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DATE: September 2, 1959

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SUBJECT: POWER REACTOR FUEL REPROCESSING: MECHANICAL PHASE

TO: W. F. Schaffer, Jr.

FROM: B. B. Klima

ABSTRACT

The major events in the Mechanical Phase of the Power Reactor Fuel Reprocessing program during August were:

1. There was an occurrence at the SRE which caused several (approximately 7) fuel elements to part when being pulled from the reactor. This will complicate reprocessing (possibly another auxiliary decladder); however, the bulk of the elements may still be reprocessed as planned. The SRE prototype fuel element and shipping container was shipped from Canoga Park August 26.
2. New or reworked parts for the mechanical decladder were supplied by the fabricators (Southern Machine, Chattanooga) so as to permit rebuilding of the machine in ORNL shops.
3. Re-evaluation of the funds available for the project led to the following direct actions:
 - a. Reduction of UO_2 pellet order to the quantity needed this fiscal year.
 - b. Reduction of Mark III prototype fuel element to 12.
 - c. Stoppage of all work by REE Division personnel.
 - d. Stoppage of all work possible that was not related to SRE fuel element reprocessing.
 - e. Award of production prototype shear contract to Birdsboro Steel Foundry and Machine Company only for the design phase.
4. The building number has been officially changed to Building 3026.

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Design of the SRE related phases of the work is essentially 78% complete with fabrication approximately 35% complete and installation approximately 13% complete. Installation of individual items of reprocessing equipment should start in the Segmenting Facility during the first week of September.

Two items (1k and 1l) were added to the schedule and they were both pertinent to the SRE reprocessing program. Descriptions of the items of the schedule is included only as it effects a change during the month of August or to reflect a change in policy. For all details and descriptions, see the previous schedule.*

The status of procurement is shown in Table 2. A total of 147 purchase requests have been turned in to the Purchasing Department. A total of \$336,577.52 has been committed by 131 purchase orders, and a total of 101 purchase orders have been received for a total value of \$129,130.70.

A summary of the work orders is shown in Table 3. Seven work orders have been closed and one work order has been added. The active work orders are for a total of \$521,411 with \$245,074 set aside for labor. Expenditures on work orders through the month of July amount to a total of \$349,589.

Based on the cost figures available, the average man-days per day of labor expended on the project are shown in Fig. 1. Approximately 19 design people and 24 fabrication and installation craftsmen per day were assigned to this program during the month of July. This figure gives an index of the effort expended on this program during the last eight months.

STATUS AND DESCRIPTION

1. Mechanical Decladding Equipment.

The 34 pieces of the mechanical decladding equipment refabricated by Southern Machine Company, Chattanooga, Tennessee, were received and the ORNL shop is rebuilding the machine.

Drawings: E-33511-15, 33517, 35228-30; D-33496, 33507-10, 33516, 33518-24, 35000, 35010, 35225-27, 35231-42, 35248-49.

1a. Basket Draining Station

No change.

Drawings: D-33509, 35009.

1b. Perforated Baskets

No change.

Drawing: D-35010.

*B. B. Klima, ORNL CF-59-1-19, "Power Reactor Fuels Reprocessing: Mechanical Phase," January 7, 1959; ORNL CF-59-1-151, "Power Reactor Fuels Reprocessing: Mechanical Phase," January 30, 1959; ORNL CF-59-1-151, Supplement 1, February 27, 1959; ORNL CF-59-1-151, Supplement 2, March 31, 1959; ORNL CF-59-5-35, "Power Reactor Fuels Reprocessing: Mechanical Phase," May 11, 1959; ORNL CF-59-5-35, Supplement 1, June 1, 1959; ORNL CF-59-5-35, Supplement 2, July 1, 1959; ORNL CF-59-8-88, August 3, 1959.

1c. Pneumatic Clad Winder and Unloader

The design of the penumatic clad winder and unloader has been completed and fabrication has started.

Drawing: B-37450.

1d. NaK Troughs

No change.

Drawing: D-35011.

1e. Cutter Locator No. 1

No change.

1f. Cutter Locator No. 2

The design of the cutter locator No. 2 has been completed.

1g. Depth Gauge for Jammed Slug Cut-Off

No change.

1h. Replacement Drive Screw and Components

A replacement screw was fabricated at ORNL and a second screw is being purchased.

1i. Tool Board

No change.

1j. Installation and Operational Procedures

No change.

1k. Oil Flushing System (New)

The hydraulic oil pump for the oil flushing of the declad tube will not tolerate metallic or other foreign particles in the oil and a filter is to be installed to protect it. However, lack of head made it necessary to install a centrifugal pump to pump the oil through the filter to the flushing pump. Design of this unit is proceeding.

1l. Decladding Machine Support (New)

The present support for the mechanical decladder will not be adequate since the decladder was raised and a new support for the machine is being designed.

2. Fuel Rod Surge Rack - Wire Removal

No change.

3. Auxiliary Decladder - Slug

No change.

Drawings: D-35002-03.

4. Auxiliary Decladder - Rod

A preliminary design of an auxiliary rod decladder is being made and further action will be based on completion of this design.

5. SRE Slug Washer

The base for the slug washer is being redesigned.

Drawings: E-36375; D-36376-81.

5a. Filter
No change.

5b. Condenser
The condenser will be a coiled finned tube and it is being designed.

5c. Ess Lifting Hook
No change.

6. NaK Oil Disposal System

No change.

Drawing: D-36238.

6a. Oil Supply
No change.

6b. NaK Reactor
No change.

6c. Filter
No change.

6d. Dump Tank
No change.

6e. Metering Tank
No change.

6f. Remote Operated Vehicles
No change.

6g. Mounting Rack
No change.

6h. Control Panel
No change.

7. NaK Disposal

No change. Held in abeyance.

8. Instruments - Hydrogen Detector

The instruments have been received and the design for installation is proceeding.

SRE FUEL ELEMENT DISASSEMBLY

9. SRE Mechanical Disassembly Tools

9a. Cotter Pin Puller
No change.

9b. Disassembly Wrench
No change.

9c. Spreader
No change.

9d. Tool Board for Tool Storage
No change.

10a. Cannister Cap Removal Device
No change.

10b. SRE Fuel Element Puller
The special air operated reel for winding up the cable and a fuel element grappling hook have been designed to pull the SRE fuel element from the cannister to its position under the saw. It is presently being fabricated.

10c. Trough
No change.

10d. Element Positioning Device
No change.

10e. Dismantling Equipment Frame
No change.

10f. Lifting Hook - Rod
Fabricated.

Drawing: D-35008.

10g. Lifting Hook - Element
No change.

Drawings: D-36671-72.

11. Recanning

No change.

Drawings: D-35244, C-35245-47.

11a. Can Storage Crate
Drawing: D-36388. Fabricated.

11b. Can Grips - GM

Fabrication of the can grips for the GM manipulator has been completed.

Drawing: D-36670.

11c. Can Grips - Crane

Design of can grips hydraulically or penumatically operated to hang on the crane has been completed and fabrication is proceeding.

11d. Recanning Table

No change.

13. Finger Washers

13a. Finger Washer - GM

No change.

13b. Finger Washer - No. 8

No change.

13c. Finger Washer - Lee

No change.

14. Recanned Fuel Handling

Only such items as are essential for immediate use will be fabricated this fiscal year.

Drawings: D-36385-86, 36633.

14a. Can Grips - Lee

No change.

14b. Table

No change.

Drawings: D-36385-86, 36392.

14c. Loading Trough

No change.

Drawing: D-36385-86.

14d. Special Plug

No change.

Drawing: D-36633.

14e. Carrier - 50"

The design of the carrier modifications are completed; however, the carrier will not be modified until next fiscal year.

Drawings: D-13003, 36385-86.

14f. Carrier Dolly - - 50"

The carrier dolly will not be fabricated until next fiscal year.

Drawings: D-36385-86.

14g. Shutter

Design of the shutter is proceeding.

Drawing: D-36385-86.

