

EPIP/TEP Instruction Memo

Date 10-20-00 Verif: CMB Box No. 20000604 T1 T2

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| TEP-ADM-1300.04 | 6 | PCR-00-1088 | | X | | 2 |

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Signature _____ Date _____

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A045

| | J. H | C. H |
|--|------|------|
| *Backup TSC,OSF-113 | --- | --- |
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| *EP Drills, Trng. Bldg. #2 | --- | --- |
| ESD, Trng. Bldg. | --- | --- |
| Environ. Affairs-Lab, Interstate Drive | --- | --- |
| Environ. Affairs-TMI, NOB-1 | --- | --- |
| *Instructor Nuclear IV, Trng. Bldg. #2 | --- | --- |
| Logistical Support, Trng. Bldg. | --- | --- |
| *NRC - Onsite, NOB-1 | --- | --- |
| *NRC - Region 1, (Chief EP Section) | --- | --- |
| *PEMA - Bureau of Plans | --- | --- |
| <u>Personnel/Vehicle Monitor Kit Trng Ctr.</u> | --- | --- |
| *Plant Maint. (Library), Serv. Bldg. | --- | --- |
| *Porter Consultants, Ardmore | --- | --- |
| <u>RLM, Rad Field Ops.</u> | --- | --- |
| <u>Rad Con -RAC Locker, Rad Field Ops.</u> | --- | --- |
| <u>Rad Con -Kit 1 PC, Rad Field Ops.</u> | --- | --- |
| <u>Rad Con -Kit 2 PC, Rad Field Ops.</u> | --- | --- |
| <u>Rad Con -Kit 3 Env, Rad Field Ops.</u> | --- | --- |
| <u>Rad Con-Kit 4 EOF Bldg Rad Field Ops.</u> | --- | --- |
| <u>Rad Con-Kit 5 EOF Bldg Rad Field Ops.</u> | --- | --- |
| <u>Rad Con-Simulator Locker, Rad Field Ops</u> | --- | --- |
| *Rad Engineers-U1, OOB | --- | --- |
| *Rad Instrument, Bldg. 159 | --- | --- |
| <u>Radwaste/Chemistry, OOB-1</u> | --- | --- |
| <u>Secondary Chem Lab., OOB-1</u> | --- | --- |
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| *Training Dept., Trng | --- | --- |
| *OSC, Rad Field Ops. | --- | --- |
| *Unit 1 Operations, OOB-1 | --- | --- |
| *Vice President - TMI, OSF-2 | --- | --- |
| *Word Processing, OOB, No Stamp/Clip | --- | --- |
| RECORDS MGMT | --- | --- |
| J. Houck | --- | --- |
| M. Vyeniolo | --- | --- |
| L. Ritter | --- | --- |
| L. Ritter | --- | --- |
| L. Ritter | --- | --- |
| D. Fetterhoff | --- | --- |
| S. Epler | --- | --- |
| R. DeSantis | --- | --- |
| S. Burkett | --- | --- |
| D. College | --- | --- |
| N. D. Brown | --- | --- |
| D. Light | --- | --- |
| R. Finicle | --- | --- |
| N. D. Brown | --- | --- |
| R. Finicle | --- | --- |
| D. Russ | --- | --- |
| W. Ressler | --- | --- |
| R. Neff | --- | --- |
| R. Finicle | --- | --- |
| P. Sauder | --- | --- |
| <i>N. McLanern</i> | --- | --- |
| D. Fleck | --- | --- |
| T. Berstler | --- | --- |
| N. Smith | --- | --- |
| S. Porter | --- | --- |
| T. Berstler | --- | --- |
| M. Wherry | --- | --- |
| J. L. Eckroth | --- | --- |
| L. Ritter | --- | --- |
| L. Ritter | --- | --- |
| V. Handley | --- | --- |
| R. Goodrich | --- | --- |
| D. Silar | --- | --- |
| D. Silar | --- | --- |
| D. Silar | --- | --- |
| J. Houck | --- | --- |
| C. Flory | --- | --- |
| T. Berstler | --- | --- |
| L. Ritter | --- | --- |
| P. J. Chevalier | --- | --- |
| A. Houseal | --- | --- |
| S. Zimmerman | --- | --- |

FOR INFORMATION ONLY

AmerGen

TMI - Unit 1
Emergency Procedure

Number

EPIP-TMI-.01

Title

Revision No.

Emergency Classification and Basis

7

Applicability/Scope

USAGE LEVEL

Effective Date

TMI Division

2

OCT 20 2000

This document is within QA plan scope
Safety Reviews Required

| | | | |
|-------------------------------------|-----|--------------------------|----|
| <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |

List of Effective Pages

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| 3 | 7 | 23 | 7 | 43 | 7 | 63 | 7 |
| 4 | 7 | 24 | 7 | 44 | 7 | 64 | 7 |
| 5 | 7 | 25 | 7 | 45 | 7 | 65 | 7 |
| 6 | 7 | 26 | 7 | 46 | 7 | 66 | 7 |
| 7 | 7 | 27 | 7 | 47 | 7 | 67 | 7 |
| 8 | 7 | 28 | 7 | 48 | 7 | 68 | 7 |
| 9 | 7 | 29 | 7 | 49 | 7 | 69 | 7 |
| 10 | 7 | 30 | 7 | 50 | 7 | 70 | 7 |
| 11 | 7 | 31 | 7 | 51 | 7 | 71 | 7 |
| 12 | 7 | 32 | 7 | 52 | 7 | 72 | 7 |
| 13 | 7 | 33 | 7 | 53 | 7 | 73 | 7 |
| 14 | 7 | 34 | 7 | 54 | 7 | 74 | 7 |
| 15 | 7 | 35 | 7 | 55 | 7 | 75 | 7 |
| 16 | 7 | 36 | 7 | 56 | 7 | 76 | 7 |
| 17 | 7 | 37 | 7 | 57 | 7 | 77 | 7 |
| 18 | 7 | 38 | 7 | 58 | 7 | 78 | 7 |
| 19 | 7 | 39 | 7 | 59 | 7 | 79 | 7 |
| 20 | 7 | 40 | 7 | 60 | 7 | 80 | 7 |

| | Signature | Date |
|-----------------|---|---------|
| Originator | N. Brown  | 9-25-00 |
| Procedure Owner | /s/ N. Brown | 9/11/00 |
| PRG | /s/ E. R. Frederick for J. S. Schork | 9/13/00 |
| Approver | /s/ N. Brown | 9/20/00 |

FOR INFORMATION ONLY

| | | |
|---|-------------------------------------|------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
| Emergency Classification and Basis | Revision No. 7 | |

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| Emergency Classification and Basis | | |

1.0 **PURPOSE**

This procedure provides guidance for the Emergency Director for determination of emergency classification based on given initiating emergency conditions (emergency action levels). The emergency action levels stated in this procedure are TMI specific and consistent with federal guidance.

2.0 **APPLICABILITY/SCOPE**

This procedure applies to all Emergency Plan Implementations at TMI.

