

FOR USE IN UNIT I ONLY

1004.15
Revision 1
04/14/82

IMPORTANT TO SAFETY
NON-ENVIRONMENTAL IMPACT RELATED

CONTROLLED COPY FOR
USE IN UNIT I ONLY

THREE MILE ISLAND NUCLEAR STATION UNIT NO. 1 EMERGENCY PLAN IMPLEMENTING PROCEDURE POST ACCIDENT IN-PLANT SAMPLING

Table of Effective Pages

Office of Nuclear Reactor Reg.

| <u>Page</u> | <u>Revision</u> | <u>Page</u> | <u>Revision</u> | <u>Page</u> | <u>Revision</u> | <u>Page</u> | <u>Revision</u> |
|-------------|-----------------|-------------|-----------------|-------------|-----------------|-------------|-----------------|
| 1.0 | 1 | | | | | | |
| 2.0 | 1 | | | | | | |
| 3.0 | 1 | | | | | | |
| 4.0 | 1 | | | | | | |
| 5.0 | 1 | | | | | | |
| 6.0 | 1 | | | | | | |

(PORC)

McAuliffe
Signature

4/13/82
Date

R. Toole
Signature

4-14-82
Date

Document ID: 0007W

8205060592 820429
PDR ADDCK 05000289
F PDR

FOR USE IN UNIT I ONLY

FOR USE IN UNIT 1 ONLY

1004.15
Revision 1

THREE MILE ISLAND NUCLEAR STATION UNIT NO. 1 EMERGENCY PLAN IMPLEMENTING PROCEDURE POST ACCIDENT IN-PLANT SAMPLING

1.0 PURPOSE

This procedure specifies the method of obtaining and analyzing primary coolant samples under accident conditions.

2.0 DISCUSSION

A requirement exists for timely analysis of primary coolant under emergency conditions without overexposure of personnel. Since radiation levels associated with sampling and analysis may be very high, special precautions are required. The Radiological Assessment Coordinator is responsible for implementing this procedure and to ensure that the sample is obtained without incurring a radiation exposure to any individual in excess of 3 REM to the whole body and 18 3/4 REM to the extremities.

3.0 REFERENCES

None

4.0 EQUIPMENT

- 4.1 Protective clothing
- 4.2 Self-contained breathing apparatus
- 4.3 Lead-glass shield
- 4.4 Remote handling tools
- 4.5 Leaded gloves
- 4.6 Source shield
- 4.7 Analytical equipment
- 4.8 Reagents
- 4.9 Glassware

FOR USE IN UNIT I ONLY

1004.15
Revision 1

4.10 Eberline Model 6112 Survey Meter (or equivalent)

4.11 Wheeled cart

4.12 Lead bricks

5.0 INSTRUCTION

5.1 Prerequisites

1. The Nuclear Service Closed Cooling System is in operation per OP 1104-11.
2. The Instrument Air System is in operation per OP 1104-25.
3. The 480 volt supplies 1A ESV and 1B ESV are energized.
4. The DC Engineered Safeguards buses A and B are energized.
5. The Reclaimed Water Portion of the Nuclear Chemical Addition System is operational per OP 1104-47.
6. The Aux. Bldg. Sump has adequate capacity to receive water from the sample sink.
7. Hood Ventilation System in operation.
8. The original sample container shall be pre-labelled to specify time of sample, date of sample, sample location, sample type and the individual obtaining the sample. Subsequent dilution sample containers shall be pre-labelled to include dilution factor and original sample data.

| | | | |
|---|----------------|--|---|
| : | <u>NOTE 1:</u> | All E S. Valves which are normally used in sampling | : |
| : | | have controls in the sample room as well as on the | : |
| : | | vertical E.S. panel. However, in order for a sample | : |
| : | | room control to operate, the corresponding switch on | : |
| : | | the E.S. panel must be in the "remote" position. | : |
| : | | Call the Control Room before and after sampling. | : |

FOR USE IN UNIT 1 ONLY

1004.15
Revision 1

: NOTE 2: Prior to sampling of R.C. Letdown or Pressurizer :
: ensure that CA-V-110 and CA-V-16 are closed. Close :
: the sample hood. :

: NOTE 3: When making adjustments to CA-V-110, no personnel :
: will stand near the drain funnel in which relief :
: valve CA-RV-5 discharges. :

: NOTE 4: The Shift Supervisor must be notified prior to :
: sampling. The RM-R6 recorder chart should be marked :
: accordingly. :

5.2 Precautions

5.2.1 Ensure that all required sampling equipment is available
before initiating sampling.

5.2.2 Three technicians will be equipped as follows before any
entrance to Sampling Room:

- a. Full protective clothing with double coveralls,
booties, hood, cotton gloves and surgeons gloves and
rainsuit.
- b. Self-contained breathing apparatus.
- c. Whole-body TLD, TLD finger ring for each hand, high
range (0-5R) self-reading dosimeter for whole body
and each wrist.