14h. Carrier Loading Station

Installation of the carrier loading station is complete except for installation of the raised "V" track which cannot be done until the carrier is in place next fiscal year.

Drawings: D-36385-86, 36633.

15. Chute Modifications - 3019

Design of modifications to the dissolver loading chute in Bldg. 3019 will not be done until next fiscal year.

17. SRE Process Analysis

The third draft of the analysis has been issued.

20. Segmenting Facility - 3026

No change.

20a. Paint Cell A Walls and Floor Storage Cell

No change.

20b. Cell A Roof Liner

No change.

20c. Move Cell A Filters

A cost estimate of the movement of the Cell A filters was made and it cannot be accomplished unless funds are made available.

20d. Cell A Air Inlet

Design of the Cell A air inlet is proceeding.

20e. Move Lights Cell A

The sketch for the movement of the lights in Cell A is being made.

20f. Zinc Bromide Windows

The filling of the Zinc Bromide windows has been completed.

20g. Hatch Covers Tunnel

The design of the hatch covers for the tunnel has been completed.

21. General Mills Manipulator

No change.

22. Model 8 Manipulators

No change.

23. Bridge Crane Cell A

No change.

24. Opening Cell A-B

Held in abeyance. Drawings: D-28434-35, 35317.

25. Cell Door Charging Door Closure

Installation of the cell door charging door closure was completed and was unsatisfactory because the air cylinder was too small. A new one is being purchased. It will be completed on arrival of the new cylinder.

Drawings: E-31275, 33040; D-31276-78, 31280-81, 33041-44.

25a. Cell Door Inflated Gasket

No change.

Drawings: D-35521-24, 36626.

25b. Cell Door Shutter Lock Revisions
Completed.

25c. Dead Man Switch

No change.

26. Traverse Table

No change.

Drawings: E-26590, 29495-97; D-26951, 29086, 29498.

27. Dust Collection System

The dust collection system will be designed next fiscal year.

27a. Cyclone

27b. Fan

28. Fire Extinguishment System

Installation is complete except for the Cardox nozzle.

28a. Cylinder Storage

Installation of the cylinder storage is complete.

29. TV Auxiliary Viewing Cell A

The camera and auxiliaries have been received and design has started.

29a. TV Camera Storage Cask
Design has started.

30. Multipurpose Wheel Saw

The saw has been designed and it is being fabricated at Ty-Sa-Man.

Drawings: E-26590; D-26591, 33048.

30a. Longitudinal Cut
This will be designed next fiscal year.

30b. Clamping Devices
Design will be started next fiscal year.

30c. Particle Collection Device
Design will be started next fiscal year.

30d. Water Circulation System
Design will be started next fiscal year.

30e. SRE Clamping Device
No change.

30f. SRE Particle Collection Device
No change.

31. Scrap Container

Fabricated.

Drawing: D-31299.

31a. Scrap Container Carrier
No change.

Drawings: D-31419-23.

32. Carrier Cell B

No change.

Drawing: D-32164-67.

33. Lifting Tongs and Tools

Fabricated.

Drawings: D-31411-18, 35352-54, 35357-58, 35363.

34. Tray and Supports

Fabricated

Drawings: E-31407; D-31408-10.

35. Tunnel Transfer Cart

Installed.

Drawings: E-31286, 31290; D-30895, 31287-88, 31291-92.

36. Cell B. Bridge Crane

Installed.

37. Maintenance Cell

Continuance of the design for the maintenance cell awaits funding.

Drawings: D-35952-53.

38. SRE Fuel Element Carrier

No change.

Drawings: E-25172-74, 29889, 35500, 35509; D-29890-97, 35501-08, 35510-12.

38a. Shipping Rack

Fabrication of the first shipping rack has been completed.

38b. Bureau of Explosive Permit

Application for the permit has been made.

38c. Gondola Modifications

Design has been completed and fabrication started.

38d. Unloading Tool

Design has been completed and fabrication started.

38e. Shadow Shield

Design has been completed and fabrication started.

39. SRE Carrier Dolly Modifications

Fabrication of the dolly has started.

Drawings: D-31294-96.

39a. Alignment Gauge

Fabricated.

Drawing: D-32168.

40. Lee Manipulator Storage Cell

No change; the strike continues.

Drawings: D-36383-86.

41. Periscope Storage Cell

Fabrication of the periscope is complete.

42. Bridge Crane Storage Cell

Installation of the modified bridge crane has been started.

Drawings: D-35004-07.

43. Duct Removal East Cell A

The cost of the duct removal has been estimated and it will probably be completed next fiscal year.

44. Utilities 3026

No change.

45. Electrical 3026

No change.

48. SRE Layout Segmenting Facility

No change.

49. Shearing Layout Segmenting Facility

No change.

51. Models

51a. Consolidated Edison
Completed.

51b. Nuclear Ship Savannah
Completed.

51c. Commonwealth Edison
Completed.

51d. Display Table
Completed.

52. Fuel Element Data Sheet

A revision has been issued and it will be revised again as required.
Drawing: D-33754.

53. Prototype Fuels Mark I, Modification 1

Fabricated.

Drawing: D-30869.

53a. Modification 2

UO₂ pellets have been received. They are not of the highest quality, however, the company has been contacted and they have given assurance that the quality will improve. Drawing D-30869.

53b. Modification 3

Fabricated. Drawing D-33752.

53c. Modification 4

No change.

Drawing: D-33757.

53d. Modification 5

No change.

Drawing: D-33758.

53e. Modification 6

Fabrication of the six prototypes has been cancelled.

Drawing: D-33759.

54. Prototype Fuels Mark II

Fabricated.

Drawing: D-33753.

55. Prototype Fuels Mark III

Twelve of the 36 prototypes have been procured and the remaining 24 have been cancelled.

Drawing: D-33755.

59. Fuel Element Separation Device

Completed.

Drawings: D-34775-76, 34782-83, 34822, 34824, 35365, 35372-73, C-34778-81.

61. Band Saw Study

No change.

Drawing: D-35391.

63. Underwater Fuel Element Disassembly Equipment

No change.

65. Batch Dissolver-3026

Design will be completed next fiscal year.

Drawings: D-31647.

65a. Material Transfer Cell A-B

Design will be completed next fiscal year.

65b. Transfer Basket

Design will be completed next fiscal year.

66. Materials Handling Study - Conceptual

Design will be completed next fiscal year.

67. Production Prototype Shear

The preliminary criteria and final criteria for the production prototype shear have been drawn up and the Birdsboro Steel Foundry and Machine Company has been started on the design.

67a. Shear Testing

Completed.

69. Shear Blade Die Set

The shear blade die set will be reworked and will be retested and then set up at Metallurgy for chopping UO_2 loaded fuel.

Drawings: D-35947-49, 36325-34.

69a. Hold Down Device

The revised Gag is being fabricated.

71. Manco Shear 4-1/2 In., Bldg. 4505

Completed.

Drawings: D-34787, 34794, 34807, 35382-87, 35474-75; C-34784, 34786.

71a. Oil Gear Unit

Installed. Drawingw: 35474-75.

71b. Holding and Clamping Device

Installed.

Drawings: D-35367-69.

72. Manco Shear 1-1/2 In., Bldg. 4505

Installed

74. Spiral Vibratory Continuous Leacher 4505

The welds on the spiral vibratory leacher failed and it is to be returned to the factory for repair.

Drawings: E-34788; D-34789-90, 34798-99.

74a. Instrumentation
No change.

75. Inclined Drum Continuous Leacher

Fabrication is continuing.

Drawings: E-27090-91; D-27092-99, 35520.

75a. Drive
Design will be completed next fiscal year.

75b. Feeder
Held in abeyance.

76. Inclined Drum Continuous Leacher Model 2

No change.

Drawings: E-35374; D-35375-79.

77. Rotating Slab Continuous Leacher

No change.

Drawings: E-35476-77; D-35478-82.

78. Batch Dissolver 4505

No change.

Drawings: E-33760-61; D-25169-70, 34795, 34798-99.