3.0 **DEFINITIONS**

- Effluent Monitor - An on-line instrument monitoring radiological conditions of a designed pathway to the environment (e.g., station ventilation exhaust).
- Emergency Action - Those measures or steps taken to ensure that an emergency situation is assessed (assessment actions) and that the proper corrective and/or protective actions are taken.
- Emergency Action Levels (EAL's) - Predetermined conditions or values, including radiological dose, specific contamination levels of airborne or waterborne concentrations of radioactive materials; events such as material disasters or fire; or specific instrument indications which, when met or exceeded, require the implementation of the Emergency Plan.
- Imminent - This is when the loss condition will occur in an hour or less. Additionally it is when equipment needed to prevent the loss is not available and it is unknown when the equipment will be available. It is also applicable if necessary equipment is not expected to be returned before the loss condition occurs.
- Loss - The conditions exist that have resulted in the failure of a protective barrier.
- Plant Conditions
 - Cold Shutdown - The plant is in the Cold Shutdown (CSD) Condition when the reactor is subcritical by at least one percent delta k/k and Tavg is no more than 200°F. Additionally the reactor coolant system pressure allowed is defined by Technical Specification 3.1.2.

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Plant Conditions (cont'd)

- | | | |
|-----------------------|---|---|
| Containment Integrity | - | <p>The requirements for Containment Integrity are as follows:</p> <ol style="list-style-type: none"> a. Must meet the requirements of the Technical Specification definition 1.7. b. Containment integrity requirements (per Technical Specification 3.6) must be met whenever all 3 of the following conditions exist: <ul style="list-style-type: none"> • RCS pressure \geq 300 psig • RCS temperature \geq 200°F • Nuclear fuel is in the core c. Other integrity conditions are listed in T.S. 3.6.2. |
| Heatup/Cooldown | - | <p>The plant is in the Heatup/Cooldown (HU/CD) condition when the reactor coolant temperature is greater than 200°F and less than 525°F.</p> |
| Hot Shutdown | - | <p>The plant is in the Hot Shutdown (HSD) condition when the reactor is subcritical by at least one percent delta k/k and Tavg is at or greater than 525°F.</p> |
| Hot Standby | - | <p>The plant is in the Hot Standby (HStby) condition when all of the following conditions exist:</p> <ol style="list-style-type: none"> a. Tavg is greater than 525°F b. The reactor is critical c. Indicated neutron power on the power range channels is less than two percent of rated power. |
| Power Operation | - | <p>The plant is in the Power Operation (PwrOps) condition when the indicated neutron power is two percent of rated power, or greater, as indicated on the power range channels.</p> |
| Refueling Shutdown | - | <p>The plant is in the Refueling Shutdown (RSD) condition when, even with all of the control rods removed, the reactor would be subcritical by at least one percent delta k/k and the reactor coolant temperature at the decay heat removal pump suction is no more than 140°F. Additionally, the allowable reactor coolant system pressure is defined by Technical Specification 3.1.2. One purpose of a refueling shutdown is to replace or rearrange all or a portion of the fuel assemblies including the control rods.</p> |
| Startup | - | <p>The plant shall be considered to be in the Startup (SU) mode when the shutdown margin is reduced with the intent of going critical.</p> |
| Potential Loss | - | <p>The conditions exist that have the possibility to result in the failure of a protective barrier.</p> |

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- Sabotage - Sabotage is defined as "The intentional and willful (e.g., eyewitness report or threat followed up with tangible evidence, investigation, etc.) act or attempt to cause an interruption of normal operations of the facility through the unauthorized use of, tampering with or destruction of machinery, components, or controls of the facility". Vandalism is also included in this category.
- Unplanned - An event occurring that was NOT projected or considered (i.e., something NOT EXPECTED) in the procedure or plan for operation.
- Valid (or Confirmed) - An indication that is conclusively justified from alternate or supportive (backup) indicators, (e.g., other meters, manual calculations, etc.) such that all doubt related to the indicators operability is removed, including prior knowledge related to the indicator.

4.0 RESPONSIBILITIES

The Emergency Director is responsible for implementing this procedure.

5.0 PROCEDURE

- 5.1 Upon recognition of an abnormal (unplanned, valid) condition, use the Emergency Action Level (EAL) Index to compare existing plant conditions to the general areas stated in the index, then refer to the referenced exhibit for the specific Emergency Action Levels.

NOTE

The detailed EAL specifications and bases provided in Exhibits 1 through 8 should be used for formal event classification activities. EAL matrices at the beginning of each exhibit provide abbreviated action level descriptions intended to facilitate general evaluation and consideration of event escalation.

- 5.1.1 Declare the highest classification of emergency (i.e., General Emergency [G], Site Area Emergency [S], Alert [A], Unusual Event [U]) for which an emergency action level has been met or exceeded, as determined by using the EAL index, EAL matrix and specific EAL and Basis.
 - 5.1.1.1 Always refer to Exhibit 8 (JUDGEMENT) to determine if an emergency declaration is warranted based on Shift Manager/Emergency Director (SM/ED) judgement. The purpose of this action is to insure that the highest level of emergency is declared based on uncertain or ambiguous conditions.
- 5.1.2 Implement EPIP-TMI-02, Emergency Direction, following determination that an emergency action level (specific or judgement) has been met or exceeded.
- 5.2 Review Administrative Procedure AP 1044, Incident Reporting Procedure and AP 1097, Corrective Action Process to ensure that applicable reporting requirements are being met.
- 5.3 Ensure that the appropriate plant procedures are being implemented.

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***** EMERGENCY ACTION LEVEL (EAL) INDEX *****

| | | |
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| | 1.2 Radioactive Material Control | |
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| | 1.4 Spent Fuel Pool | |
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EXHIBIT 1

