Subject: COLD TRAP SPECIAL

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1.0 INTRODUCTION

1.1 Purpose:

To establish the procedure for removing the residual uranium hexafluoride (UF_6) from the cold traps, subsequent to cold trap draining.

1.2 Background:

The nine cold traps contain UF_6, primarily as a vapor, following the traps having been heated and drained. This residual UF_6 must be purged from the cold traps to facilitate planned modifications to the UF_6 drain line manifold and cylinder fill stations, and to allow the cold traps to be pressure tested.

2.0 SAFETY PRECAUTIONS

2.1

WARNING

The operator must maintain continuous visual surveillance of the cold trap purging operation throughout its duration.

2.2

==NOTE==

The Area Manager or Superintendent will be on site to provide operations oversight during critical periods of venting or purging that may result in visible emissions through the scrubber.

2.3

```
* * * * * * * * * * * * * * * * * * * * * * *
*                  WARNING                    *
*                  =======                    *
*                                             *
* UF6 cylinders filled relative to the        *
* draining and purging of the cold traps      *
* must not be placed in the steam chests      *
* for reheating.                              *
* * * * * * * * * * * * * * * * * * * * * * *
```

2.4

```
* * * * * * * * * * * * * * * * * * * * * * *
*                  WARNING                    *
*                  =======                    *
*                                             *
* The UF6 dump tank pressure relief system    *
* must be in service with a gauge reading     *
* of 0.0 psig +/- 2 psig on the tap between   *
* the rupture disc and relief valve.          *
* * * * * * * * * * * * * * * * * * * * * * *
```

2.5

```
* * * * * * * * * * * * * * * * * * * * * * *
*                  WARNING                    *
*                  =======                    *
*                                             *
* The pressure indicators on the cold traps   *
* are to be carefully monitored during        *
* draining and purging operations.            *
* Pressure must be maintained within the      *
* ranges specified in the referenced          *
* procedure N-270-4, Rev. 2, "Primary Cold    *
* Trap Operation," page 3.                    *
* * * * * * * * * * * * * * * * * * * * * * *
```

2.6

```
* * * * * * * * * * * * * * * * * * * * * * *
*                  ==NOTE==                   *
*                                             *
* Ensure that the venting lines from the      *
* cold traps are being properly heated by     *
* the steam tracings.                         *
* * * * * * * * * * * * * * * * * * * * * * *
```

2.7 Testing of purge gas from cold traps will be conducted under a specific Hazardous Work Permit (HWP).

2.8 During the desmoking operations for the primary cold traps (#1 through #4) and the clean up reactor (#5), the clean-up reactor trap (#6) will be cold and on-line backed up by a secondary cold trap, cold and on-line. Purge gas from the desmoking operations will pass through these on-line traps, then through the HF scrubber and on to the HF scrubber stack.

2.9 The Shift Supervisor will verify and note in the Supervisor's log that the following systems are fully operational prior to proceeding with the desmoking operations:

A. Off-Gas HF Scrubber System

(Exhaust blowers on and approximately 10-25 gpm makeup water flow to the scrubber.)

B. Off-Gas Flow and Temperature Recorder

These values are recorded on strip charts in the control room with monitoring by the control room operator.

C. Off-Gas HF Scrubber Stack Sampling System

Health Physics verification is required (checked a minimum of once per shift).

2.10 UF_6 cylinders filled during this procedure will not be filled in excess of 20,000 lbs.

2.11 All work is to be performed according to Operating Procedure G-001, Rev. 3, "Health and Safety Precautions and Requirements."

3.0 REFERENCES

3.1 Operating Procedure N-280-1, Rev. 6, "Uranium Hexafluoride Product Handling and Shipping"

3.2 Emergency Procedure E-008, Rev. 4, "Uranium Hexafluoride (UF_6) Release"

3.3 Operating Procedure N-270-3, Rev. 2, "Secondary Cold Trap Operation"

3.4 Operating Procedure N-270-4, Rev. 2, "Primary Cold Trap Operation"

3.5 Operating Procedure N-270-5, Rev. 1, "Emergency Dump Tank"

3.6 Operating Procedure N-270-9, Rev. 0, "Refrigerant Vapor Heating System"

3.7 Operating Procedure N-170-1, Rev. 0, "H_2-F_2 Burner and Scrubber Operation"

3.8 Operating Procedure G-001, "Health and Safety Precautions and Requirements"

4.0 UF_6 COLD TRAP SYSTEM STATUS AND OPERATIONAL CONDITION

4.1 As of 4/9/86 at 0800, the following conditions existed:

4.1.1 Primary Cold Traps

#1 Heated; under nitrogen purge of 20 scfm; emptied

#2 Heated; inlet and outlet valves closed; emptied

#3 Heated; inlet and outlet valves closed; emptied

#4 Heated; inlet and outlet valves closed; emptied

4.1.2 Clean-Up Reactor Cold Traps

#5 Ambient; inlet and outlet valves closed; possibly contains some UF_6

#6 Cold; receiving purge gas from #1 primary cold trap; probably contains solid UF_6

4.1.3 Secondary Cold Traps

#1 Ambient; inlet and outlet valves closed; emptied

#2 Cold; inlet and outlet valves closed; emptied

#3 Cold: receiving purge gas from #6 clean-up cold trap; probably full

4.2 Actions taken subsequent to 4/9/86 (0800). All other trap conditions remain as indicated in 4.1: following conditions exist on 4/14/86 at 1400.

4.2.1 Secondary Cold Traps

#1 Cold: inlet and outlet valves closed: emptied

#2 Cold: receiving purge gas from #6 clean-up reactor cold trap; probably contains UF_6

#3 Heated: inlet and outlet valves closed: probably full; ready to drain at any time after 2000 hours

4.2.2 Clean-Up Reactor Cold Traps

#5 Heated: inlet and outlet valves closed: possible UF_6; ready for draining

5.0 DESMOKING PROCEDURE

5.1 Drain #5 clean-up reactor cold trap in accordance with the precautions set forth in this procedure and in accordance with N-280-1, Rev. 6, "Uranium Hexafluoride Product Handling and Shipping."