80. Materials Transfer Continuous 4505

No change.

Drawings: D-36667-69.

81. Can Chopped Fuel

Held in abeyance.

81a. Can Adaptation
Held in abeyance.

83. Shear - Dissolver

Design will be completed next fiscal year.

85. Enclosure (Jericho) 4505

Installed.

Drawings: D-27239-42, 34791-93.

86. Top Cell 4A

Installed.

Drawings: D-34796.

87. Abrasive Wheel Saw 4505

Installed.

Drawing: D-33244.

87a. Longitudinal Cut

The device to permit a fuel element to be cut longitudinally has been installed.

Drawings: D-34810-21.

87b. Clamping Device

Design will be completed next fiscal year.

Drawing: D-34780.

87c. Particle Collection Device

Design will be completed next fiscal year. Drawing D-34779

90. Leacher Solution Sampler 4505

Design will be completed next fiscal year.

90a. Leacher Solution Sampler 3026

Design will be completed next fiscal year.

93. Layout Test Area 4505

Completed.

97. Dissolver Fuel Transfer

The design of the fuel transfer lines is complete and it is out for bids.

Drawings: D-36507-09.

BBK:sg

B. B. Klima
Process Design Section
Chemical Technology Division

Table 1. PRFR Mechanical Phase - Schedule

ITEM NO.	ITEM	July	August	September	October	November	December	January	February	March	Engineer Assigned	REMARKS	Chem Tech Contact
1	Mechanical Decladding Equip. 3026		Rebuild	Install	Cold Tests						G. E. Pierce		G. A. West
1a	Basket Draining Station		Install								G. E. Pierce		G. A. West
1b	Perforated Baskets			Fabricate Extras							G. E. Pierce		G. A. West
1c	Pneumatic Clad Winder and Unloader		*Design	Fabricate	Install						G. E. Pierce		G. A. West
1d	NaK Troughs		*Fabricate	Install							G. E. Pierce		G. A. West
1e	Cutter Locator No. 1		Fabricate	Install							G. E. Pierce		G. A. West
1f	Cutter Locator No. 2		*Design	Fabricate	Install						G. E. Pierce		G. A. West
1g	Depth Gauge for Jammed Slug Cut-Off		*Design	Fabricate	Install						G. E. Pierce		G. A. West
1h	Replacement Drive Screw and Components		*Fabricate	Purchase							G. E. Pierce		G. A. West
1i	Tool Board		Design	Fabricate	Install						R. J. Emmert		G. A. West
1j	Installation and Operational Procedure		2nd Draft	Final Draft							R. J. Emmert		G. A. West
1k	Oil Flushing System			Design	Fabricate	Install					R. J. Emmert		G. A. West
1l	Decladding Machine Supports			Design	Fabricate	Install					R. J. Emmert		G. A. West
2	Fuel Rod Surge Rack Wire Removal		Design	Fabricate	Install						R. J. Emmert		G. A. West
3	Auxiliary Decladder - Slug		*Test	Design	Fabricate	Install	Cold Tests				R. J. Emmert		G. A. West
4	Auxiliary Decladder - Rod		Preliminary Design								L. N. Howell A. M. Tripp		G. A. West
5	SRE Slug Washer - 4505		*Modify	Test									G. A. West
	- 3026			Design	Install	Cold Test					G. E. Pierce		G. A. West
5a	Filter		*Design	Fabricate	Install						G. E. Pierce		G. A. West
5b	Condenser		Design	Fabricate	Install						R. P. Hutchinson		G. A. West
5c	Ess Lifting Hook		*Design	Fabricate							G. E. Pierce		G. A. West
6	NaK - Oil Disposal System			Install	Cold Test						G. E. Pierce		G. A. West
6a	Oil Supply			Install							G. E. Pierce		G. A. West
6b	NaK Reactor		*Design	Fabricate	Install						G. E. Pierce		G. A. West
6c	Filter		*Design	Fabricate	Install						G. E. Pierce		G. A. West

Table 1, Continued

ITEM NO.	ITEM	July			August			September			October			November			December			January			February			March			Engineer Assigned	REMARKS	Chem Tech Contact
6d	Dump Tank				Design	Fabricate	Install																				J. J. Quinn		G. A. West		
6e	Metering Tank				*Design	Fabricate	Install																				G. E. Pierce		G. A. West		
6f	Remote Operated Valves				Design	Fabricate	Install																				J. J. Quinn B. B. Klima		G. A. West		
6g	Mounting Rack				Design	Fabricate	Install																				J. J. Quinn		G. A. West		
6h	Control Panel					Design	Fabricate	Install																			C. D. Stout		G. A. West		
7	NaK Disposal				Hold in abeyance																										
8	Instruments - Hydrogen Detector				Design		Install																				C. S. Lisser		G. A. West		
9a	Cotter Pin Puller					Design	Fabricate																				J. T. Cox		G. A. West		
9b	Disassembly Wrench					Design	Fabricate																				J. T. Cox		G. A. West		
9c	Spreader					Design	Fabricate																				J. T. Cox		G. A. West		
9d	Tool Board for Tool Storage					Design	Fabricate	Install																			J. T. Cox		G. A. West		
10a	Cannister Cap Removal Device					Design	Fabricate	Install																			J. T. Cox		G. A. West		
10b	Fuel Element Puller					* Design	Fabricate	Install																			G. E. Pierce		G. A. West		
10c	Trough					Design	Fabricate	Install																			J. T. Cox		G. A. West		
10d	Element Positioning Device					Design	Fabricate	Install																			J. T. Cox		G. A. West		
10e	Dismantling Equipment Frame					Design	Fabricate	Install																			J. T. Cox		G. A. West		
10f	Lifting Hook - Rod				Fabricated																								G. A. West		
10g	Lifting Hook - Element					Fabricate																					G. E. Pierce		G. A. West		
11	Recanning					Design	Fabricate	Install																			R. E. Hoskins		G. A. West		
11a	Can Storage Crate				Fabricated																								G. A. West		
11b	Can Grips - GM					*Fabricate																							G. A. West		
11c	Can Grips - Crane					*Design	Fabricate																				G. E. Pierce		G. A. West		
11d	Recanning Table					Design	Fabricate	Install																			R. E. Hoskins		G. A. West		
12																															
13a	Finger Washer - GM					*Design	Fabricate	Install																			G. E. Pierce		G. A. West		

Table 1, Continued

ITEM NO.	ITEM	July			August			September			October			November			December			January			February			March			Engineer Assigned	REMARKS	Chem Tech Contact												
13b	Finger Washer - No. 8	*Design			Fabricate			Install																			G. E. Pierce		G. A. West														
13c	Finger Washer - Lee	*Design			Fabricate			Install																			G. E. Pierce		G. A. West														
14a	Can Grips - Lee				Design			Fabricate																			A. F. Zulliger		W. F. Schaffer														
14b	Table	*Design						Fabricate		Install																	G. E. Pierce		W. F. Schaffer														
14c	Loading Trough	*Design						Fabricate		Install																	G. E. Pierce		W. F. Schaffer														
14d	Special Plug							Fabricate																			G. E. Pierce		W. F. Schaffer														
14e	Carrier - 50"	*Design																											W. F. Schaffer														
14f	Carrier Dolly - 50"	*Design																											W. F. Schaffer														
14g	Shutter			Design				Fabricate		Install																	E. L. Hutto		W. F. Schaffer														
14h	Carrier Loading Station						*Fabricate			*Install																			W. F. Schaffer														
15	Chute Modification, 3019	Design To be completed next fiscal year																																									W. F. Schaffer
16																																											
17	SRE Process Analysis				*3rd Draft					Final Draft																		F. L. Hannon		G. A. West													
18																																											
19																																											
20	Segmenting Facility 3026							Modify																				G. E. Pierce		W. F. Schaffer													
20a	Paint Cell A Walls and Floor Storage Cell							Install																				G. E. Pierce		W. F. Schaffer													
20b	Cell A Roof Liner							Install																				G. E. Pierce		W. F. Schaffer													
20c	Move Cell A Filters							Hold for funds																						W. F. Schaffer													
20d	Cell A Air Inlet				Design					Install																		A. B. Fuller		W. F. Schaffer													
20e	Move Lights Cell A				Design					Install																		C. D. Stout		W. F. Schaffer													
20f	Zinc Bromide Windows	*Repaint			*Install																									W. F. Schaffer													
20g	Hatch Covers Tunnel				*Design					Fabricate			Install															G. E. Pierce		W. F. Schaffer													
21	General Mills Manipulator									Install																		G. E. Pierce		W. F. Schaffer													
22	Model 8 Manipulators	*Design						Fabricate					Install															G. E. Pierce		W. F. Schaffer													

