COSTS PERIOD FT'S																																																																																																																													
															10.3 ACTUAL COSTS PERIOD FT'S																																																																																																																													
															10.4 TOTAL ESTIMATE FT COSTS FOR CONTRACT																																																																																																																													
															10.5 TOTAL CONTRACT VALUE																																																																																																																													
															10.6 UNFILLED ORDERS OUTSTANDING																																																																																																																													
															10.7 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD																																																																																																																													
															10.8 N/A																																																																																																																													
<table border="1"> <tr> <td rowspan="4">11. SECURED COSTS</td> <td>11.1 PLANNED</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>10</td> <td>6</td> <td>9</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>25</td> </tr> <tr> <td>11.2 ACTUAL</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>10</td> <td>6</td> <td>0</td> <td>0</td> <td>7</td> <td>0</td> <td>2</td> <td>25</td> </tr> <tr> <td>11.3 VARIANCE</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>9</td> <td>0</td> <td>-7</td> <td>0</td> <td>-2</td> <td></td> </tr> <tr> <td>11.4 CUM. VARIANCE</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>0</td> <td>9</td> <td>9</td> <td>2</td> <td>2</td> <td>0</td> <td></td> </tr> </table>															11. SECURED COSTS	11.1 PLANNED	0	0	0	0	0	10	6	9	0	0	0	0	25	11.2 ACTUAL	0	0	0	0	0	10	6	0	0	7	0	2	25	11.3 VARIANCE	0	0	0	0	0	0	0	9	0	-7	0	-2		11.4 CUM. VARIANCE	0	0	0	0	0	0	0	9	9	2	2	0																																																																						
11. SECURED COSTS	11.1 PLANNED	0	0	0	0	0	10	6	9	0	0	0	0	25																																																																																																																														
	11.2 ACTUAL	0	0	0	0	0	10	6	0	0	7	0	2	25																																																																																																																														
	11.3 VARIANCE	0	0	0	0	0	0	0	9	0	-7	0	-2																																																																																																																															
	11.4 CUM. VARIANCE	0	0	0	0	0	0	0	9	9	2	2	0																																																																																																																															
12. REMARKS																																																																																																																																												
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE					14. SIGNATURE OF THE DOE PAYMENT TECHNICAL REPRESENTATIVE AND DATE																																																																																																																																							

## II5: PROGRAM MANAGEMENT

### II5I: Information Systems

#### OBJECTIVE

Provide information services for the AFR program.

#### ACTIVITY STATUS

.03 Information Services. The following work was completed:

- DPSOP-AFR-80-1-8, AFR Program August Monthly Report, DOE/SR SF-2005-8.
- 212 (35 mm) color and black and white slides depicting AFR program activities and properties.
- DPSP-AFR-80-6-2, Determination of AFR Storage Requirements, Allen B. Thomas, for presentation at ANS topical meeting in Gatlinburg, TN on September 29 through October 2.

Eighty-seven individually addressed letters, an agenda, and registration form concerning the AFR Review Meeting on October 29 and 30 were published, assembled, and mailed to contractors, interested groups, and AFR personnel.

Twenty-five individually addressed letters, a detailed agenda and instructions were prepared and mailed to speakers participating in the Review Meeting.

DPSP-AFR-80-8-7 Revision 1, Draft DOE Fee and Cost Studies of Spent Nuclear Fuel Storage and Disposal was issued for DOE/HQ review. One hundred cover sheets were printed and forwarded with the draft. After review, the final issue will be made from HQ as DOE/SR-0006, Department of Energy, Fee and Cost Studies for Spent Nuclear Fuel Storage and Disposal Services.

Assistance was provided in publicizing the extension of the public comment period on the scope and outline for a draft environmental impact statement. A representative covered the area about G.E., Morris facility, Morris, IL. Local newspapers and radio stations were contacted and payment of advertising fees are being coordinated.

Changes made by DOE/HQ in the Spent Fuel Film are being resolved with Sandia Labs. Tentative plans are to have a preliminary film and separate sound track ready for review in November.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION INFORMATION SERVICES			2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1151																					
4. CONTRACTOR (NAME AND ADDRESS) SAVANNAH RIVER PLANT AIKEN SOUTH CAROLINA					5. CONTRACT START DATE 1 OCTOBER 79																					
7. IDENT NUMBER			8. REPORTING CYCLES/PERIOD FY 1979		9. FISCAL YEARS FY 1980		10. PERCENT COMPLETE																			
			1	2	3	4	0	F	M	A	M	J	J	S	1	2	3	4	1	2	3	4	82	83	84	
. 1 SPENT FUEL FILM REPO																									0	
. 2 PUBLISH DOCUMENT PLA																									0	
. 3 DEVELOP INFORMATION																									0	
. 4 PROVIDE INFORMATION																									0	
11. REMARKS																										
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE												13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE														

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION INFORMATION SERVICES			2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1151													
4. CONTRACTOR (NAME AND ADDRESS) SAVANNAH RIVER PLANT AIKEN SOUTH CAROLINA					5. CONTRACT START DATE 1 OCT 79													
7. MONTHS			0	N	D	J	F	M	A	M	J	J	A	S	TOTALS		6. 72	80
9. COST STATUS																		
10. BUDGET AND ACTUAL COSTS THOUSANDS			11. COST PLAN DATE 21 OCT 80															
			12. PLANNED COSTS PRIOR FYS															
13. BUDGET AND ACTUAL COSTS ALL			14. ACTUAL COSTS PRIOR FYS															
			15. TOTAL ESTIMATE FY COSTS FOR CONTRACT 250															
16. ACCRUED COSTS			17. TOTAL CONTRACT VALUE 250															
			18. UNPAID ORDERS OUTSTANDING N/A															
19. REMARKS			20. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A															
			21. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE															
22. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE																		
CONFlict - FINANCIAL PLAN IS 220 FY ESTIMATE IS 250																		
23. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE			24. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE															

## **I15: PROGRAM MANAGEMENT**

### **I152: Management Systems**

#### **OBJECTIVE**

Develop and maintain a computer based management system for the AFR program. Provide Uniform Contractor Reporting System (UCRS) forms, and customized monthly reports. Remote access to the data base system will allow management personnel realtime access to the available information.

#### **ACTIVITY STATUS**

- .02 Develop and Operate Management Information System. The monthly reporting cycle using Contractor's input was accomplished. Dupont initiated program revisions were reflected in the system.
- .04 Program Planning and Reporting. Revisions were incorporated into the text of the Program Plan. A responsibility assignment matrix concept was formulated and proposed.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>MANAGEMENT SYSTEMS</b>												2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>		3. CONTRACT NUMBER <b>1152.</b>	
4. CONTRACTOR (NAME AND ADDRESS) <b>VIRGINIA POLYTECHNIC INSTITUTE AND S. U.</b> <b>BLACKSBURG</b> <b>VIRGINIA</b>												5. CONTRACT START DATE <b>17 MAY 77</b>			
6. CONTRACT COMPLETION DATE <b>30 SEP 82</b>												7. MONTHS O N D J F M A M J J A S		ALL FUNDING	
8. COST STATUS		TOTALS										B. FY 80			
9.1												10.1 COST PLAN DATE <b>21 OCT 80</b>			
9.2												10.2 PLANNED COSTS PRIOR F/Y'S <b>N/A</b>			
9.3												10.3 ACTUAL COSTS PRIOR F/Y'S <b>N/A</b>			
9.4												10.4 TOTAL ESTIMATE FY COSTS FOR CONTRACT <b>221</b>			
9.5												10.5 TOTAL CONTRACT VALUE <b>N/A</b>			
9.6												10.6 UNFILLED ORDER OUTSTANDING <b>N/A</b>			
9.7												10.7 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD <b>N/A</b>			
11.1 PLANNED		25	25	26	26	26	26	29	26	26	26	28	315		
11.2 ACTUAL		61	-61	0	0	97	0	53	1	0	7	0	206		
11.3 VARIANCE		-36	86	26	26	-71	26	-27	28	26	19	26	-20		
11.4 F/Y CUM. VARIANCE		-36	50	76	102	31	57	30	58	84	103	129	109		
12. REMARKS															
13. CONFLICT - FINANCIAL PLAN IS <b>315</b> FY ESTIMATE IS <b>221</b>															
14. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE															
15. SIGNATURE OF GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE															

CONFLICT - FINANCIAL PLAN IS 315 FY ESTIMATE IS 221

## 115: PROGRAM MANAGEMENT

### 1153: Spent Fuel Film

#### OBJECTIVE

Produce a public information film to describe commercial reactor spent fuel storage. This film will show how spent fuel is handled, transported, and stored; and explains safety, security, regulatory, and licensing procedures that are followed. The film will include footage of actual spent fuel shipments. The script will be prepared jointly by Du Pont and Sandia, with Sandia responsible for the transportation aspects and Du Pont responsible for the handling and storage aspects. Sandia will arrange production and filming.

#### ACTIVITY STATUS

- .04 Produce Film. An interlock version of the film and soundtrack will be hand carried to SRP by SNL's writer/director by October 31.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION SPENT FUEL FILM		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80										3. CONTRACT NUMBER 1153.			
4. CONTRACTOR'S NAME AND ADDRESS SANDIA LABORATORIES ALBUQUERQUE NEW MEXICO		ALL FUNDING										5. CONTRACT START DATE 1 OCT 79			
6. CONTRACT COMPLETION DATE 30 JUN 80															
7. MONTHS	G	N	D	J	F	M	A	M	J	J	R	S	TOTALS	E. FY	80
9. COST STATUS															
10. E AND P NUMBERS ALL		11. COST PLAN DATE 21 OCT 80 12. PLANNED COSTS PRIOR FYS N/A 13. ACTUAL COSTS PRIOR FYS N/A 14. TOTAL ESTIMATE FY COSTS FOR CONTRACT 50 15. TOTAL CONTRACT VALUE N/A 16. UNFILLED ORDERS OUTSTANDING N/A													
17. THOUSANDS		18. COST STATUS													
19. E AND P NUMBERS ALL		20. CUMULATIVE VARIANCE													
21. ACCUMULATED COSTS		22. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A													
23. REMARKS															
24. SIGNATURE OF CONTRACTOR'S PRODUCT MANAGER AND DATE															
25. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE															

116: QUALITY ASSURANCE

1163: DOE QA Program and Audits

OBJECTIVE

- Assist DOE/SR in development of a QA Program.
- Prepare documented QA Program and Procedures for implementation by SR.
- Assist in audits of programs and projects.

ACTIVITY STATUS

No report received.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>DOE QR PROGRAM AND AUDIT</b>												2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>		3. CONTRACT NUMBER <b>1163.</b>	
4. CONTRACTOR (NAME AND ADDRESS) <b>HANFORD ENGINEERING DEVELOPMENT LABORATORY</b> <b>RICHLAND</b> <b>WASHINGTON</b>												5. CONTRACT START DATE <b>1 JUN 80</b>		6. CONTRACT COMPLETION DATE <b>30 SEP 80</b>	
7. MONTHS		G	N	D	J	F	M	A	M	J	J	A	S	ALL FUNDING	
														TOTALS	
														8. FT	80
9. COST STATUS															
AI														9. COST PLAN DATE <b>21 OCT 80</b>	
THOUSANDS		45	43	40	38	35	33	30	28	25	23	20	18	10. PLANNED COSTS PAST FYS	
B AND R NUMBERS		15	13	10	8	5	3	0	0	0	0	0	0	11. ACTUAL COSTS PAST FYS <b>N/A</b>	
ALL		18	15	13	10	8	5	3	0	0	0	0	0	12. TOTAL ESTIMATE FY COSTS FOR CONTRACT <b>50</b>	
		15	13	10	8	5	3	0	0	0	0	0	0	13. TOTAL CONTRACT VALUE <b>N/A</b>	
		13	10	8	5	3	0	0	0	0	0	0	0	14. UNFILLED ORDER OUTSTANDING <b>N/A</b>	
		10	8	5	3	0	0	0	0	0	0	0	0	15. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD <b>N/A</b>	
ACCUMULATED COSTS		0	0	0	0	0	0	0	0	3	24	23	50	16. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE END DATE	
REMARKS															
17. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE															

## I17: PUBLIC AND GOVERNMENTAL RELATIONS

### I172: Institutional Impediments

#### OBJECTIVES

Review and analyze state and regional radioactive materials transportation plans in order to identify and resolve socioeconomic and institutional barriers.

Evaluate and develop regional methodologies for reporting and monitoring the transport of radioactive materials.

Evaluate and promote compatible state plans for dealing with transportation accidents involving radioactive materials in the southeastern States.

#### ACTIVITY STATUS

.04 Program Management and Workshops. All major elements of the project are on schedule. No delays are anticipated during the forthcoming month. A contractor meeting scheduled for September 29 through 30 was postponed until October 6 through 7 due to conflicts with other activities.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

INSTITUTIONAL IMPEDIMENTS												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80	3. CONTRACT NUMBER 1172.	
SOUTHERN STATES ENERGY BOARD ATLANTA GEORGIA												4. CONTRACTOR NAME AND ADDRESS	5. CONTRACT START DATE 26 SEP 79	
ALL FUNDING												6. CONTRACT COMPLETION DATE 25 DEC 81		
7. MONTHS	G	N	D	J	F	M	A	M	J	J	A	S	TOTALS	B. FY 80
8. COST STATUS														
9. B AND R NUMBERS	ALL	450											10. GI COST PLAN DATE 21 OCT 80	
		425												11. HI PLANNED COSTS FAIRLY FYS N/A
		400												12. II ACTUAL COSTS PRIOR FYS N/A
		375												13. III TOTAL ESTIMATE FY COSTS FOR CONTRACT 204
		350												14. XI TOTAL CONTRACT VALUE N/A
		325												15. LI UNFILLED ORDER OUTSTANDING N/A
		300												16. MI ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/R
		275												
		250												
		225												
		200												
		175												
		150												
		125												
		100												
75														
50														
25														
0														
10. ACCUMULATED COSTS														
11. CUMULATIVE VARIANCE														
12. REMARKS														
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE														
14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE														

**117: PUBLIC AND GOVERNMENTAL RELATIONS**

**1175: NRC Waste Confidence Rulemaking Proceeding**

**OBJECTIVES**

Provide DOE with technical support services with respect to spent fuel transportation and storage during the public comment and hearing processes associated with the NRC Waste Confidence Rulemaking proceedings.

**ACTIVITY STATUS**

.02 Review Cross-Statements of Other Participants. A review was made of cross-statements filed by other participants in the proceeding, which were submitted to the NRC on September 5. These cross-statements were analyzed for possible new issues and a listing of all emphasized issues was prepared.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION NRC RULE MAKING		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 1175.		
4. CONTRACTOR NAME AND ADDRESS E. R. JOHNSON ASSOCIATES, INC VIENNA VIRGINIA		ALL FUNDING												5. CONTRACT START DATE 1 JUN 80		
6. CONTRACT COMPLETION DATE 31 DEC 80																
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		B. FY 80
8. COST STATUS														G1 COST PLAN DATE 21 OCT 80		
9.1		45												H1 PLANNED COSTS PRIOR FIS		
9.1		43												H1 ACTUAL COSTS PRIOR FIS		
9.1		40												N/A		
9.1		38												H1 TOTAL ESTIMATE FY COSTS FOR CONTRACT		
9.1		35												50		
9.1		33												H1 TOTAL CONTRACT VALUE		
9.1		30												N/A		
9.1		28												H1 UNFILLED ORDER OUTSTANDING		
9.1		25												N/A		
9.1		23												H1 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD		
9.1		20												N/A		
9.1		18												15		
9.1		15												15		
9.1		13												10		
9.1		10												6		
9.1		8												4		
9.1		5												4		
9.1		3												4		
9.1		0												4		
9.2		0	0	0	0	0	0	0	15	15	10	10	50	H2 PLANNED COSTS REPORTING PERIOD		
9.2		0	4	-4	0	0	0	0	0	0	0	0	4	H2 ACTUAL COSTS REPORTING PERIOD		
9.2		0	-4	4	0	0	0	0	15	15	10	6	46	H2 CUM. VARIANCE REPORTING PERIOD		
9.2		0	-4	0	0	0	0	0	15	30	40	46	46	N/A		
REMARKS																
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE																
14. SIGNATURE OF THE INDEPENDENT TECHNICAL REPRESENTATIVE AND DATE																

13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE

14. SIGNATURE OF THE INVESTIGATING TECHNICAL REPRESENTATIVE AND DATE

I2: FACILITY ACQUISITION

I2I: MORRIS ACQUISITION

I2II: Evaluation Studies

OBJECTIVE

Define alternatives, prepare conceptual designs, and conduct analytical studies for the potential application of the GE-Morris to AFR program needs.

