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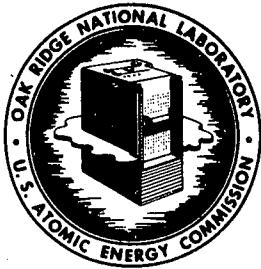
UNION CARBIDE NUCLEAR COMPANY

Division of Union Carbide Corporation



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Supplement No. 5

DATE: April 30, 1958

SUBJECT: PAR Loop Schedule Review

TO: W. F. Schaffer, Jr.

FROM: B. B. Klima

COPY NO. 103

ABSTRACT

The schedule for the installation of the PAR slurry loop experiment in the South Facility of the ORR has been reviewed and revised. The design, fabrication, and installation is approximately two weeks behind schedule at this time due to many factors; however, indications are that this time can be made up. Design is estimated to be 75% complete, fabrication 32% complete and installation 12% complete.

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The schedule previously published* has been completely reviewed and revised to take into account the effects of revised design philosophies and schedules of the ORR.

Summary

Design is estimated to be 75% complete, fabrication 32% complete, and installation 12% complete (see Fig. 1).

The design, fabrication, and installation is approximately two weeks behind schedule at this time due to delays in the startup of the ORR. The present schedule for the ORR indicates that the initial testing should be completed early in June (see Fig. 2). In addition a seven-week delay of the program at Westinghouse has been experienced.

Sixteen of the constructional units of the schedule are complete.

A shutdown of the ORR of three months is necessary to complete the installation of the items around equipment chamber A. If this is not tolerable, and indications are that it will not be, it will probably be necessary to revise the installation plans extensively to move the temporary shielding to permit the work to continue on an unscheduled basis when the ORR is down plus certain scheduled shutdowns of the ORR.

Scope

The following schedule is broken down into such individual design or constructional units as seems logical so that the progress of these units can be followed. Two units have been dropped and two units have been added. A description of the individual units was given in the previous schedules.* Only sufficient details have been included in this review as will describe current progress or changes.

A description of the experiment together with the basis for the schedule are given in the original issue of the schedule* and are not repeated.

The overall plan for arrangement of the equipment (together with unit code numbers) for the PAR loop installation at the ORR is shown in Figs. 3 through 6.

Procurement

A summary of the status of procurement for the PAR loop is given. A total of 72 requests to purchase equipment have been turned in. A total of \$71,413.96 has been spent on materials delivered to date, or \$3,172.40 during the month of April.

1. South Facility Plug

Completed and installed in the ORR.

Drawings: D-29865 through D-29875, D-29877 through D-29879, D-29904, D-29905 and D-29908.

*B. B. Klima, PAR Loop Schedule, ORNL-CF-57-11-145, November 15, 1957--Supplement 1, December 16, 1957--Supplement 2, January 15, 1958--Supplement 3, February 28, 1958--Supplement 4, March 31, 1958.

2. Liner HS-1

Completed and in use. Drawings: D-29885, D-29908.

3. Dummy Plug HS-1

Completed and in use. Drawings: D-29886 through D-29888.

4. HS-2 Extension

Completed and in use. Drawing: D-29902.

5. HS-2 Plug

Completed and in use. Drawings: D-29903, 30206 through 30209.

6. Temporary Shielding

The temporary shielding has been added in front of the south facility plug. It must be removed before equipment chamber A and its attendant permanent shielding can be installed.

Drawing: D-30177

7. Sleeves

Completed. Drawing: D-30026.

8. Three Floor Slabs

The three floor slabs have been placed in position. They have not been grouted in since it is conceivable that it might be necessary to remove the south facility plug prior to full power reactor operation.

9. Permanent Cooling for Facility Plug - Drawing: D-31098.

Substitution of packless valves for those currently installed is contemplated.

10. Temporary Cooling for East Plugs

No change.

11. Gas Services

A gas cylinder storage area outside the ORR Building is being designed.

13. Process Piping Preliminary

Design of the preliminary process piping is complete and installation has been started. Drawings: D-30026, 31102, 31104 through 31107, 31114, 31122.

14. Rear Shielding

Installed. Drawings: D-30014, 30015, 30017, 30018.

16. Cover Equipment Chamber A

The cover for Equipment Chamber A was fabricated at Paducah. Slight design changes were made after fabrication, and it had to be modified at ORNL. It will be sent to Westinghouse as part of the Equipment Chamber A mockup (Item 109) and will be returned to ORNL for use at the ORR.

Drawing: D-29916

17. Equipment Chamber A

The fabrication at Paducah is proceeding satisfactorily. Design of the final piping and inter-chamber duct work is nearing completion.

Drawings: E-29913, D-29914, through D-29918, D-29940, through D-29942, 29948, 29956, 30923, 30924, C-29906, D-31106, and 31124.

18. Lead Donut Shield Chamber A

No change. Drawings: D-30015, 30019, 30029.

19. Shield Above Chamber A.

Completed design awaits checking of drawings. Drawing: D-30030.

20. Concrete Block East of Chamber A

No change. Drawing: D-30015, 30017.

23. Equipment Chamber B

The drawings are being modified to conform to the latest changes. As soon as these are completed the chamber will be modified. Modification to the box will be minor; however, the cover modifications will be more extensive.

Drawings: E-29920, 29921, D-29922, 29923, 29939, 30923, 30924, 31103, 31106, 31124.

24. Shielding Top and West Side of Equipment Chamber B

No change. Drawings: D-30014, 30015, 30017, 30018, 30020.

25. Shield Front of Chamber B

No change. Drawing: D-30014 through 30016, 30018, 30020, 30022.

26. Concrete Shield East Chamber B

No change. Drawing: D-30015, 30017, 30019.

28. Equipment Chamber C

Equipment Chamber C is being manufactured by Young and Bertke, Cincinnati, Ohio. They machined half-way through the one-half inch front cover plate. This was caused

by an accidental bending of the cover prior to machining. The half-inch steel plate of the front cover plate is being replaced and will be remachined. Since the redesign was completed, Young & Bertke will make all revisions.

Drawings: E-29924, 29925, D-29926, 29927, 30923, 30924, 31112, 31106, 31124.

29. Shielding Top-Sides Equipment Chamber C

No change. Drawings: D-30014, 30015, 30017, 30018, 30020.

30. Shield Front of Chamber C

The redesign has been completed and the piece was released for fabrication at ORNL. Drawings: D-30014, 30015, 30016, 30018, 30020, and 30021.

33. Equipment Chamber D

No change. Drawings: E-29928, 29929, D-29930 and 29931, 30923, 30924, 31113, 31118.

34. Shielding Top and Sides Equipment Chamber D

No change. Drawings: D-30023, through 30025.

35. Shield Front Chamber D

No change. Drawings: D-30023, through 30025.

36. Concrete Shielding West of Chamber D

No change. Drawings: D-30023, 30024.

37. Shield Around Slurry Lines

No change. Drawings: D-30023, 30024.