5.2 Drain #3 secondary cold trap in accordance with the precautions set forth in this procedure and in accordance with N-280-1, Rev. 6.

5.3 After draining, place #3 secondary cold trap in cold condition with block valves closed; keep #5 clean-up cold trap hot but close all inlet and outlet valves.

5.4 Purge #2 Primary Cold Trap (Note - #2P is hot: valves closed: empty.)

5.4.1 Connect air supply to drain header.

5.4.2 Open #2 primary cold trap drain valve.

5.4.3 Open air supply valve and pressure #2 to 10 psig.

5.4.4 Close drain #2 valve; hold pressure for 30 minutes.

5.4.5 Slowly bleed pressure from #2 through the gas discharge valve. (i.e. through #6 and then to #2 secondary); close gas discharge valve.

5.4.6 Repeat steps 5.4.2 through 5.4.5 two more times.

5.4.7 Open #2 primary cold trap drain valve and pressure up the trap to 1-2 psig; close drain valve.

5.4.8 Close #2 primary cold trap pressure transmitter block valve; disconnect transmitter fitting.

5.4.9 Slowly open transmitter block valve and exhaust air into vacuum hose. Observe for UF_6 smoke; close transmitter block valve.

5.4.10 If any UF_6 fume is observed, repeat section 5.4 again, but not until trap skin temperature reaches 150°F.

5.4.11 If no UF_6 fume is observed, leave the trap in a hot; all valves closed; empty status.

5.5 Purge #3 Primary Cold Trap

Follow the same procedure as set forth in section 5.4.

5.6 Purge #4 Primary Cold Trap

Follow the same procedure as set forth in section 5.4.

5.7 Realign N_2 purge gas to #4 primary cold trap.

5.7.1 Close the gas inlet and outlet valves to primary cold trap #1.

5.7.2 Open the gas inlet and outlet valves to #4 primary cold trap; this places #4 primary cold trap; this places #4 on-line for continued purging of the UF_6 feed header.

5.3 Purge #1 Primary Cold Trap

Follow the same procedure as set forth in section 5.4.

5.9 Purge #5 Clean-Up Reactor Cold Trap
(Note - #5 CUR is hot; valves closed; empty)

5.9.1 Connect air supply to drain header.

5.9.2 Open #5 clean-up cold trap drain valve.

5.9.3 Open air supply valve and pressure #5 to 10 psig.

5.9.4 Close #5 drain valve; hold pressure for 30 minutes.

5.9.5 Slowly bleed pressure from #5 through the gas inlet valve. (Note - this is different than #1, 2, 3 or 4.); close gas inlet valve.

5.9.6 Repeat steps 5.9.2 through 5.9.5 two more times.

5.9.7 Open #5 drain valve and pressure up the trap to 1-2 psig; close the drain valve.

5.9.8 Continue the test for UF_6 as set forth in 5.4.8 through 5.4.11.

5.9.9 Cycling of pressure-purges will be repeated as many times as necessary to desmoke three (3) primary cold traps and the #5 CUR cold trap.

After these are desmoked, they are blocked in and left on heat. (They will be monitored for additional UF_6 melting which will increase the pressure on the trap. If this is found, the trap must be rescheduled for draining and pressure purging). The Supervisor may repeat the UF_6 free verification steps 5.4.8 through 5.4.11 on any trap as needed.

```
* * * * * * * * * * * * * * * * * * * * * * * *
*                  [STATUS]                     *
*                                               *
* At this point, there is one primary cold      *
* trap, one CUR cold trap, and three            *
* secondary cold traps left to be desmoked.     *
* See Figure 1 for the "typical" piping         *
* status. The yellow indicates the system       *
* on-line and evacuating to desmoke. The        *
* cold traps marked in red are hot and those    *
* marked in blue are cold. The valves marked    *
* in red are closed and those marked in green   *
* are open. (Color coding will be marked on     *
* the figure drawings issued to operations.)    *
* * * * * * * * * * * * * * * * * * * * * * * *
```

5.10 Statement of Objective:

The next three cold traps need to be drained and desmoked one at a time, venting to a CUR cold trap in series with a secondary cold trap on cold to catch the UF_6 evolved (maximum UF_6 recovery method).

5.11 Two of the secondary cold traps must be processed next.

```
* * * * * * * * * * * * * * * * * * * * * * * *
*                  [STATUS]                     *
*                                               *
* Since #3 secondary cold trap is hot and       *
* ready to drain, it will be next to process.   *
* * * * * * * * * * * * * * * * * * * * * * * *
```

5.12 Drain and Purge #3 Secondary Cold Trap

5.12.1 Repeat the heat and drain as per the step 5.2.

5.12.2 After draining the trap, evacuate the drain header by way of the drain valve of the primary cold trap on continuous purge. See Figure 2 for drain evacuation flow.

5.12.3 After the drain header and #1 secondary cold trap is evacuated, the drain valve to the #2 primary cold trap will be closed. This line will then be used for this trap pressure purging as described in steps 5.4.1 through 5.4.11. The pressure-purge gas will be evacuated each time through the on-line primary cold trap drain valve. (See Figure 2.)

```
* * * * * * * * * * * * * * * * * * * * * * * * * *
*                  [STATUS]                         *
*                                                   *
* "During" the step 5.12.3, the on-line             *
* #2 secondary cold trap may be accumulating        *
* UF6. Another empty and cold secondary cold        *
* trap (#1) should replace the #2 secondary         *
* cold trap as the on-line trap. No. 1              *
* secondary cold trap was drained, and is           *
* cold and ready for service.                       *
* * * * * * * * * * * * * * * * * * * * * * * * * *
```

5.13 Heat, Drain, and Purge #2 Secondary Cold Trap

5.13.1 Place #1 secondary cold trap on-line and block in the #2 secondary cold trap for tempering and heatup cycle per referenced procedures. The heatup cycle prior to draining will continue until all internal UF_6 is melted and the pressure rise on the cold trap stops. Pressure venting (if necessary) will be done by way of the trap gas inlet valve.

```
* * * * * * * * * * * * * * * * * * * * * * * * * *
*                  [STATUS]                         *
*                                                   *
* This predrain heatup cycle is expected to         *
* take 24 to 48 hours.                              *
* * * * * * * * * * * * * * * * * * * * * * * * * *
```