ACTIVITY STATUS

- .02 Dry Storage Concepts. SRP NEDG-24729, Alternatives for Dry Storage of Spent Fuel at Morris Operation, has been printed. Document distribution is being held up until patent release has been obtained.
- .03 Add-on Basin Feasibility. The revised draft of NEDG-24749, Alternative Concepts for Spent Fuel Storage Basin Expansion at Morris Operation, was reviewed by SRP and approved for printing. After printing is completed, document distribution is to be held up until patent release has been obtained.

Preliminary basket designs are being reviewed by GE rack fabricators in Wilmington, North Carolina to reduce costs and produce a readily fabricated basket.

.02.2 **Cask Handling Station.** Work continued on designs for modifying cask facilities to increase Morris fuel receiving and shipping capabilities.

Draft specifications have been prepared for the 125-ton cask crane and the 10-ton auxiliary crane. Crane manufacturers were contacted to obtain critical crane dimensions and information for designing crane supports and structural framing.

All components for the new shipping cask cleaning system have been selected. Vendors of many key components were contacted and literature and cost estimates are being received.

Preliminary design of the cask turntable and the vertical spray header was completed, and design of the bottom horizontal spray header was initiated.

Sketches and engineering calculations for the elevatorwork platform for two cask preparation stations were completed.

A draft report on the cleaning system, including descriptions, equipment lists and services requirements was initiated.

.02.3 **Basin Wall Support and Seismic Studies.** Dynamic analyses of seismic and tornado loading were completed on two alternative systems for supporting the South wall of the existing basin during excavation for the add-on basin. One alternative involves constructing a temporary external truss and the other involves construction of a reinforced concrete buttress outside Basin 2 near the gate between Basin 2 and the add-on basin. The buttress alternative has been selected for continuing study since it would be less costly and would have minimal impact on construction.

.02.4 **Radwaste Treatment Facility.** As currently planned, radioactive solutions collected in the LAW vault will be concentrated by a new evaporator to a point just short of crystallization. With this evaporator, the vault will be capable of containing all dissolved and solid low-level wastes until the year 2,000, or until the facility is decommissioned. The evaporation system, has been conceptually designed and is currently undergoing internal GE review.

When the LAW vault eventually requires emptying, the concentrated liquid in the vault would be removed down to a prescribed low level by routing it to a waste solidification facility. At this time, a large pump (100 gpm, 65 psig) would be installed in the vault with the intake as close to the vault floor as possible. The pump discharge would feed a hydroclone separator. The overhead from the hydroclone, containing a small amount of solids (5% as fines), is piped to a sluicing nozzle whose flow can be directed into the LAW vault to flush solids toward the pump inlet. The hydroclone underflow (65% solids) is collected in a settling tank. Contents of the settling tank are also routed to waste solidification facilities.

Continued operation will remove all solids from the vault and the remaining clarified solution is removed for solidification. Procedures and equipment required for removing the solids are being prepared or designed. Some equipment specifications can not be completed until experimental data on solution and slurry properties are received from Morris in October.

- .02.5 Cask Handling Interface. Sufficient information has been received about the NLI-1/2 cask to determine the operating sequence required for cask turn around at Morris. A draft report which describes equipment needs, facility modifications, and special tool requirements has been completed and is undergoing internal GE review. When approved, the format of this report will be used as a basis for preparing similar reports for other casks at Morris.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION EVALUATION STUDIES - MORRIS		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1211.																			
4. CONTRACTOR NAME, ADDRESS GENERAL ELECTRIC CO. SAN JOSE CALIFORNIA				5. CONTRACT START DATE 1 FEBRUARY 79																			
				6. CONT. COMPLETION DATE 30 SEPTEMBER 80																			
7. IDENT. NUMBER	8. REPORTING CATEGORY	9. FISCAL YEARS		10. PERCENT COMPLETE																			
		FY 1979		FY 1980		FY 1981																	
		1	2	3	4	M	N	O	J	F	M	A	R	S	1	2	3	4	82	83	84		
1	SURV SP FUL STOR & L																						100
2	DRY STORAGE CONCEPTS																						98
3	POD-ON BASIN FERSIBI																						98
11. REMARKS																							
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE																					

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION EVALUATION STUDIES - MORRIS		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1211.												
4. CONTRACTOR NAME AND ADDRESS GENERAL ELECTRIC CO. SAN JOSE CALIFORNIA		5. CONTRACT START DATE 1 FEB 79		6. CONTRACT COMPLETION DATE 30 SEP 80												
7. MONTHS	O	N	D	J	F	M	A	M	J	J	R	S	TOTALS	B. FT	80	
8. COST STATUS																
9.1	THOUSANDS	ALL FUNDING												9.1 COST PLANNED DATE 21 OCT 80		
														9.1 PLANNED COSTS PRIOR FYS N/A		
9.2	B AND R NUMBERS	ALL												9.2 ACTUAL COSTS PRIOR FYS N/A		
														9.2 TOTAL ESTIMATE FT COSTS FOR CONTRACT 77		
9.3	ALL													9.3 TOTAL CONTRACT VALUE N/A		
														9.3 UNFILLED ORDERS OUTSTANDING N/A		
10. PLANNED		0	0	0	0	0	0	73	2	2	0	0	0	77		
11. ACTUAL		0	0	0	0	0	0	73	5	-5	0	0	0	73		
12. VARIANCE		0	0	0	0	0	0	0	-3	7	0	0	0			
13. CUM. VARIANCE		0	0	0	0	0	0	0	-3	4	4	4	4			
14. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE																
15. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE																

## 121: FACILITY ACQUISITION

### 1212: Improvements and Additions to the Storage Basin Capacity at Morris

#### OBJECTIVES

To ensure that all appropriate work items related to licensing and operation of Morris as a DOE-owned AFR Spent Fuel Storage Facility (under 10 CFR 72) are completed in a timely manner. Develop designs for improvements to the current Morris Operation and increase the storage capacity to the add-on basin. Define licensing and project requirements for implementing the design improvements.

#### ACTIVITY STATUS

.01 Licensing Documentation. As a part of the work required to prepare the license amendment permitting high-density storage at Morris, licensing personnel are reviewing technical details of the system and evaluating system safety.

The Safety Analysis Report (SAR) for Morris Operation is being reviewed and revisions which would be required for DOE ownership are being determined. Review is scheduled for completion in mid-November.

.02.1 High-Density Storage System. Work continues on developing design details for the 21.75-in. square basket selected for both BWR and PWR baskets. Criticality analyses have been initiated for the PWR basket design using the MERIT code. First results indicated that the initial design was unacceptable ( $K_{eff}$  in the 0.95 to 0.96 range). Several design modifications intended to increase the effective water gap between the bundles have been developed. Criticality analyses are currently being made on modified designs.

Design of modular grid support structures has been initiated to safely handle seismic loads which would be encountered when grids are loaded with baskets of consolidated fuel rods. Preliminary studies will determine the support beam sizes and the number and positioning of grid supports required.

Drawings of Morris basins have been reviewed to identify the location of interferences (e.g., water supply piping and pipe supports) which could prevent storage in some basket spaces. Reviews to date indicate that up to 13 baskets in Basin 2 and 7 baskets in the add-on basin might be eliminated by such interferences. Design studies are underway to eliminate or minimize the storage impact of interferences.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE : OF 1

1. CONTRACT IDENTIFICATION		PRELICENSING ACTIVITIES - MORRIS												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1212		
4. CONTRACTOR NAME, ADDRESS		GENERAL ELECTRIC CO. SAN JOSE CALIFORNIA												5. CONTRACT START DATE 1 MAY 80				
7. IDENT. NUMBER		8. REPORTING CATEGORY		9. FISCAL YEARS			FY 1979			FY 1980			FY 1981			10. PERCENT COMPLETE		
				1	2	3	4	5	6	7	8	9	10	11	12	13	14	
. 1		LICENSE APPLI															10	
. 2		ENGINEERING																26
11. REMARKS																		
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE								13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE										

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION		PRELICENSING ACTIVITIES - MORRIS												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1212.	
4. CONTRACTOR NAME AND ADDRESS		GENERAL ELECTRIC CO. SAN JOSE CALIFORNIA												5. CONTRACT START DATE 1 MAY 80			
7. MONTHS		0	N	D	J	F	M	A	M	J	J	R	S	ALL FUNDING		6. FY 80	
8. COST STATUS														TOTALS			
9. THOUSANDS		450												10. COST PLAN DATE 21 OCT 80			
		425												11. PLANNED COSTS PRED FYS			
		400												12. ACTUAL COSTS PRED FYS		N/A	
		375												13. TOTAL ESTIMATE FY COSTS FOR CONTRACT		N/A	
		350												14. TOTAL CONTRACT VALUE		407	
		325												15. UNFILLED ORDERS OUTSTANDING		N/A	
		300												16. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD		N/A	
		275												17. CUM. VARIANCE		N/A	
18. BUDGET NUMBERS		250												18. CUM. VARIANCE		N/A	
19. ALL		225												19. CUM. VARIANCE		N/A	
20. ACCRUED COSTS		200												20. CUM. VARIANCE		N/A	
		175												21. CUM. VARIANCE		N/A	
		150												22. CUM. VARIANCE		N/A	
		125												23. CUM. VARIANCE		N/A	
		100												24. CUM. VARIANCE		N/A	
		75												25. CUM. VARIANCE		N/A	
		50												26. CUM. VARIANCE		N/A	
		25												27. CUM. VARIANCE		N/A	
		0												28. CUM. VARIANCE		N/A	
29. REMARKS														30. CONFLICT - FINANCIAL PLAN IS 499 FY ESTIMATE IS 407			
31. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE														32. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			

## **122: BARNWELL ACQUISITION**

### **1222: AFR/Design and Licensing Information/BNFP as a Model**

#### **OBJECTIVE**

Provide design and licensing information preparatory to conversion of a nuclear fuel reprocessing plant's fuel receiving and storage facility to an AFR spent fuel storage facility using the BNFP as a model.

#### **ACTIVITY STATUS**

**.01 Facility Modifications.** Bechtel has completed work on the canal design and seismic analysis under the present contract. A final report was received prior to completion of the soils investigation. Additional test borings are required to complete the soils analysis which will be done in October/November. Bechtel's input to the SAR was received and is under internal review.

Design work has been completed on AFR projects. A final report to DOE is being compiled. This activity will end in October.

**.02 Rack Design.**

- Criticality analysis of disassembled/canned fuel was completed.
- Structural evaluation of the rack mounting for a disassembled fuel loading scenario was completed.
- Preliminary design of a rack latching device was completed. An updated cost figure of \$180k was submitted to DOE for the revised rack design.

**.03 Security.** Security plans and the system conceptual design were received from IEAL and are under internal review.

**.04 Licensing Documentation.** A draft of the ASAR is approximately 60% complete. The Environmental Report is under internal review. The AFR Site Emergency Plan (SEP) draft will be completed in October. Pool gate failure accident analysis will be incorporated in the SAR.

FORM 00E 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>PRELICENSING ACTIVITIES-AGNS</b>												2. REPORTING PERIOD <b>01 SEP 80 THROUGH 30 SEP 80</b>		3. CONTRACT NUMBER <b>1222</b>	
4. CONTRACTOR (NAME AND ADDRESS) <b>UPPER LEVEL WORK BREAKDOWN STRUCTURE</b>												5. CONTRACT START DATE <b>1 OCT 79</b>			
6. CONTRACT COMPLETION DATE <b>30 SEP 82</b>															
7. MONTHS	O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FT	80
9. COST STATUS															
10.  THOUSANDS	2250	-												GI COST PLAN DATE <b>21 OCT 80</b>	
	2125													HI PLANNED COSTS PRIOR FYS	
	2000														
	1875														
	1750														
	1625														
	1500														
	1375														
	1250														
	1125														
11. B AND R NUMBERS  ALL	1000														
	875														
	750														
	625														
	500														
	375														
	250														
	125														
	0														
12. ACCRUED COSTS	CI PLANNED	45	68	78	108	148	163	192	232	260	266	243	175	1978	
	DI ACTUAL	45	68	78	108	148	163	192	255	291	258	180	230	2016	
	EI VARIANCE	0	0	0	0	0	0	0	-23	-31	8	63	-55		
	FI CUM. VARIANCE	0	0	0	0	0	0	0	-23	-54	-46	17	-38		
	REMARKS														N/A
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE												14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			

## 131: NEPA ACTIVITIES

### 1312: AFR Environmental Impact Statement

#### OBJECTIVE

Assume overall responsibility for preparing and issuing the AFR-EIS. Two separate statements will be written. The first addresses the use of existing commercial facilities with spent fuel storage pools and one new spent fuel storage facility to satisfy near term storage requirements. No additional construction at existing facilities, dry storage, or use of Government-owned facilities will be considered.

Following publication of the first, a second statement will consider dry storage, and expansion of pool storage capacity by new construction at existing facilities and at new sites to satisfy midterm storage requirements.

#### ACTIVITY STATUS

- .04 Complete Draft of Near-Term AFR EIS. A meeting was held at ANL on September 23-24 to review the status of AFR EIS preparation and to visit the GE Morris Operation. Preliminary drafts of supporting material from S. M. Stoller Corp. and Sandia National Laboratories were reviewed and comments were referred back to the originators.

FORM DOE 695  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 2

1. CONTRACT IDENTIFICATION AFR-EIS (ANL)		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 1312			
4. CONTRACTOR NAME AND ADDRESS ARGONNE NATIONAL LABORATORY														5. CONTRACT START DATE 1 OCTOBER 79			
														6. CONTRACT COMPLETION DATE 31 DECEMBER 82			
7. IDENT. NUMBER	8. REPORTING CATEGORY	9. FISCAL YEARS FY 1979				FY 1980				FY 1981				10. PERCENT COMPLETE			
		1	2	3	4	0	N	D	J	F	M	A	J	S	1	2	3
1. 1	INITIATE AFR-EIS					█				█							100
1. 2	INCLUDE FINAL SITE R					█				█							30
1. 3	PREP NOT OF INTNT TO					█				█							100
1. 4	COMPLT DRAFT OF NO-TR					█				█							10
1. 5	PUBLISH DRAFT OF NO-TR									█							0
1. 6	CONSIDER HEARINGS									█							0
1. 7	CON LST NMNS & COMPLT									█							0
1. 8	PUBLISH FINAL NMNS-T									█							0
1. 9	PREP NOT OF INT TO P									█							0
1. 10	OBTAİN NO-TERM AFR-E									█							0
1. 11	COMPLETE DRAFT OF LO									█							0
1. 12	PUBLISH DRAFT OF LOH									█							0
1. 13	COMPLETE FINAL LONG-									█							0
1. 14	PUBLISH FINAL LONG-T									█							0
11. REMARKS																	
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE										13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE							

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION AFR-EIS (ANL)		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 1312			
4. CONTRACTOR NAME AND ADDRESS ARGONNE NATIONAL LABORATORY		ALL FUNDING												5. CONTRACT START DATE 1 OCT 79			
														6. CONTRACT COMPLETION DATE 31 DEC 82			
7. MONTHS	0	N	D	J	F	M	A	M	J	J	A	S	TOTALS		B. F. 80		
8. COST STATUS																	
a) BUDGET NUMBERS  THOUSANDS	450													c) COST PLAN DATE 21 OCT 80			
	425													d) PLANNED COSTS - PRIOR FTS			
	400													N/A			
	375													e) ACTUAL COSTS - PRIOR FTS			
	350													N/A			
	325													f) TOTAL ESTIMATE FOR COSTS FOR CONTRACT			
	300													320			
	275													g) TOTAL CONTRACT VALUE			
	250													N/A			
	225													h) UNFILLED ORDERS OUTSTANDING			
200													N/A				
175																	
150																	
125																	
100																	
75																	
50																	
25																	
0																	
b) BUDGET NUMBERS  ALL	c) PLANNED	38	29	15	17	11	11	7	25	37	48	43	39	320			
	d) ACTUAL	0	0	0	99	12	12	5	12	7	16	15	17	195			
	e) VARIANCE	38	29	15	-82	-1	-1	2	13	30	32	28	22				
	f) END VARIANCE	38	67	82	0	-1	-2	0	13	43	75	103	125				
	g) REMARKS															h) ESTIMATE FOR MANAGEMENT REPORTING PERIOD	
i) SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE															j) SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE		

## 131: NEPA ACTIVITIES

### 1313: AFR-EIS Assistance to ANL

#### OBJECTIVE

Prepare appendices for the AFR-EIS:

- Develop criteria for determining suitable sites for newly constructed spent fuel storage facilities.
- Examine the environmental effects of dry well storage.
- Examine the technical feasibility and potential problems of converting Government facilities to an AFR and if conversion is feasible, the environmental effects of conversion and storage of fuel.
- Examine the environmental effects of transportation of spent fuel from power reactors to AFR's and from AFR's to the repository.
- Aid ANL in the comparison of environmental effects of AFR's studied.
- Be responsive to other requests.
- Determine the capacity and the licensability of the Western New York Nuclear Service as an AFR spent fuel storage facility.

