

August 29, 1962

J. C. Sanders

62			63			64			65			66											
S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
B-1	Install and check-out			Start-up hot bleed			Pump maps Mark IX Pump			Start-up cycle variations			Start-up new reflector			Boost pump perf. Aerojet Pump			Start with syst. using boost pump				
B-3	Construction			→			Tank heat and cavitation 46,000 gallon tank			Pump Map Aerojet Pump			Parallel pump operation			Advanced reactor with parallel pumps			Expansion for 15,000 mw				

IF FUNDS FOR B-3 ARE DELAYED TO SEPTEMBER, 1963, THEN THE SCHEDULES BECOME:

B-1	Install and construct			Start-up hot bleed			Pump maps Mark IX Pump			Start-up cycle variations			Start-up new reflector			Boost pump perf.			Start with syst. using boost pump		
B-3	←			Construction			→			Tank heating and cavitation 46,000 gallon tank			Pump maps Aerojet Pump			B Parallel Pumps					

- Notes:
1. Start-up work includes chill down assessment and specification on tank shut-off valve manipulation.
 2. Tank heating, cavitation and tank pressurisation are studied together.
 3. Pump mapping includes cavitation without simulated nuclear heat.
 4. Start-up cycle variations include modes for diluting hot gas and tests of heated bleed cycles.
 5. Schedule assumes that main emphasis of NERVA contractor will be switched to hot bleed cycle.
 6. Expansion for 15,000 mw includes larger tank, new engines, and advanced pumping systems.
 7. B Notes delay between the two schedules for the same work.

SEP 6 1962

From Lewis
 To **NASA - Headquarters**
 Apts: **F. G. Schwenk (NOP)**
 Subject: **Transmittal of Tentative Work Schedules for B-1 and B-3
 Nuclear Rocket Stands**

Reference:

1. Please take the action indicated below:

- (A) Advise status.
- (B) For your information, proper action, and files.
- (C) For reply by your office.
- (D) Forward (on loan) (for our files).
- (E) Translate for our files.
- xx (F) There ~~(is)~~ (are) transmitted herewith the following:
- (G) The following visited us on dates given.
- (H) Hold for further information.
- (I) Copy of this letter enclosed with shipment.
- (J) Advise whether order will be placed soon.
- (K) Return catalogs and literature furnished by low bidder.
- (L) Return samples submitted with letter of award.
- (M) Send catalog and price list applying to general schedule.

Two (2) copies of subject schedule.

E. J. MANGANIELLO
E. J. Manganiello
Deputy Director

HHE HHS:kjw
 DSO
 BTL

Copies to: NASA Hqs. (NOP)
 Files
 Deputy Director
 AD&E Division
 NP Branch

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	S	O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A
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1. Start-up work includes chill down assessment and specification on tank shut-off valve manipulation.
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 7. B Notes delay between the two schedules for the same work.

SEP 6 1952

From Lewis
 To **NASA - Headquarters**
 Attn: **F. G. Schwank (NOP)**
 Subject: **Transmittal of Tentative Work Schedules for B-1 and B-3
 Nuclear Rocket Stands**

Reference:

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Two (2) copies of subject schedule.

E. J. MANGANIELLO
E. J. Manganiello
Deputy Director

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E-1	Install and commission	Start-up hot bleed	Pump room Unit II Pump	Start-up verification	Start-up and reflector	Start pump perf. Aerijet Pump	Start with syst. using boost pump
E-3	Construction			Tank head and verification 15,000 gallon tank	Pump room Aerijet Pump	Parallel pump operation	Advanced reactor with parallel pumps Specimen for 15,000 gal
IF WORK FOR E-1 AND RELATED TO OPERATIONS, USE THE SCHEDULE ABOVE.							
E-1	Install and commission	Start-up hot bleed	Pump room Unit II Pump	Start-up verification	Start-up and reflector	Start pump perf. Aerijet Pump	Start with syst. using boost pump
E-3				Tank head and verification 15,000 gallon tank	Pump room Aerijet Pump	Parallel pump operation	Advanced reactor with parallel pumps Specimen for 15,000 gal

Notes: 1. Start-up and initial operation shall be as specified in the schedule above.
 2. Tank head and verification shall be completed by the end of the schedule.
 3. Pump room shall be completed by the end of the schedule.
 4. Start-up and initial operation shall be completed by the end of the schedule.
 5. Tank head and verification shall be completed by the end of the schedule.