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1.0 RADIOLOGICAL CONTROLS

| GENERAL EMERGENCY | SITE AREA EMERGENCY | ALERT | UNUSUAL EVENT | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|--|---------------|-----------|--------|--------|----------|----------|------|----------|----------|-------|----------|----------|--|--|-----------|--------|--------|----------|----------|------|----------|----------|-------|----------|----------|
| <p>G1.1 (Airborne Effluent) EFFLUENT RADIOLOGICAL DOSE exceeds PAG limits as indicated by:</p> <p>1) Dose Assessment information is not available for ≥ 15 minutes and any of the following RMS indications exist:</p> <p>RM-G-25 Off Scale high RM-A-8GH $\geq 1 \text{ E}+05$ CPM RM-A-9GH $\geq 6 \text{ E}+05$ CPM RM-A-14 $\geq 4 \text{ E}+02$ $\mu\text{Ci/cc}$</p> <p>OR</p> <p>2) Field Monitoring Team results indicate an integrated dose of ≥ 1000 mRem total Whole Body (TEDE) OR ≥ 5000 mRem Child Thyroid organ dose (CDE)</p> <p>OR</p> <p>3) VALID dose projection for the SAB or beyond of ≥ 1000 mRem total Whole Body dose (TEDE) OR > 5000 mRem child thyroid organ dose (CDE)</p> <p>APPLICABILITY: All Plant Conditions (BASIS, Page 10)</p> | <p>S1.1 (Airborne Effluent) HIGH RADIOLOGICAL DOSES at the SAB as indicated by:</p> <p>1) Dose Assessment information is not available for ≥ 15 minutes and any of the following RMS indications exist:</p> <p>RM-G-25 $\geq 3 \text{ E}+05$ mR/hr RM-A-8GH $\geq 1 \text{ E}+04$ CPM RM-A-9GH $\geq 6 \text{ E}+04$ CPM RM-A-14 $\geq 4 \text{ E}+01$ $\mu\text{Ci/cc}$</p> <p>OR</p> <p>2) Field Monitoring Team results indicate an integrated dose of ≥ 100 mRem but < 1000 mRem total Whole Body (TEDE) OR ≥ 500 mRem but < 5000 mRem Child Thyroid organ dose (CDE)</p> <p>OR</p> <p>3) VALID dose projection for the SAB or beyond of ≥ 100 mRem but < 1000 mRem total Whole Body dose (TEDE) OR ≥ 500 mRem but < 5000 mRem Child Thyroid organ dose (CDE)</p> <p>APPLICABILITY: All Plant Conditions (BASIS, Page 11)</p> | <p>A1.1 (Airborne Effluent) RADIOLOGICAL EFFLUENT LIMITS significantly exceeded (200X Tech Specs) as indicated by:</p> <p>1) The RELEASE HAS or WILL exceed 15 minutes.</p> <p>AND</p> <p>2a) Any of the following VALID RMS indications:</p> <p>RM-G-25 $\geq 2 \text{ E}+04$ mR/hr RM-A-8GH $\geq 8 \text{ E}+02$ CPM RM-A-9GH $\geq 4 \text{ E}+03$ CPM RM-A-14 $\geq 3 \text{ E}+00$ $\mu\text{Ci/cc}$</p> <p>OR</p> <p>2b) Sample results equal or exceed the following values ($\mu\text{Ci/cc}$):</p> <table border="0"> <tr> <td></td> <td>Noble Gas</td> <td>Iodine</td> </tr> <tr> <td>Offgas</td> <td>1.5 E+03</td> <td>8.4 E-02</td> </tr> <tr> <td>Vent</td> <td>9.1 E+00</td> <td>5.0 E-04</td> </tr> <tr> <td>Purge</td> <td>2.0 E+01</td> <td>1.0 E-03</td> </tr> </table> <p>OR</p> <p>2c) The Dose Assessment system calculates a dose rate of: ≥ 10 mRem/hr but < 100 mRem/hr Whole Body (TEDE) OR ≥ 30 mRem/hr but < 500 mRem/hr Child Thyroid (CDE)</p> <p>APPLICABILITY: All Plant Conditions (BASIS, Page 12)</p> | | Noble Gas | Iodine | Offgas | 1.5 E+03 | 8.4 E-02 | Vent | 9.1 E+00 | 5.0 E-04 | Purge | 2.0 E+01 | 1.0 E-03 | <p>U1.1 (Airborne Effluent) RADIOLOGICAL EFFLUENT LIMITS being exceeded (2X Tech Specs) as indicated by:</p> <p>1) The RELEASE HAS or WILL exceed 60 minutes.</p> <p>AND</p> <p>2a) Any of the following VALID RMS indications:</p> <p>RM-G-25 $\geq 2 \text{ E}+02$ mR/hr RM-A-8G $\geq 2 \text{ E}+05$ CPM RM-A-9G $\geq 6 \text{ E}+05$ CPM RM-A-14 $\geq 3 \text{ E}-02$ $\mu\text{Ci/cc}$</p> <p>OR</p> <p>2b) Sample results equal or exceed the following values ($\mu\text{Ci/cc}$):</p> <table border="0"> <tr> <td></td> <td>Noble Gas</td> <td>Iodine</td> </tr> <tr> <td>Offgas</td> <td>1.5 E+01</td> <td>8.4 E-04</td> </tr> <tr> <td>Vent</td> <td>9.1 E-02</td> <td>5.0 E-06</td> </tr> <tr> <td>Purge</td> <td>2.0 E-01</td> <td>1.0 E-05</td> </tr> </table> <p>OR</p> <p>2c) The Dose Assessment system calculates a dose rate of: ≥ 0.1 mRem/hr but < 10 mRem/hr Whole Body (TEDE) OR ≥ 0.3 mRem/hr but < 30 mRem/hr Child Thyroid (CDE)</p> <p>APPLICABILITY: All Plant Conditions (BASIS, Page 13)</p> | | Noble Gas | Iodine | Offgas | 1.5 E+01 | 8.4 E-04 | Vent | 9.1 E-02 | 5.0 E-06 | Purge | 2.0 E-01 | 1.0 E-05 |
| | Noble Gas | Iodine | | | | | | | | | | | | | | | | | | | | | | | | | |
| Offgas | 1.5 E+03 | 8.4 E-02 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vent | 9.1 E+00 | 5.0 E-04 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Purge | 2.0 E+01 | 1.0 E-03 | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Noble Gas | Iodine | | | | | | | | | | | | | | | | | | | | | | | | | |
| Offgas | 1.5 E+01 | 8.4 E-04 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Vent | 9.1 E-02 | 5.0 E-06 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Purge | 2.0 E-01 | 1.0 E-05 | | | | | | | | | | | | | | | | | | | | | | | | | |

EXHIBIT 1

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| GENERAL EMERGENCY | SITE AREA EMERGENCY | ALERT | UNUSUAL EVENT |
|-------------------|---------------------|---|---|
| | | <p>A1.2 (In Plant) VALID UNEXPECTED RADIATION LEVELS impede Safe Operation/Cold Shutdown As indicated by:</p> <p>1) > 15 mR/hr on RM-G-1 (Control Room) OR 2) Select in plant area radiation monitors read > 1000 mR/hr</p> <p>APPLICABILITY: All Plant Conditions (BASIS: Page 14)</p> | <p>U1.2 (In Plant) VALID UNEXPECTED IN PLANT AREA RADIATION MONITOR (RM-G) readings of ≥ 500 mR/hr.</p> <p>APPLICABILITY: All Plant Conditions (BASIS: Page 15)</p> |
| | | <p>A1.3 (Liquid Effluents) RADIOLOGICAL EFFLUENT LIMITS significantly exceeded (200X Tech Spec) as indicated by ANY of the following indications for ≥ 15 minutes:</p> <p>1) RM-L-7 $\geq 1 \text{ E}+05$ CPM OR 2) RM-L-12 Off Scale High OR 3) Sample results of $\geq 2\text{E}-03 \mu\text{Ci/cc}$</p> <p>APPLICABILITY: All Plant Conditions (BASIS: Page 16)</p> | <p>U1.3 (Liquid Effluent) RADIOLOGICAL EFFLUENT LIMITS being exceeded (2X Tech Spec) as indicated by ANY of the following indications for ≥ 60 minutes:</p> <p>1) RM-L-7 $\geq 1 \text{ E}+03$ CPM OR 2) RM-L-12 $\geq 1 \text{ E}+05$ CPM OR 3) Sample results of $\geq 2\text{E}-05 \mu\text{Ci/cc}$</p> <p>APPLICABILITY: All Plant Conditions (BASIS: Page 17)</p> |
| | | <p>A1.4 (Spent Fuel Pool)</p> <p>1) Report that the irradiated fuel in the Spent Fuel Pool is uncovered OR 2) Decreasing level in the Spent Fuel Pool and RM-G-9 ≥ 1000 mR/hr OR 3) Report of damage to irradiated fuel AND Either of the following VALID RMS indications: RM-A-4G $\geq 8.0 \text{ E} + 05$ CPM or RM-A-14 $\geq 2.0 \text{ E} - 02 \mu\text{Ci/cc}$</p> <p>APPLICABILITY: All Plant Conditions (BASIS: Page 18)</p> | <p>U1.4 (Spent Fuel Pool) Low Spent Fuel Pool Level alarm with uncontrolled leakage.</p> <p>APPLICABILITY: All Plant Conditions (BASIS: Page 19)</p> |