39. Equipment Chamber E

Equipment Chamber E is being fabricated at Paducah. Drawings: E-29932, D-29933, 29934, 30923.

42. Equipment Chamber F

Design is continuing.

46. Concrete Door Frame Shield

Completed design awaits checking of drawings. Drawings: D-30015, 30027.

47. Concrete Shield Door

Design is completed for the lower piece. Completion of the design of the upper section awaits checking of the drawings. Drawings: E-29949, 29950, D-29951, 30014, 30015, and 30030.

48. Lead Shutter

Completed design awaits checking of drawings: Drawing: D-30015.

49. Concrete Shield Door Storage Rack

Completed design awaits checking of drawings.

51. Booster Pumps

No change.

52. Booster Pump Shield

No change.

53. D₂O Pump System

No change.

54. Metering Pump and Auxiliaries

No change.

56. Caustic System

No change.

59. Filter U-9

No change.

61. Slurry Addition and Charging System

No change.

63. Sampler

No change.

64. Sample Carrier

No change.

66. Loop Carrier

Two stainless steel lined lead shielded loop carriers are being made at Paducah. Drawings: E-29889, D-29890 through 29898.

67. Loop Carrier Pedestal. No change.

68. Loop Carrier Storage. No change.

69. Carrier Trailer

No change.

70. Trailer Ramp

No change.

71. Carrier Loop Withdrawal Tool Alignment

No change.

73. Slurry Removal Carrier

The slurry removal carrier will be designed but construction will be postponed pending decision on slurry disposition.

74. Slurry Removal - Unit Shielding

The unit shielding for the slurry removal carrier will be designed but construction will be postponed pending decision on slurry disposition.

75. Irradiated Slurry Storage Tank

Decision on tank and piping design and location for a buried irradiated slurry storage tank is required.

76. Ventilation

No change. Drawings: D-31099, 31123, 31124.

77. Analytical Equipment

No change.

78. Dummy Plug Storage

No change.

80. Utility Instrument Panel

No change. Drawings: D-30923, 30924.

81. Utilities Instruments

No change.

82. Process Instrument Panel

No change. Drawings: D-30923, 30924.

83. Process Instruments

No change.

84. Basement Process Instrument Panel

This panel will probably not be designed until a decision on contents of Chamber D has been reached. Drawings: D-30923, 30924.

85. Basement Process Instruments

Same as Item 84.

86. Radiation Instrument Panel

No change. Drawings: D-30923, 30924.

87. Radiation Instruments

No change.

88. Electrical Panel

No change. Drawings: D-29524, 30923, 30924.

91. In-Pile Loops and Vapor Containers

The vapor container manufactured for Westinghouse by Process Equipment Company was tried, in the liner which is in the ORR, and it was found to fit satisfactorily.

94. Loop End Templates

The templates have been modified at Westinghouse.

Drawings: D-29977 through D-29979.

95. Loop Handling Tool

No change. Drawing: D-26416.

96. Disconnect Handling Tool

No change. D-26417.

97. Disconnect Wrench

No change. Drawing: D-26424.

98. Loop Wheel Gauge

Completed. Drawing - Field Sketch Only

99. 27-Inch Trough

Completed. Drawing: E-26421.

100. 10-Inch Trough

Completed - Drawing D-26422.

101. Loop Loading Cradle

No change.

105. Mockup Loop HS-1

The mockup of the loop, equipment chamber A, and the HS-1 beam hole in the basement of Building 4501 is being modified to bring the rear of the loop up to current design. This includes the one-inch disconnects and piping is added to the chamber.

Drawings: E-27075 through 27077, 26572 through 26574, 26413 through 26415.

106. Slurry Valve No. 3

No change.

107. Slurry Valve Ultrasonic

No change.

108. Sample Mockup

No change. Drawings: D-29942, 29956.

109. Chamber A

The mockup of Equipment Chamber A for Westinghouse has been piped. It requires painting and assembly. Drawing E-26572, E-26573, 26574, D-29942, 29956.

111. Gold Seal Autoclave Valves

No change.

112. Gold Seal Disconnect Test

A suitable gold seal disconnect design for autoclave type joints has been developed which permits use of a gold seal as a secondary seal in conjunction with the primary stainless steel seal. 9/16 and 3/8 inch fittings have been tested and found to be satisfactory.

Drawings: C-26418, 29989.

113. Hydroclone Test Mockup - No change.

114. Gold Seal Disconnect Cycling Mockup

No change.

115. Model

A model approximately 1 inch to the foot is contemplated to demonstrate accessibility and practicability. It is now being designed.



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Process Design Section
Chemical Technology Division

BBK/nr

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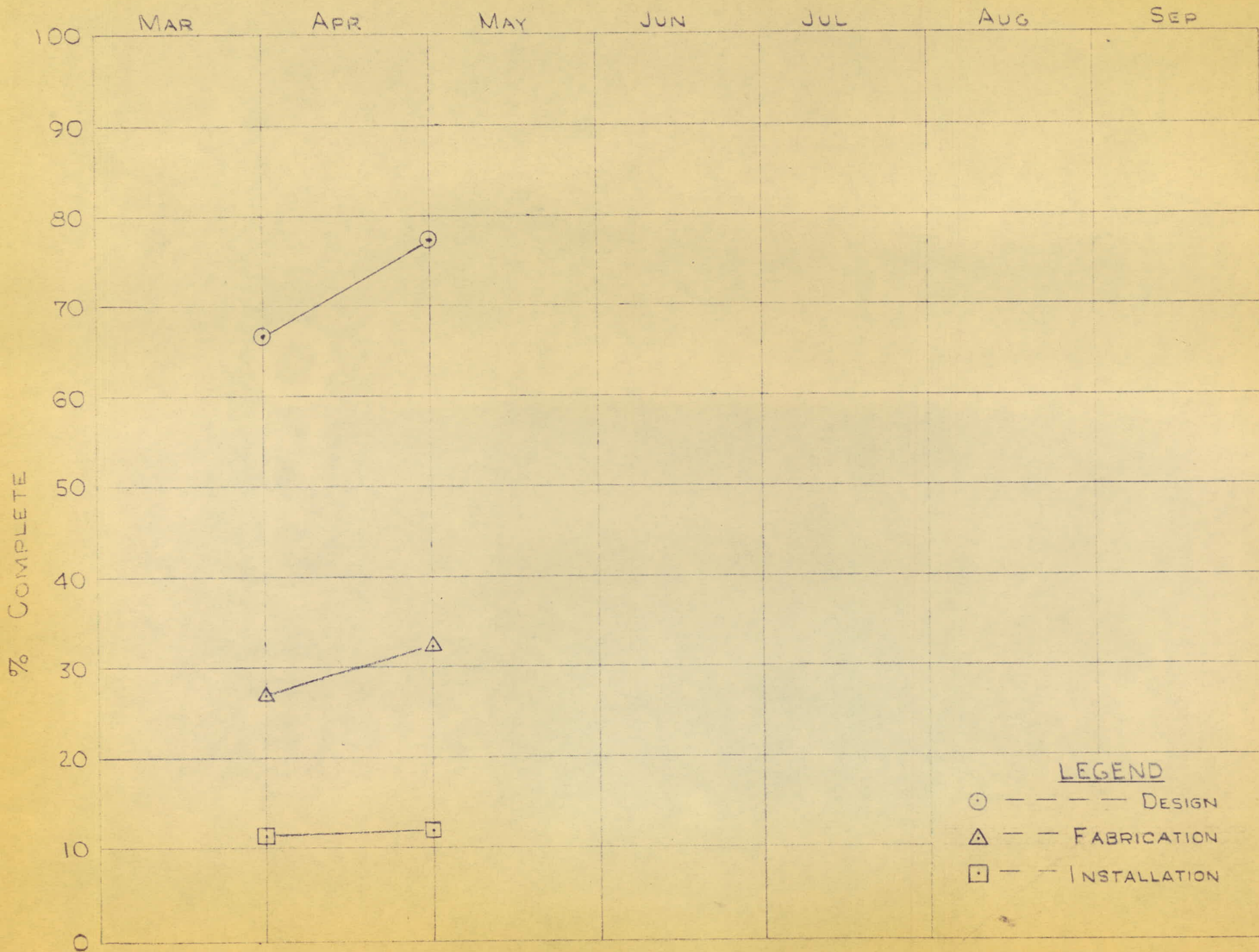