Table 1, Continued

ITEM NO.	ITEM	July			August			September			October			November			December			January			February			March			Engineer Assigned	REMARKS	Chem Tech Contact
51c	Fuel Element Models Com. Ed.				Fabricated																								G. K. Ellis		
51d	Fuel Element Models Display Table							*Fabricate]																					G. K. Ellis		
52	Fuel Element Data Sheet							*Revision]																					G. K. Ellis		
53	Prototype Fuels: Mk I, Mod. 1				Fabricated																								W. F. Schaffer		
53a	Prototype Fuels: Mk I, Mod. 2							Receive UO ₂ Pellets]	Fill]																		W. S. Hornbaker	W. F. Schaffer			
53b	Prototype Fuels: Mk I, Mod. 3				Fabricated																								W. F. Schaffer		
53c	Prototype Fuels: Mk I, Mod. 4				Designed																								W. F. Schaffer		
53d	Prototype Fuels: Mk I, Mod. 5				Designed																								W. F. Schaffer		
53e	Prototype Fuels: Mk I, Mod. 6				Hold in abeyance																								W. F. Schaffer		
54	Prototype Fuels: Mk II				Fabricated																								G. A. West		
55	Prototype Fuels: Mk III				Fabricated																								W. F. Schaffer		
56																															
57																															
58																															
59	Fuel El. Separation Devices				*Report]																								G. K. Ellis		
60																															
61	Band Saw Study				*Study]																								W. F. Schaffer		
62																															
63	Underwater Fuel Element Disassembly Equipment											Design]																	L. N. Howell	C. D. Watson	
64																															
65	Batch Dissolver 3026				Design	next fiscal year																							W. F. Schaffer		
65a	Materials Transfer Cell A-B				Design	next fiscal year																							W. F. Schaffer		
65b	Transfer Basket				Design	next fiscal year																							W. F. Schaffer		
66	Materials Handling Study - Conceptual				*Preliminary Design]																								W. F. Schaffer		
67	Production Prototype Shear				*Preliminary Criteria]							Design]																	C. H. Odom	W. F. Schaffer	
					*Final Criteria]																										

[illegible]

ITEM NO.	ITEM	July		August		September		October		November		December		January		February		March		Engineer Assigned	REMARKS	Chem Tech Contact
67a	Shear Testing				*Test	]															C. D. Watson	
68																						
69	Shear Blade Die Set			*Rework	*Test	Rework Setup Metallurgy	]												R. B. Pratt		G. K. Ellis	
69a	Shear Holddown Device			*Design	Fabricate	Install	]												G. E. Pierce		G. K. Ellis	
70																						
71	Manco Shear - 4-1/2", 4505			Installed																	G. K. Ellis	
71a	Manco Oil Gear Unit			Installed																	G. K. Ellis	
71b	Manco Holding, Clamping Devices			Installed																	G.K. Ellis	
72	Manco Shear - 1-1/2" 4505			Installed																	G. K. Ellis	
73																						
74	Spiral Vibratory Continuous Leacher, 4505						Test	]	Remove	]											G. K. Ellis	
74a	Spiral Vibratory Instrumentation					Install	]												L. H. Chase G. E. Pierce		G. K. Ellis	
75	Inclined Drum Continuous Leacher, 4505					Fabricate	]												G. E. Pierce		G. K. Ellis	
75a	Inclined Drum Drive			Design delayed til next fiscal year																	G. K. Ellis	
75b	Inclined Drum Feeder			Hold in abeyance																		
76	Inclined Drum Continuous Leacher Mod. 2			Designed																	G. K. Ellis	
77	Rotating Slab Continuous Leacher			Designed																	G. K. Ellis	
78	Batch Dissolver 4505									Install	]						Test	]	G. E. Pierce		G. K. Ellis	
79																						
80	Material Transfer Continuous 4505					Purchase	]	Install	]										G. E. Pierce		G. K. Ellis	
81	Can Chopped Fuel			*Design	]			Hold in abeyance													G. K. Ellis	
81a	Can Adaptation			Hold in abeyance																	G. K. Ellis	
82																						
83	Shear Dissolver			Design next fiscal year																	G. K. Ellis	
84																						

Table 1, Continued

ITEM NO.	ITEM	July			August			September			October			November			December			January			February			March			Engineer Assigned	REMARKS	Chem Tech Contact
85	Enclosure (Jericho) 4505			Installed																									G. K. Ellis		
86	Top Cell 4A			Installed																									G. K. Ellis		
87	Abrasive Wheel Saw 4505			Installed																									G. A. West		
87a	Longitudinal Cut			*Install																									G. A. West		
87b	Clamping Device			Design delayed until			next fiscal year																						G. A. West		
87c	Particle Coll. Device			Design delayed until			next fiscal year																						G. A. West		
88																															
89																															
90	Leacher Solution Sampler 4505			Design delayed until			next fiscal year																						G. K. Ellis		
90a	Leacher Solution Sampler 3026			Design delayed until			next fiscal year																						W. F. Schaffer		
91																															
92																															
93	Layout Test Area 4505			Completed																									G. K. Ellis		
94																															
95																															
96																															
97	Dissolved Fuel Transfer						* Design																				J. H. Gibson J. C. Suddath		W. F. Schaffer		
98																															
99																															
100																															
101																															
102																															
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PROCUREMENT SUMMARY