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| GENERAL EMERGENCY | SITE AREA EMERGENCY | ALERT | UNUSUAL EVENT |
|-------------------|---------------------|---|--|
| | | <p>A1.5 (Reactor Cavity)</p> <ol style="list-style-type: none"> 1) Report that the irradiated fuel in the Fuel Transfer Canal is uncovered. <p>OR</p> <ol style="list-style-type: none"> 2) Decreasing water level in the Fuel transfer Canal and either of the following VALID RMS indications: RM-G-6 > 1000 mR/hr or RM-G-7 > 1000 mR/hr <p>OR</p> <ol style="list-style-type: none"> 3) Report of damage to the irradiated fuel. AND Either of the following VALID RMS indications: RM-A-9G > 1.0 E + 05 CPM or RM-A-2G > 8.0 E + 05 CPM <p>APPLICABILITY: CSD, RSD (BASIS: Page 20)</p> | <p>U1.5 (Reactor Cavity) Low Fuel Transfer Canal Level alarm with uncontrolled leakage</p> <p>APPLICABILITY: CSD, RSD (BASIS: Page 21)</p> |
| | | | <p>U1.6 (Fuel Clad Degradation) RCS activity exceeds one of the following:</p> <ol style="list-style-type: none"> 1) UNPLANNED VALID Alert Alarm on either: <ol style="list-style-type: none"> a) RM-L-1 low or b) RM-L-1 high <p>OR</p> <ol style="list-style-type: none"> 2) Power Operations radiochemistry analysis indicates any of the following: <ol style="list-style-type: none"> a) Activity > 100/ \bar{E} μCi/gm or b) DEI-131 > 0.35 μCi/gm for > 48 hours. or c) DEI-131 > 60 μCi/gm <p>OR</p> <ol style="list-style-type: none"> 3) Hot Standby radiochemistry analysis indicates any of the following: <ol style="list-style-type: none"> a) Activity > 100/ \bar{E} μCi/gm or b) DEI-131 > 0.35 μCi/gm for > 48 hours. or c) DEI-131 > 275 μCi/gm <p>OR</p> <ol style="list-style-type: none"> 4) All other plant conditions radiochemistry analysis indicated DEI-131 > 275 μCi/gm <p>APPLICABILITY: All Plant Conditions (BASIS: Page 22)</p> |

| | | |
|---|-------------------------------------|-------------------------------|
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EXHIBIT 1

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G1.1 (Airborne Effluent) (GENERAL EMERGENCY)

EFFLUENT RADIOLOGICAL DOSES at the Site Area Boundary as indicated by the following:

- 1) Dose Assessment information is NOT available for ≥ 15 minutes and ANY of the following RMS indications exist:

| | |
|----------|---|
| RM-G-25 | Off Scale High |
| RM-A-8GH | $\geq 1.0 \text{ E}+05 \text{ CPM}$ |
| RM-A-9GH | $\geq 6.0 \text{ E}+05 \text{ CPM}$ |
| RM-A-14 | $\geq 4.0 \text{ E}+02 \text{ } \mu\text{Ci/cc}$ (When ESF ventilation is required) |

OR

- 2) Field Monitoring Team results indicate an integrated dose of $\geq 1000 \text{ mRem}$ total Whole Body dose (TEDE)

OR

$\geq 5000 \text{ mRem}$ Child Thyroid organ dose (CDE)

OR

- 3) VALID dose projection for the Site Area Boundary (SAB) or beyond of $\geq 1000 \text{ mRem}$ total Whole Body dose (TEDE)

OR

$\geq 5000 \text{ mRem}$ Child Thyroid organ dose (CDE)

(1 OR 2 OR 3)

APPLICABILITY: All Plant Conditions

BASIS:

- TMI has "REAL TIME" dose assessment capability.
- The dose assessment code accesses current plant data to automatically perform a dose assessment every five (5) minutes. This code also generates MIDAS plume plots for the RAC to evaluate the radiological consequences of an event.
- The Emergency Procedures and alarm response procedures direct the Operations personnel to have the GRCS (Group Rad Con Supervisor) evaluate abnormal and unexpected radiological indications.
- The Radiation Monitoring System indications are in accordance with calculation RAF 6612-96-030.
- This EAL satisfies NESP-007 Site Area Emergency AG1.

| | | |
|---|-------------------------------------|-------------------------------|
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EXHIBIT 1

S1.1 (Airborne Effluent) (SITE AREA EMERGENCY)

HIGH RADIOLOGICAL DOSES at the Site Area Boundary as indicated by the following:

- 1) Dose Assessment information is NOT available for ≥ 15 minutes and ANY of the following RMS indications exist:

- | | |
|----------|---|
| RM-G-25 | $\geq 3.0 \text{ E}+05 \text{ mR/hr}$ |
| RM-A-8GH | $\geq 1.0 \text{ E}+04 \text{ CPM}$ |
| RM-A-9GH | $\geq 6.0 \text{ E}+04 \text{ CPM}$ |
| RM-A-14 | $\geq 4.0 \text{ E}+01 \text{ } \mu\text{Ci/cc}$ (When ESF ventilation is required) |

OR

- 2) Field Monitoring Team results indicate an integrated dose of $\geq 100 \text{ mRem}$ but $< 1000 \text{ mRem}$ total Whole Body dose (TEDE)

OR

$\geq 500 \text{ mRem}$ but $< 5000 \text{ mRem}$ Child Thyroid organ dose (CDE)

OR

- 3) VALID dose projection for the Site Area Boundary (SAB) or beyond of $\geq 100 \text{ mRem}$ but $< 1000 \text{ mRem}$ total Whole Body dose (TEDE)

OR

$\geq 500 \text{ mRem}$ but $< 5000 \text{ mRem}$ Child Thyroid organ dose (CDE)

(1 OR 2 OR 3)

APPLICABILITY: All Plant Conditions

BASIS:

- TMI has "REAL TIME" dose assessment capability.
- The dose assessment code accesses current plant data to automatically perform a dose assessment every five (5) minutes. This code also generates MIDAS plume plots for the RAC to evaluate the radiological consequences of an event.
- The Emergency Procedures and alarm response procedures direct the Operations personnel to have the GRCS (Group Rad Con Supervisor) evaluate abnormal and unexpected radiological indications.
- The Radiation Monitoring System indications are in accordance with calculation RAF 6612-96-030.
- This EAL satisfies NESP-007 Site Area Emergency AS1.

| | | |
|--|-------------------------------------|-------------------------------|
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EXHIBIT 1

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A1.1 (Airborne Effluent) (ALERT)
RADIOLOGICAL EFFLUENT LIMITS (200X TECH SPECS) being exceeded, as indicated by the following:

1) The RELEASE HAS or WILL exceed 15 minutes.