FIGURE 1 - PROGRESS GRAPH

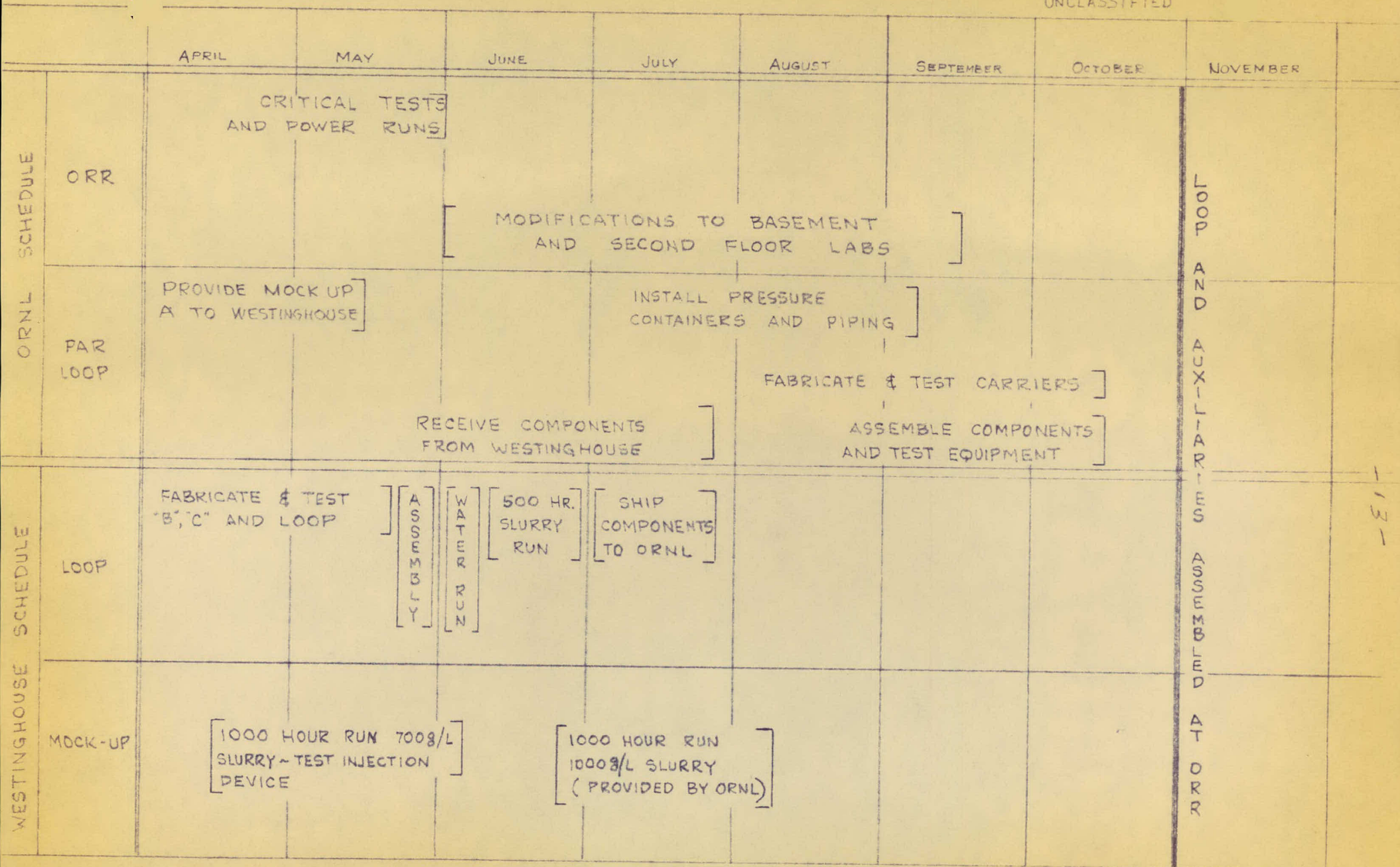
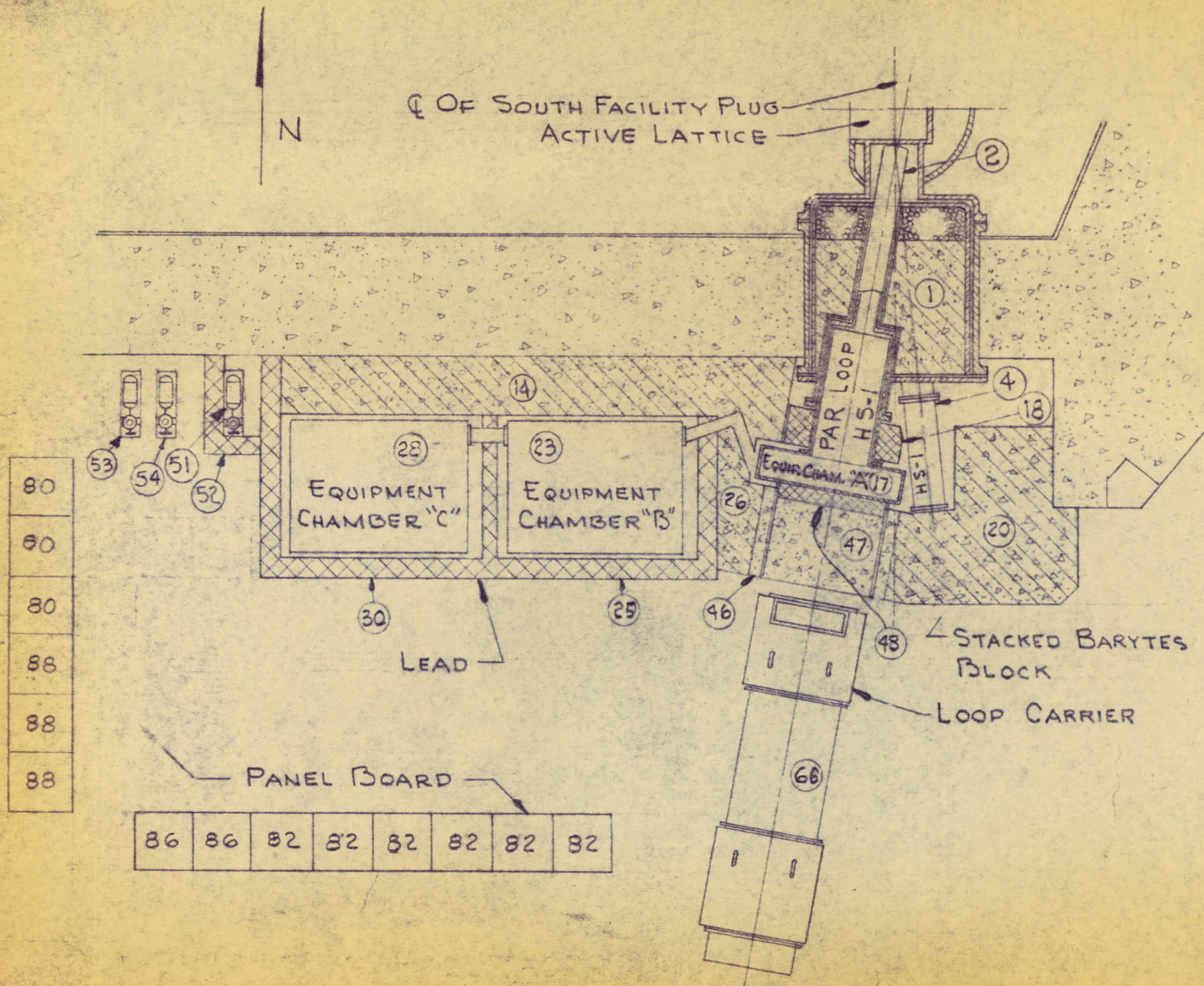