Table 2 - PRFR - Mechanical Phase

ITEM NO.	ITEM	WORK ORDER	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
1	Mechanical Decladding Equipment	A-70132-11	11/18/58	D-161062 11/20/58	93X16370 12/24/58	4/30/59	\$ 9,861.50	6/1/59	Southern Machine Co., Chattanooga, Tenn.
2	Prototype Fuel Elements Mark I, Mod. 1, 50 ea.	A-70132-42	12/23/58	D-161064 12/23/58	93X16396 2/4/59	6/20/59	24,293.00	6/30/59	Dayton, Ohio Continental Technical Service, Inc.
3	Prototype Fuel Elements Mark I, Mod. 2, 25 ea.	A-70132-42	12/23/58	D-161064 12/23/58	93X16396 2/4/59	6/20/59	10,900.00	7/10/59	Continental Technical Service, Inc. Dayton, Ohio
4	Prototype Fuel Elements, Mark I, Mod. 3, 25 ea.	A-70132-42	1/7/59	D-161066 1/7/59	93X16396 2/4/59	6/20/59	13,300.00	6/30/59	Continental Technical Service, Inc. Dayton, Ohio
5	Manco Shear Blade for Manco MC125DA	A-70132-41	12/23/58	D-78293 12/26/58	41X37063 12/29/58	1/28/59	1,075.00	2/2/59	Manco Manufacturing Co., Bradley, Ill.
6	Fuel Element Power Shear Testing	A-70132-43	12/30/58	D-161065 12/30/58	93X44534 3/18/59	6/30/59	10,283.00	6/30/59	Clearing, Div. of U.S. Ind., Inc. Chicago 30, Ill.
7	Fuel Element Power Shear - Testing	A-70132-43	12/30/58	D-161065 12/30/58	93X44533 3/18/59	6/30/59	11,000.00	6/30/59	Birdsboro Steel Foundry and Machine Co. Birdsboro, Pennsylvania
8	Organic Blanket Liquids for Test	A-70132-41	1/16/59	D-161068 1/19/59	OR59-1283 2/20/59	3/1/59	7.15	4/6/59	Union Carbide Chem. Co. New York, New York
9	Porcelain Rod 0.40 in. o.d. x 6" (8000)	A-70132-11	1/19/59	D-78337 1/20/59	54X41902 1/22/59	1/30/59	240.00	2/27/59	Clowes Ceramic Corp., Chattanooga, Tenn.
10	Seamless Stainless Tubing, 304, 0.227" x 0.197"	A-70132-42	1/21/59	D-161075 1/22/59	70X42333 1/29/59	1/30/59	95.52	2/27/59	J. Bishop and Co. Platinum Works Malvern, Pennsylvania
11	Filter Discs Poroloy	A-70132-41	1/27/59	D-161077 1/28/59	26X39578 2/2/59	2/2/59	368.10	2/9/59	Bendix Filter Div. Madison Hghts, Michigan
12	Aluminum Cans and Canner	A-70132-41	1/28/59	D-161079 1/28/59	93X44541 4/2/59	3/13/59	1,750.50	7/1/59	George D. Ellis and Sons, Inc. Philadelphia, Pennsylvania
13	Prototype Fuel Elements Mk III, 36 ea.	A-70132-42	1/28/59	D-161080 1/29/59	93X44540 4/1/59	6/20/59	15,776.00		Davidson Chem. Division Erwin, Tennessee Partial Shipment 8/25/59
14	Medium Capacity Rectilinear Manipulator	A-92456-05	1/28/59	D-161081 1/29/59	22X46724 3/3/59	6/15/59	8,250.00		Lee Associates, Inc., Boise, Idaho
15	Dissolver Installation, Heat Exchr-Stainless Steel	A-70132-41	2/2/59	D-161084 2/2/59	94X39093 2/6/59	2/24/59	1,352.00	3/2/59	Manning & Lewis Engineering Co. Newark 4, New Jersey
16	S and t Butylbenzene	A-70132-41	2/5/59	D-161088 2/5/59	14X43136 2/11/59	3/4/59	105.00	2/17/59	Phillips Petroleum Co. New York 5, New York
17	Vibratory Cont. Diss. - Port Hole Seals	A-70132-41	2/5/59	D-161089 2/5/59	55X45450 2/24/59	3/6/59	22.32	3/17/59	Halogen Insulator and Seal Corp. Franklin Park, Ill.

PROCUREMENT SUMMARY

Table 2 - PRFR - Mechanical Phase (continued)

[illegible]

PROCUREMENT SUMMARY

Table 2 - PRFR - Mechanical Phase (continued)

ITEM NO.	ITEM	WORK ORDER	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
35	Mech. Decl. Eq. - Roll Drive Gearmotor	A-70132-41	3/10/59	D-161124 3/11/59	53X48466 3/19/59	4/20/59	\$ 67.08	4/22/59	Janette Electric Co. Morton Grove, Illinois
36	Mech. Decl. Eq. - Two Speed Motor	A-70132-41	3/10/59	D-161125 3/11/59	53X48458 3/19/59	4/30/59	96.08	5/12/59	Howell Electric Motors Co. Knoxville, Tenn.
37	Uranium Oxide Pellets - (130,000)	A-70132-42	3/10/59	A-76504 4/16/59	93X44579 5/13/59	8/15/59	\$54,645.00		Partial Shipment 8/26/59 (17,662) Davidson Chemical Co., Erwin, Tennessee
38	Fuel Element Model - 999 ft. AL Tubing 0.304" OD	A-70132-41	3/13/59	A-76478 3/13/59	77X48641 3/16/59	4/25/59	169.21	5/4/59	Aluminum Company of America Chattanooga, Tenn.
39	SFE Slug Washer and Two Baskets	A-70132-41	3/13/59	A-76479 3/13/59	70X51504 4/2/59	5/1/59	1,780.00	5/5/59	Brinkman Tool and Die, Inc. Dayton, Ohio
40	Mech. Decl. Eq. - Terminal Block	A-70132-41	3/10/59	D-161123 3/11/59	74X49410 3/17/59	4/20/59	15.32	4/1/59	Graybar Electric Co. Knoxville, Tenn.
41	Shear Die Set Plus Blades	A-70132-43	3/19/59	A-76481 3/20/59	93X44596 6/10/59	6/24/59	3,370.00	6/30/59	Clearing Machine Co. Chicago, Ill.
42	Shear Die Set Plus Blades	A-70132-43	3/19/59	A-76482 3/20/59	93X44574 5/4/59	5/22/59	1,484.86	6/29/59	Birdsboro Steel Foundry & Mch. Co. Birdsboro, Pa.
43	Multipurpose Saw	A-70132-43	3/16/59	A-76480 3/16/59	55X53807 4/16/59	8/15/59	8,525.00		Ty-Sa-Man Machine Co. Knoxville, Tenn.
44	Dissolver Basket Poromesh	A-70132-41	3/30/59	A-76490 3/30/59	26X48794 4/10/59	5/29/59	55.00	6/30/59	Bendix Filter Div., Madison Heights, Mich.
45	Oil Gear Pump - Foot Valve	A-70132-41	4/3/59	A-76499 4/6/59	45X51454 4/10/59	5/1/59	91.00	4/17/59	Oilgear Co., Milwaukee, Wis.
46	Dissolvers - Poroloy	A-70132-41	4/16/59	A76503 4/16/59	26X56649 5/18/59	8/10/59	303.40		Bendix Filter Div. Madison Hts., Michigan
47	Fire Extinguisher System	A-92456-05	4/10/59	A-76501 4/10/59	45X56830 5/14/59	6/1/59	5,755.00	7/21/59	Walter Kidde and Co., Inc. Atlanta, Ga.
48	Omniscope Periscope	A-92408-02	4/20/59	A-76505 4/21/59	14X58209 5/20/59	6/20/59	925.00	7/2/59	Lerna Engineering Corp. Northampton, Mass.
49	Storage Cell Crane - Pulleys - Collars	A-70132-41	4/20/59	A-76506 4/21/59	63B34888 5/23/59 LBY - 32	5/20/59	11.13	5/1/59	Hoyt N. Payne Co. Knoxville, Tenn.
50	Storage Cell Crane - Bearings	A-70132-41	4/20/59	A-76507 4/21/59	63B27900 4/23/59 LBY - 78	5/20/59	7.42	5/4/59	Dixie Bearings, Inc. Knoxville, Tenn.
51	Storage Cell Crane - Electro Clutch	A-70132-41	4/20/59	A-76508 4/21/59	53X55214 4/30/59	6/15/59	238.00	7/13/59	ITE Circuit Breaker Co. Atlanta, Ga.

PROCUREMENT SUMMARY

Table 2 - PRFR - Mechanical Phase (continued)