Work will be based on available published information and data developed during the study. A site visit will be made to existing facilities included in the study.

#### ACTIVITY STATUS

.01 Input to ANL for The Near-Term AFR-EIS. Work continues on drafts that evaluate technical feasibility and licensability of converting Government facilities to an AFR. Completion is scheduled for early October.

Revised drafts of Section 2.2.1 Accidental Deaths, and 2.2.3, Occupational Effects, of Appendix C, Environmental Effects of Each Facility were received, reviewed, and returned for minor corrections.

Work is continuing on revising drafts of sections (Dry Storage) 1.1 Existing Commercial Facilities, 1.2 Cask Storage, and Section 3 Double Tier Racking of Appendix F: Potential Spent Fuel Storage Options. Completion is scheduled for early October.

Work continues on all phases of the engineering and licensing status of the West Valley Facility. The structural analysis of the storage pool is behind schedule due to an information delay from Lawrence Livermore Laboratory. The material has been received. The structural analysis is not required for the internal draft of the Near Term AFR-EIS and will not impact that schedule.

.05 At DOE/SR's request, a Planning Guide was added as a subtask. The guide with a detailed annotated schedule is for use in determining the critical path of NEPA actions and NRC licensing requirements and to minimize effects of individual actions on the overall AFR Program schedule. NUS Corporation has been subcontracted for this work which is underway.



FORM DOE 535  
(1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION AFR-EIS ASSISTANCE TO ANL (ORNL)		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1313																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
4. CONTRACTOR NAME AND ADDRESS OAK RIDGE NATIONAL LABORATORY OAK RIDGE TENNESSEE 37830				5. CONTRACT START DATE 1 OCTOBER 79																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
7. IDENT NUMBER 1. PROVIDE INPUT TO ANL		8. FISCAL YEAR FY 1979		6. CONT. COMPLETION DATE 30 JUNE 82																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1050	1051	1052	1053

## 132: CONGRESSIONAL ACTIVITIES

### 1321: Congressional Reports

#### OBJECTIVE

Conduct studies and provide three reports on spent fuel storage suitable for submission to Congress, elected officials, and the public:

- Identify potential spent fuel storage sites and needs in the first report.
- Report on storage fee and calculation method in the second report.
- Finally, discuss spent fuel ownership, identify potential sites after taking into account comments from public hearings, and recommend methods and costs of acquisition.

#### ACTIVITY STATUS

.02 Fee Report. The third draft of the fee report for Congress was revised and a formal draft was issued for DOE/HQ review. Its title is Department of Energy Fee and Cost Studies of Spent Nuclear Fuel Storage and Disposal, September 1980, DPSP-AFR-80-8-7, Revision 1. The report defines the spent fuel fee which incorporates costs for interim storage of spent fuel and costs for ultimate geologic disposal. It includes the formula to be used to recover all Federal costs associated with acquisition and operation of AFR facilities, and an estimate of the fee to be charged users of AFR storage and disposal services.

Volume II of the report, a collection of reference reports used in the fee determination, was deleted. All the reports are available to the public.

The final fee report will be issued three weeks after receipt of DOE/HQ comments on the formal draft and will be made available for public distribution three weeks after its release to Congress. The dollar amount of the fee will not be released until the report has been approved.

**U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

**I32: CONGRESSIONAL ACTIVITIES**

**I322: Hearings Support**

**OBJECTIVE**

Conduct studies and provide a preliminary plan for public hearings to obtain input for DOE AFR report to Congress. Arrange for a subcontractor or other agency to handle hearing arrangements, logistics, transcript, and summary.

**ACTIVITY STATUS**

.02 Prepare Hearings Contract. This work element will not be funded in FY-81 and it will be retired as being completed within the intent of the objective. Future assistance will be provided under the scope of Work Element III2: Program Planning and Management.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM 00E 536  
(1/70)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>HEARINGS SUPPORT</b>												2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>		3. CONTRACT NUMBER <b>1322.</b>			
4. CONTRACTOR NAME AND ADDRESS <b>SAVANNAH RIVER PLANT</b> <b>AIKEN</b> <b>SOUTH CAROLINA</b>												5. CONTRACT START DATE <b>1 JUL 79</b>					
6. CONTRACT COMPLETION DATE <b>1 JUL 80</b>																	
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		B. FT	80
9. COST STATUS																	
RI		10. BUDGETED COSTS (IN THOUSANDS)													11. COST PLAN DATE <b>21 OCT 80</b>		
		45													12. PLANNED COSTS (PAST FYS)		
		43													13. ACTUAL COSTS (PAST FYS)		
		40													14. TOTAL ESTIMATE FY COSTS FOR CONTRACT		
		38													15. TOTAL CONTRACT VALUE		
		35													16. UNPAIDLED SPACERS OUTSTANDING		
		33													17. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD		
		30													18. N/A		
		26													19. N/A		
		25													20. N/A		
		23													21. N/A		
		20													22. N/A		
		18													23. N/A		
		15													24. N/A		
		13													25. N/A		
10													26. N/A				
8													27. N/A				
5													28. N/A				
3													29. N/A				
0													30. N/A				
ALL		31. ACCRUED COSTS															
		C) PLANNED													32. 0		
		D) ACTUAL													33. 16		
		E) VARIANCE													34. 15		
		F) CUR. VARIANCE													35. N/A		
REMARKS																	
36. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE																	
37. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE																	

## **14: TECHNICAL SUPPORT**

### **141: SAFETY AND ENVIRONMENTAL TECHNOLOGY**

#### **1411: Criticality Analysis in a Storage Array**

##### **OBJECTIVE**

Calculate the progression, consequences, and eventual shutdown mechanism for postulated criticality events involving LWR fuel assemblies in an AFR storage facility.

##### **ACTIVITY STATUS**

.04 Develop Computational Methods. Major modifications to the neutronics and thermal-hydraulics codes have been completed in preparation for coupling. Routing for linking codes were completed, and testing and debugging the coupled system is in progress.

A draft report describing accident scenarios and critical configurations were submitted for approval before final issue.

FORM DOE 535  
(1/1/78)  
VPI FAXSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION		CRITICALITY ANALYSIS												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1411						
4. CONTRACTOR NAME, ADDRESS		BATTELLE PACIFIC NORTHWEST LABORATORIES RICHLAND WASHINGTON												5. CONTRACT START DATE 1 FEBRUARY 80		6. CONT. COMPLETION DATE 31 JULY 81						
7. IDENT. NUMBER	8. REPORTING CATEGORY	9. FISCAL YEARS		FY 1980										FY 1981		82	83	84	10. PERCENT COMPLETE			
		FY 1979		1	2	3	4	5	N	D	J	F	M	A	M	J	J	S	1	2	3	4
1	DEVELOP SCENARIOS																					0
2	DEVELOP COMPUTATIONS																					0
3	FINALIZE CRITICAL EVE																					0
11. REMARKS																						
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE												13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE										

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION		CRITICALITY ANALYSIS												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1411				
4. CONTRACTOR NAME AND ADDRESS		BATTELLE PACIFIC NORTHWEST LABORATORIES RICHLAND WASHINGTON												5. CONTRACT START DATE 1 FEB 80		6. CONTRACT COMPLETION DATE 31 JUL 81				
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FT	80				
9. COST STATUS														9. COST PLAN DATE 21 OCT 80		10. PLANNED COSTS PRIOR FYS N/A				
11. ACTUAL COSTS THOUSANDS		450													11. ACTUAL COSTS PRIOR FYS N/A		12. TOTAL ESTIMATE FT COSTS FOR CONTRACT 220			
13. BILLED & UNBILLED NUMBERS		425													13. TOTAL CONTRACT VALUE N/A		14. UNFILLED ORDERS OUTSTANDING N/A			
15. ALL		400													15. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A					
16. ACCRUED COSTS		375																		
17. PLANNED		350																		
18. ACTUAL		325																		
19. VARIANCE		300																		
20. CUM. VARIANCE		275																		
21. REMARKS		250																		
22. BILLED		225																		
23. UNBILLED		200																		
24. CUM. BILLED		175																		
25. CUM. UNBILLED		150																		
26. CUM. COSTS		125																		
27. CUM. PLANNED		100																		
28. CUM. ACTUAL		75																		
29. CUM. VARIANCE		50																		
30. CUM. CUM. VARIANCE		25																		
31. CUM. CUM. CUM. VARIANCE		0																		
32. REMARKS		0	0	0	0	14	18	32	31	32	31	31	31	31	220	33. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A				
34. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		0	0	0	0	9	14	7	27	37	25	34	20	173						
35. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE		0	0	0	0	5	4	25	4	-5	6	-3	11							

## I4I: SAFETY AND ENVIRONMENTAL TECHNOLOGY

### I4I3: Spent Fuel and Pool Component Integrity

#### OBJECTIVE

Establish the corrosion and metallurgical condition of nuclear fuel and fuel components after extended underwater storage. Results will provide insights to fuel and pool equipment behavior and will benefit licensing and operating fuel storage pools. Develop information required for test fuel storage at GE-Morris and include special design requirements, licensing and regulatory considerations, and costs.

#### ACTIVITY STATUS

.01 Program Management. Drafts of three PNL papers to be presented at an NACE symposium in Toronto (April 6 through 10, 1981) are being finalized prior to submission for clearance. Titles are:

- Nuclear Fuel Behavior in Water Pools
- Overview of Spent Fuel Pool Material Studies at PNL
- Assessment of Stress Corrosion Cracking in Spent Fuel Pool Piping

A paper entitled, Significance of Shippingport and Connecticut Yankee Fuel Examinations to Extended Water Storage of LWR Fuel, is being prepared for an IAEA symposium on spent fuel storage in Las Vegas.

In addition to these pending publications, the following publications were prepared during FY 1980:

- NRC Confidence Hearing Testimony PNL-SA-8197, January 1980; published as a section in DOE/NE-007, 15 April, 1980.
- NRC Confidence Hearing Cross Statement, published as a section in DOE/NE-007, Suppl. 1, 5 September 1980.
- Draft Report, Investigation of the Condition of Metallic Spent Fuel Components, PNL-3537.
- Interim Report, Three Mile Island No. 1 Spent Fuel Pool System Pipe Cracking Analysis, PNL-3102, November 1979.
- Annual Report - FY 1979, Spent Fuel and Fuel Pool Component Integrity, PNL-3171, May 1980.
- Draft Report Summarizing the World Survey of Spent Fuel Storage Experience. (Currently undergoing editing by the IAEA/NEA Consultant Group).

- .02 International Activities. The draft of the World Survey of Spent Fuel Storage Experience has been reviewed by the Consultant Group. Comments will be incorporated into the draft in October. A visit to Vienna is planned during October (at IAEA expense) to finalize the survey draft and to consult with the Nuclear Materials and Fuel Cycle Section on a proposed handbook on spent fuel storage.
- .03 Spent Fuel Acquisition and Examination. The Shippingport fuel examination of eight rods was completed in September, including the following non-destructive tests: visual, eddy current, profilometry, leak testing and gamma scan; and the following destructive tests: Metallography, hydrogen analyses, fission gas release, and burst tests. Examination results are being evaluated. The preliminary assessment suggests that none of the cladding properties have changed substantially during 21 years of water storage.

Examination of stainless-clad Connecticut Yankee fuel assembly S004 included the following non-destructive tests: sipping, visual, profilometry, gamma scan, eddy current, and weighing. Destructive tests involved: fission gas and metallography. The metallographic examination, including scanning electron microscopy, is still in progress. Burnup analysis, ceramography, microprobe analyses, and clad mechanical property tests remain to be done. The visual, eddy, current and metallographic exams now available have shown no evidence of cracks in the stainless steel cladding of Assembly S004.

- .04 Spent Fuel Pool Component Exams. Specimens from fuel pools at Savannah River (RBOF), La Crosse (BWR), and Zion (PWR) are expected to be received for examination during the first quarter of FY 1981.
- .05 Mechanism Studies. Work is proceeding to complete equipment installations for spent fuel pool studies and include tanks for environmental tests and test stands for stress corrosion studies.
- .06 Spent Fuel Storage Assessment. The contract with the General Electric Company with requested changes was returned to G.E. early in September.
- .07 Spent Fuel Shipment Assessment. PNL has asked the Battelle-Columbus Laboratory to submit a proposal for the Phase I assessment as a basis for transferring \$15,000 for work.



U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>FUEL INTEGRITY</b>		2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>										3. CONTRACT NUMBER <b>1413.</b>										
4. CONTRACTOR NAME AND ADDRESS <b>BATTELLE PACIFIC NORTHWEST LABORATORIES</b> <b>RICHLAND</b> <b>WASHINGTON</b>		ALL FUNDING										5. CONTRACT START DATE <b>1 OCT 78</b>										
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		6. FY <b>80</b>						
9. COST STATUS																						
10.														11. COST PLAN DATE <b>21 OCT 80</b>								
12. THOUSANDS		900	850	800	750	700	650	600	550	500	450	400	350	300	250	200	150	100	50	0	13. PLANNED COSTS FOR CONTRACT <b>755</b>	
14. B AND R NUMBERS														15. ACTUAL COSTS PRIOR FYS <b>N/A</b>								
16. ALL														17. TOTAL ESTIMATE FOR CONTRACT <b>N/A</b>								
18. UNFILLED ORDERS OUTSTANDING														19. TOTAL CONTRACT VALUE <b>N/A</b>								
20. REMARKS														21. UNFILLED ORDERS OUTSTANDING <b>N/A</b>								
22. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE														23. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE								

## 142: DISASSEMBLY AND ROD STORAGE

### 1421: Underwater Disassembly

#### OBJECTIVE

Develop equipment for underwater disassembly of fuel rod bundles and evaluate related safety, environmental, and safeguards and accountability issues. The program will bring rod storage to the status of being on hand and ready for hot demonstration.

#### ACTIVITY STATUS

- .01 Prototype System Design. Design analysis documentation is in progress. Its completion and incorporation with other sections will finish the Task 1 Draft Report. Methods of overcoming the excessive current of the cut-off saw motor in overcoming viscous friction of water on the cutting wheel are being investigated. Action is being taken to correct specific deficiencies cited by the DOE QA audit and to preclude their future occurrence.
- .02 Safety Analysis Report. Comments on the draft report are expected by November 1.
- .03 Safeguards. A response was prepared and sent to address DOE's comments and suggestions regarding the draft report. Also, Allied General Nuclear Services (AGNS) has been contracted to review the draft report.
- .04 Environmental Report. The determination of pool and airborne activity increase in a water basin due to use of a rod storage system is being performed.
- .05 Fabrication. Fabrication of the fuel disassembly and rod storage equipment is in progress at Offshore Power System (OPS). OPS is behind schedule in most activities (software production, material receipts, and product fabrication) for all items. Problem areas causing these delays are due to problems with the start-up of internal systems and an underestimate by OPS of the level of effort required to create manufacturing drawings. OPS has taken corrective actions to place the project back on schedule. A QA audit of OPS' Manufacturing Document Control System was performed at the Blount Island Facility. Some discrepancies were found in implementation of OPS' manufacturing, planning, and control to fabrication work, and they are being corrected. A complete QA audit will be performed during October. Fuel rod guides manufactured by Preferred Engineering and Tooling Industries and the elevator controls system manufactured by MDDS were received at NAC.

.06 Demonstration. Facility preparation at AGNS' Barnwell Plant is on schedule. A meeting was held to finalize pool modification details. The dummy Exxon nuclear fuel assembly has arrived at AGNS.



FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION UNDERWATER DISASSEMBLY		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 1421.						
4. CONTRACTOR NAME, ADDRESS NUCLEAR ASSURANCE CORP. ATLANTA GEORGIA														5. CONTRACT START DATE 1 MAY 79						
														6. CONT. COMPLETION DATE 31 JULY 81						
7. IDENT NUMBER	8. REPORTING CATEGORY	9. FISCAL YEARS		FY 1980										FY 1981			10. PERCENT COMPLETE			
		FY 1979		1	2	3	4	0	N	D	J	F	M	A	M	J		J	S	1
1	PROTOTYPE DESIGN																	90		
2	SAFETY ANALYSIS																	90		
3	SMR ACCOUNTING																	98		
4	ENVIRONMENTAL ANALYSIS																	10		
5	EQUIPMENT PROCUREMENT																	50		
6	DEMONSTRATION TESTS																	0		
7	ECONOMIC STUDIES																	0		
8	PROJECT REP DISASSEM																	0		
9	W/ COMM'T. PREP FOR H																	0		
10	HBT DEMONSTRATION																	0		
11. REMARKS																				
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE										13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE										

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION UNDERWATER DISASSEMBLY		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80												3. CONTRACT NUMBER 1421.				
4. CONTRACTOR NAME AND ADDRESS NUCLEAR ASSURANCE CORP. ATLANTA GEORGIA														5. CONTRACT START DATE 1 MAY 79				
														6. CONTRACT COMPLETION DATE 31 JUL 81				
7. MONTHS		0	N	D	J	F	M	A	M	J	J	R	S		TOTALS	4. FY 80		
8. COST STATUS																		
9. CUM. AND A NUMBERS	ALL	THOUSANDS	10. COST PLAN DATE 21 OCT 80												11. PLANNED COSTS PRIOR FTS			
															12. ACTUAL COSTS PRIOR FTS			
															13. TOTAL ESTIMATE FY COSTS FOR CONTRACT			
															14. TOTAL CONTRACT VALUE			
															15. UNFILLED ORDERS OUTSTANDING			
															16. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD			
															17. N/A			
															18. N/A			
															19. N/A			
															20. N/A			
21. CUM. AND A NUMBERS			CI PLANNED	66	71	64	45	50	50	44	104	118	93	118	70	893	21. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD	
22. ACCRUED COSTS			DI ACTUAL	66	72	63	45	50	50	44	104	97	83	0	203	877		
23. VARIANCE			EI VARIANCE	0	-1	1	0	0	0	0	21	10	118	-133				
24. CUM. VARIANCE			FI CUM. VARIANCE	0	-1	0	0	0	0	0	21	31	149	16				
25. REMARKS																		
26. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE										27. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE								

## I42: DISASSEMBLY AND ROD STORAGE

### I422: Dry Disassembly

#### OBJECTIVE

Demonstrate disassembly and encapsulation of nuclear fuel as a means to increase spent fuel storage at an AFR with a dry cell.

#### ACTIVITY STATUS

- .01 Equipment/Procedure Preparation. A purchase order for controls was sent to DOE for approval. Piping and instrument and logic diagrams were completed. One-third of the mechanical equipment drawings are complete. Work orders for construction have been issued. All drawings will be completed in October as scheduled.
- .03 Process Assessment Studies. The General Atomic consulting agreement has been finalized and effort is expected to commence under the agreement next month.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION DRY DISASSEMBLY		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1422																			
4. CONTRACTOR NAME, ADDRESS ALLIED GENERAL NUCLEAR SERVICES BARNWELL SOUTH CAROLINA				5. CONTRACT START DATE 17 APRIL 80																			
				6. CONT. COMPLETION DATE 31 DECEMBER 83																			
7. IDENT. NUMBER	8. REPORTING CATEGORY	9. FISCAL YEARS FY 1979		FY 1980		FY 1981		10. PERCENT COMPLETE															
		1	2	3	4	0	N	D	J	F	M	A	M	J	J	A	S	1	2	3	4	82	83
1	EQUIPMENT PROCUREMENT																					11	
2	DEVELOP DISASSEMBLY																					0	
3	DISSASSEMBLY AND CANN																					0	
4	PROCESS ASSESSMENT S																					7	
5	FINAL REPORT FOR COL																					0	
6	HOT DEMONSTRATIONS A																					0	
11. REMARKS																							
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE																					

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION DRY DISASSEMBLY		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1422																	
4. CONTRACTOR NAME AND ADDRESS ALLIED GENERAL NUCLEAR SERVICES BARNWELL SOUTH CAROLINA				5. CONTRACT START DATE 17 APR 80																	
				6. CONTRACT COMPLETION DATE 31 DEC 83																	
7. MONTHS	G	N	D	J	F	M	A	M	J	J	A	S	TOTALS	S	FY	80					
8. COST STATUS																					
9. BUDGET NUMBERS THOUSANDS	450													10. COST PLAN DATE 21 OCT 80							
	425													11. PLANNED COSTS PRIOR FY'S							
	400													N/A							
	375													12. ACTUAL COSTS PRIOR FY'S							
	350													N/A							
	325													13. TOTAL ESTIMATE FY COSTS FOR CONTRACT							
	300													482							
	275													14. TOTAL CONTRACT VALUE							
	250													N/A							
	225													15. UNPAID ORDERS OUTSTANDING							
200													N/A								
175													16. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD								
150													N/A								
125													17. CUM. VARIANCE								
100													N/A								
75													18. CUM. VARIANCE								
50													N/A								
25													19. CUM. VARIANCE								
0													N/A								
20. ACCRUED COSTS		0	0	0	0	0	0	9	64	59	93	133	124	21. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD							
21. ACTUAL		0	0	0	0	0	0	0	0	113	79	94	155	441							
22. VARIANCE		0	0	0	0	0	0	9	64	-54	14	39	-31	N/A							
23. CUM. VARIANCE		0	0	0	0	0	0	9	73	19	33	72	41	N/A							
REMARKS																					
24. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		25. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE																			

142: DISASSEMBLY AND ROD STORAGE

1423: Fuel Rod Criticality

OBJECTIVE

Provide critical configurations of fuel rod clusters to simulate LWR-type fuel elements in close proximity water storage. Report the data from these configurations in sufficient detail to benchmark analytical techniques for design of spent fuel storage racks.

ACTIVITY STATUS

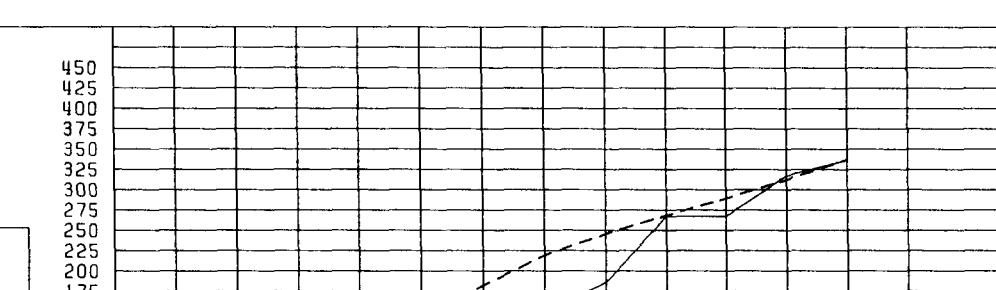
.05 Measurements. Critical reactor measurements on Core I are complete. The moderator boron concentration required to control criticality was very close to that predicted by pre-experiment calculations. Preparations are underway to load Core II.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM 00E 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>FUEL ROD CRITICALITY</b>										2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>		3. CONTRACT NUMBER <b>1423.</b>	
4. CONTRACTOR (NAME AND ADDRESS) <b>BABCOCK AND WILCOX CO.</b> <b>LYNCHBURG</b> <b>VIRGINIA</b>										5. CONTRACT START DATE <b>1 JUN 77</b>			
6. CONTRACT COMPLETION DATE <b>30 SEP 81</b>										7. MONTHS O N D J F M A M J J A S		8. FY <b>80</b>	
										TOTALS			
9. COST STATUS													
10. 										11. COST PLAN DATE <b>21 OCT 80</b>			
12. THOUSANDS 450 425 400 375 350 325 300 275 250 225 200 175 150 125 100 75 50 25 0										13. PLANNED COSTS PAST FYS <b>N/A</b>			
14. ACTUAL COSTS PAST FYS <b>N/A</b>										15. TOTAL ESTIMATE FY COSTS FOR CONTRACT <b>337</b>			
16. TOTAL CONTRACT VALUE <b>N/A</b>										17. UNFILLED ORDER OUTSTANDING <b>N/A</b>			
18. ACCURED COSTS C1 PLANNED 26 21 18 39 41 37 37 26 23 21 23 25 C2 ACTUAL 0 0 0 0 84 18 47 37 81 0 50 20 C3 VARIANCE 26 21 18 39 -43 19 -10 -11 -58 21 -27 5 C4 CUM. VARIANCE 26 47 65 104 61 80 70 59 1 22 -5 0										19. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD <b>N/A</b>			
20. REMARKS										21. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE			
22. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE													

## 143: AFR EQUIPMENT DEVELOPMENT

### 1432: Laser-Based Failure Detection

#### OBJECTIVE

Test, develop, and apply laser-based analytical techniques to the detection and identification of leaking spent nuclear fuel assemblies in water-cooled storage facilities as follows:

- Evaluate the most promising laser-based technique for detecting leakers.
- Evaluate laboratory techniques and determine the minimum sensitivity.
- Evaluate this technique with field tests.

#### ACTIVITY STATUS

.02 Sensitivity and Selectivity. An ultra-violet laser and a visible laser were successfully used to detect atoms and molecules. The double resonance laser technique can now be used with the combination of a UV laser and a visible laser. Previously, two UV lasers were required.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