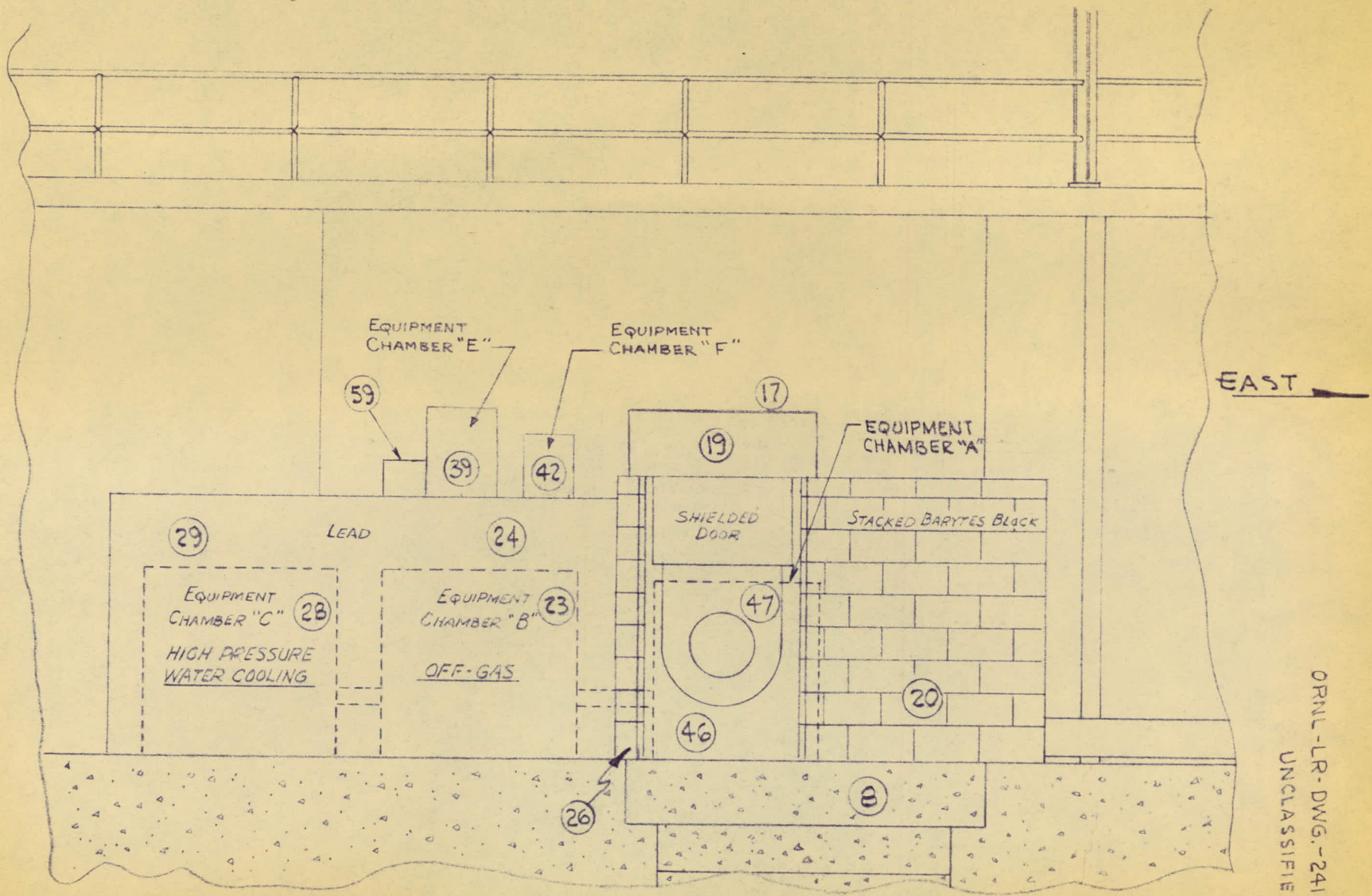
FIGURE 2. RELATIONSHIP BETWEEN THIS SCHEDULE AND OTHER INTERLOCKING SCHEDULES

131



14-
 ORNL-LR-DWG 24110 R-1
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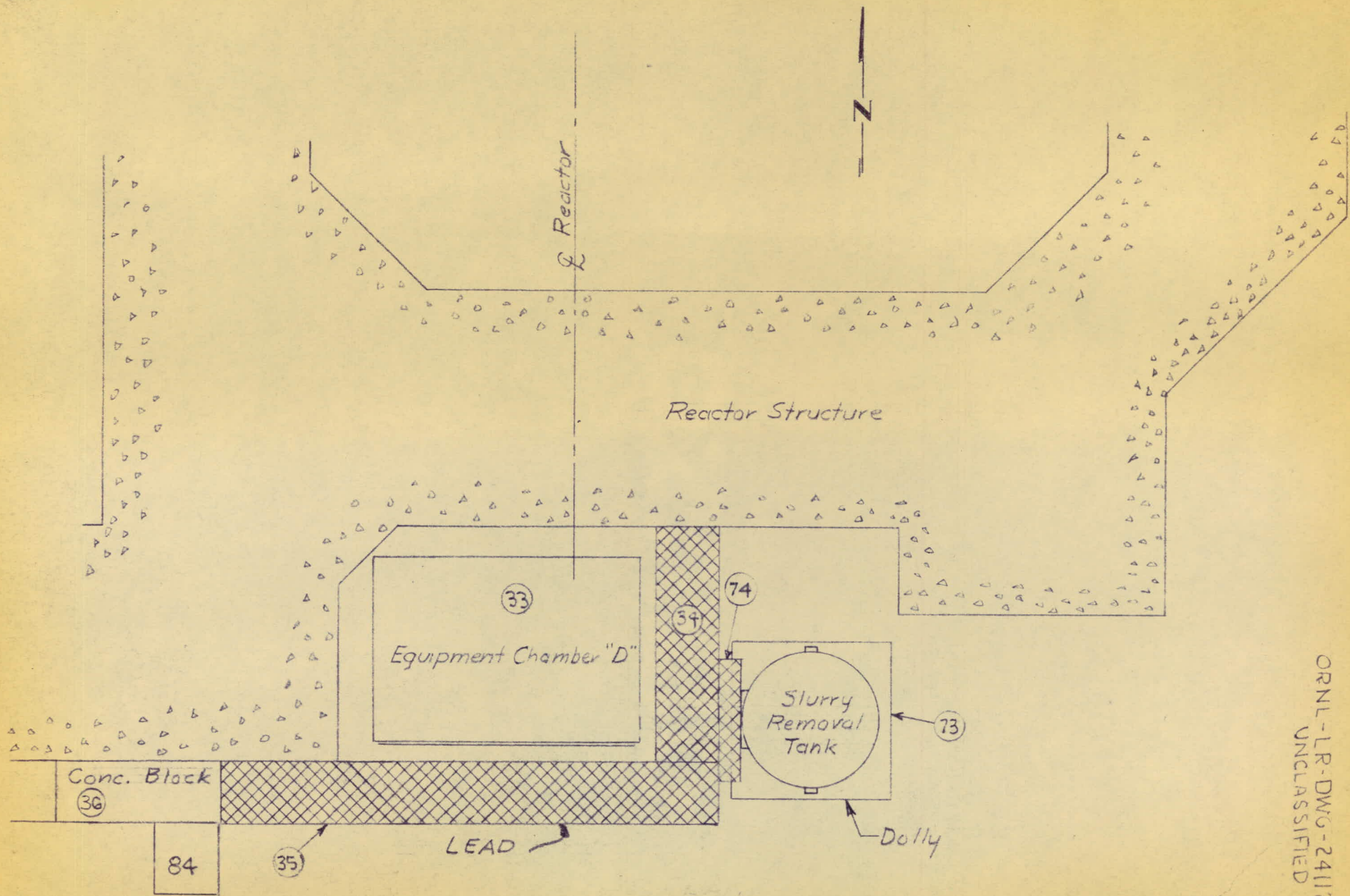
FIGURE 3 PLAN OF EQUIPMENT - OPERATING FLOOR - ORR



-15-

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FIGURE 4 ELEVATION OF EQUIPMENT - OPERATING FLOOR - ORR



-16-

ORNL-LR-DWG-24112-R1