ITEM NO.	ITEM	WORK ORDER	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
52	Storage Cell Crane - Sprocket	A-70132-41	4/20/59	A-76509 4/21/59	63x49884 5/1/59	5/20/59	2.40	5/4/59	Power Drives Inc., Knoxville, Tennessee
53	Storage Cell Crane - Cast Iron Drum	A-70132-41	4/20/59	A-76510 4/21/59	27x54348 5/7/59	5/20/59	46.00	5/22/59	Stephens-Adamson Mfg. Co., Aurora, Ill.
54	SRE Carrier - Stainless Steel	A-92408-02	4/20/59	A-76512 4/21/59	73x55928 5/11/59	6/20/59	750.00	6/3/59	Ray Miller Co. South Charleston, W. Va.
55	SRE Carrier - Boral	A-92408-02	4/20/59	A-76511 4/21/59	73x55910 5/4/59	5/20/59	750.00	5/13/59	Brooks and Perkins Detroit, Michigan
56	SRE Carrier - Stainless Steel Channel	A-92408-02	4/20/59	A-76513 4/22/59	73x55938 5/14/59	5/20/59	16.94	5/19/59	Youngstown Mfg. Inc., Atlanta, Ga.
57	Prototype Fuel Element Mk 1 - Mod 6 - 6 ea	A-70132-43	5/4/59	A-76515 5/4/59	93x62134 7/28/59	9/24/59 6/17/59		Cancelled	Ferrotherm Co., Cleveland, Tenn.
58	Opening Cell A - B -, Doors Gastight - 2 ea	A-70132-41	5/6/59	A-76516 5/6/59	21x59434 6/4/59	6/30/59	950.00	8/19/59	Overbeke-Kain Co., Bedford, Ohio
59	Carrier - Stainless Steel	A-92408-02	8/18/59	A-76518 5/8/59		9/17/59			
60	Vibratory Dissolver - Mechanic Advisor	A-70132-26	5/8/59	A-76518 5/8/59	76x52308 5/11/59	5/11/59	392.51	7/29/59	Syntron Company Homer City, Penna.
61	SRE Carrier - Stainless Steel	A-92408-02	4/20/59	A-76512 4/21/59	73x55927 5/11/59	7/8/59	404.89	8/5/59	Slip-Not Belting Co. Kingsport, Tenn.
62	Cell Door - Inflatable Strip Seal	A-70132-41	5/14/59	A-76519 5/14/59	96x60263 6/25/59	8/4/59	350.00		Kirkhill Rubber Co., Brea, Calif.
63	SRE Mech. Decl. Eq. - Valves Jamesbury	A-70132-11	5/14/59	A-76520 5/14/59	35x54788 5/22/59	6/15/59	358.02	6/12/59	Ind. Piping Supply Co., Knoxville, Tenn.
64	Can Storage Baskets - 45 ea	A-70132-41	5/15/59	A-76522 5/15/59	70x55895 6/1/59	7/1/59	1,575.00	6/30/59	Brinkman Tool & Die Co., Dayton, Ohio
65	Horizontal Continuous Dissolver - Silicon Carbide Bearings	A-70132-26	5/20/59	A-95364 5/20/59	52x60565 6/23/59	8/3/59 7/13/59	390.00		Carborundum Corporation, Niagara Falls, N. Y.
66	Vibratory Dissolver - Controls	A-70132-26	5/15/59	A-76523 5/15/59	22x54948 5/18/59	5/18/59	71.05	5/21/59	Syntron Company Homer City, Penna.
67	Control Valve	A-70132-41	5/12/59	A-76524 5/12/59	59x57394 5/27/59	6/26/59	160.75	6/4/59	Bedjacket Valve Co., Carnegie, Pa.
68	Cans - Steel	A-70132-41	5/14/59	A-76525 5/14/59	27x61990 7/2/59	8/17/59	60.90		George D. Ellis & Sons, Inc., Philadelphia Pa.

PROCUREMENT SUMMARY

Table 2 - PRFR- Mechanical Phase (continued)

ITEM NO.	ITEM	Work Order	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
69	Manco Shear Housing - Valve	A-70132-41	5/19/59	A-74526 5/19/59	35X59297 7/7/59	7/24/59	244.00	8/21/59	General Machine Co of N.J., Inc., Newark N.J.
70	SRE Fuel Element Mock-ups - Wire	A-70132-11	5/28/59	A-95738 5/28/59	74X58456 6/2/59	6/8/59	8.08	6/8/59	The Melin Company, Cleveland, Ohio
71	Batch Dissolver - Flange and Gaskets	A-70132-25	5/28/59	A-95741 5/28/59	96X60232 6/8/59	7/17/59	117.34	7/17/59	Melrath Supply & Gasket Co. Philadelphia, Pa.
72	SRE Carrier - Tool Steel	A-92408-02	5/28/59	A-76527 5/28/59	73X55997 6/5/59	6/19/59	28.98	6/17/59	Crucible Steel Co., of America, Chamblee, Ga.
73	Fuel Elements for Test - 5 ea (180 Rods)	A-70132-42	5/28/59	D-161064 5/28/59	93X16396 6/3/59	6/17/59	1,695.00	6/30/59	Continental Technical Services, Inc. Dayton, Ohio
74	Seg. Fac. - Windows - Amercoat	A-92456-02	6/5/59	A-95437 6/5/59	29X59348 6/15/59	6/9/59	120.06	6/30/59	Southeastern, Inc. Knoxville, Tennessee
75	Seg. Fac. - Door - Ratiomotor	A-92456-02	6/5/59	A-95441 6/5/59	53X60607 6/8/59	6/29/59	486.05	7/7/59	H. N. Payne Co., Knoxville, Tenn.
76	Seg. Facility - Door - Chain & Sprockets	A-92456-02	6/8/59	A-95759 6/18/59	63X34888 LRX 48	6/19/59	28.98	6/11/59	Hoyt N. Payne Co., Knoxville, Tenn.
77	Batch Dissolver - Flange	A-70132-25	5/28/59	A-95741 5/28/59	70X59840 6/25/59	8/3/59	76.10	7/20/59	Gray-Hodges Corp., Knoxville, Tenn.
78	SRE Carrier - 1-1/4" Plate	A-92408-02	6/15/59	D-172031 6/15/59	73P60758 6/25/59	7/27/59	1,416.11		G.O. Carlson, Inc., Thorndale, Pa.
79	SRE Carrier - 19-3/8" and 1-1/8" Tubing	A-92408-02	6/15/59	D-172032 6/15/59	70X63536 7/6/59	8/6/59	3,714.19		Assoc. Stl. Co., Houston 11, Texas
80	SRE Carrier - 5/8" Plate	A-92408-02	6/16/59	D-172033 6/16/59	73X60773 6/30/59	7/15/59	158.55	7/14/59	G. O. Carlson, Inc., Thorndale, Pa.
81	Seg. Fac. Manipulators - Wrist Housings & Cams	A-92455-02	6/19/59	A-95640 6/19/59	22X62923 6/27/59	7/1/59	644.20	6/30/59	Central Res. Lab., Red Wing, Minn.
82	Tunnel Transfer Cart - Limit Switches	A-92456-02	6/24/59	A-95683 6/24/59	59X66323 7/17/59	7/25/59	19.10	7/27/59	M. G. Elect. Equip., Co.
83	SRE Carrier - Bearings	A-92408-02	6/17/59	A-76529 6/17/59	63B27900 LRX-116 6/19/59	7/30/59	25.02	6/24/59	Dixie Bearings, Inc., Knoxville, Tenn.
84	SRE-NaK Decomposer - Auto. Valves	A-70132-41	6/22/59	A-76531 6/22/59	59X66391 7/29/59	9/2/59	2,395.50		Leinart Engr. Co., Knoxville, Tenn.
85	SRE-NaK Decomposer - Mixing Pumps	A-70132-41	6/22/59	A-76532 6/22/59	45X62251 6/29/59	7/31/59	32.50	7/13/59	Tidewater Supply Co., Knoxville, Tenn.