5.13.2 Drain and purge #2 secondary cold trap. Wait four hours after the pressure rise stops before draining, to assure a maximum melt in the trap. Follow the drain, evacuation, and purge procedure per steps 5.12.1, 5.12.2, and 5.12.3.

```
* * * * * * * * * * * * * * * * * * * * * * * * *
*                  [STATUS]                       *
*                                                 *
* This step is expected to take 24 to 48          *
* hours to complete desmoking of this trap.       *
* * * * * * * * * * * * * * * * * * * * * * * * *
```

```
* * * * * * * * * * * * * * * * * * * * * * * * *
*                    SYSTEM                       *
*                    STATUS                       *
*                                                 *
* At this point, three traps remain to be         *
* processed to a smoke-free condition. They       *
* are one primary cold trap, #6 CUR cold trap     *
* and #1 secondary cold trap. The primary         *
* cold trap will be next for processing.          *
* * * * * * * * * * * * * * * * * * * * * * * * *
```

5.14 Pressure purge the remaining primary cold trap to be desmoked.

5.14.1 Switch the continuous N_2 purge flow to another primary cold trap that has been desmoked and block in the trap to be desmoked.

```
* * * * * * * * * * * * * * * * * * * * * * * * *
*                  [STATUS]                       *
*                                                 *
* The continuous purging of this trap may         *
* already have it desmoked, so a verification     *
* check should be made at this point.             *
* * * * * * * * * * * * * * * * * * * * * * * * *
```

5.14.2 Make the desmoke verification check on this primary cold trap as referenced on steps 5.4.7 through 5.4.11. If the trap is free of smoke, proceed to the next step, and if still smoking, repeat referenced steps 5.4.1 through 5.4.11 on this trap until smoke-free.

SYSTEM STATUS
All cold traps are desmoked except #6 CUR cold trap and #1 secondary cold trap, both of which are cold and on-line.

5.15 Heat, drain, and pressure purge #6 CUR cold trap while evacuating the complete upstream system.

5.15.1 Open the CUR cold trap line by-pass valve and close the #6 CUR cold trap gas inlet and outlet valves. Monitor the cold trap off-gas temperature. It should go up some with the CUR cold trap cooling removed from the continuous purge gas flow. Check the HF scrubber discharge stack. Increase the HF scrubber makeup water flow if UF_6 stacking is evident, and reduce the N_2 purge flow as much as possible (without jeopardizing the off-gas blower) to stop UF_6 slippage.

5.15.2 With the #6 CUR cold trap blocked in, start the tempering and heatup cycle per referenced procedures. The heatup cycle prior to draining will continue until all internal UF_6 is melted and the pressure rise on the cold trap stops. Pressure venting (if necessary) will be done by way of the trap gas outlet line (very slowly, while the control room operator is monitoring flow and the stack is monitored for visible emission).

5.15.3 Once the #6 CUR cold trap tempering is started, open all valves in the upstream UF_6 piping system as shown on Figure 3 to assure evacuation of this system. During the valve changes, the off-gas flow and temperature will be monitored in the control room. The HF scrubber discharge stack will be monitored. If visible emissions occur, the trap being opened will have the discharge throttled, and the HF scrubber makeup flow will be increased.

```
* * * * * * * * * * * * * * * * * * * * * * * * *
*                    [STATUS]                     *
*                                                 *
* The predrain heatup cycle is expected to *
* take 24 to 48 hours.                            *
* * * * * * * * * * * * * * * * * * * * * * * * *
```

5.15.4 Drain the #6 CUR cold trap. Wait four hours after the pressure rise stops before draining, to assure a maximum melt in the trap. Follow the drain referenced procedures. Evacuate the drain backup into the trap and out the gas outlet line.

5.15.5 Pressure purge the #6 CUR cold trap. The drain header will be used for this trap pressure purge as described in steps 5.4.1 through 5.4.11. The pressure purge gas will be evacuated each time through the trap's gas inlet line. (See Figure 4.)

```
* * * * * * * * * * * * * * * * * * * * * * * * *
*                    SYSTEM                       *
*                    STATUS                       *
*                                                 *
* At this point everything has been purged to *
* smoke-free except the #1 secondary cold *
* trap and its drain header.                      *
* * * * * * * * * * * * * * * * * * * * * * * * *
```

5.16 Heat, drain, and pressure purge #1 secondary cold trap while evacuating the complete upstream system.

5.16.1 Open the gas outlet valves on both #2 and #3 secondary cold traps for the continuous purge gas flow to the off-gas blower and close the inlet and outlet valves on the #1 secondary cold trap. Monitor the HF scrubber discharge stack for UF_6 slippage and adjust the scrubber makeup flow accordingly. (See Figure 5.)

```
* * * * * * * * * * * * * * * * * * * * * * * * * *
*                    [STATUS]                     *
*                                                 *
* This #1 secondary cold trap was drained        *
* earlier and is not expected to have more       *
* than 50 lbs. of UF6 in it.                      *
* * * * * * * * * * * * * * * * * * * * * * * * * *
```

5.16.2 With the #1 secondary cold trap blocked in, start the tempering and heatup cycle per referenced procedures. The heatup cycle prior to draining will continue until all internal UF_6 is melted and the pressure rise on the cold trap stops. Pressure venting is not expected to be required, but if necessary, it will be done by way of the trap gas outlet valve (venting very slowly while stack monitors are watching).

```
* * * * * * * * * * * * * * * * * * * * * * * * * *
*                    [STATUS]                     *
*                                                 *
* The predrain heatup cycle is expected to       *
* take 24 to 48 hours.                            *
* * * * * * * * * * * * * * * * * * * * * * * * * *
```

5.16.3 No. 1 secondary cold trap drain - wait four hours after the pressure rise stops before draining, to assure a maximum melt in the trap. Follow the drain referenced procedures. Evacuate the drain backup into the trap and out the gas outlet line.

```
* * * * * * * * * * * * * * * * * * * * * * * * * *
*                    ==NOTE==                     *
*                                                 *
* This vented UF6 bearing gas goes directly      *
* to the scrubber and must be vented slowly      *
* enough for the HF scrubber to contain it.      *
* While venting, the stack must be monitored     *
* and scrubber water flows adjusted              *
* accordingly.                                    *
* * * * * * * * * * * * * * * * * * * * * * * * * *
```