FORM DCE 535  
(1/1/78)  
VPI FACSIMILE

PAGE 1 OF 1

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>LASER BASED FAILURE DETECTION</b>		2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>												3. CONTRACT NUMBER <b>1432.</b>	
4. CONTRACTOR NAME AND ADDRESS <b>SANDIA LABORATORIES ALBUQUERQUE NEW MEXICO</b>		5. CONTRACT START DATE <b>1 OCT 78</b>													
		6. CONTRACT COMPLETION DATE <b>30 SEP 80</b>													
7. MONTHS	O	N	D	J	F	M	A	M	J	J	R	S	TOTALS	B. <sup>7</sup>	80
9. COST STATUS															
<b>10</b>  <b>11</b>  <b>12</b>  <b>13</b>  <b>14</b>  <b>15</b>  <b>16</b>  <b>17</b>  <b>18</b>  <b>19</b>  <b>20</b>  <b>21</b>  <b>22</b>  <b>23</b>  <b>24</b>  <b>25</b>  <b>26</b>  <b>27</b>  <b>28</b>  <b>29</b>  <b>30</b>  <b>31</b>  <b>32</b>  <b>33</b>  <b>34</b>  <b>35</b>  <b>36</b>  <b>37</b>  <b>38</b>  <b>39</b>  <b>40</b>  <b>41</b>  <b>42</b>  <b>43</b>  <b>44</b>  <b>45</b>  <b>46</b>  <b>47</b>  <b>48</b>  <b>49</b>  <b>50</b>  <b>51</b>  <b>52</b>  <b>53</b>  <b>54</b>  <b>55</b>  <b>56</b>  <b>57</b>  <b>58</b>  <b>59</b>  <b>60</b>  <b>61</b>  <b>62</b>  <b>63</b>  <b>64</b>  <b>65</b>  <b>66</b>  <b>67</b>  <b>68</b>  <b>69</b>  <b>70</b>  <b>71</b>  <b>72</b>  <b>73</b>  <b>74</b>  <b>75</b>  <b>76</b>  <b>77</b>  <b>78</b>  <b>79</b>  <b>80</b>  <b>81</b>  <b>82</b>  <b>83</b>  <b>84</b>  <b>85</b>  <b>86</b>  <b>87</b>  <b>88</b>  <b>89</b>  <b>90</b>  <b>91</b>  <b>92</b>  <b>93</b>  <b>94</b>  <b>95</b>  <b>96</b>  <b>97</b>  <b>98</b>  <b>99</b>  <b>100</b>  <b>101</b>  <b>102</b>  <b>103</b>  <b>104</b>  <b>105</b>  <b>106</b>  <b>107</b>  <b>108</b>  <b>109</b>  <b>110</b>  <b>111</b>  <b>112</b>  <b>113</b>  <b>114</b>  <b>115</b>  <b>116</b>  <b>117</b>  <b>118</b>  <b>119</b>  <b>120</b>  <b>121</b>  <b>122</b>  <b>123</b>  <b>124</b>  <b>125</b>  <b>126</b>  <b>127</b>  <b>128</b>  <b>129</b>  <b>130</b>  <b>131</b>  <b>132</b>  <b>133</b>  <b>134</b>  <b>135</b>  <b>136</b>  <b>137</b>  <b>138</b>  <b>139</b>  <b>140</b>  <b>141</b>  <b>142</b>  <b>143</b>  <b>144</b>  <b>145</b>  <b>146</b>  <b>147</b>  <b>148</b>  <b>149</b>  <b>150</b>  <b>151</b>  <b>152</b>  <b>153</b>  <b>154</b>  <b>155</b>  <b>156</b>  <b>157</b>  <b>158</b>  <b>159</b>  <b>160</b>  <b>161</b>  <b>162</b>  <b>163</b>  <b>164</b>  <b>165</b>  <b>166</b>  <b>167</b>  <b>168</b>  <b>169</b>  <b>170</b>  <b>171</b>  <b>172</b>  <b>173</b>  <b>174</b>  <b>175</b>  <b>176</b>  <b>177</b>  <b>178</b>  <b>179</b>  <b>180</b>  <b>181</b>  <b>182</b>  <b>183</b>  <b>184</b>  <b>185</b>  <b>186</b>  <b>187</b>  <b>188</b>  <b>189</b>  <b>190</b>  <b>191</b>  <b>192</b>  <b>193</b>  <b>194</b>  <b>195</b>  <b>196</b>  <b>197</b>  <b>198</b>  <b>199</b>  <b>200</b>  <b>201</b>  <b>202</b>  <b>203</b>  <b>204</b>  <b>205</b>  <b>206</b>  <b>207</b>  <b>208</b>  <b>209</b>  <b>210</b>  <b>211</b>  <b>212</b>  <b>213</b>  <b>214</b>  <b>215</b>  <b>216</b>  <b>217</b>  <b>218</b>  <b>219</b>  <b>220</b>  <b>221</b>  <b>222</b>  <b>223</b>  <b>224</b>  <b>225</b>  <b>226</b>  <b>227</b>  <b>228</b>  <b>229</b>  <b>230</b>  <b>231</b>  <b>232</b>  <b>233</b>  <b>234</b>  <b>235</b>  <b>236</b>  <b>237</b>  <b>238</b>  <b>239</b>  <b>240</b>  <b>241</b>  <b>242</b>  <b>243</b>  <b>244</b>  <b>245</b>  <b>246</b>  <b>247</b>  <b>248</b>  <b>249</b>  <b>250</b>  <b>251</b>  <b>252</b>  <b>253</b>  <b>254</b>  <b>255</b>  <b>256</b>  <b>257</b>  <b>258</b>  <b>259</b>  <b>260</b>  <b>261</b>  <b>262</b>  <b>263</b>  <b>264</b>  <b>265</b>  <b>266</b>  <b>267</b>  <b>268</b>  <b>269</b>  <b>270</b>  <b>271</b>  <b>272</b>  <b>273</b>  <b>274</b>  <b>275</b>  <b>276</b>  <b>277</b>  <b>278</b>  <b>279</b>  <b>280</b>  <b>281</b>  <b>282</b>  <b>283</b>  <b>284</b>  <b>285</b>  <b>286</b>  <b>287</b>  <b>288</b>  <b>289</b>  <b>290</b>  <b>291</b>  <b>292</b>  <b>293</b>  <b>294</b>  <b>295</b>  <b>296</b>  <b>297</b>  <b>298</b>  <b>299</b>  <b>300</b>  <b>301</b>  <b>302</b>  <b>303</b>  <b>304</b>  <b>305</b>  <b>306</b>  <b>307</b>  <b>308</b>  <b>309</b>  <b>310</b>  <b>311</b>  <b>312</b>  <b>313</b>  <b>314</b>  <b>315</b>  <b>316</b>  <b>317</b>  <b>318</b>  <b>319</b>  <b>320</b>  <b>321</b>  <b>322</b>  <b>323</b>  <b>324</b>  <b>325</b>  <b>326</b>  <b>327</b>  <b>328</b>  <b>329</b>  <b>330</b>  <b>331</b>  <b>332</b>  <b>333</b>  <b>334</b>  <b>335</b>  <b>336</b>  <b>337</b>  <b>338</b>  <b>339</b>  <b>340</b>  <b>341</b>  <b>342</b>  <b>343</b>  <b>344</b>  <b>345</b>  <b>346</b>  <b>347</b>  <b>348</b>  <b>349</b>  <b>350</b>  <b>351</b>  <b>352</b>  <b>353</b>  <b>354</b>  <b>355</b>  <b>356</b>  <b>357</b>  <b>358</b>  <b>359</b>  <b>360</b>  <b>361</b>  <b>362</b>  <b>363</b>  <b>364</b>  <b>365</b>  <b>366</b>  <b>367</b>  <b>368</b>  <b>369</b>  <b>370</b>  <b>371</b>  <b>372</b>  <b>373</b>  <b>374</b>  <b>375</b>  <b>376</b>  <b>377</b>  <b>378</b>  <b>379</b>  <b>380</b>  <b>381</b>  <b>382</b>  <b>383</b>  <b>384</b>  <b>385</b>  <b>386</b>  <b>387</b>  <b>388</b>  <b>389</b>  <b>390</b>  <b>391</b>  <b>392</b>  <b>393</b>  <b>394</b>  <b>395</b>  <b>396</b>  <b>397</b>  <b>398</b>  <b>399</b>  <b>400</b>  <b>401</b>  <b>402</b>  <b>403</b>  <b>404</b>  <b>405</b>  <b>406</b>  <b>407</b>  <b>408</b>  <b>409</b>  <b>410</b>  <b>411</b>  <b>412</b>  <b>413</b>  <b>414</b>  <b>415</b>  <b>416</b>  <b>417</b>  <b>418</b>  <b>419</b>  <b>420</b>  <b>421</b>  <b>422</b>  <b>423</b>  <b>424</b>  <b>425</b>  <b>426</b>  <b>427</b>  <b>428</b>  <b>429</b>  <b>430</b>  <b>431</b>  <b>432</b>  <b>433</b>  <b>434</b>  <b>435</b>  <b>436</b>  <b>437</b>  <b>438</b>  <b>439</b>  <b>440</b>  <b>441</b>  <b>442</b>  <b>443</b>  <b>444</b>  <b>445</b>  <b>446</b>  <b>447</b>  <b>448</b>  <b>449</b>  <b>450</b>  <b>451</b>  <b>452</b>  <b>453</b>  <b>454</b>  <b>455</b>  <b>456</b>  <b>457</b>  <b>458</b>  <b>459</b>  <b>460</b>  <b>461</b>  <b>462</b>  <b>463</b>  <b>464</b>  <b>465</b>  <b>466</b>  <b>467</b>  <b>468</b>  <b>469</b>  <b>470</b>  <b>471</b>  <b>472</b>  <b>473</b>  <b>474</b>  <b>475</b>  <b>476</b>  <b>477</b>  <b>478</b>  <b>479</b>  <b>480</b>  <b>481</b>  <b>482</b>  <b>483</b>  <b>484</b>  <b>485</b>  <b>486</b>  <b>487</b>  <b>488</b>  <b>489</b>  <b>490</b>  <b>491</b>  <b>492</b>  <b>493</b>  <b>494</b>  <b>495</b>  <b>496</b>  <b>497</b>  <b>498</b>  <b>499</b>  <b>500</b>  <b>501</b>  <b>502</b>  <b>503</b>  <b>504</b>  <b>505</b>  <b>506</b>  <b>507</b>  <b>508</b>  <b>509</b>  <b>510</b>  <b>511</b>  <b>512</b>  <b>513</b>  <b>514</b>  <b>515</b>  <b>516</b>  <b>517</b>  <b>518</b>  <b>519</b>  <b>520</b>  <b>521</b>  <b>522</b>  <b>523</b>  <b>524</b>  <b>525</b>  <b>526</b>  <b>527</b>  <b>528</b>  <b>529</b>  <b>530</b>  <b>531</b>  <b>532</b>  <b>533</b>  <b>534</b>  <b>535</b>  <b>536</b>  <b>537</b>  <b>538</b>  <b>539</b>  <b>540</b>  <b>541</b>  <b>542</b>  <b>543</b>  <b>544</b>  <b>545</b>  <b>546</b>  <b>547</b>  <b>548</b>  <b>549</b>  <b>550</b>  <b>551</b>  <b>552</b>  <b>553</b>  <b>554</b>  <b>555</b>  <b>556</b>  <b>557</b>  <b>558</b>  <b>559</b>  <b>560</b>  <b>561</b>  <b>562</b>  <b>563</b>  <b>564</b>  <b>565</b>  <b>566</b>  <b>567</b>  <b>568</b>  <b>569</b>  <b>570</b>  <b>571</b>  <b>572</b>  <b>573</b>  <b>574</b>  <b>575</b>  <b>576</b>  <b>577</b>  <b>578</b>  <b>579</b>  <b>580</b>  <b>581</b>  <b>582</b>  <b>583</b>  <b>584</b>  <b>585</b>  <b>586</b>  <b>587</b>  <b>588</b>  <b>589</b>  <b>590</b>  <b>591</b>  <b>592</b>  <b>593</b>  <b>594</b>  <b>595</b>  <b>596</b>  <b>597</b>  <b>598</b>  <b>599</b>  <b>600</b>  <b>601</b>  <b>602</b>  <b>603</b>  <b>604</b>  <b>605</b>  <b>606</b>  <b>607</b>  <b>608</b>  <b>609</b>  <b>610</b>  <b>611</b>  <b>612</b>  <b>613</b>  <b>614</b>  <b>615</b>  <b>616</b>  <b>617</b>  <b>618</b>  <b>619</b>  <b>620</b>  <b>621</b>  <b>622</b>  <b>623</b>  <b>624</b>  <b>625</b>  <b>626</b>  <b>627</b>  <b>628</b>  <b>629</b>  <b>630</b>  <b>631</b>  <b>632</b>  <b>633</b>  <b>634</b>  <b>635</b>  <b>636</b>  <b>637</b>  <b>638</b>  <b>639</b>  <b>640</b>  <b>641</b>  <b>642</b>  <b>643</b>  <b>644</b>  <b>645</b>  <b>646</b>  <b>647</b>  <b>648</b>  <b>649</b>  <b>650</b>  <b>651</b>  <b>652</b>  <b>653</b>  <b>654</b>  <b>655</b>  <b>656</b>  <b>657</b>  <b>658</b>  <b>659</b>  <b>660</b>  <b>661</b>  <b>662</b>  <b>663</b>  <b>664</b>  <b>665</b>  <b>666</b>  <b>667</b>  <b>668</b>  <b>669</b>  <b>670</b>  <b>671</b>  <b>672</b>  <b>673</b>  <b>674</b>  <b>675</b>  <b>676</b>  <b>677</b>  <b>678</b>  <b>679</b>  <b>680</b>  <b>681</b>  <b>682</b>  <b>683</b>  <b>684</b>  <b>685</b>  <b>686</b>  <b>687</b>  <b>688</b>  <b>689</b>  <b>690</b>  <b>691</b>  <b>692</b>  <b>693</b>  <b>694</b>  <b>695</b>  <b>696</b>  <b>697</b>  <b>698</b>  <b>699</b>  <b>700</b>  <b>701</b>  <b>702</b>  <b>703</b>  <b>704</b>  <b>705</b>  <b>706</b>  <b>707</b>  <b>708</b>  <b>709</b>  <b>710</b>  <b>711</b>  <b>712</b>  <b>713</b>  <b>714</b>  <b>715</b>  <b>716</b>  <b>717</b>  <b>718</b>  <b>719</b>  <b>720</b>  <b>721</b>  <b>722</b>  <b>723</b>  <b>724</b>  <b>725</b>  <b>726</b>  <b>727</b>  <b>728</b>  <b>729</b>  <b>730</b>  <b>731</b>  <b>732</b>  <b>733</b>  <b>734</b>  <b>735</b>  <b>736</b>  <b>737</b>  <b>738</b>  <b>739</b>  <b>740</b>  <b>741</b>  <b>742</b>  <b>743</b>  <b>744</b>  <b>745</b>  <b>746</b>  <b>747</b>  <b>748</b>  <b>749</b>  <b>750</b>  <b>751</b>  <b>752</b>  <b>753</b>  <b>754</b>  <b>755</b>  <b>756</b>  <b>757</b>  <b>758</b>  <b>759</b>  <b>760</b>  <b>761</b>  <b>762</b>  <b>763</b>  <b>764</b>  <b>765</b>  <b>766</b>  <b>767</b>  <b>768</b>  <b>769</b>  <b>770</b>  <b>771</b>  <b>772</b>  <b>773</b>  <b>774</b>  <b>775</b>  <b>776</b>  <b>777</b>  <b>778</b>  <b>779</b>  <b>780</b>  <b>781</b>  <b>782</b>  <b>783</b>  <b>784</b>  <b>785</b>  <b>786</b>  <b>787</b>  <b>788</b>  <b>789</b>  <b>790</b>  <b>791</b>  <b>792</b>  <b>793</b>  <b>794</b>  <b>795</b>  <b>796</b>  <b>797</b>  <b>798</b>  <b>799</b>  <b>800</b>  <b>801</b>  <b>802</b>  <b>803</b>  <b>804</b>  <b>805</b>  <b>806</b>  <b>807</b>  <b>808</b>  <b>809</b>  <b>810</b>  <b>811</b>  <b>812</b>  <b>813</b>  <b>814</b>  <b>815</b>  <b>816</b>  <b>817</b>  <b>818</b>  <b>819</b>  <b>820</b>  <b>821</b>  <b>822</b>  <b>823</b>  <b>824</b>  <b>825</b>  <b>826</b>  <b>827</b>  <b>828</b>  <b>829</b>  <b>830</b>  <b>831</b>  <b>832</b>  <b>833</b>  <b>834</b>  <b>835</b>  <b>836</b>  <b>837</b>  <b>838</b>  <b>839</b>  <b>840</b>  <b>841</b>  <b>842</b>  <b>843</b>  <b>844</b>  <b>845</b>  <b>846</b>  <b>847</b>  <b>848</b>  <b>849</b>  <b>850</b>  <b>851</b>  <b>852</b>  <b>853</b>  <b>854</b>  <b>855</b>  <b>856</b>  <b>857</b>  <b>858</b>  <b>859</b>  <b>860</b>  <b>861</b>  <b>862</b>  <b>863</b>  <b>864</b>  <b>865</b>  <b>866</b>  <b>867</b>  <b>868</b>  <b>869</b>  <b>870</b>  <b>871</b>  <b>872</b>  <b>873</b>  <b>874</b>  <b>875</b>  <b>876</b>  <b>877</b>  <b>878</b>  <b>879</b>  <b>880</b>  <b>881</b>  <b>882</b>  <b>883</b>  <b>884</b>  <b>885</b>  <b>886</b>  <b>887</b>  <b>888</b>  <b>889</b>  <b>890</b>  <b>891</b>  <b>892</b>  <b>893</b>  <b>894</b>  <b>895</b>  <b>896</b>  <b>897</b>  <b>898</b>  <b>899</b>  <b>900</b>  <b>901</b>  <b>902</b>  <b>903</b>  <b>904</b>  <b>905</b>  <b>906</b>  <b>907</b>  <b>908</b>  <b>909</b>  <b>910</b>  <b>911</b>  <b>912</b>  <b>913</b>  <b>914</b>  <b>915</b>  <b>916</b>  <b>917</b>  <b>918</b>  <b>919</b>  <b>920</b>  <b>921</b>  <b>922</b>  <b>923</b>  <b>924</b>  <b>925</b>  <b>926</b>  <b>927</b>  <b>928</b>  <b>929</b>  <b>930</b>  <b>931</b>  <b>932</b>  <b>933</b>  <b>934</b>  <b>935</b>  <b>936</b>  <b>937</b>  <b>938</b>  <b>939</b>  <b>940</b>  <b>941</b>  <b>942</b>  <b>943</b>  <b>944</b>  <b>945</b>  <b>946</b>  <b>947</b>  <b>948</b>  <b>949</b>  <b>950</b>  <b>951</b>  <b>952</b>  <b>953</b>  <b>954</b>  <b>955</b>  <b>956</b>  <b>957</b>  <b>958</b>  <b>959</b>  <b>960</b>  <b>961</b>  <b>962</b>  <b>963</b>  <b>964</b>  <b>965</b>  <b>966</b>  <b>967</b>  <b>968</b>  <b>969</b>  <b>970</b>  <b>971</b>  <b>972</b>  <b>973</b>  <b>974</b>  <b>975</b>  <b>976</b>  <b>977</b>  <b>978</b>  <b>979</b>  <b>980</b>  <b>981</b>  <b>982</b>  <b>983</b>  <b>984</b>  <b>985</b>  <b>986</b>  <b>987</b>  <b>988</b>  <b>989</b>  <b>990</b>  <b>991</b>  <b>992</b>  <b>993</b>  <b>994</b>  <b>995</b>  <b>996</b>  <b>997</b>  <b>998</b>  <b>999</b>  <b>1000</b>  <b>1001</b>  <b>1002</b>  <b>1003</b>  <b>1004</b>  <b>1005</b>  <b>1006</b>  <b>1007</b>  <b>1008</b>  <b>1009</b>  <b>1010</b>  <b>1011</b>  <b>1012</b>  <b>1013</b>  <b>1014</b>  <b>1015</b>  <b>1016</b>  <b															

#### I44: STORAGE ALTERNATIVES

##### I441: Dry Storage Concept Evaluation

###### OBJECTIVE

Assess the feasibility of the various spent fuel dry storage options that have been developed or proposed. Evaluate the economic and safety comparisons for the options that are considered feasible and compare these to wet storage. Advanced studies will be performed for the most promising dry storage alternative.

###### ACTIVITY STATUS

- .05 Prepare and Issue Dry Storage Evaluation Final Report. Copies of the final report, Spent Fuel Dry Storage Concept Evaluation, were transmitted. Program commitments are complete.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>DRY STORAGE CONCEPT EVALUATION</b>												2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>		3. CONTRACT NUMBER <b>1441.</b>	
4. CONTRACTOR (NAME AND ADDRESS) <b>ROCKWELL HANFORD OPERATIONS</b> <b>RICHLAND</b> <b>WASHINGTON</b>												5. CONTRACT START DATE <b>1 OCT 79</b>			
6. CONTRACT COMPLETION DATE <b>30 JUN 80</b>															
7. MONTHS	G	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FY <b>80</b>	
9. COST STATUS															
A) COST PLAN DATE <b>21 OCT 80</b> B) PLANNED COSTS PRIOR FY'S <b>N/A</b> C) ACTUAL COSTS PRIOR FY'S <b>N/A</b> D) TOTAL ESTIMATE FY COSTS FOR CONTRACT <b>85</b> E) TOTAL CONTRACT VALUE <b>N/A</b> F) UNFILLED ORDER OUTSTANDING <b>N/A</b> G) ESTIMATE FOR SUBSEQUENT REPORTING PERIOD <b>N/A</b>															
B) PLN & R NUMBERS		0	0	0	2	2	15	24	21	21	0	0	85		
ALL		0	0	0	1	2	12	19	23	16	5	0	85		
C) PLANNED		0	0	0	1	2	12	19	23	16	5	0	85		
ACCURRED COSTS		0	0	0	1	0	3	5	-2	5	-5	0	-7		
D) ACTUAL		0	0	0	1	2	12	19	23	16	5	0	85		
E) VARIANCE		0	0	0	1	0	3	5	-2	5	-5	0	-7		
F) CUM. VARIANCE		0	0	0	1	1	4	9	7	12	7	7	0		
REMARKS															
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE												14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			

## 144: CONCEPTUAL DRY STORAGE

### 1443: Dry Storage at Morris Operation

#### OBJECTIVE

Develop the conceptual design of an integrated system for dry storage of spent fuel at Morris Operation. Conduct supporting analyses and reviews in sufficient detail to establish firm technical and licensing bases for the concept. Define licensing and project requirements for implementing the concept.

#### ACTIVITY STATUS

- .01 Fuel Preparation Cell. Spent fuel disassembly experience was investigated; there are indications that irradiated PWR fuels have been disassembled several times, but the only actual experience available to GE was the disassembly of several bundles by Battelle Northwest Laboratories for a small processing facility test. The disassembly was on a laboratory scale and difficulty was encountered in rod removal, Some rods had to be cut and sectioned at the spacers to obtain the core material.
- .02 Fuel Storage Cells. An in-house computer program for the thermal analysis of air-stored, compacted fuel rods in square canisters nears completion. Pacific Northwest Laboratories will perform thermal analysis calculations of BWR and PWR whole bundles. These calculations should be completed in November.