PROCUREMENT SUMMARY

Table 2 - PRFR - Mechanical Phase (Continued)

ITEM NO.	ITEM	Work Order	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
86	SRE Shear Blades Return Springs	A-70132-43	7/31/59	A-76564 7/31/59	94X67722 8/19/59	8/2/59	3.48	8/28/59	E. A. Baumbach Mfr. Co., Chicago, Illinois
87	SRE Carrier - Boral	A-92408-02	6/22/59	A-76534 6/22/59	73X65304 7/10/59	7/31/59	672.00	8/4/59	Brooks & Perkins, Inc., Detroit, Mich.
88	Seg. Fac. Storage Cell Crane - Collars Pulleys	A-70132-41	6/25/59	A-76535 6/25/59	63B34888 LRX 55 6/25/59	7/30/59	11.13	6/29/59	Hoyt N. Payne Co., Knoxville, Tenn.
89	SRE Mech. Decladder - Microklean Filter	A-70132-41	6/26/59	A-76538 6/26/59	26X65106 7/9/59	7/31/59	55.65	7/24/59	Cuno Engr. Co., Atlanta, Ga.
90	SRE Mech. Decladder - Micronic Filter	A-70132-41	6/26/59	A-76539 6/26/59	26X65136 7/16/59	7/31/59	45.80		Bendix Filter Div. Madison Hts. Michigan
91	Seg. Fac. Window 5 - Valves	A-92456-02	6/26/59	A-95703 6/26/59	35X59296 7/7/59	7/20/59	14.30	7/27/59	Air and Hydraulics Engr. Co., Birmingham, Ala.
92	SRE Carrier - 4" Rod	A-92408-02	6/15/59	D-172031 6/15/59	73P60759 6/25/59	7/6/59	297.31	8/14/59	Associated Steel Co., Houston, Texas
93	Seg. Fac. Door - Locking Clamp	A-92456-02	6/18/59	A-95347 6/18/59	23X61636 6/18/59	6/29/59	54.40	6/22/59	Lapear Mfg. Co., Detroit, Mich.
94	Seg. Facility - Windows - Amercoat	A-92456-02	5/28/59	A-95718 5/28/59	29X63234 7/7/59	7/8/59	43.48	7/10/59	Southeastern Inc., Knoxville, Tenn.
95	SRE Carrier - Rod HyTuf	A-92408-02	7/1/59	A-76540 7/1/59	73P65310 7/15/59	8/3/59	318.20		Crucible Steel Co., Chamblee, Ga.
96	Seg. Facility - Windows - Amercoat	A-92456-02	7/6/59	A-95700 7/6/59	29X63245 7/8/59	7/13/59	28.98	7/14/59	Southeastern, Inc., Knoxville, Tenn.
97	Seg. Fac. - Fire Extinguishment - Cardox Play Pipe	A-92456-05	7/8/59	A-76542 7/8/59	35X64949 7/24/59	7/7/59	100.00		Cardex Corp. Chicago, Illinois
98	Prototype Fuels - Tubing 0.790" o.d. x 0.010" wall	A-70132-11	7/8/59	A-76543 7/8/59	70X63581 7/16/59	8/15/59	173.88		Ind. Piping Supply Co., Knoxville, Tenn.
99	SRE Mech. Decladder - Screw and Nut	A-70132-11	7/6/59	A-76541 7/6/59	55X63995 7/29/59	8/15/59	96.40		Valley Mach. Works, Knoxville, Tenn.
100	Cont. Mtl. Trans - Clevis, Boots	A-70132-26	7/15/59	A-96347 7/15/59		7/28/59			
101	Seg. Fac. Cell A - Top Amercoat - Fiberglas	A-70132-11	7/8/59	A-95848 7/8/59	29X-66708 7/24/59	7/17/59	384.80	8/14/59	Southeastern Inc., Knoxville, Tenn.
102	Seg. Fac. - Tunnel Transfer Cart - Relays	A-92456-02	7/9/59	A-96351 7/9/59	53B30290 LRX-17 7/16/59	7/27/59	2.44	7/17/59	Graybar Elec. Co., Knoxville, Tenn.

PROCUREMENT SUMMARY

Table 2 - PRFR Mechanical Phase Continued

ITEM NO.	ITEM	Work Order	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
103	Seg. Fac. - Expanding Gasket - Swagelok Connectors	A-92455-02	7/9/59	A-95846 7/9/59	70X-63583 7/16/59	8/3/59	15.94	7/24/59	Ridge Valve & Fitting Co., Knoxville, Tenn.
104	SRE Mech. Decladder - Sprockets Chain	A-70132-11	7/20/59	A-76545 7/20/59	63B34888 LRX-64 7/20/59	8/20/59	3.50	8/3/59	Hoyt N. Payne Co., Knoxville, Tenn.
105	SRE - Mechanical Decladder - Air Motor	A-70132-11	7/20/59	A-76546 7/20/59	41X65655 8/3/59	8/20/59	295.00	8/24/59	Gardner Denver Co., Knoxville, Tenn.
106	Seg. Fac. Tunnel Trans. Cart - Relays	A-92456-02	7/22/59	A-95780 7/22/59	53B30290 LRX-18 7/30/59	8/13/59	6.10	8/5/59	Graybar Electric Co., Knoxville, Tenn.
107	Wrench - Open End Ratchet	A-70132-14	7/20/59	A-76548 7/20/59	41X65659 8/4/59	8/24/59	207.45	8/25/59	Gardner Denver Co., Knoxville, Tenn.
108	Cont. Dissolver - Syntrol Mechanic	A-70132-14	7/20/59	A-76549 7/20/59	76X-52390 7/20/59	7/28/59	300.00		Syntrol Co., Homer City, Pa.
109	Seg. Fac. Storage Cell	A-92456-02	7/21/59	A-76550 7/21/59	27X63691 7/30/59	8/21/59	30.00	8/12/59	Hamilton Caster Mfg. Co., Knoxville, Tenn.
110	SRE Slug Washer Filter Baskets	A-70132-11	7/21/59	A-76551 7/21/59	96X69819 8/18/59	8/28/59	379.74		O. A. Caughron and Son, Knoxville, Tenn.
111	SRE Slug Washer Filter - Clamp	A-70132-11	7/21/59	A-76552 7/21/59	35X68910 8/6/59	8/21/59	78.00	8/17/59	Lapeer Mfg. Co., Lapeer, Mich.
112	Seg. Fac. Med. Cap. Manipulator - Cam Follower	A-92456-02	7/21/59	A-76553 7/21/59	63B27900 LRX130 7/28/59	8/21/59	12.90	8/3/59	Dixie Bearing Inc., Knoxville, Tenn.
113	Seg. Fac. Med. Cap Manipulator - Pip Pins	A-92456-02	7/21/59	A-76554 7/21/59	35X64969 7/30/59	8/27/59	17.60		Aviation Dev. Inc., Burbank, Calif. Partial Shipment 8/10/59
114	Seg. Fac. Carrier Dolly - Ratchets	A-92456-02	7/21/59	A-76555 7/21/59	23X66840 7/29/59	8/28/59	47.48		Snap-on Tools Corp., Atlanta, Ga.
115	Jericho Vibratory Feeder for Dissolver Test	A-70132-12	8/12/59	A-76578 8/12/59	77X57 8/12/59	9/21/59			
116	NaK Disposal - Silicone "O" Ring	A-70132-11	7/21/59	A-76557 7/21/59	96X65079 8/5/59	8/21/59	10.80	8/31/59	Precision Rubber Co., Dayton, Ohio
117	Seg. Fac. - CO ₂ Extinguisher Plugs Inserts	A-92456-02	7/23/59	A-95775 7/23/59		8/10/59			
118	Fuel Element Models - Plexiglass	A-70132-15	7/24/59	A-96398 7/24/59	41B58048 LRX-3 7/27/59	7/30/59	35.52	8/3/59	Almac Plastics, Inc., New York, N. Y.
119	SRE Carrier - Wide Flange	A-92408-02	7/29/59	A-96426 7/29/59	73X65370 8/3/59	8/7/59	483.50	8/5/59	Joe T. Ryerson & Son, Inc. Cincinnati, Ohio