: NOTE: Should also use TLD wrist badge if available. :

FOR USE IN UNIT I ONLY

1004.15
Revision 1

- 5.2.3 Personnel performing sampling will leave Sample Room and notify their Supervisor immediately if it appears that their quarterly exposure limit might be exceeded.

: NOTE: Monitor self-reading dosimetry frequently. :

5.3 Procedure

: NOTE: Ensure that CA-V-13, CA-V-1, CA-V-2 and CA-V-3 are :
: closed. :

- 5.3.1 Technician 1 will proceed as follows:

5.3.1.1 Don leaded gloves.

5.3.1.2 Enter Sampling Room carrying Teletektor with probe extended and perform rapid survey of radiation levels.

: NOTE: Radiation levels are expected to be relatively low :
: until sampling begins. :

5.3.1.3 Ensure that leaded glass shield in place in front of hood.

5.3.1.4 Ensure that wheeled cart with sample shield is in place at hood.

5.3.1.5 Place polyethylene sample bottle into hood with remote handling tool locked on.

5.3.1.6 Open CA-V 35, CA-V-33, CA-V 34, CA-V-25A, CA-V-26B.

5.3.1.7 Close CA-V-26A, CA-V-25B, CA-V-26C, CA-V-25C, CA-V-110, CA-V 30, CA-V-31, CA-V-16.

5.3.1.8 Open CA-V-13, CA-V-2.

FOR USE IN UNIT I ONLY

1004.15
Revision 1

- 5.3.1.9 Slowly open CA-V-110 (flow restriction device) to obtain pressure of 40-60 PSIG on CA6 PI.

: CAUTION: Adjust CA-V-110 carefully since pressure of 125 PSIG :
: downstream will cause CA-RV-5 to lift. :

- 5.3.1.10 Return to step-off pad with Teletektor, check self-reading dosimeters and inform others of radiation levels encountered and exposure received.

: NOTE: Allow the sample to recirculate through the cooler :
: at least five minutes before proceeding. :

- 5.3.2 Technician 2 will proceed as follows:

- 5.3.2.1 Don leaded gloves.

- 5.3.2.2 Enter Sample Room with Teletektor extended and quickly check radiation levels.

- 5.3.2.3 Verify that temperature of 150° or less is indicated on CA4 TI.

- 5.3.2.4 Raise hood door, open CA-V-107 (demineralized water) and CA-V-16.

- 5.3.2.5 Lower hood to 100LFPM line.

: NOTE: Allow time to purge for approximately 15 seconds. :

: CAUTION: Check dosimeters while purging line. :

FOR USE IN UNIT 1 ONLY

1004.15
Revision 1

- 5.3.2.6 Obtain grab sample by placing bottle under drain line
(hold sample bottle with remote handling tool).

: CAUTION: Obtain only 20-30 ML. in sample bottle (1-2 inch :
: level in bottle). :

- 5.3.2.7 Raise hood door.
- 5.3.2.8 Close CA-V-16.
- 5.3.2.9 Move sample bottle to shield on cart leaving remote
handling tool attached.
- 5.3.2.10 Close hood.
- 5.3.2.11 Return to step-off pad with Teletektor, (checking radia-
tion levels), check self-reading dosimeters and notify
others of radiation levels.
- 5.3.3 Technician 3 will proceed as follows:
- 5.3.3.1 Enter Sampling Room CLOSE CA-V-13, CA-V-2, CA-V-110.
- 5.3.3.2 Move cart to HOT lab.
- 5.3.3.3 Move sample bottle from shield on cart to shielded area
of laboratory bench using remote tool.

: CAUTION: Return to step-off pad and check dosimetry. :

- 5.3.3.4 Obtain Teletektor and perform rapid survey of Hot Lab.