TEST SPECIFICATION

CENTRAL CHEMICAL MIX SYSTEM

1-4324

7 December 1962

STATINTL

[redacted]

Approved For Release 2001/08/13 : CIA-RDP78B04747A001800070011-4

FOREWORD

This acceptance test shall be executed by qualified personnel of the Engineering Department, initialing the proper operation of each step.

Any malfunctions or difficulties will be recorded on a separate sheet and the step rechecked for proper operation. (Describe malfunction on reverse side of sheet.)

Upon completion, the completed document shall be returned to the Engineering Department.

Follow test procedures as outlined.

CENTRAL CHEMICAL MIX SYSTEM

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System Tank Farm [redacted] For _____

PART I

Preparation:

1. Thoroughly clean all components. ✓
2. Thoroughly clean the area around components. ✓
3. Flush all tanks and remove debris from tank bottoms. ✓

Mechanical Attachments:

Physical Connections:

Tanks ✓

Piping ✓

Piping Circuitry ✓

Facilities ✓

Mobile Unit (where applicable) ✓ *

Electrical Fittings ✓

Conduit Supports ✓ * *

PART II

Preliminary Operational Test:

1. Inspect all tank welds, seams and fittings for leaks. ✓
2. Check operation of all manually operated valves. ✓
3. Individually check all electrical circuits and controls on console for proper operation. ✓

* covers for motors to be shielded
* * will be replaced with S.S.

PART III

Functional Test:

1. Fill mix tank sequentially using the various water supplies available:

   - Deionized 45° ✓
   - Deionized 68° ✓
   - Deionized 145° ✓
   - Filtered Ambient ✓
   - Filtered 45° ✓
   - Filtered 68° ✓
   - Filtered 145° ✓

2. Check operation of mixer motor. ✓

3. Transfer to storage tanks (fill completely). ✓

4. Regulate nitrogen pressure to 3 PSI (as observed on gauge) and pressurize the system. *

   a. Operate nitrogen exhaust system. *

   b. Recharge tank system with nitrogen. *

5. Recirculate contents of each storage tank through the heat exchanger and observe temperature of solution. ✓

6. Close all valves in the GPE area use lines. ✓

   a. Observe operation of level control indicators at console. ✓

   b. Observe operation of level control indicators at remote location. ✓

7. Recirculate tank solution through filter, area use lines and heat exchanger. ✓

   a. Record pressure as read on gauge at filter. ✓ 22.5 PSI

* nitrogen not available 12/2/63
air used for test

b. Observe operation of level indicators at console. ✓

c. Observe operation of level indicators at remote location. ✓

8. Open drain valve and check operation of level indicators at console. ✓

At remote location. ✓

9. Fill portable mix unit. ✓

Check mixer motor. ✓

Check pump. ✓

Attach to additive system and charge tank. ✓

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PART IV

Operational Acceptance Test Procedure:

1. **Check to see all tanks are filled with water.**
2. **Operate nitrogen pressure system.**
3. **Operate solution distribution system for 6 hours, recording temperature on the recorder at console.**
4. **Record tank temperatures and pressures of each system hourly:**

Time	Temperature	Pressure	Initial

PART V

Shut Down Procedure:

1. **Drain and flush all tanks and lines.**
2. **Remove all filter cartridges.**
3. **Replace filter cartridges with new 10-micron cartridges.**

* not available 12/21/62

STATINTL [redacted]

21 Dec. 1962

PSD/NPIC-12-62
27 December 1962

MEMORANDUM FOR THE RECORD -

SUBJECT: Photochemical Solutions Laboratory - [redacted] STATINTL

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1. During the past two weeks [redacted] NPIC and Messrs. [redacted] have made several tours and spent a considerable amount of time going over the chemical mix system being installed in [redacted] During this time many points have been noticed which we feel should be corrected or explained prior to accepting the system as being satisfactory. It is also felt that certain architectural design and constructions of the room itself must be corrected in the near future. STATINTL STATINTL STATINTL

2. The following list of questions should be answered "yes" if [redacted] is to live up to the contract:

a. Do mix tanks have gauges calibrated in 2½ gal. increments?

b. Do flows from filters meet the 80 LPM minimum requirements?

c. Do we have a 3/4" vacuum line from storage tanks?

d. Do we have a 1" N_2 line to storage tanks?

e. Do we have a 2" pipe in heat exchanges?

f. Are the safety valves on all storage tanks?

g. Do we have wash down hoses?

h. Are all lines coded as set forth in DMJM memo of 30 August 1962.

i. Is there provisions for batch date labels?

j. Are all electrical outlets, motor switches and the console water-proof?

k. Are all conduit and pull boxes corrosion resistant?

l. Are all filters in such a position to make filters changing convenient?

PSD/NPIC-12-62
27 December 1962

3. The following is a list of items which we feel should be corrected in the near future:

a. Mixers cause excessive vortex.

b. Tank thermometers are located so that they are susceptible to breakage and a change in the type of thermometers and a shielding as indicated.

c. All lines should be securely anchored to the wall or floor.

d. Filters on mix tanks side should be provided or equipped with drain lines.

e. Low level ~~along~~ Alarm system on the 330 gal. stock tanks should be installed at a lower level. Changes on drain valves of mix tanks should be relocated to the side of the tank if feasible.

f. Portable mix tanks should be equipped with a scale to indicate gallons.

g. Flow indicator panel in Room 2S464B not installed.

h. One temperature dial on back of stock tank is broken.

[redacted] STATINTL
Chief, Production Services Division, NPIC