Evaluation continues on alternative canister configurations for the dry storage of consolidated rods. Emphasis has been placed on developing a storage system for PWR's which is similar to that developed for the BWR system. This is a system where fuel bundles and canisters of separated rods can be stored interchangeably. A concept has been developed, but not yet thermally analyzed, which permits storage of standard PWR fuel canisters interchangeably with an extended surface PWR rod canister. The canister spacing must be slightly larger to accept the rod canister. With the increased spacing, the storage capacity for PWR fuels in the canyon cells would be some 10% less than that for BWR fuels. In the BWR system, the same canister and canister spacing is used for storing both bundles and rods. In this PWR system, however, different canister designs are used for bundle and rod storage, but they are stored at the same centerline spacing in the same storage racks. There can be no final selection of storage approaches on separated rods until rod thermal analyses are completed.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

CONCEPTUAL DRY STORAGE - MORRIS												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1443.	
GENERAL ELECTRIC CO. SAN JOSE CALIFORNIA												ALL FUNDING		4. CONTRACTOR NAME AND ADDRESS 5. CONTRACT START DATE 1 MAY 80 6. CONTRACT COMPLETION DATE 30 NOV 81	
7. MONTHS	O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	B. FY 80	
9. COST STATUS															
THOUSANDS NUMBERS	450												6. COST PLAN DATE 21 OCT 80		
	425												7. PLANNED COSTS PRIOR FYS		
	400												8. ACTUAL COSTS PRIOR FYS		
	375												9. TOTAL ESTIMATE FY COSTS FOR CONTRACT		
	350												10. TOTAL CONTRACT VALUE		
	325												11. UNFILLED ORDERS OUTSTANDING		
	300												12. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD		
	275												13. N/A		
	250												14. N/A		
	225												15. N/A		
	200												16. N/A		
	175												17. N/A		
	150												18. N/A		
	125												19. N/A		
	100												20. N/A		
75												21. N/A			
50												22. N/A			
25												23. N/A			
0												24. N/A			
10. ACCURRED COSTS															
CI. PLANNED	0	0	0	0	0	0	0	18	40	44	79	60	241		
DI. ACTUAL	0	0	0	0	0	0	0	0	0	0	0	61	61		
EI. VARIANCE	0	0	0	0	0	0	0	18	40	44	79	-1			
FI. CUM. VARIANCE	0	0	0	0	0	0	0	18	58	102	181	180			
REMARKS															
CONFLICT - FINANCIAL PLAN IS 241 FY ESTIMATE IS 112															
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE							14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE								

144: STORAGE ALTERNATIVES

1444: Dry Storage Technology Development

OBJECTIVE

Develop a program for dry storage demonstrations and tests at the Nevada Test Site to show the feasibility and safety of dry storage and collect data for licensing of the concept.

ACTIVITY STATUS

- .01 Program Plan. A meeting was held at SRP with DOE/SR, Westinghouse, and Du Pont to review a draft of the dry storage program plan. Changes were agreed upon and incorporated into a final draft, which was transmitted in September.
- .03 Past Experience Summary Report. A rough draft of this report was submitted in September. Revisions were completed and a final draft will be released during October.

FORM DCE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PROBLEMS OF

1. CONTRACT IDENTIFICATION: <b>DRY STORAGE TECHNOLOGY DEVELOPMENT</b>		2. REPORTING PERIOD: <b>01 SEP 80 THROUGH 30 SEP 80</b>		3. CONTRACT NUMBER: <b>1444</b>	
4. CONTRACTOR NAME, ADDRESS: <b>WESTINGHOUSE CORP. PITTSBURGH PENNSYLVANIA</b>		5. CONTRACT START DATE: <b>1 JANUARY 80</b>		6. CONT. COMPLETION DATE: <b>30 SEPTEMBER 80</b>	
7. IDENT. NO.	B. REPORTING CATEGORY	9. FISCAL YEARS		10. PERIOD COMPLETED	
		FY 1979	FY 1980	FY 1981	82 83 84
1	PREPARE AND SUBMIT	1	2	3	4
2	IDENT CANDIDATE EXP	5	6	7	8
		9	10	11	12
		13	14	15	16
		17	18	19	20
		21	22	23	24
		25	26	27	28
		29	30	31	32
		33	34	35	36
		37	38	39	40
		41	42	43	44
		45	46	47	48
		49	50	51	52
		53	54	55	56
		57	58	59	60
		61	62	63	64
		65	66	67	68
		69	70	71	72
		73	74	75	76
		77	78	79	80
11. REMARKS					
12. SIGNATURE OF CONTRACTOR, PROJECT MANAGER AND DATE		13. APPROVALS			

FORM 00E 536  
(1/78)  
VP1 MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>DRY STORAGE TECHNOLOGY DEVELOPMENT</b>												2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>		3. CONTRACT NUMBER <b>1444.</b>	
4. CONTRACTOR NAME AND ADDRESS: <b>WESTINGHOUSE CORP.</b> <b>PITTSBURGH</b> <b>PENNSYLVANIA</b>												5. CONTRACT START DATE <b>1 JAN 80</b>		6. CONTRACT COMPLETION DATE <b>30 SEP 80</b>	
7. MONTHS		G	N	D	J	F	M	A	M	J	J	ALL FUNDING		TOTALS	
8. COST STATUS		0											0	FT	80
9. BUDGET AND ACTUAL COSTS		450											6) COST PLAN DATE <b>21 OCT 80</b>		
THOUSANDS		425											10) PLANNED COSTS PRIOR FYS		
11) BUDGET AND ACTUAL COSTS		400											N/A		
12) BUDGET AND ACTUAL COSTS		375											11) ACTUAL COSTS PRIOR FYS		
13) BUDGET AND ACTUAL COSTS		350											N/A		
14) BUDGET AND ACTUAL COSTS		325											12) TOTAL ESTIMATE FY COSTS FOR CONTRACT		
15) BUDGET AND ACTUAL COSTS		300											215		
16) BUDGET AND ACTUAL COSTS		275											13) TOTAL CONTRACT VALUE		
17) BUDGET AND ACTUAL COSTS		250											N/A		
18) BUDGET AND ACTUAL COSTS		225											14) UNFILLED ORDERS OUTSTANDING		
19) BUDGET AND ACTUAL COSTS		200											N/A		
20) BUDGET AND ACTUAL COSTS		175											21) ESTIMATE FOR SUBSEQUENT REPORTING PERIOD		
22) BUDGET AND ACTUAL COSTS		150											N/A		
23) BUDGET AND ACTUAL COSTS		125											22) TOTAL FUNDING FOR CONTRACT		
24) BUDGET AND ACTUAL COSTS		100											23) FUNDING BALANCE		
25) BUDGET AND ACTUAL COSTS		75											24) FUNDING BALANCE		
26) BUDGET AND ACTUAL COSTS		50											25) FUNDING BALANCE		
27) BUDGET AND ACTUAL COSTS		25											26) FUNDING BALANCE		
28) BUDGET AND ACTUAL COSTS		0											27) FUNDING BALANCE		
ACCURRED COSTS		1) PLANNED	0	0	0	0	14	20	18	8	0	15	65	75	215
ACCURRED COSTS		2) ACTUAL	0	0	0	0	19	13	25	3	7	8	54	86	215
ACCURRED COSTS		3) VARIANCE	0	0	0	0	-5	7	-7	5	-7	7	11	-11	
ACCURRED COSTS		4) CUM. VARIANCE	0	0	0	0	-5	2	-5	0	-7	0	11	0	
REMARKS															
19. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE								20. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE							

## 145: OPERATIONS DATA AND ASSESSMENT

### 1453: Morris Test Program

#### OBJECTIVE

Conduct tests at GE-Morris to characterize the behavior of spent LWR fuel in water pools and pilot advanced storage concepts.

#### ACTIVITY STATUS

- .01 Morris Operation Capabilities. NEDG-24806, Concepts for Spent Fuel Storage Tests at Morris Operation, has been printed. Distribution of the report awaits SRP release approval.
- .02 Gaseous Radionuclide Release. Evaluation of data to determine the amount of basin tritium in basin exhaust air continues. To aid in understanding tritium transport, two bench-scale laboratory experiments have been conducted. In these experiments tritiated water was evaporated and relative amounts of tritium in condensate and evaporator bottoms determined. Samples to determine the concentration of krypton in basin exhaust air are at Argonne awaiting analysis.
- .03 Radiation Levels. Detailed design continues on the test chamber for making radiation measurements on individual fuel bundles both along the bundle length and above the top. Ten preliminary drawings have been completed. The design of the base support (lower portion of the test chamber) is about 75% complete. The design of the diving bell (top portion of the test chamber) has been initiated.

A prototype indexing mechanism for positioning the radiation detector along the vertical fuel length has been tested. Preliminary calibration checks have been performed both in air and water. Tests indicated that the detector can be placed within an eighth-inch of a designated position along the fuel length.

- .05 Activity Transfer. To determine whether a radioisotopic gradient exists in either Basin 1 or Basin 2, samples were taken at 15 basin locations at three water depths. Lab analysis of samples has been completed and results are being evaluated.

Qualitative sipping tests using both the whole basket and individual bundle sipping hoods are being evaluated.

Design criteria have been developed for the test chamber for quantitative sipping tests on individual bundles.

FORM 50E 535  
(1/1/78)  
MPL FACS/TMII

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

FORM DOE 530  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>MORRIS TEST PROGRAM</b>												2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>		3. CONTRACT NUMBER <b>1453</b>	
4. CONTRACTOR NAME AND ADDRESS <b>GENERAL ELECTRIC CO.</b> <b>SAN JOSE</b> <b>CALIFORNIA</b>												5. CONTRACT START DATE <b>1 FEB 79</b>		6. CONTRACT COMPLETION DATE <b>31 DEC 81</b>	
7. MONTH		C	N	D	J	F	M	A	M	J	J	ALL FUNDING		8. TOTALS	
9. COST STATUS														9.1 COST PLAN DATE <b>21 OCT 80</b>	
10. BUDGET NUMBERS														10.1 ACTUAL COST PRIOR FIS <b>N/A</b>	
11. BUDGET NUMBERS														11.1 TOTAL CONTRACT VALUE <b>N/A</b>	
12. UNFILLED ORDERS OUTSTANDING														12.1 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD <b>N/A</b>	
13. COMMENTARY														13.1 ESTIMATE OF CONTRACT'S PROJECT PERIOD AND UNIT <b>CONFlict - FINANCIAL PLAN IS 161 FY ESTIMATE IS 130</b>	

CONFLICT - FINANCIAL PLAN IS 161 FY ESTIMATE IS 130

13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE

146: GENERIC STUDIES

1463: Site Selection Method

OBJECTIVE

Develop a method for selection of AFR sites for the eastern U.S. using two basic criteria:

- (1) Minimization of ton-mile for lowest costs and
- (2) Minimization of people-ton-miles for lowest exposure.

ACTIVITY STATUS

.01 Develop Site Selection Method. Work continued on the streamlining of the computer programs and development and testing of formulations and algorithms to address timing and capacity considerations.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION SITE SELECTION METHOD			2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1463																	
4. CONTRACTOR (NAME, ADDRESS) JOHNS HOPKINS UNIVERSITY BALTIMORE MARYLAND					5. CONTRACT START DATE 1 OCTOBER 79																	
					6. CONTRACT COMPLETION DATE 31 DECEMBER 80																	
7. IDENT. NUMBER	6. REPORTING CATEGORY	9. FISCAL YEARS FY 1979		FY 1980		FY 1981		10. PERCENT COMPLETE														
		1	2	3	4	0	N		D	J	F	M	A	M	J	J	A	S	1	2	3	4
1. 1	DEVELOP SITE SELECTI																					0
1. 2	PREPARE AND ISSUE SI																					0
11. REMARKS																						
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE										13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE												

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION SITE SELECTION METHOD			2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1463																	
4. CONTRACTOR (NAME AND ADDRESS) JOHNS HOPKINS UNIVERSITY BALTIMORE MARYLAND			ALL FUNDING		5. CONTRACT START DATE 1 OCT 79																	
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FY 80	6. CONTRACT COMPLETION DATE 31 DEC 80						
9. COST STATUS																						
10. B AND R NUMBERS THOUSANDS	450													11. COST PLN DATE 21 OCT 80								
	425													12. PLANNED COSTS PRIOR FYS								
	400													N/A								
	375													13. ACTUAL COSTS PRIOR FYS								
	350													N/A								
	325													14. TOTAL ESTIMATE FY COSTS FOR CONTRACT								
	300													165								
	275													15. TOTAL CONTRACT VALUE								
	250													N/A								
	225													16. UNFILLED ORDERS OUTSTANDING								
200													N/A									
175													17. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD									
150													N/A									
125													18. CUM. VARIANCE									
100													19. CUM. VARIANCE									
75													20. CUM. VARIANCE									
50													21. CUM. VARIANCE									
25													22. CUM. VARIANCE									
0													23. CUM. VARIANCE									
24. ACCRUED COSTS		25. PLANNED	26. ACTUAL	27. VARIANCE	28. CUM. VARIANCE	29. CUM. VARIANCE	30. CUM. VARIANCE	31. CUM. VARIANCE	32. CUM. VARIANCE	33. CUM. VARIANCE	34. CUM. VARIANCE	35. CUM. VARIANCE	36. CUM. VARIANCE	37. CUM. VARIANCE	38. CUM. VARIANCE	39. CUM. VARIANCE	40. CUM. VARIANCE	41. CUM. VARIANCE	42. CUM. VARIANCE	43. CUM. VARIANCE		
44. REMARKS																						
45. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE										46. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE												

## 147: SAFEGUARDS

### 147I: Physical Protection Requirements

#### OBJECTIVE

Address the technical problems related to the protection and monitoring of spent fuel storage facilities. Design and analytically evaluate integrated safeguards systems and related test equipment to ensure adequate performance and compatibility. Perform an analysis to determine possible sabotage events in spent fuel pools. Design an integrated control and safeguards system to perform the following tasks:

- Confirm reported movements and operations.
- Detect unreported movements and operations.
- Provide continuous record of status, location, and inventory.
- Contain tamper-indicating and self-checking ability.
- Provide technical assistance during the construction and checkout of selected spent fuel storage facilities.

#### ACTIVITY STATUS

- .01 **Sabotage Analysis.** Laboratory experiments are planned to confirm UO<sub>2</sub> material parameters used in the report SAND 80-0079, Preliminary Analysis of Explosive Sabotage of LWR Spent Fuel. A supplier has been located who can fabricate samples to desired sizes and to new fuel manufacturing specifications.
- .02 **Integrated Control.** At a meeting with Du Pont and Nuclear Material Management Safeguard System (NMMSS) personnel, Sandia outlined an Item Accounting System (IAS). Participants identified several areas requiring additional information and coordination. Sandia will circulate an outline draft of the IAS for consideration.
- .03 **Physical Protection System.** The physical protection system design for a generic AFR spent fuel facility allows the use of local law enforcement agencies, FBI, and DOE personnel to be the primary response force. This option reduces on-site security force personnel by up to an order of magnitude; however, capital cost increase because of required hardware subsystems. Subsystems were identified and performance specification were defined. Since most of the components exist, the additional hardware effort consists of integration and testing.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>PHYSICAL PROTECTION REQUIREMENTS</b>												2. REPORTING PERIOD <b>01 SEP 80</b> THROUGH <b>30 SEP 80</b>		3. CONTRACT NUMBER <b>1471.</b>																																																																	
4. CONTRACTOR NAME AND ADDRESS <b>SANDIA LABORATORIES</b> <b>ALBUQUERQUE</b> <b>NEW MEXICO</b>												5. CONTRACT START DATE <b>1 MAR 79</b>																																																																			
6. CONTRACT COMPLETION DATE <b>30 SEP 81</b>																																																																															
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		8. FY <b>80</b>																																																															
9. COST STATUS														9. COST PLAN DATE <b>21 OCT 80</b>																																																																	
10. THOUSANDS NUMBERS		900	850	800	750	700	650	600	550	500	450	400	350	300	250	200	150	100	50	0	10. PLANNED COSTS PRIOR FYS <b>N/A</b>																																																										
11. B AND R NUMBERS														11. ACTUAL COSTS PRIOR FYS <b>N/A</b>																																																																	
12. ALL														12. TOTAL ESTIMATE FY COSTS FOR CONTRACT <b>700</b>																																																																	
13. ACCRUED COSTS														13. TOTAL CONTRACT VALUE <b>N/A</b>																																																																	
14. REMARKS														14. UNFILLED ORDER OUTSTANDING <b>N/A</b>																																																																	
<table border="1"> <tr> <td colspan="2">C1. PLANNED</td> <td>56</td><td>56</td><td>58</td><td>58</td><td>59</td><td>59</td><td>59</td><td>59</td><td>59</td><td>59</td><td>59</td><td>59</td> <td colspan="2">700</td> </tr> <tr> <td colspan="2">D1. ACTUAL</td> <td>0</td><td>0</td><td>0</td><td>0</td><td>208</td><td>27</td><td>42</td><td>62</td><td>42</td><td>38</td><td>41</td><td>240</td> <td colspan="2">700</td> </tr> <tr> <td colspan="2">E1. VARIANCE</td> <td>56</td><td>56</td><td>58</td><td>58</td><td>-149</td><td>32</td><td>17</td><td>-3</td><td>17</td><td>21</td><td>18</td><td>-181</td> <td colspan="2">N/A</td> </tr> <tr> <td colspan="2">F1. CUM. VARIANCE</td> <td>56</td><td>112</td><td>170</td><td>228</td><td>79</td><td>111</td><td>128</td><td>125</td><td>142</td><td>163</td><td>181</td><td>0</td> <td colspan="2">N/A</td> </tr> </table>														C1. PLANNED		56	56	58	58	59	59	59	59	59	59	59	59	700		D1. ACTUAL		0	0	0	0	208	27	42	62	42	38	41	240	700		E1. VARIANCE		56	56	58	58	-149	32	17	-3	17	21	18	-181	N/A		F1. CUM. VARIANCE		56	112	170	228	79	111	128	125	142	163	181	0	N/A		15. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD <b>N/A</b>	
C1. PLANNED		56	56	58	58	59	59	59	59	59	59	59	59	700																																																																	
D1. ACTUAL		0	0	0	0	208	27	42	62	42	38	41	240	700																																																																	
E1. VARIANCE		56	56	58	58	-149	32	17	-3	17	21	18	-181	N/A																																																																	
F1. CUM. VARIANCE		56	112	170	228	79	111	128	125	142	163	181	0	N/A																																																																	
16. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE														17. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE																																																																	

I47: SAFEGUARDS

I472: Accountability Systems

OBJECTIVE

Define specific materials management control problems and identify possible solutions for an AFR facility.