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FIGURE 5 PLAN OF EQUIPMENT - BASEMENT FLOOR - ORR

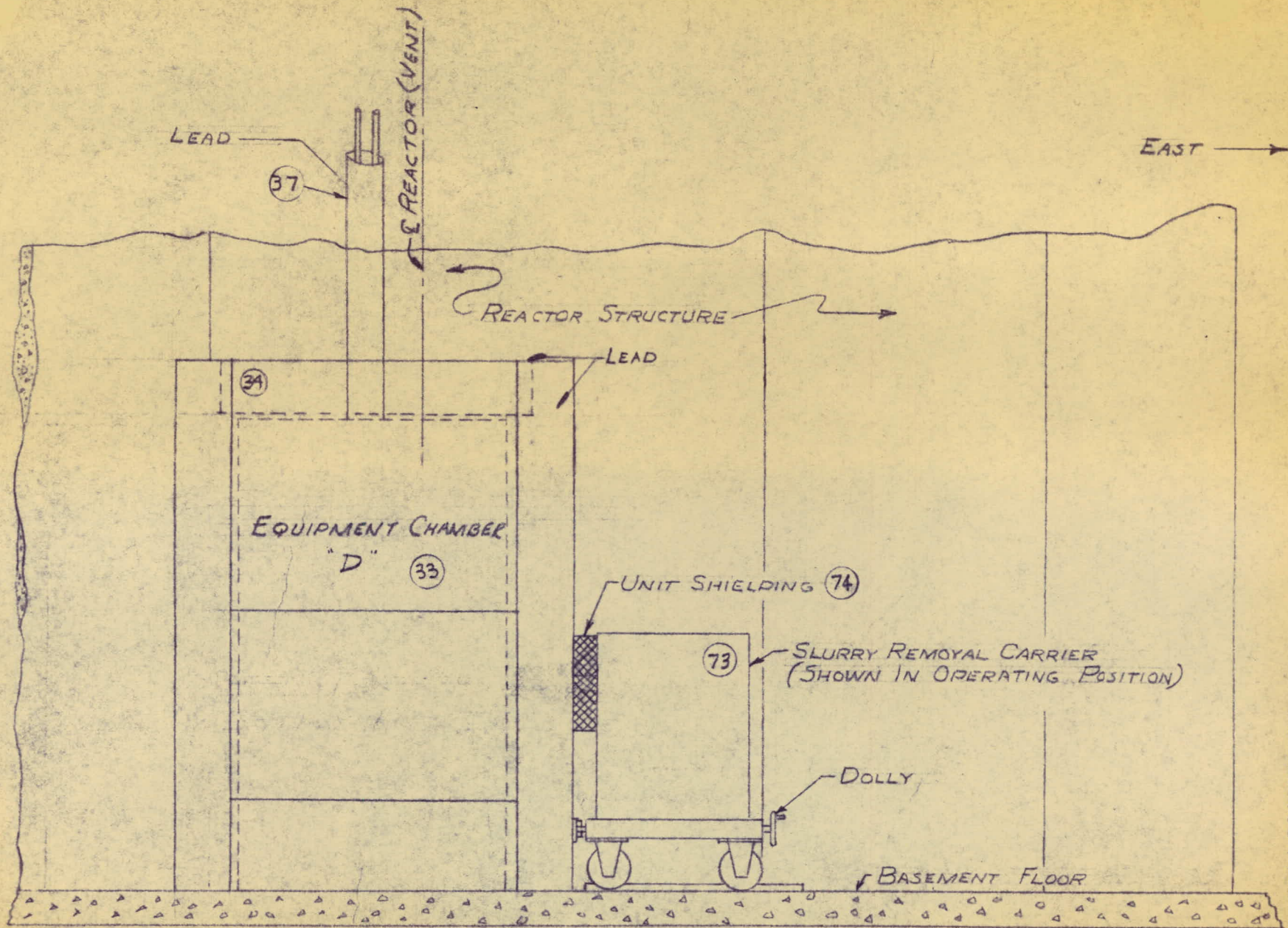


FIGURE 6 ELEVATION OF EQUIPMENT - BASEMENT FLOOR - ORR

-17-
 ORNL-LR-DWG.-2413 R1
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PAR GROUP

NOTES

1. Brackets indicate calendar period at which a phase is to be completed.
2. Abbreviations used: Inst. - Installed Rec. - Received, Des. - Design, Fab. - Fabricate, Rev. - Revision, Rem - Remove
3. Asterisk indicates phase is completed.