5.16.4 Pressure purge the #1 secondary cold trap. The drain header will be used for this trap pressure purge as described in steps 5.4.1 through 5.4.11. The pressure purge gas will be evacuated very slowly each time through the traps gas outlet valve. Monitor the stack and scrubber each time venting occurs. When the drain header and the #1 secondary cold trap is smoke-free, open the traps inlet and outlet valves with the system. (See Figure 6.)

```
* * * * * * * * * * * * * * * * * * * * * * * * *
*                    SYSTEM                       *
*                    STATUS                       *
*                                                 *
* All traps are desmoked, and are being           *
* evacuated to the HF scrubber.                   *
* * * * * * * * * * * * * * * * * * * * * * * * *
```

5.17 Statement of Objective:

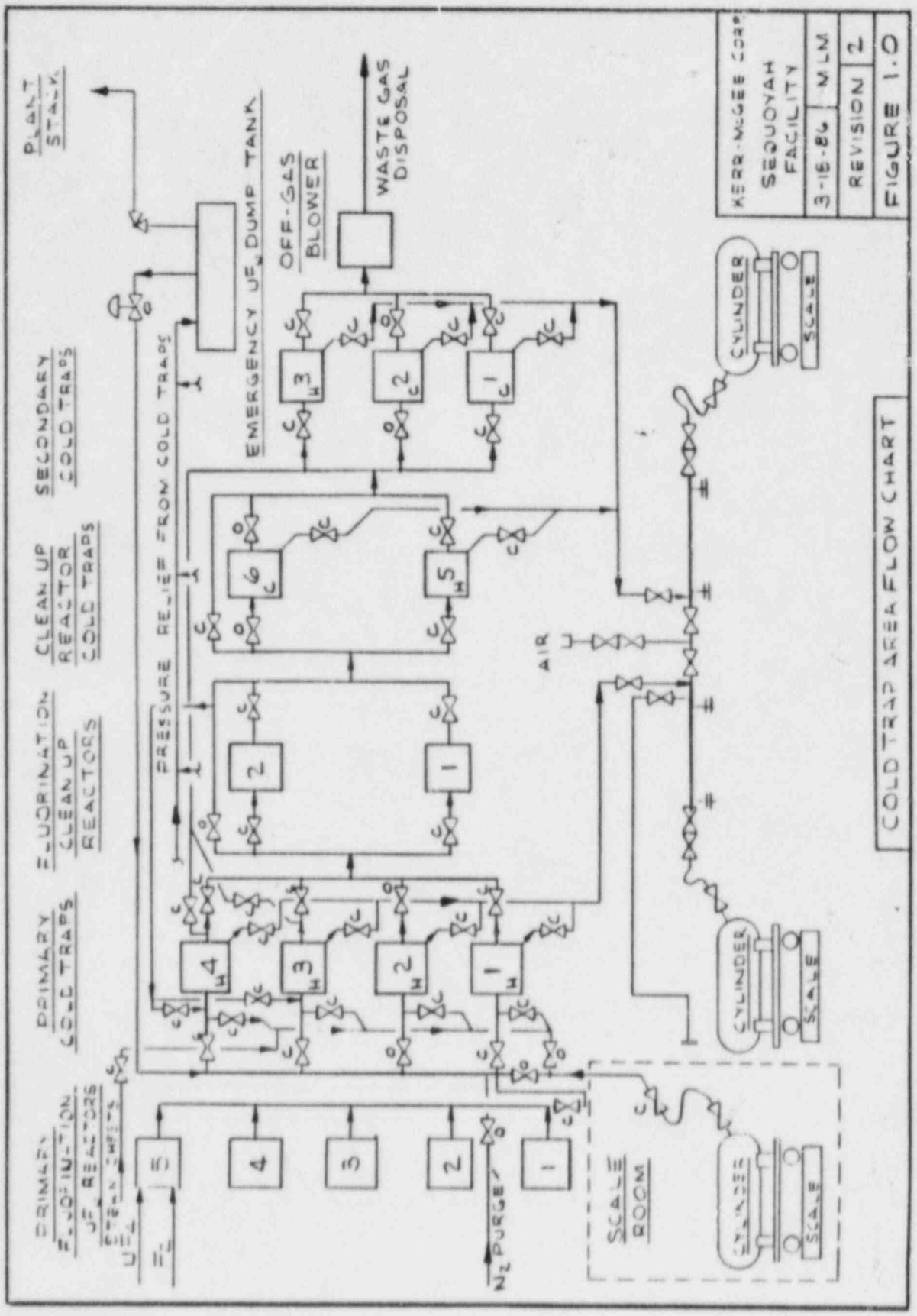
The cold traps must be cooled to ambient temperature and purged with N_2 to atmospheric pressure, before shutdown for maintenance.