PROCUREMENT SUMMARY

Table 2 - PRFR Mechanical Phase Continued

ITEM NO.	ITEM	Work Order	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
120	NaK Disposal - Plug Cock	A-70132-41	7/27/59	A-76562 7/27/59	35X64988 8/4/59	8/28/59	44.10		Willis Supply Co., Knoxville, Tenn.
121	Mericho Nozzles Spray	A-41873-41	7/30/59	A-76563 7/30/59	35X68918 8/7/59	8/31/59	22.70	8/19/59	Spray Engr. Co., Burlington, Mass.
122	Carrier - Eyebolt	A-92408-02	7/31/59	A-76565 7/31/59	27X38123 LRX 9 8/11/59	8/31/59	17.95	8/31/59	Belknap Hdware & Mfg. Co., Louisville, Ky
123	Carrier - Chain	A-92408-02	7/31/59	A-76566 7/31/59	27X67267 8/19/59	8/31/59	194.04		Partial Shipment 8/28/59 McMaster-Carr Supply Co., Chicago, Ill.
124	Carrier - Turnbuckle	A-92408-02	7/31/59	A-76567 7/31/59	27X67227 8/11/59	8/31/59	52.74		C. M. McClung & Co., Knoxville, Tenn.
125	Decladder - Tubing Fittings	A-70132-11	7/31/59	A-76568 7/31/59	70X67344 8/13/59	8/31/59	21.47	8/24/59	Industrial Piping Supply Co., Knoxville, Tenn.
126	Decladder - Fafnir Bearings	A-70132-11	7/31/59	A-76569 7/31/59	63B27900 LRX 140 8/5/59	8/31/59	8.62	8/6/59	Dixie Bearings Inc., Knoxville, Tenn.
127	Decladder - Schrader Fittings	A-70132-11	7/31/59	A-76570 7/31/59	94X67723 8/18/59	8/31/59	5.76		Tennessee Belting and Supply, Inc., Knoxville
128	Decladder - Sprocket - Chain	A-70132-11	7/31/59	A-76571 7/31/59	63B34888 LRX-67 8/5/59	8/31/59	8.84	8/5/59	Hoyt N. Payne Co., Knoxville, Tenn.
129	Decladder -Hydraulic Hose	A-70132-11	7/31/59	A-76572 7/31/59		8/31/59			
130	Decladder - Danley Spring	A-70132-11	7/31/59	A-76573 7/31/59	94X67721 8/18/59	8/31/59	0.50		Danly Machine Specialties, Inc., Chicago, Ill.
131	Decladder - Barco Joint	A-70132-11	7/31/59	A-76574 7/31/59		8/31/59			
132	Manipulators - Film Polyester	A-92456-02	7/31/59	A-110427 8/4/59		10/15/59			
133	SRE Mech. Decladder - Bearings	A-70132-11	7/20/59	A-76545 7/20/59	63B27900 LRX-130 7/28/59	7/29/59	5.51	8/3/59	Dixie Bearings, Inc., Knoxville, Tenn.
134	Filters - MicroMetallic	33705-106	7/24/59	A-76556 7/24/59	26X68014 8/5/59	9/4/59	229.65		Micro Metallic Div., Glencore, N. Y.
135	Prototype Fuel Elements - Tubing	A-70132-28	8/12/59	A-110369 8/12/59		8/25/59			
136	Prototype Fuel Elements - Wire	A-70132-11	8/12/59	A-110357 8/12/59		8/31/59			

TABLE 3 - WORK ORDER STATUS
MECHANICAL PROCESSING
Account 3370-106

Work Order Number	Description	Cost Estimate		Expenditures as of 8/1/59	
		Total	Labor	Total	Labor
A 01202-11 (closed)	Liquid transfer line cost estimate	\$ 755	\$ 600	\$ 486	\$ 298
A 01235-11	Prototype fuels, fabrication	2,500	1,200	255	145
A 01244-11	Study and estimate of revision to Cell A ventilation Bldg. 3026	600	364	82	50
A 70132-11	Equipment for decladding SRE fuel elements, fabrication and installation	18,500	10,000	31,130	10,483
A 70132-14 (closed)	Experimental facility Bldg. 4505 (Jericho) fabrication, alterations, installation, testing	19,250	9,000	22,504	10,312
A 70132-15 (closed)	Models of prototype fuels	6,336	3,836	7,307	3,998
A 70132-17	Test assemblies, Cook's Shop	12,570	6,800	11,131	5,979
A 70132-18 (closed)	Experimental facilities Bldg. 4505 (Jericho), design	10,920	6,600	8,874	5,366
A 70132-19	Special cell equipment and proto- type equipment layout for Segmenting Cell, Bldg. 3026, design	48,562	29,353	27,625	16,766
A 70132-21 (closed)	Continuous leacher, design	18,656	11,240	15,498	9,314
A 70132-22 (closed)	Fuel element separation device, design	5,100	3,000	3,544	2,135
A 70132-23	Shearing device and auxiliaries, design	10,607	6,398	3,677	2,230
A 70132-25	Batch dissolver, fabrication and installation	12,000	5,450	16,383	6,264
A 70132-26	Continuous dissolver, fabrication and installation	43,565	18,565	36,322	14,486
A 70132-28	Shearing devices and auxiliaries, modification and installation	22,500	10,000	24,382	11,756
A 70132-29	Saws, modification and installation	3,000	1,600	2,930	1,555

TABLE 3 - WORK ORDER STATUS (continued)

MECHANICAL PROCESSING
Account 3370-106

Work Order Number	Description	Cost Estimate		Expenditures as of 8/1/59	
		Total	Labor	Total	Labor
A 70132-30 (closed)	Saws, design	18,769	11,339	7,305	4,427
A 70132-31	Mechanical decladding equipment and auxiliaries, design	50,375	30,465	26,001	15,692
A 70132-32	Dissolver instrumentation, design	2,935	1,600	4,453	1,008
A 70132-33	Dissolver instrumentation, procure- ment and installation	13,270	2,000	5,898	322
A 70132-34	Hydrogen analyzer Cell A, Engr. and Installation	1,500	668	112	67
A 92408-02	Carriers, fabrication and/or alterations	40,000	12,100	22,409	4,973
A 92408-05	Carriers, design	12,315	9,740	5,494	4,395
A 92456-02	Segmenting Facility, procure, fabricate, install	58,500	26,000	32,454	13,546
A 92456-04	Segmenting Facility, design	16,043	12,746	12,099	9,678
A 92456-05	Segmenting Facility, purchase and installation	35,000	8,000	6,363	371
A 92832-01	Remote viewing, Engr. design	2,208	1,750	55	44
A 92832-02	Remote viewing, Inst. design	1,330	1,000	154	123
A 92832-03	Remote viewing, Procurement and installation	7,645	3,000	0	0
A 92900-01	Liquid transfer lines, design 3019-3026	1,000	660	844	675
A 92900-02	Liquid Transfer Lines - Fabrica- tion and Inst.	25,100	-	-	-
Aggregate Active Work Orders		\$521,411	\$245,074	\$335,771	\$156,458
Closed Work Orders		-	-	13,818	7,373
TOTAL		-	-	\$349,589	\$163,831

FIG. 1 INDEX OF EFFORT EXPENDED - AVERAGE MANDAYS LABOR PER DAY

DISTRIBUTION

1-2.	W. F. Schaffer, Jr.	30-31.	M. I. Lundin
3.	J. B. Adams	32.	G. Morris
4.	T. A. Arehart	33.	E. W. Parrish
5.	G. B. Berry	34.	G. E. Pierce
6.	R. E. Blanco	35.	F. Ring
7.	B. F. Bottenfield	36.	W. R. Sanford
8.	J. C. Bresee	37.	G. W. Sell
9.	K. B. Brown	38.	J. C. Suddath
10.	F. R. Bruce	39.	J. A. Swartout
11.	G. A. Cristy	40.	E. H. Taylor
12.	F. L. Culler	41.	H. A. Todd
13.	H. G. Duggan	42.	T. L. Trent
14.	W. K. Eister	43.	W. E. Unger
15.	G. K. Ellis	44.	C. D. Watson
16.	D. E. Ferguson	45.	G. A. West
17.	O. Freeland	46.	C. E. Winters
18.	C. A. Fritts	47.	E. J. Witkowski
19.	R. M. Fuller	48.	F. W. Wuest
20.	W. R. Gall	49.	A. F. Zulliger
21.	H. E. Goeller	50-51.	B. B. Klima
22.	W. O. Greever	52.	ORNL-RC
23.	A. T. Gresky	53.	M. J. Skinner
24.	W. S. Hornbaker	54-62.	Laboratory Records
25.	L. N. Howell	63-65.	Central Research Library
26.	K. E. Jamison	66.	Document Reference
27.	J. C. Lauderdale		Section
28.	R. B. Lindauer	67-81.	TISE-AEC
29.	C. S. Lisser	82.	O. T. Roth, Washington