ITEM NO.	ITEM	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER	NOVEMBER	DECEMBER	REMARKS
1	South Facility Plug	Completed and Installed							Fabricated at Paducah
2	Liner HS-1	Completed and Installed							Fabricated at Y-12
3	Dummy Plug HS-1	Completed and Installed							Fabricated at Y-12
4	HS-2 Extension	Completed and Installed							Fabricated at Y-12
5	HS-2 Plug	Completed and Installed							Fabricated at Y-12
6	Temporary Shielding	*Inst.]	Rem.]						
7	Sleeves	Installed							
8	Three Floor Slabs		Inst.]						Fabricated at Knox Concrete
9	Permanent Cooling for F.Plug		Inst.]						
10	Temporary Cooling for E.Plugs		Rem.]						To be Removed by ORR Personnel
11	Gas Services		Des]		Fab.]				
12									
13	Process Piping Preliminary	*Des]	Inst.]						
14	Rear Shielding	Installed							
15									
16	Cover Eq. Chamber A	Rev.] Fab.]		Rec.]	Inst.]				Fabricated at Paducah
17	Equipment Chamber A	Des.] Fab.]		Inst.]					Being Fabricated at Paducah
18	Lead Donut Shield A	*Fab.]		Inst.]					Fabricated at Y-12
19	Shield Above Chamber A		Des]		Fab.]	Inst.]			
20	Concrete Shield East of Chamber A				Inst.]				
21									
22									
23A	Equipment Chamber B	Rev.Des.]	Inst.]						Fabricated at Cinn. Ventilating Co.
23B	Packaged Unit B			Rec.]	Inst.]				Westinghouse to Furnish
23C	Cover Plate B	Rev.Des.]		Rev.Fab.]		Inst.]			Fabricated at Cinn. Ventilating Co.

Reactor ... 7, 12, 19, 20 ...

ITEM NO.	ITEM	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		REMARKS
45																				
46	Concrete Door Frame Shield				Des.				Fab.		Inst.									
47	Concrete Shield Door				*Des.				Fab.		Inst.									
48	Lead Shutter				Des.				Fab.		Inst.									
49	Concrete Shield Door Storage Rack				Des.				Fab.		Inst.									
50																				
51	Booster Pumps				Des.			Fab.			Inst.									
52	Booster Pump Shield				Des.						Inst.									
53	D ₂ O Pump System				Des.			Fab.			Inst.									
54	Metering Pump & Auxiliaries				Des.			Fab.			Inst.									
55																				
56	Caustic Systems							Des.		Fab.			Inst.							
57																				
58																				
59	Filter U-9						Des.				Inst.									
60																				
61	Slurry Addition and Charging System				Loc.		Des.			Fab.			Inst.							
62																				
63	Sampler				Des.				Fab.											
64	Sampler Carrier				Des.					Fab.			Inst.							
65																				
66	Loop Carrier				*Des.					Fab. First			Fab. Second							Being Fabricated at Paducah
67	Loop Carrier Pedestal						Des.		Fab.		Inst.									
68	Carrier Cradle									Des.			Fab.							
69	Carrier Trailer									Des.			Fab.							

ITEM NO.	ITEM	APRIL		MAY		JUNE		JULY		AUGUST		SEPTEMBER		OCTOBER		NOVEMBER		DECEMBER		REMARKS
70	Trailer Ramp							Des.				Fab.								
71	Carrier Loop Withdrawal Tool Alignment					Des.				Fab.										
72																				
73	Slurry Removal Carrier							Des.												
74	Slurry Removal Unit Shielding								Des.											
75	Irradiated Slurry Stg. Tank		Locate			Des.						Inst.								
76	Ventilation					Inst.														
77	Analytical Equipment							Des.						Inst.						
78	Dummy Plug Storage							Des.		Fab.		Inst.								
79																				
80	Utilities Inst. Panel		Des.	Fab.	Inst.															
81	Utilities Instruments							Rec.		Inst.									Westinghouse to Furnish Components	
82	Process Instrument Panel							Rec.		Inst.									Westinghouse to Furnish	
83	Process Instruments							Rec.											Westinghouse to Furnish	
84	Basement Process Inst. Panel																		None to be Made	
85	Basement Process Inst.																		None to be Made	
86	Radiation Inst. Panel			Des.	Fab.			Inst.												
87	Radiation Inst.			Des.	Fab.			Inst.												
88	Electrical Panel							Rec.		Inst.									Westinghouse to Furnish	
89																				
90																				
91	In-Pile Loop							Rec.				Assemble Container							Westinghouse to Furnish	
92																				
93																				
94	Loop End Templates							Rec.											Modified at Westinghouse	