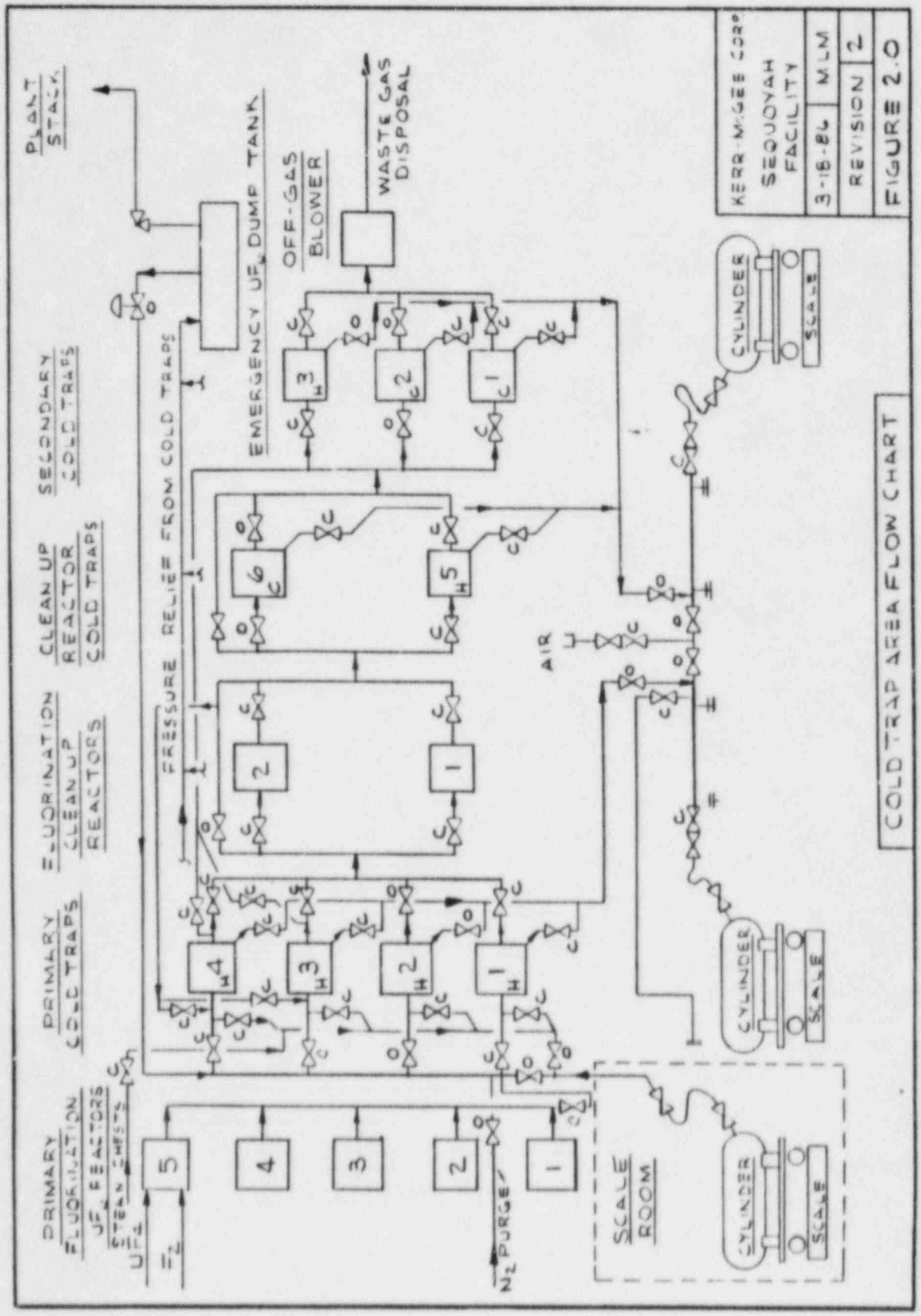
5.17.1 Cold Trap Cool Down - Put all traps on temper and allow them to cool down to ambient temperature. The N_2 purge through the system will be maintained through the cool down.

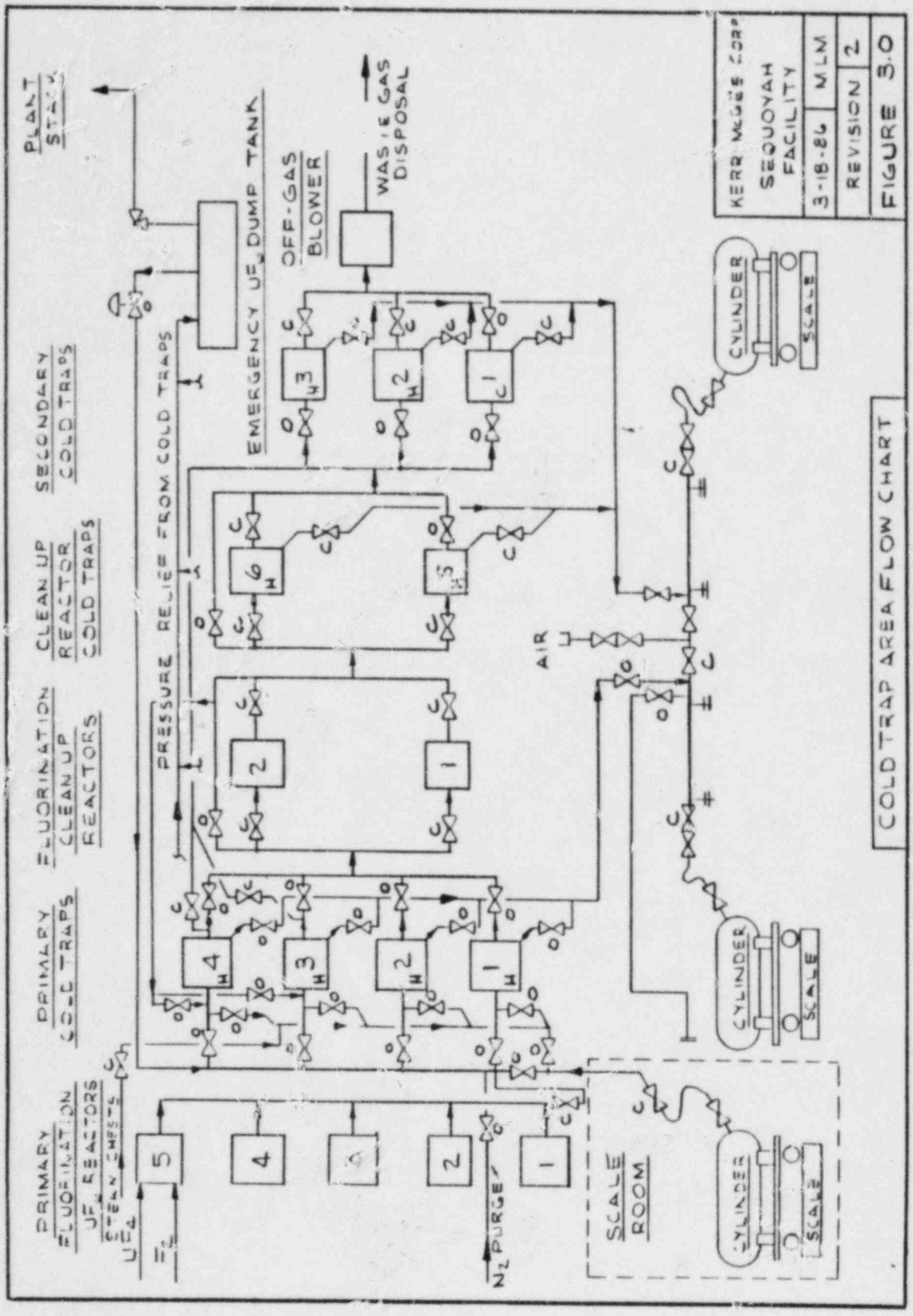
5.17.2 System Pressuring to Atmospheric Pressure with N_2