ACTIVITY STATUS

.02 Inventory and Control Systems. Monte Carlo calculations on irradiated PWR fuel assemblies, that were described last month, have been extended to mock up the energy dependence of prompt neutrons generated when a fuel assembly is pulsed with an external neutron source. The major finding was that the epithermal flux, (E greater than 0.625 ev) was about three times the thermal flux, (E less than 0.625 ev), within 2 cm distance from the assembly. This finding reinforces the choice of an epithermal neutron detector as the preferred instrument to assay plutonium content; the original choice favored an epithermal detector to discriminate against the predominate thermal pulse neutrons from the external source.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

FORM 100E 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION ACCOUNTABILITY SYSTEMS												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1472.		
4. CONTRACTOR NAME AND ADDRESS LOS ALAMOS SCIENTIFIC LABORATORY LOS ALAMOS NEW MEXICO												5. CONTRACT START DATE 1 OCT 78				
6. CONTRACT COMPLETION DATE 30 SEP 81																
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		B. FY 80
9. COST STATUS																
10. THOUSANDS		11. COST PLAN DATE 21 OCT 80														
		12. PLANNED COSTS PRIOR FYS N/A														
13. B AND R NUMBERS		14. ACTUAL COSTS PRIOR FYS N/A														
		15. TOTAL ESTIMATE FY COSTS FOR CONTRACT 700														
16. ALL		17. TOTAL CONTRACT VALUE N/A														
		18. UNFILLED ORDERS OUTSTANDING N/A														
19. ACCURRED COSTS		CI PLANNED	49	49	50	50	50	80	99	99	99	100	874	20. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A		
		DI ACTUAL	0	0	0	0	96	110	79	79	84	46	98	690		
		EI VARIANCE	49	49	50	50	-46	-60	1	20	15	53	1	2		
		FI CUM. VARIANCE	49	98	148	198	152	92	93	113	128	181	182	184		
21. REMARKS																
CONFlict - FINANCIAL PLAN IS 874 FY ESTIMATE IS 700																
22. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE							23. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE									

**147: SAFEGUARDS**

**1473: Safeguards and Nonproliferation Support**

**OBJECTIVE**

Provide safeguards and nonproliferation information in support of the AFR program.

**ACTIVITY STATUS**

.01 Technical Support. The Technical Data Summary for AFR safeguards and nonproliferation concerns (DPSTD-AFR-80-43) was issued September 23. A program plan for fiscal years 1981 through 1985 is in preparation.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION SAFEGUARDS AND NON-PROLIFERATION SUPPORT		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1473													
4. CONTRACTOR (NAME, ADDRESS) SAVANNAH RIVER LABORATORY AIKEN SOUTH CAROLINA				5. CONTRACT START DATE 1 MAY 79													
				6. CONTRACT COMPLETION DATE 30 SEPTEMBER 81													
7. IDENT. NUMBER	8. REPORTING CATEGORY	9. FISCAL YEARS FY 1979		FY 1980		10. PERCENT COMPLETE											
		1	2	3	4		0	N	C	J	F	M	A	M	J	J	A
1	TECHNICAL SUPPORT															20	
2	SABOTAGE ANALYSIS															20	
11. REMARKS																	
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE															

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION SAFEGUARDS AND NON-PROLIFERATION SUPPORT		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1473										
4. CONTRACTOR (NAME AND ADDRESS) SAVANNAH RIVER LABORATORY AIKEN SOUTH CAROLINA				5. CONTRACT START DATE 1 MAY 79										
				6. CONTRACT COMPLETION DATE 30 SEP 81										
7. MONTHS	O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FY 80
9. COST STATUS														
A) THOUSANDS	90													10. COST PLAN DATE
	85													21 OCT 80
B) B AND R NUMBERS	80													11. PLANNED COSTS PRIOR FTS
	75													N/A
ALL	70													12. ACTUAL COSTS PRIOR FTS
	65													N/A
C) PLANNED	60													13. TOTAL ESTIMATE FY COSTS FOR CONTRACT
	55													75
ACCURED COSTS	50													14. TOTAL CONTRACT VALUE
	45													N/A
E) VARIANCE	40													15. UNFILLED ORDERS OUTSTANDING
	35													N/A
F) CUM. VARIANCE	30													16. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD
	25													N/A
REMARKS														
CONFLICT - FINANCIAL PLAN IS 50 FY ESTIMATE IS 75														
17. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		18. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE												

## 15: TRANSPORTATION

### 151: TRANSPORT INDUSTRY PROGRAMS

#### 1511: Define Industry Needs and Capabilities

#### OBJECTIVE

Survey the cask manufacturing industry to determine willingness and limitations to keep up with cask demands. Assess manufacturing capabilities and determine the availability and fabricability of cask materials. Identify legislation, regulations, and other institutional impediments. The Nuclear Materials Transportation Technology Center (TTC) will do the following:

- Conduct the survey and evaluate industry response to transportation system demands.
- Gather and collate information on State and local legislation and regulations.
- Assess the impact of "ALARA" (as low as reasonably achievable) on spent fuel transport and evaluate the effects of routing restrictions.
- Develop a generic risk model program and a standardized transportation EIS.

#### ACTIVITY STATUS

.01 Institutional Issues. Results from the industry survey questionnaire were compiled and forwarded to a consultant group of industry representatives for evaluation and comment.

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**MILESTONE SCHEDULE AND STATUS REPORT**

PAGE 1 OF 1

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>INDUSTRY NEEDS AND CAPABILITIES</b>												2. REPORTING PERIOD <b>01 SEP 80 THROUGH 30 SEP 80</b>		3. CONTRACT NUMBER <b>1511.</b>	
4. CONTRACTOR (NAME AND ADDRESS) <b>SANDIA LABORATORIES ALBUQUERQUE NEW MEXICO</b>												5. CONTRACT START DATE <b>1 OCT 79</b>			
6. CONTRACT COMPLETION DATE <b>CONTINUING</b>															
7. MONTHS	O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FY <b>80</b>	
9. COST STATUS															
a)  <b>THOUSANDS</b>	450												10. COST PLAN DATE <b>21 OCT 80</b>		
	425												11. PLANNED COSTS PRIOR FYS		
	400												N/A		
	375												12. ACTUAL COSTS PRIOR FYS		
	350												N/A		
	325												13. TOTAL ESTIMATE FY COSTS FOR CONTRACT		
	300												300		
	275												14. TOTAL CONTRACT VALUE		
	250												N/A		
	225												15. UNFILLED ORDERS OUTSTANDING		
	200												N/A		
	175												16. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD		
	150												N/A		
	125												17. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		
	100												18. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE		
75															
50															
25															
0															
b) B AND R NUMBERS <b>ALL</b>												19. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE			
20. ACCRUED COSTS												21. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			
REMARKS															
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE												14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE			

## 151: TRANSPORT INDUSTRY PROGRAMS

### 1512: Transportation System Development

#### OBJECTIVE

Develop cask/facility interface criteria and establish testing standards. Identify and evaluate quality assurance methods, decontamination techniques, and exposure control procedures. The Nuclear Materials Transportation Technology Center will:

- Establish system design descriptions and equipment interface criteria
- Develop required cask manufacturing quality assurance, decontamination, and exposure control procedures
- Enhance development of transportation system standards
- Evaluate transportation system safety when subjected to extreme accidents
- Develop cask fleet servicing facilities
- Advance intermodal transportation
- Evaluate cask handling options
- Develop transportation logistics models

#### ACTIVITY STATUS

.02 Transportation System Safety Evaluation. The first of a series of experiments subjecting spent fuel to hypervelocity impacts was conducted at EG&G/INEL. The test purpose was to determine and characterize particle size distribution of fission and activation products dispersed under very high shock and thermal conditions. Analysis of data is underway.

.07 Methods. A computer model was developed which permits evaluation of a thermal transient in a cask under accident and post-accident conditions. ORNL will add the model to the PACRAT/SCOPE system.

Staff of the Oregon Graduate Center (OGC) are developing welding processes for cask manufacturing which would allow joining of steel sections up to 14 inches thick. Exxon, another TTC contractor, is inventorying and evaluating manufacturing and QA methods to be applied to fabricating shipping containers. A number of areas were identified where OGC and Exxon might interface to support each other's programs.

A meeting was held with PNL to discuss work on thermal code inventory and benchmarking. Among topics discussed were: (1) the philosophy of the benchmarking effort; (2) specific test cases to be developed by PNL and SNL/TTC for use in exercising thermal codes, and (3) industry and government participation in the benchmarking effort.

- .08 **Logistics.** NUREG-0348 (October, 1979) lists 165 urban areas with populations of over 100,000 that have been placed in the COMPU.MAP data base. Coordinates of all power reactors from the same report are being checked against COMPU.MAP node coordinates.



NO MILESTONE SCHEDULE and STATUS REPORT (DOE 535) received

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>TRANSPORT SYSTEM DEVELOPMENT</b>		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80										3. CONTRACT NUMBER <b>1512.</b>			
4. CONTRACTOR NAME AND ADDRESS <b>SANDIA LABORATORIES ALBUQUERQUE NEW MEXICO</b>		5. CONTRACT START DATE <b>1 OCT 79</b>										6. CONTRACT COMPLETION DATE <b>CONTINUING</b>			
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	
8. COST STATUS														9. COST PLANNED DATE <b>21 OCT 80</b>	
B1. B AND R NUMBERS		10. PLANNED COSTS PRIOR FYS 												11. ACTUAL COSTS PRIOR FYS <b>N/R</b>	
ALL		12. TOTAL ESTIMATE F1 COSTS FOR CONTRACT <b>725</b>												13. TOTAL CONTRACT VALUE <b>N/A</b>	
ACCURED COSTS		14. UNFILLED ORDERS OUTSTANDING <b>N/A</b>												15. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD <b>N/A</b>	
REMARKS															
16. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE														17. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE	

**153: TRANSPORTATION SUPPORT**

**153I: Transportation Information**

**OBJECTIVE**

Develop a comprehensive Transportation Information System as a source of information on spent fuel casks, shipping modes, routes, and costs.

**ACTIVITY STATUS**

.04 Legislative Data Base. The Environmental Science Information Center, ORNL, is preparing a comprehensive collection of notebooks containing information on each state's legislative actions.

NO MILESTONE SCHEDULE and STATUS REPORT (DOE 535) received

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>TRANSPORT INFORMATION</b>												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80	3. CONTRACT NUMBER 1531.			
4. CONTRACTOR (NAME AND ADDRESS) SANDIA LABORATORIES ALBUQUERQUE NEW MEXICO												5. CONTRACT START DATE 1 OCT 79				
6. CONTRACT COMPLETION DATE CONTINUING																
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FY 80	
9. COST STATUS																
AI THOUSANDS		450												GI	LOST PLAN DATE 21 OCT 80	
		425													HI	PLANNED COSTS PRIOR FYS
		400													N/A	
		375													II	ACTUAL COSTS PRIOR FYS
		350													N/A	
		325													JI	TOTAL ESTIMATE FY COSTS FOR CONTRACT
		300													125	
		275													KI	TOTAL CONTRACT VALUE
		250													N/A	
		225													LI	UNFILLED ORDERS OUTSTANDING
200													N/A			
B1 B AND R NUMBERS		175												MI	ESTIMATE FOR SUBSEQUENT REPORTING PERIOD	
		150													N/A	
		125														
		100														
		75														
ALL		50														
		25														
		0														
ACCURED COSTS		CI PLANNED	6	6	6	6	12	12	12	13	13	13	13	13	125	
		DI ACTUAL	0	0	0	29	8	8	14	4	13	14	15	20	125	
		EI VARIANCE	6	6	6	-23	4	4	-2	9	0	-1	-2	-7		
		FI CUM. VARIANCE	6	12	18	-5	-1	3	1	10	10	9	7	0		
REMARKS																
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE								14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE								

## **153: TRANSPORTATION SUPPORT**

### **1532: International Transport Data and Support**

#### **OBJECTIVE**

Obtain data pertaining to transport of foreign spent power reactor fuel. The Nuclear Materials Transportation Technology Center (TTC) will collect and assess baseline information on land, water, and air transportation systems for international spent fuel shipments and information on international facility transportation interfaces.

#### **ACTIVITY STATUS**

- .01 **Transportation System Data.** Reactor and plant site data sheets have been prepared on the contract to establish foreign reactor interfaces. Final reports, which will be site specific, are due in late November.
- .02 **Routine Transfer.** The Category III Mission Study (Routine Transfer Study) was also ready for release on September 28, but is also being modified for requested format changes. This study has also been classified, and is separated into three parts as follows:

Part -1 Introduction and Executive Summary  
Part -2 Policy Aspects Analysis  
Part -3 Spent Fuel Arisings Analysis

NO MILESTONE SCHEDULE and STATUS REPORT (DOE 535) received

FORM DOE 536  
(1/78)

VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION INTERNATIONAL TRANSPORT DATA												2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1532.																																									
4. CONTRACTOR (NAME AND ADDRESS) SANDIA LABORATORIES ALBUQUERQUE NEW MEXICO												5. CONTRACT START DATE 1 OCT 79		6. CONTRACT COMPLETION DATE CONTINUING																																									
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		8. FT 80																																							
9. COST STATUS																																																							
B1: B AND R NUMBERS ALL		RI												G1 COST PLAN DATE 21 OCT 80																																									
		450												H1 PLANNED COSTS PRIOR FYS																																									
		425												N/A																																									
		400												I1 ACTUAL COSTS PRIOR FYS																																									
		375												N/A																																									
		350												J1 TOTAL ESTIMATE FY COSTS FOR CONTRACT																																									
		325												250																																									
		300												K1 TOTAL CONTRACT VALUE																																									
		275												N/A																																									
		250												L1 UNFILLED ORDERS OUTSTANDING																																									
ACCURRED COSTS		225												N/A																																									
		200												M1 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD																																									
		175												N/A																																									
		150																																																					
REMARKS		125																																																					
		100																																																					
		75																																																					
		50																																																					
		25																																																					
		0																																																					
C1 PLANNED		5	5	5	0	0	155	5	5	5	5	55	250	D1 ACTUAL		0	0	0	17	5	150	6	3	4	10	5	50	E1 VARIANCE		5	5	5	-17	-5	5	-1	2	1	-5	0	5	F1 CUM. VARIANCE		5	10	15	-2	-7	-2	-3	-1	0	-5	-5	0
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE																14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE																																							

## 16: INTERNATIONAL ACTIVITIES

### 161: TRANSFER PLANS

#### 1611: Fuel Transfer Plan

##### OBJECTIVE

Investigate the feasibility of conducting an emergency transfer of irradiated nuclear fuel from foreign countries to designated spent fuel storage facilities, and determine the requirements for the U.S. to acquire a contingency foreign fuel transfer capability.