23
PROCUREMENT SUMMARY

PAR GROUP

ITEM No.	ITEM	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
1	PAR Loop Mockup	8/21/57	D-131642 8/21/57	96X-79975 9/3/57	9/16/57	\$3,231.95	10/2/57	Process Equipment Co., Tipp City, Ohio
2	Bearings for Mockup	8/21/57	D-131643 8/21/57	L.R. X-34 8/21/57	8/30/57	\$17.40	9/11/57	Dixie Bearings, Inc., Knoxville, Tenn.
3	Bearings for Dummy Plugs	9/5/57	D-131646 9/5/57	L.R. X-43 9/10/57	10/4/57	\$34.80	9/12/57	Dixie Bearings, Inc., Knoxville, Tenn.
4	Ratchet Wrenches for use with Disconnects	9/13/57	D-131652 9/19/57	8-72757 10/9/57	10/21/57	\$25.67	10/23/57	R. T. Clapp Co., Knoxville, Tenn.
5	5 ft Handle for Ratchet Wrenches for Use with Disconnects	9/13/57	D-131653 9/19/57	22X86802 9/26/57	10/4/57	\$6.70	10/4/57	Dempster Machine Shop, Knoxville, Tenn.
6	Torque Wrench for Use with Disconnects	9/16/57	---	---	10/25/57	---	9/20/57	From Stores
7	Republic Valves for Disconnect Mockup	9/17/57	D-131654 9/20/57	8-81501-22 9/26/57	9/25/57	\$131.64	10/1/57	Leinart Engineering, Knoxville, Tenn.
8	Ermeto Fittings for Disconnect Mockup	9/16/57	D-131655 9/23/57	44X86257 10/1/57	11/18/57	\$415.35	11/8/57	Abernathy - Thomas Co., Kingsport, Tenn.
9	Tubing for Disconnects for Disconnect Mockup	9/16/57	D-131657 9/23/57	44X-86247 9/26/57	10/10/57	\$178.19	11/7/57	Ray Miller Co., S. Charleston, W. Virginia
10	Autoclave Valves and Fittings for Disconnect Mockup	9/16/57	D-131660 9/23/57	41X-86429 9/27/57	10/3/57	\$577.42	11/1/57	Autoclave Engr. Sales, Erie, Pennsylvania
11	Bar 1-1/2" x 5 for Equipment Chambers B, C, and D	9/24/57	D-131661 9/26/57	44X-87669 10/10/57	10/15/57	\$1,946.60	10/16/57	Knoxville Steel Prod. Co., Knoxville, Tenn.
12	Desilverized lead for shielding, 320,000 lbs	10/17/57	10/17/57	42X91346 11/21/57	12/1/57	\$43,200.00	12/17/57	National Lead Co., Cincinnati, Ohio
13	Aluminum Valve Couplers for Dummy Plug HS-1	10/31/57	D-160211 10/31/57	41X-89417 11/4/57	11/11/57	\$101.46	11/14/57	Snap-Tite, Inc., Union City, Tenn.
14	Circuit Breaker	11/1/57	D-17844	53X89869 11/8/57	11/18/57	\$46.50	11/18/57	Stokes Elec. Co., Knoxville, Tenn.
15	Transformer	11/1/57	D-17844A	53X90729 11/11/57	11/28/57	\$190.47	12/1/57	Westinghouse Elec. Corp., Knoxville, Tenn.
16	Stainless Steel for Equipment Chamber A 1-1/2", 3/4" Plate & 1" Rod	11/4/57	D-131665 11/5/57	42X91364 11/25/57	12/9/57	\$4,206.50	1/2/58	Vance Iron & Steel Co., Chattanooga, Tenn.
17	Stainless Steel for Equipment Chamber A 5/8" and 1/4" Plate	11/4/57	D-131665A 11/5/57	42X91365 11/25/57	12/2/57	\$531.75	1/2/58	Sandmeyer Steel Co., Philadelphia, Pa.

27
PROCUREMENT SUMMARY

PAR GROUP

ITEM No.	ITEM	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
18	Structural Steel for Shielding	11/6/57	D-131667 11/11/57	42X-90095 11/14/57	12/6/57	\$310.38	12/2/57	Steel Supply, Inc., Knoxville, Tenn.
19	Steel for Equipment Chambers B, C, and D	11/6/57	D-131669 11/11/57	73X87967 11/27/57	12/2/57	\$1,091.36	12/10/57	Steel Supply, Knoxville, Tenn.
20	Equipment Chamber C	11/12/57	D-131671 11/15/57	96X90521 11/27/57	1/31/58	\$1,368.00		Young and Bertke Co., Cincinnati, Ohio
21	Preliminary Piping - Stainless Steel Pipe	11/18/57	D-131674 11/20/57	70X-84396 12/2/57	12/12/57	\$1,227.74	1/3/58	Stainless Piping & Supply, Charleston W. Va.
22	Preliminary Piping - Steel Pipe 660 ft 1/2" Sch. 80	11/18/57	D-131675 11/20/57	70X-84388 11/25/57	11/29/57	\$98.93	12/2/57	Industrial Piping & Supply, Knoxville, Tenn.
23	Preliminary Piping - Stainless Steel Tubing	11/18/57	D-131679 11/21/57	70X-92554 12/4/57	12/15/57	\$245.00	1/2/58	Ray Miller, Inc., S. Charleston, W. Va.
24	Preliminary Piping - Stainless Steel Tubing 20 ft - 9/16" o.d.	11/18/57	D-131674A 12/3/57	70X-84395 12/3/57	12/10/57	\$102.80	12/12/57	Ray Miller, Inc., S. Charleston, W. Va.
25	Equipment Chamber B	11/21/57	D-131680 11/21/57	96X-93951 12/24/57	1/22/58	\$3,732.99	3/14/58	Cincinnati Ventilating Co., Covington, Ky.
26	Equipment Chamber D	11/25/57	D-131683 11/27/57	96X-93951 12/24/57	2/7/58	\$3,626.03		Cincinnati Ventilating Co., Covington, Ky.
27	Equipment Chamber Powell Angle Valves	11/26/57	D-131682 11/26/57	35X-93525 12/18/57	1/18/58	\$240.00	1/24/58	Industrial Piping Supply, Knoxville, Tenn.
28	Panel Mounted Globe Valves - Equipment Chamber E Hoke Type	11/26/57	D-131684 11/27/57	59X-93460 12/18/57	1/15/58	\$138.40	3/11/58	James C. White Co., Greer S. Carolina
29	Autoclave Elbow Fittings - Equipment Chamber A	12/6/57	D-131686 12/6/57	77X-93071 12/30/57	2/15/58	\$177.00	2/3/58	Autoclave Engineers, Erie, Pennsylvania
30	Neoprene "O" Rings - Hole Liner HS-1	12/12/57	D-131687 12/12/57	96X-93937 12/18/57	12/30/57	\$72.00	1/2/58	Minnesota Rubber & Gasket Co., Minneapolis
31	Switch for Drain Sump	1/3/58	D-131691 1/6/58	59X-96107 1/13/58	1/17/58	\$118.00	2/3/58	Leinart Engr. Co., Knoxville, Tennessee
32	Pump for Drain Sump	1/3/58	D-131692 1/6/58	45X-95482 1/9/58	1/17/58	\$160.00	3/3/58	Aurora Pump Co., Knoxville, Tennessee
33	Three floor filler slabs	1/14/58	D-131697 1/14/58	21X-96887 1/22/58	2/1/58	\$1,750.00	2/7/58	Knox Concrete Products, Inc., Knoxville, Tenn.
34	Reinforcing Bar for Chamber D - 2" x 5"	1/14/58	D-131698 1/17/58	44X-96251 1/16/58	2/1/58	\$789.07	2/3/58	Ryerson & Son, Inc., Cincinnati, Ohio