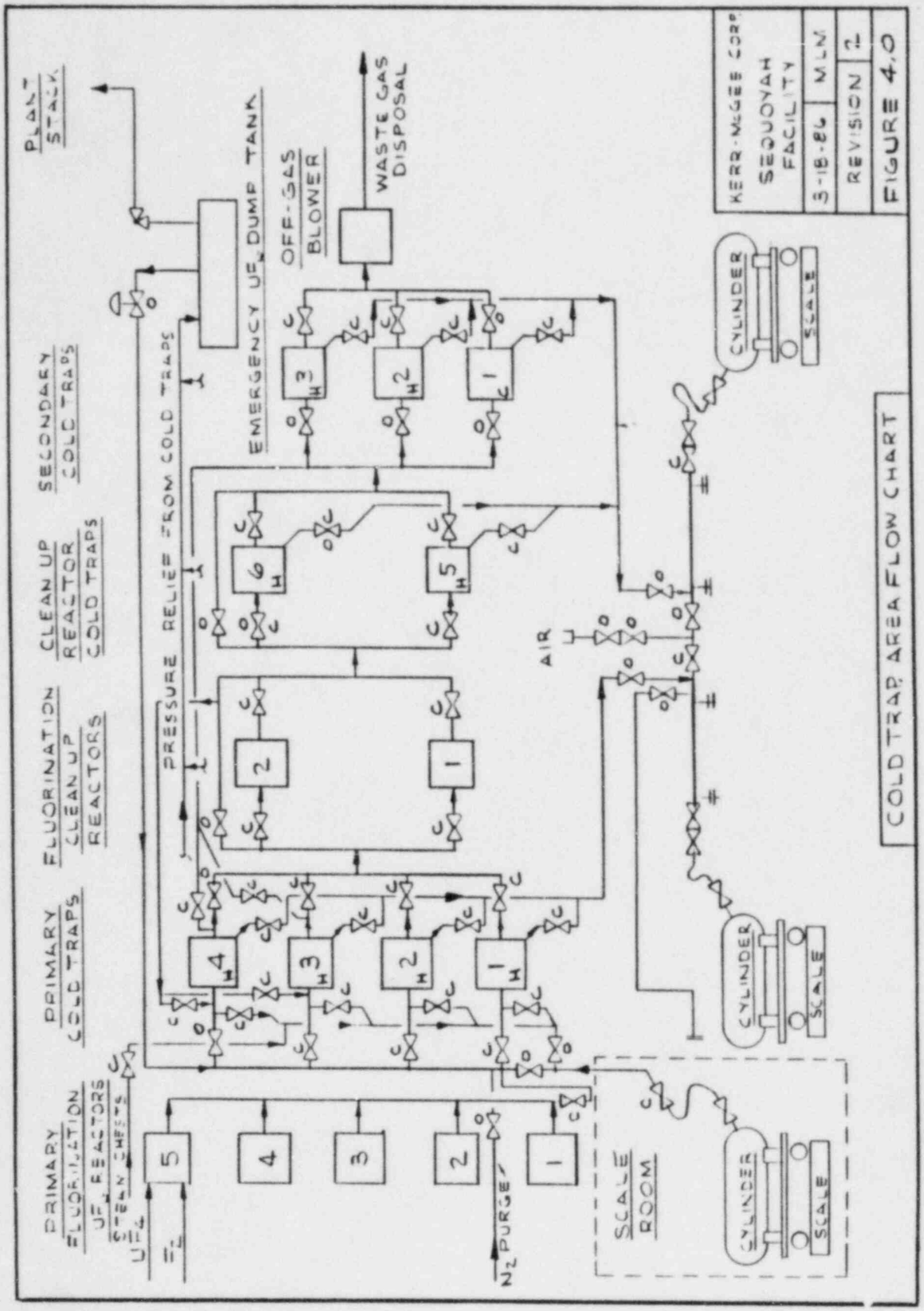
Open the off-gas blow recycle valve with the continuous N_2 purge in service. When the system pressure increases, shut down the off-gas blower and close its outlet valve. Allow the N_2 to pressure the system to 14.7 psia and then reopen the blower outlet valve.