AND

2a) Any one of the following VALID effluent Radiation Monitoring System indications are present:

| | | |
|------------------|----------|--|
| Condenser Offgas | RM-G-25 | ≥ 2.0 E+04 mR/hr |
| Station Vent | RM-A-8GH | ≥ 8.0 E+02 CPM |
| RB Purge | RM-A-9GH | ≥ 4.0 E+03 CPM |
| ESF Vent | RM-A-14 | ≥ 3.0 E+00 μCi/cc (When ESF ventilation is required) |
| OR | | |

2b) Sample results for any of the following effluent pathways equal or exceed the values listed:

| | TOTAL Noble Gas Concentrations | TOTAL Iodine Concentrations |
|------------------|-----------------------------------|--------------------------------|
| Condenser Offgas | 1.5 E+03 μCi/cc | 8.4 E-02 μCi/cc |
| Station Vent | 9.1 E+00 μCi/cc | 5.0 E-04 μCi/cc |
| RB Purge | 2.0 E+01 μCi/cc | 1.0 E-03 μCi/cc |
| OR | | |

2c) The Dose Assessment system calculates one of the following dose rates:

≥ 10 mRem/hour but < 100 mRem/hour whole body (TEDE)

OR

≥ 30 mRem/hour but < 500 mRem/hour child thyroid dose (CDE)

(1 **AND** 2a, OR 1 **AND** 2b, OR 1 **AND** 2c)

APPLICABILITY: All Plant Conditions

BASIS:

- The Emergency Director SHALL declare the event as soon as it is determined that the release duration HAS or WILL LIKELY exceed fifteen minutes, with the indications that the Technical Specification limits have been exceeded by a factor of 200 (two hundred times higher than the amount specified in TS).
- Calculation RAF 6612-96-030 contains the basis for the RMS indications for two hundred times Technical Specification values in accordance with 6610-PLN-4200.01.
- The sample results are based on the assumptions in OP 1101-2.1, RMS Setpoint.
- The Continuous On Line Assessment (COLA) system calculates an Integrated DOSE and assumes a DEFAULT 8 hour release duration. The dose rate can be determined from COLA by dividing the Integrated DOSE by the release duration.
- This EAL satisfies NESP-007 Alert AA.1.

| | |
|---|------------------------------|
| | Number EPIP-TMI-01 |
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EXHIBIT 1

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U1.1 (Airborne Effluent) (UNUSUAL EVENT)
RADIOLOGICAL EFFLUENT LIMITS (2X Tech Specs) being exceeded as indicated by the following:

1) The RELEASE HAS or WILL exceed 60 minutes.

AND

2a) Any one of the following VALID effluent Radiation Monitoring System indications are present:

| | | |
|------------------|---------|--|
| Condenser Offgas | RM-G-25 | ≥ 2.0 E+02 mR/hr |
| Station Vent | RM-A-8G | ≥ 2.0 E+05 CPM |
| RB Purge | RM-A-9G | ≥ 6.0 E+05 CPM |
| ESF Vent | RM-A-14 | ≥ 3.0 E-02 μCi/cc (When ESF ventilation is required) |
| OR | | |

2b) Sample results for any of the following effluent pathways exceed the values listed:

| | TOTAL Noble Gas Concentrations | TOTAL Iodine Concentrations |
|------------------|-----------------------------------|--------------------------------|
| Condenser Offgas | 1.5 E+01 μCi/cc | 8.4 E-04 μCi/cc |
| Station Vent | 9.1 E-02 μCi/cc | 5.0 E-06 μCi/cc |
| RB Purge | 2.0 E-01 μCi/cc | 1.0 E-05 μCi/cc |
| OR | | |

2c) The Dose Assessment system calculates one of the following dose rates:

≥ 0.1 mRem/hour but < 10 mRem/hour whole body (TEDE)

OR

≥ 0.3 mRem/hour but < 30 mRem/hour child thyroid dose (CDE)

(1 AND 2a, OR 1 AND 2b, OR 1 AND 2c)

APPLICABILITY: All Plant Conditions

BASIS:

- The Emergency Director SHALL declare the event as soon as it is determined that the release duration HAS or WILL LIKELY exceed sixty minutes, with the indications that the Technical Specification limits have been exceeded by a factor of 2 (twice the amount specified in TS).
- Calculation RAF 6612-96-030 contains the basis for the RMS indications for two times Technical Specification values in accordance with 6610-PLN-4200.01.
- The sample results are based on the assumptions in OP 1101-2.1, RMS Setpoint.
- The Continuous On Line Assessment (COLA) system calculates an Integrated DOSE and assumes a DEFAULT 8 hour release duration. The dose rate can be determined from COLA by dividing the Integrated DOSE by the release duration.
- This EAL satisfies NESP-007 Unusual Event AU1.

| | | |
|---|-------------------------------------|------------------------------|
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EXHIBIT 1

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A1.2 (In Plant) (ALERT)

VALID UNEXPECTED RADIATION LEVELS impede Safe Operation or Reaching and Maintaining Cold Shutdown as indicated by the following:

- 1) Greater than 15 mR/hour on RM-G-1 (Control Room)
- OR**
- 2) Select in-plant area radiation monitors (listed in Basis, below) indicating greater than 1000 mR/hour

(1 OR 2)

APPLICABILITY: All Plant Conditions

BASIS:

The EAL address increased radiation levels that may impede safe operation or safe shutdown.

- This is not intended to address planned temporary conditions such as fuel transfer, or radiography for example.
- This EAL addresses increased radiation levels that limit effective safe operation of the plant or limit the transition to and maintenance of Cold Shutdown conditions.
- This is a degraded condition and warrants event declaration with additional support to assist in achieving safe conditions without severely impairing the health and safety of the public.
- The first part of this EAL addresses the Control Room, an area of continuous occupancy required for normal safe operation and safe shutdown.
- The second part of this EAL addresses areas outside of the Control Room.
SELECT AREA RADIATION MONITORS
RM-G-2 (Radio Chem Lab), RM-G-3 (Primary Sampling Room), RM-G-4 (Hot Tool Room Area), RM-G-10 (Aux Bldg entrance 305'), RM-G-11 (Aux Bldg near Waste Tank 305'), RM-G-12 (Aux Bldg 305', outside Solidification Valve alley), RM-G-13 (Aux Bldg entrance 281'), RM-G-14 (Aux Bldg near Waste Tank 281'), and RM-G-15 (Aux Bldg Ht Exchanger Vault 271')
- Unexpected radiation levels of this magnitude represent a serious degradation in the control of radioactive material and degradation in the level of safety of the plant.
- The basis for the 1000 mR/hr criteria is that such areas would require locked high radiation controls by Technical Specifications. These controls will slow down personnel response to these areas.
- This EAL satisfies NESP-007 Alert AA3.

| | | |
|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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EXHIBIT 1

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U1.2 (In Plant) (UNUSUAL EVENT)

VALID UNEXPECTED IN-PLANT AREA RADIATION MONITOR (Any in-plant RM-G monitors) readings of ≥ 500 mR/hr.