25
PROCUREMENT SUMMARY

PAR GROUP

ITEM No.	ITEM	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
35	Pipe and Fittings - Forged Steel Tees	1/14/58	D-131700 1/20/58	1/22/58 42B82299 LRX-12	2/10/58	\$5.76	3/10/58	Grinnell Co., Atlanta, Georgia
36	Pipe and Fittings - Malleable Iron Tees	1/14/58	D-131701 1/20/58	1/22/58 44B82260 LRX-11	2/10/58	\$1.05	3/6/58	Industrial Piping & Supply, Charlotte, N.C.
37	Pipe and Fittings - 347 Stainless Fittings	1/14/58	D-131702 1/20/58	70X97118 1/28/58	2/15/58	\$501.53	2/17/58	Industrial Piping Supply Co., Knoxville
38	Pipe and Fittings - Crane Valves	1/14/58	D-131703 1/20/58	35X96723 1/22/58	2/15/58	\$203.00	2/3/58	Crane Company, Knoxville, Tenn.
39	Pipe and Fittings - Powell Valves	1/14/58	D-131703 1/20/58	35X96724 1/22/58	2/15/58	\$113.00	2/17/58	Industrial Piping Supply, Knoxville
40	Pipe and Fittings - 347 Stainless Pipe	1/14/58	D-131704 1/20/58	70X97122 1/29/58	2/15/58	\$648.84	2/13/58	Ray Miller, Inc., S. Charleston, W. Va.
41	Pipe and Fittings - 304 Stainless Swagelok Unions	1/14/58	D-131705 1/21/58	70X97119 1/27/58	4/8/58	\$162.60		James C. White Co., Greer, S. C.
42	Pipe and Fittings - Forged Steel Ells	1/14/58	D-131706 1/20/58	70X97116 1/24/58	2/10/58	\$12.60	2/3/58	Crane Company, Knoxville, Tennessee
43	Pipe and Fittings - Stainless Steel	1/14/58	D-131699 1/23/58	13X94550 1/28/58	2/12/58	\$804.06	2/20/58	E. I. DuPont de Nemours Co., Aiken, S. C.
44	Chamber A - "O" Rings	1/14/58	D-131708 1/23/58	1/27/58 44B82858 LRX-17	2/10/58	\$5.16	2/2/58	Anchor Packing Co., Pittsburgh, Pa.
45	Chamber A - Neoprene Gasket	1/20/58	D-131707 1/22/58	55X98631 2/10/58	2/15/58	\$72.00	3/3/58	Melrath Supply & Gasket Co., Philadelphia
46	Chamber A - Bolts	1/20/58	D-131710 1/23/58	28X-97950 2/14/58	2/21/58	\$63.75	3/11/58	United States Fastener Corp., Detroit, Mich
47	Chamber A - Bearings	1/20/58	D-131711 1/23/58	1/28/58 24B75828 LRX-93	2/15/58	\$8.65	2/5/58	Dixie Bearings Inc., Knoxville, Tenn.
48	Chamber A - Triarc Retaining Rings	1/20/58	D-131712 1/23/58	1/28/58 24B-75828 LRX-93	2/15/58	\$2.40	3/13/58	Dixie Bearings, Inc., Knoxville
49	Pipe and Fittings - 347 Stainless Steel	1/14/58	D-131702A 1/20/58	70X97117 1/28/58	2/7/58	\$239.22	2/10/58	Slip-Not Belting, Kingsport, Tenn.
50	Chamber A Mockups - Autoclave Fittings	2/4/58	D-131718 2/6/58	70X99820 2/25/58	3/25/58	\$228.30	4/7/58	Autoclave Engineers, Inc., Erie, Pa.
51	Chamber A Mockups - Ermeto Fittings	2/5/58	D-131715 2/6/58	70X1725 3/11/58	3/28/58	\$1,142.80	4/1/58	Weatherhead Co., Kingsport, Tenn.

26
PROCUREMENT SUMMARY

PAR GROUP

ITEM No.	ITEM	PURCHASE REQUEST	PURCHASE REQUISITION	PURCHASE ORDER	PROMISED DELIVERY	COST	RECEIVED	REMARKS
52	Disconnect Wrenches	2/4/58	D-131716 2/6/58	23X-99902 2/18/58	3/5/58	\$133.69	4/1/58	R. T. Clapp Co., Knoxville, Tennessee
53	HS-1 Liner - "O" Rings	2/6/58	D-131717 2/6/58	44B-82858 2/10/58 LRX-19	2/10/58	\$5.94	2/10/58	Anchor Packing Co., Pittsburgh, Pa.
54	Decapper - Angle Drives	2/18/58	D-131720 2/18/58	63X196 2/24/58	2/28/58	\$111.60	3/6/58	Slip-Not Belting Corp, Knoxville, Tenn.
55	Mockup - Republic Valves	2/19/58	D-131721 2/19/58	35X1112 2/27/58	3/10/58	\$199.44	3/20/58	Leinart Engineering Co., Knoxville, Tenn.
56	Spray Kote Molybdenum for Valve Experiment	2/20/58	D-131722 2/20/58	33X1824 3/4/58	3/4/58	\$13.80	3/6/58	J. A. Postell, Atlanta, Ga.
57	Loop Carrier Sling	2/26/58	D-131731 3/3/58	28X-3760 3/31/58	5/27/58	\$482.94		Jones & Laughlin Steel Co., Atlanta, Ga.
58	Mock-up - 1" tubing	3/11/58	D-131738 3/11/58	70X4106 3/24/58	4/7/58	\$197.66	4/3/58	Ray Miller Inc., S. Charleston, W. Va.
59	Loop Carrier - Stainless Steel Plate - 1-inch	3/13/58	D-131740 3/19/58	13X2261 3/20/58	4/1/58	\$2,865.02		General Electric Co., Richland, Wash.
60	Shielding Eq. Ch. D - 2" x 5" Bar	3/17/58	D-131739 3/18/58	44X-4354 4/2/58	4/15/58	\$181.98	4/7/58	O'Neal Steel Co., Chattanooga, Tenn.
61	Mockup, 3/4", 9/16", and 3/8" tubing	3/18/58	D-131741 3/19/58	70X4106 3/24/58	4/7/58	\$605.94	4/10/58	Ray Miller Inc., S. Charleston, W. Va.
62	Barytes Block for Shielding	3/20/58	D-131743 3/24/58		5/1/58			
63	Concrete Shield Door - Plastiment	3/25/58	D-131744 3/26/58	21X 3573 4/7/58	5/1/58	\$9.00	4/21/58	Sika Chem. Co., Pittsburgh, Pa.
64	Concrete Shield Door - Steel Punchings	3/25/58	D-131745 3/26/58		5/1/58			
65	Concrete Shield Door - Limonite	3/25/58	D-131746 3/26/58		5/1/58			
66	Loop Carrier - Stainless Steel Plate - 3/4-inch	3/28/58	D-131749 3/31/58	44X-4346 3/31/58	4/4/58	\$689.52	4/3/58	Associated Steel Co., Houston, Texas
67	Little Richard Valve for Test	3/31/58	D-171878 3/31/58	59X6815 4/15/58	5/1/58	\$575.00		American Inst. Co., Silver Springs, Md.
68	Chamber E Bulkhead Unions	3/31/58	D-171885 4/15/58	44B 91155 4/19/58 LRX-24	4/25/58	\$74.04		Partial Shipment 4/28/58 James C. White Co., Greer, S. C.