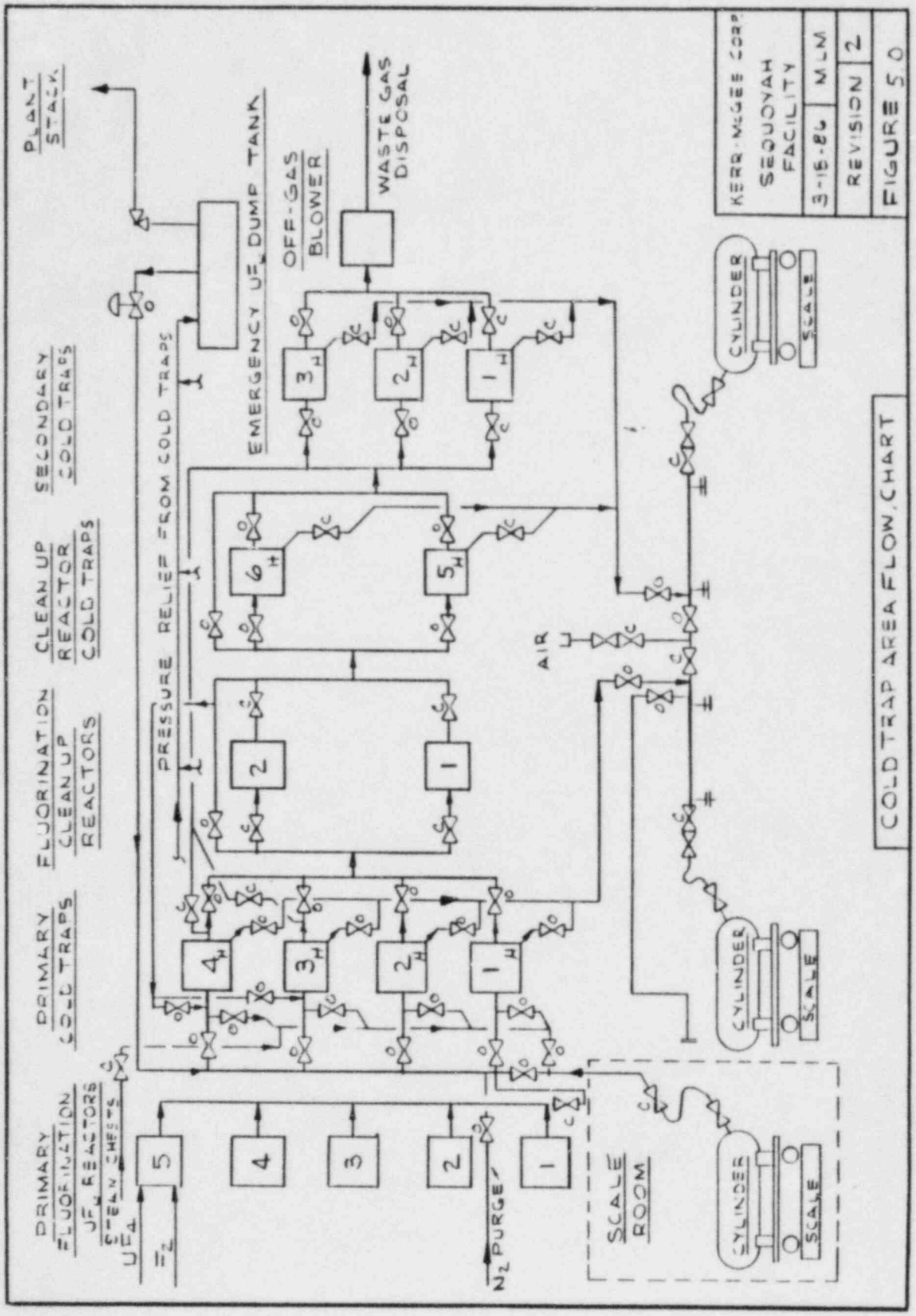
```
* * * * * * * * * * * * * * * * * * * * * * * * *
*                    SYSTEM                       *
*                    STATUS                       *
*                                                 *
* The system is ready for maintenance work.       *
* * * * * * * * * * * * * * * * * * * * * * * * *
```

