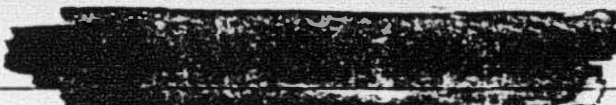


NRC
Shift



AP 1001

Three Mile Island Nuclear Station

SIDE 1

Figure 1001-8

Special Operating Procedure

SOP No. 3-33
(From SOP Log Index)

NOTE: Instructions and guidelines in AP 1001 must be followed when completing this form.

Unit No. I & II

Date 4/3/79

1. Title WATER Sump Discharges to Industrial Waste Treatment System

2. Purpose (include purpose of SOP) and IWS
Ensure IWTS Effluent meets Release Specifications

3. Attach procedure to this form written according to the following format.

A. Limitations and Precautions

- 1. Nuclear Safety
- 2. Environmental Safety
- 3. Personnel Safety
- 4. Equipment Protection

B. Prerequisites

C. Procedure

4. Generated by D.J. Bolts Date 4/3/79

5. Duration of SOP - Shall be no longer than 30 days from the effective date of the SOP or (a) or (b) below - whichever occurs first.

(a) SOP will be cancelled by incorporation into existing or new permanent procedure submitted by 1/1/79

(b) SOP is not valid after 1/1/79
(fill in circumstances which will result in SOP being cancelled)

5. (a) Is the procedure Nuclear Safety Related?
If "yes", complete Nuclear Safety Evaluation. (Side 2 of this Form) Yes No

(b) Does the procedure affect Environmental Protection?
If "yes", complete Environmental Evaluation. (Side 2 of this Form) Yes No

(c) Does the procedure affect radiation exposure to personnel? Yes No

NOTE: If all entries are "no", the change may be approved by the Shift Supervisor. If any questions are answered "yes", the change must be approved by the Station Superintendent/Unit Superintendent.

7. Review and Approval

NRC McBall Approved - Shift Supervisor D. J. Bolts 4-3-79 Date

AIARA T. D. ... Reviewed - List members of PORC contacted W. C. ... 4/3/79 Date

Baw St... 4-3-79 Date

D. J. Bolts Approved-Station Superintendent/Unit Superintendent D. J. Bolts 4/3/79 Date

8. SOP is Cancelled

Shift Supervisor/Shift Foreman 130 207 Date

"EVALUATION"

AP-1001

Three Mile Island Nuclear Station

SIDE 2

Figure 1001 - 8

Nuclear Safety/Environmental Impact Evaluation

SOP No. E-33

1. Title _____

2. Nuclear Safety Evaluation

Does this SOP:

- (a) increase the probability of occurrence or the consequences of an accident or malfunction of equipment important to safety? yes no
- (b) create the possibility for an accident or malfunction of a different type than any evaluated previously in the safety analysis report? yes no
- (c) reduce the margin of safety as defined in the basis for any technical specification? yes no

Details of Evaluation (Explain why answers to above questions are "no". Attach additional pages if required.)

Evaluation By _____ Date _____

3. Environmental Impact Evaluation

Does this SOP:

- (a) possibly involve a significant environmental impact? yes no
- (b) have a significant adverse effect on the environment? yes no
- (c) involve a significant environmental matter or question not previously reviewed and evaluated by the N.R.C. yes no

Details of Evaluation

Evaluation By _____ Date _____

*NOTE: If these questions are "yes", the change must receive N.R.C. approval.

4. Review (PORC review of evaluation is required only when requested by the Station Superintendent/Unit Superintendent. If this review is made, the PORC must consist of two off-site members.)

1. _____

2. _____

Off Site Members PORC Chairman Signature Date

5. Approval

_____ **130 210** _____

Station Superintendent/Unit Superintendent Date

1.0 Purpose

This SOP ensures that all station sump discharges to the Industrial Waste Treatment System are monitored and sampled to ensure that 10 CFR 20 MPC Values are not exceeded.

2.0 Limits and Precautions

- 2.1 The following Sump Pump Breakers will be maintained open unless associated sump levels dictate pump operation. Prior to breaker closure and subsequent transfer of liquid to IWT, a grab sample must be taken and an isotopic analysis performed to ensure 10 CFR 20 MPC Values are not exceeded. In addition, permission to close sump pump breakers must be obtained from the Unit Superintendent or Gary P. Miller. Caution Tags will be placed on each breaker referring to this SOP.