APPLICABILITY: All Plant Conditions

BASIS:

- Normal levels are the highest reading in the past 24 hours, excluding the current peak, which typically range as high as .5 mR/hr.
- This value of 500 mR/hr identifies that an abnormal condition exists (this is an approximate increase by a factor of 1000 over normal readings, background).
- Unexpected radiation levels of this magnitude represent a degradation in the control of radioactive material and potential degradation in the level of safety of the plant.
- This EAL does not include the Control Room. (Refer to EAL A1.2 for Control Room habitability.)
- This EAL satisfies NESP-007 Unusual Event AU2.

| | | |
|---|-------------------------------------|------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
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EXHIBIT 1

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A1.3 (Liquid Effluent) (ALERT)

RADIOLOGICAL EFFLUENT LIMITS being EXCEEDED (200X TECH SPECS) with ANY of the following indications:

- 1) RM-L-7 $\geq 1 \text{ E}+05$ CPM for ≥ 15 minutes
- OR**
- 2) RM-L-12 Off Scale High for ≥ 15 minutes
- OR**
- 3) Sample results (Cesium and Iodine) indicate $\geq 2 \text{ E}-03 \mu\text{Ci/cc}$

(1 **OR** 2 **OR** 3)

APPLICABILITY: All Plant Conditions

BASIS:

- This is based on exceeding, by 200 times the Technical Specification limit for a 15 minute release.
- This is meant to satisfy, in part, NESP-007 Alert, AA.1.

| | | |
|---|-------------------------------------|------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
| Emergency Classification and Basis | Revision No. 7 | |

EXHIBIT 1

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U1.3 (Liquid Effluent) (UNUSUAL EVENT)

RADIOLOGICAL EFFLUENT LIMITS being EXCEEDED (2X TECH SPEC) as indicated by ANY of the following:

- 1) VALID RM-L-7 indication of $\geq 1 \text{ E}+03$ CPM for greater than or equal to 60 minutes
- OR**
- 2) VALID RM-L-12 indication of $\geq 1 \text{ E}+05$ CPM for greater than or equal to 60 minutes
- OR**
- 3) Sample results (Cesium and Iodine) indicate $\geq 2 \text{ E}-05$ $\mu\text{Ci/cc}$

(1 **OR** 2 **OR** 3)

APPLICABILITY: All Plant Conditions

BASIS:

- This is based on exceeding, by two (2) times, the applicable limits for liquid effluent.
- This is meant to satisfy, in part, NESP-007 Unusual Event AU.1.

| | | |
|---|-------------------------------------|------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
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EXHIBIT 1

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A1.4 (Spent Fuel Pool) (ALERT)

- 1) Report that the irradiated fuel in the Spent Fuel Pool is uncovered
OR
- 2) Decreasing level in the Spent Fuel Pool and RM-G-9 ≥ 1000 mR/hr
OR
- 3) Report of damage to irradiated fuel
 AND
 Either of the following VALID RMS indications:
 RM-A-4G $\geq 8.0 \text{ E}+05$ CPM
 or
 RM-A-14 $\geq 2.0 \text{ E}-02$ $\mu\text{Ci/cc}$

(1 **OR** 2 **OR** 3)

APPLICABILITY: All Plant Conditions

BASIS:

- The report that fuel is uncovered is sufficient for event declaration because of the potential damage to the fuel and subsequent lack of control of radioactive material.
- Calculation RAF 6612-96-022 provides guidance for radiation monitor response to uncovering of irradiated fuel.
- Potential for increased doses to plant personnel due to damage or uncovering of irradiated fuel.
- This EAL satisfies part of NESP-007 Alert AA.2.

| | | |
|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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EXHIBIT 1

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U1.4 (Spent Fuel Pool) (UNUSUAL EVENT)

Low Level alarm on the Spent Fuel Pool due to uncontrolled Spent Fuel Pool leakage, as determined by the Shift Manager.

APPLICABILITY: All Plant Conditions

BASIS:

- Early indication of a problem with cooling the Spent Fuel and potential for increased doses to the plant staff.
- Uncontrolled is when the leakage exceeds or is expected to exceed the makeup and collection capability.
- Event classification is warranted as a precursor to a more serious event.
- This EAL satisfies part of NESP-007 Unusual Event AU.2.

| | | |
|---|-------------------------------------|------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
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EXHIBIT 1

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A1.5 (Reactor Cavity) (ALERT)

- 1) Report that the irradiated fuel in the Fuel Transfer Canal is uncovered
- OR**
- 2) Decreasing water level in the Fuel Transfer Canal and either of the following VALID RMS indications:
RM-G-6 ≥ 1000 mR/hr
or
RM-G-7 ≥ 1000 mR/hr
- OR**
- 3) Report of damage to irradiated fuel
AND
Either of the following VALID RMS indications:
RM-A-9G ≥ 1.0 E +05 CPM
or
RM-A-2G ≥ 8.0 E +05 CPM

(1 **OR** 2 **OR** 3)

APPLICABILITY: Cold Shut Down, Refueling Shut Down

BASIS:

- Potential for increased doses to plant personnel due to damage or unrecovering of irradiated fuel.
- The EAL is intended to identify problems in the Fuel Transfer Canal with the handling of irradiated fuel, such that, it may become uncovered or damaged.
- The EAL satisfies part of NESP-007 Alert AA.2.

| | | |
|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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EXHIBIT 1

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U1.5 (Reactor Cavity) (UNUSUAL EVENT)

- 1) Low Fuel Transfer Canal Level alarm with uncontrolled leakage.

APPLICABILITY: Cold Shut Down, Refueling Shut Down

BASIS:

- Indication of a problem with cooling the fuel in the Reactor Vessel and potential for increased doses to the plant staff.
- Level alarm is only energized when the Transfer canal is filled. Alarm is PLB-4-9.
- Uncontrolled is when the leakage exceeds or is expected to exceed the makeup and collection capability.
- Event classification is warranted as a precursor to a more serious event.
- The EAL satisfies part of NESP-007 Unusual Event AU.2.

| | | |
|---|-------------------------------------|-------------------------------|
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U1.6 (Fuel Clad Degradation) (UNUSUAL EVENT)

Reactor Coolant activity exceeds one of the following:

1) UNPLANNED VALID Alert Alarm on either:

- a) RM-L-1 low
or
- b) RM-L-1 high

OR

2) Power Operations radiochemistry analysis indicates any of the following:

- a) Activity > $100/\bar{E}$ $\mu\text{Ci/gm}$
or
- b) Dose Equivalent Iodine (DEI) 131, > 0.35 $\mu\text{Ci/gm}$ for > 48 hours
or
- c) Dose Equivalent Iodine (DEI) 131, > 60 $\mu\text{Ci/gm}$

OR

3) Hot Standby radiochemistry analysis indicates any of the following:

- a) Activity > $100/\bar{E}$ $\mu\text{Ci/gm}$
or
- b) Dose Equivalent Iodine (DEI) 131, > 0.35 $\mu\text{Ci/gm}$ for > 48 hours
or
- c) Dose Equivalent Iodine (DEI) 131, > 275 $\mu\text{Ci/gm}$

OR

4) All other plant conditions (Hot Shutdown, Heat Up/Cool Down, Cold Shutdown, Refueling Shutdown) radiochemistry analysis indicates Dose Equivalent Iodine (DEI) 131, > 275 $\mu\text{Ci/gm}$

(1 OR 2 OR 3 OR 4)

APPLICABILITY: All Plant Conditions

BASIS:

- The stated conditions are indications of potential degradation in the level of safety of the plant and potential precursor of more serious problems.
- The Letdown monitor (RM-L-1) low and high range monitor being in alarm are possible indications that the activity of the Reactor Coolant System is in excess of the Technical Specification limits as stated in TS 3.1.4.
- UNPLANNED is added to preclude event declaration when an activity that causes a crud burst is implemented. Results from the radiochemistry analysis required by EP 1202-12 should be carefully examined to verify that the increased activity was a result of the planned crud burst and not an unplanned fuel clad degradation.
- This EAL satisfies NESP-007 Unusual Event, SU4.