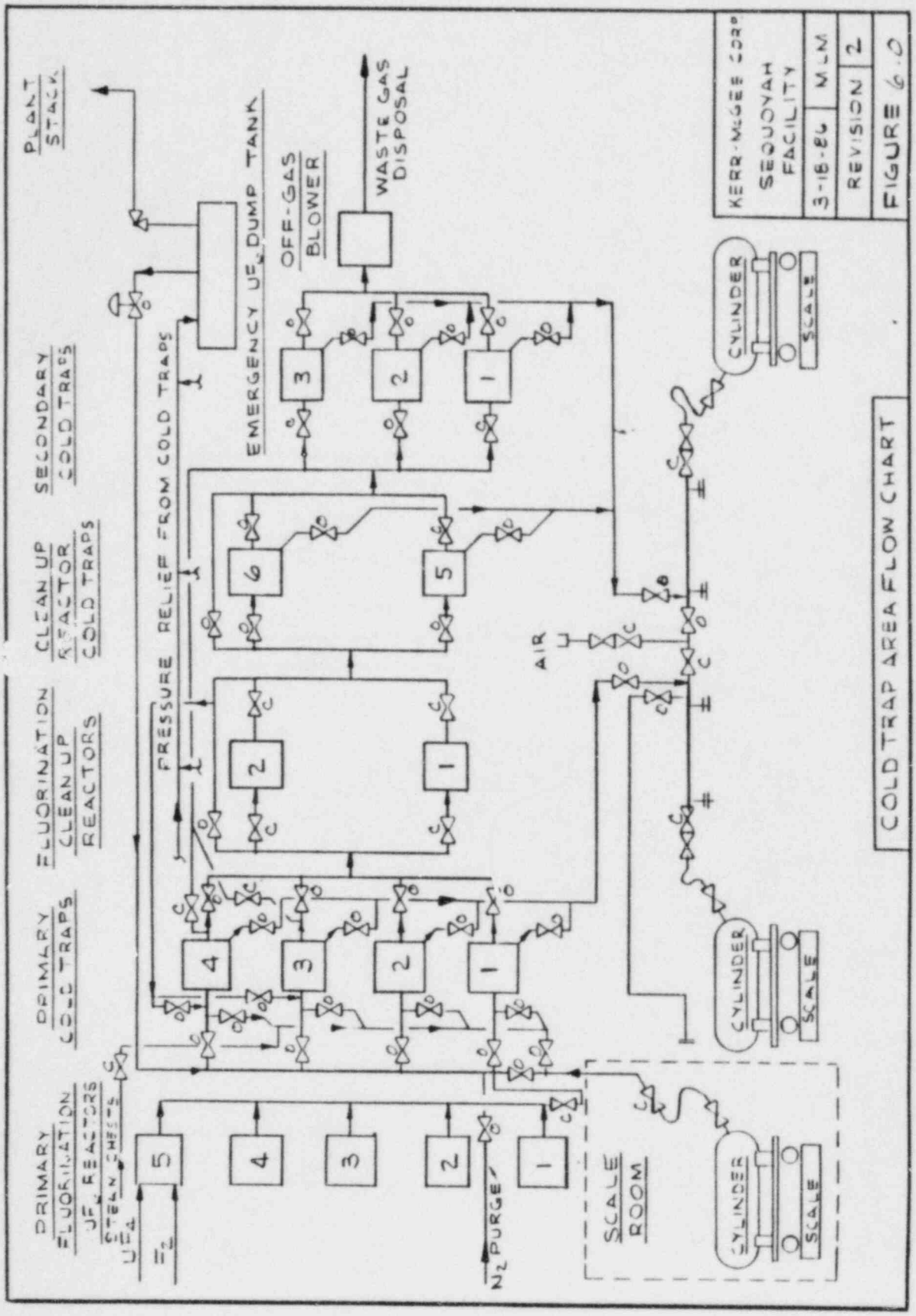

KERR-McGEE CORP.
SEQUOYAH FACILITY
3-16-86 MLM
REVISION 2
FIGURE 1.0
COLD TRAP AREA FLOW CHART
PLANT STACK
WASTE GAS DISPOSAL
OFF-GAS BLOWER
EMERGENCY UF6 DUMP TANK
PRESSURE RELIEF FROM COLD TRAPS
SECONDARY COLD TRAPS
CLEAN UP REACTOR COLD TRAPS
FLUORINATION CLEAN UP REACTORS
PRIMARY COLD TRAPS
PRIMARY FLUORINATION UF6 REACTORS
CYLINDER
SCALE
AIR
N2 PURGE
SCALE ROOM


KERR-McGEE CORP.
SEQUOYAH FACILITY
3-18-86 MLM
REVISION 2
FIGURE 2.0
COLD TRAP AREA FLOW CHART
PLANT STACK
OFF-GAS BLOWER
WASTE GAS DISPOSAL
EMERGENCY UF6 DUMP TANK
PRESSURE RELIEF FROM COLD TRAPS
SECONDARY COLD TRAPS
CLEAN UP REACTOR COLD TRAPS
FLUORINATION CLEAN UP REACTORS
PRIMARY COLD TRAPS
PRIMARY FLUORINATION UF6 REACTORS
STEAM CHESTS
UF6
F2
N2 PURGE
AIR
CYLINDER
SCALE
SCALE ROOM


KERR-MCGEE CORP
SEQUOYAH FACILITY
3-18-86 MLM
REVISION 2
FIGURE 3.0
COLD TRAP AREA FLOW CHART
PLANT STACK
EMERGENCY UF6 DUMP TANK
OFF-GAS BLOWER
WASTE GAS DISPOSAL
SECONDARY COLD TRAPS
CLEAN UP REACTOR COLD TRAPS
FLUORINATION CLEAN UP REACTORS
PRIMARY CO-C TRAPS
PRESSURE RELIEF FROM COLD TRAPS
PRIMARY FLUORINATION UF6 REACTORS
STEAM CHESTS
UF6
F2
N2 PURGE
AIR
CYLINDER
SCALE
SCALE ROOM


KERR-McGEE CORP.
SEQUOYAH FACILITY
3-18-86 MLN
REVISION 2
FIGURE 4.0
COLD TRAP AREA FLOW CHART
PLANT STACK
WASTE GAS DISPOSAL
OFF-GAS BLOWER
EMERGENCY UF6 DUMP TANK
PRESSURE RELIEF FROM COLD TRAPS
SECONDARY COLD TRAPS
CLEAN UP REACTOR COLD TRAPS
FLUORINATION CLEAN UP REACTORS
PRIMARY COLD TRAPS
PRIMARY FLUORINATION OF REACTORS
GREEN CHEESE
UF6
N2 PURGE
AIR
CYLINDER
SCALE
SCALE ROOM


COLD TRAP AREA FLOW CHART
FIGURE 5.0
REVISION 2
3-15-86 MLM
SEQUOYAH FACILITY
KERR-McGEE CORP
PLANT STACK
SECONDARY COLD TRAPS
CLEAN UP REACTOR COLD TRAPS
FLUORINATION CLEAN UP REACTORS
PRIMARY COLD TRAPS
PRIMARY FLUORINATION UF6 REACTORS
STEAM CHESTS
UF6
F2
N2 PURGE
EMERGENCY UF6 DUMP TANK
PRESSURE RELIEF FROM COLD TRAPS
OFF-GAS BLOWER
WASTE GAS DISPOSAL
AIR
CYLINDER
SCALE
SCALE ROOM


KERR-McGEE CORP.
SEQUOYAH FACILITY
3-16-86 MLM
REVISION 2
FIGURE 6.0
COLD TRAP AREA FLOW CHART
PLANT STACK
EMERGENCY UF6 DUMP TANK
OFF-GAS BLOWER
WASTE GAS DISPOSAL
SECONDARY COLD TRAPS
CLEAN UP REACTOR COLD TRAPS
FLUORINATION CLEAN UP REACTORS
PRIMARY COLD TRAPS
PRESSURE RELIEF FROM COLD TRAPS
PRIMARY FLUORINATION UF6 REACTORS
STEAM CHECKS
UF4
F2
N2 PURGE
AIR
CYLINDER
SCALE
SCALE ROOM

REVIEWED BY:

Area Superintendent _____ Date _____

Area Manager Larry A. Thrasher Date 4/16/86

Manager,
Maintenance N/A Date _____

Manager,
Operations J. C. Marler Date 4/16/86

Manager,
Conv. Engineering J. C. Marler Date 4/16/86

Manager,
Laboratory/QA N/A Date _____

Manager, Safety,
Industrial Hygiene
& Health Physics C. R. Mandaud Date 4/16/86

Manager,
Administration
& Services _____ Date _____

APPROVED BY:

Manager,
Sequoyah Facility W. L. Utrage Date 4-16-86

REVIEWED BY:

Area Superintendent _____ Date _____

Area Manager _____ Date _____

Manager,
Maintenance _____ Date _____

Manager,
Operations _____ Date _____

Manager,
Conv. Engineering _____ Date _____

Manager,
Laboratory/QA _____ Date _____

Manager, Safety,
Industrial Hygiene
& Health Physics _____ Date _____

Manager,
Administration
& Services _____ Date _____

APPROVED BY:

Manager,
Sequoyah Facility _____ Date _____