	<u>Sump</u>	<u>Sump Pump</u>	<u>Breaker Location</u>
Unit 1	Turbine Room Sump IWT	SD-P-3 SD-P-2A SD-P-2B	IDTPMCC Unit 1E ICTPMCC Unit 1C IDTPMCC Unit 1E
Unit 1	Auxiliary Boiler Blowdown Sump IWT	SD-P-10A SD-P-10B	Local at pump Local at pump
Unit 1	Powdex Sump IWT	SD-P-1A SD-P-1B	1ATPMCC Unit 4D 1BTPMCC Unit 4D
Unit 2	Turbine Bldg. Sump IWT	SD-P-1A SD-P-1B	2-31A Unit 3B 2-41A Unit 9C
Unit 2	Tendon Gallery Sump IWT	SD-P-13A SD-P-13B	2-37 Unit HG3 2-47 Unit JH2
Unit 2	Control & Service Bldg. Sump IWT	SD-P-9A SD-P-9B	2-37 Unit EG1 2-47 Unit GH2
Unit 2	Control Bldg. Area Sump IWT	SD-P-3A SD-P-3B	2-31C Unit 4E 2-41C Unit 5C
Unit 2	Diesel A Sump IWT	SD-P-10A SD-P-10B	2-11EC Unit JFB 2-11EC Unit JCB
Unit 2	Diesel B Sump IWT	SD-P-10C SD-P-10D	2-21EC Unit JFF 2-21EC Unit JFF
Unit 2	Pretreatment Sludge Collection Sump IWT	WT-P-16A WT-P-16B	2-41A Unit 5E 2-31A Unit 10E
Unit 1	Pretreatment Sump IWT	WT-P-24A WT-P-24B	Pretreatment MCC Unit 2C Pretreatment MCC Unit 2D

Note: Controls for Unit 1 Pretreatment Dual Gravity Filter Backward Flow, Skimmers, and Sludge Collectors are not included in this procedure since it could cause undue interruption of Pretreatment System operation. These discharges are monitored at the INTS Filtration System every two hours.

- 2.2 Immediately following sump pump-down open the associated breaker.
- 2.3 Grab Samples will be obtained every two hours at the Industrial Waste System complex and Isotopic Analysis performed to ensure release limits are not exceeded. Samples will be obtained at effluent sample points 104 and 107. Results will be kept in the Water Sample Log Book.

3.0 Prerequisites

- 3.1 One of the following sump levels is high and contents must be pumped to the INTS or IWFS.

Unit 1 to INTS

Turbine Room Sump
Auxiliary Boiler Blowdown Sump

Unit 1 to IWFS

Unit 1 Pretreatment Sump
Powdex Sump

Unit 2 to INTS

Turbine Building Sump
Tenden Gallery Sump
Control & Service Bldg. Sump
Control Bldg. Area Sump
Diesel A Sump
Diesel B Sump

Unit 2 to IWFS

Unit 2 Pretreatment Sludge Collection Sump

- 3.2 The sump to be pumped down has had an isotopic analysis performed on a sample of the contents and it is known not to contain concentrations of radionuclides in excess of 10 CFR 20 MPC limitations taking into account total plant effluent flow.
- 3.3 Sump analysis results will be maintained by the Shift Foreman in the Water Sample Log Book in Unit 1 Control Room.

4.0 Procedure

- 4.1 Ensure Shift Foreman has obtained results of sump contents Isotopic Analysis and sum of the ratios of radionuclides is less than 1.0 at the river. Use Sump Pump Discharge Flow Rate and Effluent Flow Rate to determine dilution factor.

- 4.2 Obtain permission from the Unit Superintendent or Gary P. Miller to close the respective sump pump breakers.
- 4.3 Close the sump pump breakers and allow the pumps to draw down the water level as low as possible.
- 4.4 Open the respective sump pump breakers.
- 4.5 Notify Control Room to log the time and approximate volume of the transfer on the ~~associated analysis sheet~~ Sump Pumping Data Sheet - Attachment 1
- 4.6 Report transfer information to SUMP COORDINATOR.
- 4.7 Attempt to identify and isolate the source and cause of all isotopic analysis high concentration indications.

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SUMP _____

IWTS } SUMP LEVEL BEFORE _____ TIME _____
IWFS } _____ DATE _____

SOURCE OF WATER TO SUMP

PERMISSION GRANTED TO PUMP _____
G. P. MILLER/STATION SUPT.

IWTS } SUMP LEVEL AFTER _____ TIME _____
IWFS } _____ DATE _____

NOTE: THIS DATA MUST GO TO THE SUMP COORDINATOR

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SUMP WATER SAMPLE ANALYSIS AND CALCULATIONS

Date	Time	I-131 (uCi/cc)	I-133 (uCi/cc)	Sta. Disch. 3 (cpm x 10 ³)	Sump Disch. (cpm)	DF	I-131 to river (uCi/cc)	I-133 to river (uCi/cc)	I-131 MPC	I-133 MPC	Final Fraction of MPC	System Disch. yes/no