EXHIBIT 2

EPIP-TMI-.01
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2.0 FISSION PRODUCT BARRIERS

METHOD TO DETERMINE EMERGENCY LEVEL: EVALUATE EACH BARRIER FOR POTENTIAL LOSS/LOSS. RECORD POINTS BELOW FOR MOST SEVERE CONDITION FOR EACH BARRIER. IF LOSS CRITERIA IS MET FOR A BARRIER IT IS NOT AUTOMATICALLY RECOVERABLE, AN EVALUATION IS REQUIRED BEFORE CHANGING THE BARRIER STATUS. ENTER A ZERO IF THRESHOLD CONDITIONS ARE NOT MET. ADD POINTS FOR TOTAL AND DECLARE EVENT.

| G2.1 GENERAL EMERGENCY (Points 11-13) | S2.1 SITE AREA EMERGENCY (Points 7-10) | A2.1 ALERT (Points 4-6) | U2.1 UNUSUAL EVENT (Points 1-3) |
|--|---|---|--|
| LOSS of ANY TWO BARRIERS AND POTENTIAL LOSS of THIRD BARRIER | LOSS of BOTH FUEL CLAD and RCS or POTENTIAL LOSS of BOTH FUEL CLAD and RCS or POTENTIAL LOSS OF EITHER FUEL CLAD or RCS and LOSS of ANY OTHER BARRIER | LOSS or POTENTIAL LOSS of EITHER FUEL CLAD or RCS NOTE: The reference basis document (NESP-007) does not address the status of containment, however, potential loss of containment is considered and included in the ALERT evaluation. | LOSS or POTENTIAL LOSS of CONTAINMENT <hr/> U2.2 (RCS/Total OTSG Leakage) SPECIAL CASE Any of the following: 1) Unidentified RCS or Pressure Boundary leakage \geq 10 gpm OR 2) Total OTSG leakage \geq 10 gpm to the condenser OR 3) Identified RCS leakage \geq 25 gpm Applicability: All Plant Conditions (Basis Page 25) |

| CONDITIONS | RCS (BASIS on Page 26) | | FUEL CLAD (BASIS on Page 27) | | CONTAINMENT (RB) (BASIS on Page 28) | |
|--------------------------|---|---|------------------------------|-------------------------------------|---|---|
| | POTENTIAL LOSS (4 Points) | LOSS (5 Points) | POTENTIAL LOSS (4 Points) | LOSS (5 Points) | POTENTIAL LOSS (1 Point) | LOSS (3 Points) |
| RB RAD | | 1) RM-G-22 OR RM-G-23 ≥ 22 R/hr | | 1) RM-G-22 OR RM-G-23 ≥ ALERT ALARM | 1) RM-G-22 or RM-G-23 ≥ 12000 R/hr | |
| INCORE TEMPERATURE | | 2) < 25°SCM | 1) >25° Super Heat | 2) T _{clad} ≥ 1400°F | 2) T _{clad} ≥ 1800°F | |
| RCS ACTIVITY | | | | 3) ≥ 2500 μCi/CC | | |
| RCS INTEGRITY | 1) Cycling PORV OR RCS Code Safety Valves 2) Exceeds pressure/temperature limits of TS HU/CD Curve | 3) Stuck open PORV OR RCS Code Safety Valve OR HPI-PORV Cooling | | | | |
| PRIMARY LEAKAGE | 3) VALID High flow (D-3-1) or calculated leakrate ≥ 160gpm | | | | | |
| PRI/SEC LEAKAGE | 4) VALID High flow (D-3-1) or calculated leakrate ≥ 160gpm | | | | | 1) Total OTSG leak > 1 gpm TS to atmosphere |
| CONTAINMENT CONDITIONS | | | | | 3.1) RB Press. ≥ 50 psig OR 3.2) RB Hydrogen concentration ≥ 4% OR 3.3) RB pressure ≥ 30 psig and RB Emergency Cooling is less than assumed in the FSAR | 2.1) RB Press ≥ 100 psig OR 2.2) RB Isolation fails resulting in a release pathway OR 2.3) Rapid unexplained loss of RB pressure following an initial pressure increase OR 2.4) RB pressure or sump level response not consistent with LOCA conditions. |
| RADIATION LEVEL READINGS | | | | 4) LETDOWN LINE > 15 R/hr | | 3) RM-A-8GH ≥ 200 cpm (Gas High Range) |

RCS POINTS + FUEL CLAD POINTS + CONTAINMENT POINTS = TOTAL POINTS (refer below for event level)

| NOTE | |
|-------------|-----------------------|
| Point Total | Event Classification |
| 1 or 3 | = Unusual Event |
| 4, 5, 6 | = Alert |
| 7, 8, 9, 10 | = Site Area Emergency |
| 11, 12, 13 | = General Emergency |

| | | |
|---|-------------------------------------|-------------------------------|
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EXHIBIT 2

U2.2 (RCS/OTSG Leakage) (UNUSUAL EVENT)
SPECIAL CASE, DOES NOT MEET BARRIER CRITERIA

RCS / Total OTSG leakage as indicated by any of the following:

- 1) Unidentified RCS or Pressure Boundary leakage is ≥ 10 gpm
- OR**
- 2) Total OTSG leakage ≥ 10 gpm to the condenser
- OR**
- 3) RCS identified leakage is ≥ 25 gpm

(1 **OR** 2 **OR** 3)

APPLICABILITY: All Plant Conditions

BASIS:

The EAL is a precursor for more serious conditions and potential degradation of the level of safety of the plant.

- The 10 gpm value for unidentified and pressure boundary leakage was selected because it is an observable amount on normal Control Room indications. The value is above that typically requiring time consuming tests, such as mass balance, to determine the leak magnitude.
- The 25 gpm value for identified leakage is set higher because if the leak location and magnitude are known, there is less significance than unknown leakage. Typically this leakage is recoverable or has been evaluated as safe in accordance with Technical Specifications.
- The numbers used are greater than those allowed by Technical Specifications and these are the ones that have the potential for causing a degradation in the level of safety of the plant.
- The Fission Product Barrier EALs provide guidance on escalation of this event.
- "RCS" includes any interfacing system - i.e., MU, DHR.
- This EAL satisfies NESP-007 EAL SU5.

| | | |
|---|-------------------------------------|-------------------------------|
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EXHIBIT 2

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BARRIER status.

RCS

Potential Loss of RCS Fission Product Barrier

- 1) Cycling (2 or more times) the PORV or RCS Code Safety Valves

BASIS:

Rather than depend on instrumentation to determine the potential loss of this barrier the over pressure protection is monitored. The safety valves open between 2450 psig and 2510 psig (Allowance for set pressure and Code Safety valve accumulation). This is at the limit of design of the RCS but well within tested values (2750 psig) verifying integrity.

Pressure transients that cause multiple cycles (>2) increases the probability of failure.