##### ACTIVITY STATUS

- .01 Nonroutine Transfer. Comments have been received on the Category I Mission Study (Emergency Fuel Transfer Feasibility Study) submitted on July 28 and are being incorporated. The final version of the report is expected to be ready for release in October.
- .01.1 The Category II Mission Study (Contingency Fuel Transfer Study) was ready for release on September 28 as scheduled, but was withheld temporarily in order to incorporate certain format changes requested by DOE. The study report will be released as one classified document, but separated into four parts as follows:

- Part -1 Introduction and Executive Summary
- Part -2 Systems Analysis
- Part -3 Legal Aspects Assessment
- Part -4 Institutional and Regulatory Analysis

NO MILESTONE SCHEDULE and STATUS REPORT (DOE 535) received

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
**CONTRACT MANAGEMENT SUMMARY REPORT**

1. CONTRACT IDENTIFICATION <b>TRANSFER PLANS</b>		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1611.												
4. CONTRACTOR (NAME AND ADDRESS) <b>BOEING ENGINEERING AND CONSTRUCTION CO.</b> SEATTLE WASHINGTON				5. CONTRACT START DATE 28 DEC 79												
				6. CONTRACT COMPLETION DATE CONTINUING												
7. MONTHS	O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FY 80		
9. COST STATUS																
<b>AI</b>  <b>THOUSANDS</b>  <b>ALL</b>  <b>BI</b> B AND R NUMBERS  <b>ALL</b>	450												9. COST PLAN DATE 21 OCT 80			
	425												10. PLANNED COSTS PRIOR FYS N/A			
	400												11. ACTUAL COSTS PRIOR FYS N/A			
	375												12. TOTAL ESTIMATE FY COSTS FOR CONTRACT 440			
	350												13. TOTAL CONTRACT VALUE N/A			
	325												14. UNFILLED ORDERS OUTSTANDING N/A			
	300															
	275															
	250															
	225															
200																
175																
150																
125																
100																
75																
50																
25																
0																
RECURRED COSTS		CI PLANNED	0	0	0	10	26	41	44	61	66	67	67	58	440	15. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A
		DI ACTUAL	0	0	0	0	16	30	46	34	84	88	37	123	458	
		EI VARIANCE	0	0	0	10	10	11	-2	27	-18	-21	30	-65		
		FI CUM. VARIANCE	0	0	0	10	20	31	29	56	38	17	47	-18		
16. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE																
17. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE																

162: MULTINATIONAL STORAGE FACILITY

1621: Multinational Storage Facility

OBJECTIVE

Assist U.S. Government in planning and arrangements for a multinational storage facility in support of U.S. nonproliferation objectives. Activities will include:

- Technical and design studies for U.S. Government agencies planning for international storage facilities
- Develop plans required for U.S. participation in international storage facilities
- Manage implementation plans for the international storage facility to the extent required by the U.S. Government

ACTIVITY STATUS

.01 Multinational Study Assistance. Liaison with DOE personnel has continued.

.02 A working meeting to develop a U.S. position on the split of work between the U.S. and Japan for the U.S./Japanese Joint Feasibility Study was held in Washington DC, September 11 with representatives from DOE, Du Pont, Boeing, E. R. Johnson, and IEAL. The meeting resulted in three alternate plans for allocating tasks. Detailed cost spread sheets and spending curves were prepared for each option. A Japanese study team is reviewing the U.S. Draft Work Plan and preparing a response. After the U.S. review of the Japanese response, working-level and intergovernmental meetings will be scheduled, probably during October.

NO MILESTONE SCHEDULE and STATUS REPORT (DOE 535) received

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION MULTINATIONAL STORAGE FACILITY		2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80										3. CONTRACT NUMBER 1621.				
4. CONTRACTOR (NAME AND ADDRESS) BOEING ENGINEERING AND CONSTRUCTION CO. SEATTLE WASHINGTON		5. CONTRACT START DATE 28 DEC 79										6. CONTRACT COMPLETION DATE CONTINUING				
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		E. FY 80
8. COST STATUS																
B1 B AND R NUMBERS		C1 COST PLAN DATE 21 OCT 80														
		C2 PLANNED COSTS PRIOR FYS														
		C3 ACTUAL COSTS PRIOR FYS														
		C4 TOTAL ESTIMATE FY COSTS FOR CONTRACT														
		C5 TOTAL CONTRACT VALUE														
		C6 UNFILLED ORDERS OUTSTANDING														
		C7 ESTIMATE FOR SUBSEQUENT REPORTING PERIOD														
		C8 N/A														
RECORDED COSTS		D1 PLANNED 0 0 0 0 0 5 9 9 14 33 87 93 250														
		D2 ACTUAL 0 0 0 0 19 -19 6 18 15 32 3 23 97														
		D3 VARIANCE 0 0 0 0 -19 24 3 -9 -1 1 84 70														
		D4 CUM. VARIANCE 0 0 0 0 -19 5 8 -1 -2 -1 83 153														
REMARKS CONFLICT - FINANCIAL PLAN IS 250 FY ESTIMATE IS 70																
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE								14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE								

## 163: INTERNATIONAL COOPERATION

### 1631: International Programs

#### OBJECTIVE

Plan and implement a framework for international cooperation through information exchanges and technology transfers relevant to spent fuel storage and transportation.

#### ACTIVITY STATUS

- .01 International Cooperation Plan. A revised draft International Cooperation Plan was provided in August. Du Pont/DOE/SR requested revisions of the plan to (a) remove references to specific contractors and write it as a Government program plan, (b) remove cost and schedule information, and (c) to make greater emphasis on technical and institutional benefits to the U.S. that can be achieved by cooperative programs. A revised plan is scheduled for October.
- .02 Technology Transfer (Information Exchange)

1. The first phase of activity covered by the International Cooperation Plan is the preparation for visitation to high priority countries. Preparation activities have included the following:

- Release August 11 of draft discussion papers for Sweden, Federal Republic of Germany and Spain. These papers include reasons for desiring programs, rationale for other countries to participate and potential cooperative activities. One page briefs of these papers have also been prepared. Comments on these papers similar to those noted above for the plan have been received and a revised set of papers is scheduled for October 3.
- A draft report summarizing international organizations in spent fuel management has been shipped to Du Pont/DOE as of September 26. A final report incorporating any comments is planned by November 7.
- A draft document to inventory nuclear spent fuel programs in high priority countries also has been shipped to Du Pont/DOE as of September 26 with final release planned for November 7.

Support to the IAEA's Expert Group on International Spent Fuel Management has proceeded as follows:

- Input records and consultation services have been provided to task coordinators for terms of reference -1 (storage needs), -2 (technology assessment), -3 (requirements assessment), and -5 (siting). A final report providing worldwide projected spent fuel discharge rates and storage requirements is being prepared for release in October.
- The draft coordination report for term of reference 3 (cost evaluation) has been delivered to the IAEA. A volume containing engineering details in the form of appendices has been provided in draft form to DuPont/DOE/SR and is scheduled for release in October.
- The program activity for 1981 has been planned and includes continued support of the technical/economic subgroup by generation of comments on reports from other sources and reaction to comments on U.S. reports.



NO MILESTONE SCHEDULE and STATUS REPORT (DOE 535) received

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION INTERNATIONAL PROGRAMS										2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		5. CONTRACT NUMBER 1631.					
4. CONTRACTOR (NAME AND ADDRESS) BOEING ENGINEERING AND CONSTRUCTION CO. SEATTLE WASHINGTON										6. CONTRACT START DATE 28 DEC 79		7. CONTRACT COMPLETION DATE CONTINUING					
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS		8. FY 80	
9. COST STATUS																	
10. BUDGET AND ACTUAL COSTS IN THOUSANDS		900												11. LOST PLAN DATE 21 OCT 80			
		850													12. PLANNED COSTS PRIOR FY'S		
		800													N/A		
		750													13. ACTUAL COSTS PRIOR FY'S		
		700													N/A		
		650													14. TOTAL ESTIMATE FY COSTS FOR CONTRACT		
		600													570		
		550													15. TOTAL CONTRACT VALUE		
		500													N/A		
		450													16. UNFILLED ORDERS OUTSTANDING		
17. BUDGET AND ACTUAL COSTS IN DOLLARS		400												N/A			
		350												18. ESTIMATE FOR SUBSEQUENT REPORTING PERIOD			
		300												N/A			
		250													19. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE		
		200													20. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE		
REMARKS																	
CONFLICT - FINANCIAL PLAN IS 410 FY ESTIMATE IS 570																	

## 164: ACTIVITIES AND PROGRAM PLANNING

### 164.1: Program Management/Support

#### OBJECTIVE

Integrate management and support services for the international activities program. This includes:

- Management and allocation of program resources
- Accounting for program progress and scheduled activities
- Business and administrative services
- Development and maintenance of the international activities program plan.

In addition, provide technical studies, topical reports, and informational briefings as required to support overall international activities.

#### ACTIVITY STATUS

- .01 Program Planning. The final Program Plan document was submitted to Du Pont on September 15. The Program Development Plan, which incorporates all sections of the Program Plan but expands on the scope of work for the current fiscal year, will be published in final form during the next month.
- .03 Program Reporting. A presentation on program activities and accomplishments was given to Du Pont and DOE on September 24 and 25 at Savannah River. Emphasis was given to FY 1980 overall accomplishments in areas of Fuel Transfer Studies and International Cooperation and to planned FY 1981 activities in areas of Pacific Basin Feasibility Study and International Cooperation, in particular the support to the IAEA International Spent Fuel Management effort.
- .03 Program Management. The formal proposal for FY 1981 activities on the International Spent Fuel Storage program was submitted to Du Pont September 24. Negotiations with Du Pont and IEAL as the subcontractor has been completed on a study to be performed for DOE on The Effects on U.S. Non-Proliferation Policy of Various Spent Fuel Disposition Strategies.

NO MILESTONE SCHEDULE and STATUS REPORT (DOE 535) received

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION PROGRAM MANAGEMENT/SUPPORT										2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80		3. CONTRACT NUMBER 1641.			
4. CONTRACTOR (NAME AND ADDRESS) BOEING ENGINEERING AND CONSTRUCTION CO. SEATTLE WASHINGTON										5. CONTRACT START DATE 28 DEC 79		6. CONTRACT COMPLETION DATE CONTINUING			
7. MONTHS		O	N	D	J	F	M	A	M	J	J	A	S	TOTALS	8. FY 80
9. COST STATUS															
A) THOUSANDS		900												9) COST PLAN DATE 21 OCT 80	
		850													10) PLANNED COSTS PRIOR FYS N/A
B) B AND R NUMBERS		500												11) ACTUAL COSTS PRIOR FYS N/A	
		450													12) TOTAL ESTIMATE FY COSTS FOR CONTRACT 620
ALL		400												13) TOTAL CONTRACT VALUE N/A	
		350													14) UNFULFILLED ORDERS OUTSTANDING N/A
ACCURED COSTS		300												15) ESTIMATE FOR SUBSEQUENT REPORTING PERIOD N/A	
REMARKS		250													
CONFLICT - FINANCIAL PLAN IS 600 FY ESTIMATE IS 620															
16. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE										17. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE					

164: ACTIVITIES INTEGRATION AND PLANNING

1643: Program Management

OBJECTIVE

Provide program management activities necessary to: accomplish international program objectives, allocate program resources, measure program progress, account for cost, and operate data resource library.

ACTIVITY STATUS

No report received.

FORM DOE 535  
(1/1/78)  
VPI FACSIMILE

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
MILESTONE SCHEDULE AND STATUS REPORT

PAGE 1 OF 1

1. CONTRACT IDENTIFICATION GENERAL SUPPORT				2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80										3. CONTRACT NUMBER 1643.						
4. CONTRACTOR (NAME, ADDRESS) SAVANNAH RIVER PLANT AIKEN SOUTH CAROLINA														5. CONTRACT START DATE 1 OCTOBER 79						
														6. CONT. COMPLETION DATE INDEFINITE						
7. IDENT. NUMBER	8. REPORTING CATEGORY	9. FISCAL YEARS FY 1979				FY 1980				FY 1981				10. PERCENT COMPLETE						
		1	2	3	4	0	N	D	J	F	M	A	M		J	J	A	S	1	2
1	GENERAL SUPPORT																	0		
11. REMARKS																				
12. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE										13. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE										

FORM DOE 536  
(1/78)  
VPI MODIFICATION

U. S. DEPARTMENT OF ENERGY  
SAVANNAH RIVER OPERATIONS OFFICE  
CONTRACT MANAGEMENT SUMMARY REPORT

1. CONTRACT IDENTIFICATION GENERAL SUPPORT				2. REPORTING PERIOD 01 SEP 80 THROUGH 30 SEP 80										3. CONTRACT NUMBER 1643.					
4. CONTRACTOR NAME AND ADDRESS SAVANNAH RIVER PLANT AIKEN SOUTH CAROLINA														5. CONTRACT START DATE 1 OCT 79					
														6. CONTRACT COMPLETION DATE CONTINUING					
7. MONTHS		0	N	D	J	F	M	A	M	J	J	A	S	TOTALS		8. FY 80			
9. COST STATUS																			
AI THOUSANDS		90													GI COST PLAN DATE 21 OCT 80				
		85														H) PLANNED COSTS PRIOR FY'S N/A			
B) B AND R NUMBERS ALL		70													I) ACTUAL COSTS PRIOR FY'S N/A				
		65														J) TOTAL ESTIMATE FY COSTS FOR CONTRACT 100			
RECCURED COSTS		50													K) TOTAL CONTRACT VALUE N/A				
		45														L) UNFILLED ORDERS OUTSTANDING N/A			
REMARKS																			
13. SIGNATURE OF CONTRACTOR'S PROJECT MANAGER AND DATE										14. SIGNATURE OF THE GOVERNMENT TECHNICAL REPRESENTATIVE AND DATE									



## AFR GLOSSARY

AFR -- Away From Reactor

AFR-EIS -- Away-From-Reactor Environmental Impact Statement

AGNS -- Allied General Nuclear Services

ANL -- Argonne National Laboratory

ARB -- at-reactor basin

ASAR -- AFR Safety Analysis Report (conceptual)

BCL -- Battelle Columbus Laboratories

BEC -- Boeing Engineering and Construction Company

BEFAST -- Behavior of Fuel Assemblies during long-term Storage

BNFP -- Barnwell Nuclear Fuel Plant

BWR -- boiling water reactor

CERT -- constant extension rate test

COBRA-N -- thermal hydraulics computer program

COMPU.MAP -- computer mapping program

CRP -- Center for Radiological Protection

DISFUL -- computer code (Stoller Corp.)

DOE -- Department of Energy

DOE/ER -- Department of Energy/Energy Research

DOE/EV -- Department of Energy/Environment

DOE/HQ -- Department of Energy/Headquarters

DOE/NE -- Department of Energy/Nuclear Energy

DOE/SR -- Department of Energy/Savannah River

DOS -- Department of State

EIS -- Environmental Impact Statement

ENC -- Exxon Nuclear Corp.

ER -- Environmental Report (conceptual)

FEMA -- Federal Emergency Management Agency

FRG -- Federal Republic of Germany

FRSS -- Fuel Receiving and Storage Station (AGNS-Barnwell)

FSF -- Fleet Servicing Facility

GE -- General Electric

GEIS -- Generic Environmental Impact Statement

GPSS -- General Purpose Simulation System

GWe -- gigawatts electric

HEDL -- Hanford Engineering Development Laboratory

IAEA -- International Atomic Energy Agency

IEAL -- International Energy Associates Limited

ISFM -- International Spent Fuel Management

ISFP -- International Spent Fuel Program

kWh -- kilowatt hour

LASL -- Los Alamos Scientific Laboratory

LWR -- light water reactor

MISTIC -- Model Interstate Scientific and Technical Information Clearinghouse

ml -- milliliter

MT -- metric ton

MTU -- metric ton of uranium

MW -- megawatt

MWD -- megawatt day

NAC -- Nuclear Assurance Corporation

NCSL -- National Conference of State Legislatures

NEPA -- National Environmental Protection Agency

NES -- Nuclear Energy Services

NFS -- Nuclear Fuel Services

NMMSS -- Nuclear Material Management Safeguard System at Oak Ridge

NM/TTC -- Nuclear Materials Transportation Technology Center

NRC -- National Regulatory Commission

NSF -- National Science Foundation

NUS -- corporate name (formerly Nuclear Utility Service)

OMB -- Office of Management and Budget

ONWI -- Office of Nuclear Waste Isolation

ORNL -- Oak Ridge National Laboratories

PNL -- Pacific Northwest Laboratories

ppb -- parts per billion

PWR -- pressurized water reactor

RAM -- radioactive material

RBOF -- Receiving Basin Offsite Fuel (Du Pont-SRP)

RHO -- Rockwell Hanford Operations

RMT -- Radioactive Material Transport

SFPO -- Spent Fuel Project Office (DOE/SR)

SNL -- Sandia National Laboratories

SNL/TCC -- Sandia National Laboratories/Transportation Technology Center

SRL -- Savannah River Laboratory

SRP -- Savannah River Plant

SSEB -- Southern States Energy Board

TES -- Teledyne Energy Systems

TSSE -- Transportation System Safety Evaluation

TTC -- Transportation Technology Center (SNL)

TWIGL -- neutronics computer program - two dimensional

UCRS -- Uniform Contractor Reporting System

UK -- United Kingdom

U.S. -- United States

VPI -- Virginia Polytechnic Institute (and State University)

WBS -- Work Breakdown Structure

WEN -- Work Element Numbers

WIGL -- neutronics computer program

WNYNS -- Western New York Nuclear Service (West Valley)