- 2) Exceed the pressure and temperature limits of the Technical Specification Heat Up or Cool Down curve

BASIS:

This curve (Figure 3.1-1) represents the RT_{NDT} Limits to prevent brittle fracture of the vessel. Specific analysis would be required if violated therefore it is conservative to assume the RCS boundary is potentially lost.

- 3) RCS leakage: VALID High Make Up Flow alarm (D-3-1) or calculated leak rate of ≥ 160 gpm.

BASIS:

The 160 gpm is based upon the makeup capability of a single Make Up Pump, which is normally running.

Additionally, even with elevated pressure, the normal makeup line bypass (MU-V-217) does not have to be used.

- 4) Total OTSG leakage: VALID High Make Up Flow alarm (D-3-1) or calculated leak rate of ≥ 160 gpm and the loss of RCS inventory is into the OTSG.

BASIS:

The 160 gpm is based upon the makeup capability of a single Make Up Pump, which is normally running.

Additionally, even with elevated pressure, the normal makeup line bypass (MU-V-217) does not have to be used.

Loss of RCS Fission Product Barrier

- 1) **RM-G-22 OR RM-G-23 $\geq 22R/hr$**

BASIS:

- Calculation RAF 6612-96-023 documents RM-G-22/23 readings under LOCA conditions with Tech Spec RCS activity.
- This should be considered a loss of RCS.

- 2) **< 25° SCM (Subcooled Margin)**

BASIS:

While there is effective heat removal to protect the Fuel Cladding, this is indicative of a loss in the RCS barrier.

- 3) **Stuck open PORV OR RCS Code Safety Valve OR HPI-PORV Cooling**

BASIS:

The PORV to be included must be stuck open and its isolation valve stuck in the open position (PORV cannot be isolated) or being used in the HPI-PORV Cooling mode. One or both of the Code Safety Valves is assumed to be open. Unisolable flow through either the PORV or a Code Safety Valve places a hole in the RCS and therefore the barrier is lost.

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BARRIER status.

FUEL CLAD

Potential Loss of Fuel Clad Fission Product Barrier

- 1) > 25° Superheat

BASIS:

The RCS may be sub-cooled or at saturated conditions and still be effective in removing heat from the core. The case of 25° superheat addresses the concern of inadvertent declaration based on instrument error. Valid indication of superheat places the cladding in a potential loss condition because the amount of heat removal from the core can be less than expected allowing further heatup and actual cladding failure.

Loss of Fuel Clad Fission Product Barrier

NOTE

Loss of this barrier is NOT RECOVERABLE.

- 1) RM-G-22 OR RM-G-23 ≥ ALERT ALARM

BASIS:

- The alarm set point is based on cladding failure to provide a reading this high. Additional reference is OP 1101-2.1, the RMS setpoint procedure for additional information.
- 2500 μCi/cc total RCS activity corresponds to approximately 300 μCi/cc DEI 131, per the EDCM. This is approximately 5% fuel clad damage.

- 2) $T_{CLAD} \geq 1400^{\circ}\text{F}$ curve

BASIS:

The RCS is in a very poor heat transfer region and the potential for cladding damage is greatly increased. This is the starting point where certain fuel pins could experience eutectic effects and release the gap activity from the fuel pins.

- 3) RCS Activity ≥ 2500 μCi/cc (Total)

BASIS:

These are cladding damage numbers, indication that 5% of the core has experienced cladding damage and has released its gap activity.

- 4) Letdown line reading > 15 R/hr

BASIS:

These are cladding damage numbers, indication that 5% of the core has experienced cladding damage and has released its gap activity.

The letdown line reading taken at the letdown monitor provides a quick conservative approach to ascertain this minimum level without the delay associated with a post accident sample.

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BARRIER status.

CONTAINMENT

Potential loss of Containment Fission Product Barrier

- 1) RM-G-22 or RM-G-23 reading ≥ 12000 R/hr

BASIS:

- Based on calculation RAF 9140-89-002, RM-G-22 or RM-G-23 readings would correspond to a LOCA with 20% release of fuel gap activity.

- 2) $T_{CLAD} \geq 1800^{\circ}\text{F}$ curve

BASIS:

This condition is a conservative estimate that if conditions continue degrading the Containment barrier could be lost. This is the point where exothermic reactions are taking place inside the RCS based on the steam envelope around the hot zirconium clad fuel pellets. Based on the assumption that the Core could melt through the RCS barrier and interact with the hydrogenous containment floor, the subsequent loss of containment could result in the release of large amounts of radioactivity to the general public.

- 3.1) RB Pressure ≥ 50 psig

BASIS:

This is the closest major instrument division below the design pressure of the Reactor Building. This is about the pressure to which the building is leak tested.

- 3.2) RB Hydrogen $\geq 4\%$

BASIS:

Sandia Laboratory analysis on ignition of hydrogen supports that in a steam environment, hydrogen is not flammable in concentrations of less than 4%.

- 3.3) The Reactor Building Pressure is ≥ 30 psig and the Reactor Building Emergency Cooling is less than the minimum assumed in the FSAR.

BASIS:

- This condition of less than minimum is exceeded if any one of the following conditions are not met:

| SPRAY | COOLERS |
|-------|---------|
| 2 | 0 |
| 0 | 3 |
| 1 | 1 |

- This is consistent with the Level 2 Probability Risk Assessment (PRA) assumptions of no Coolers and no Spray where the pressure could increase to 4 times the value with a combustion or similar event to cause a pressure spike. Four times the setpoint (30 psig) is still below the assumed failure value from the PRA of 144 psig. However, above 30 psig there could be a pressure spike that could exceed 144 psig; therefore the RB is in jeopardy.

[CONTAINMENT continued on the next page]

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CONTAINMENT (Cont'd)

Loss of Containment Fission Product Barrier

- 1) Total OTSG leak > 1 gpm (Tech Spec) and steam to atmosphere from the affected generator.

BASIS:

- This magnitude of leakage, assuming an 8 hour release duration, will result in expected measurable doses to the public. These doses are above those received normally, therefore the barrier to prevent the release of radioactivity has been lost.
- The OTSG leak and path from the affected generator to the environment have the potential to impact the public with small doses.
- This is anticipatory because dose assessment will validate the event classification.
- Paths are Steam Line Break, Main Steam Relief stuck open or steaming via the Atmospheric Dump Valves. (Affected generator)
- The direct to atmosphere means that the condenser function has been lost for the affected (leaking) generator.

- 2.1) RB Pressure \geq 100 psig

BASIS:

- An analysis was performed to verify integrity of the containment as a barrier to the release of fission products. This showed that, mathematically, the building would be intact at up to three times the design pressure or 150 psig. The margin of safety would be greatly decreased at that point. The calculations showed that cracking could be expected at 120 psig, therefore a conservative value of 100 psig was assumed to be the point where the containment barrier was lost. This does not consider the status of the steel liner on preventing the release of fission products. Another condition is that an analysis would be performed for any pressure over design to verify the integrity of the barrier.
- This loss is NOT RECOVERABLE.

- 2.2) RB isolation
Failure of the RB isolation resulting in a release pathway.

BASIS:

An isolation can be considered successful if at least one valve closes. This condition states that at least two valves have failed and a pathway exists for the release of fission products from the containment. The barrier is lost when fission products cross the barrier.

[CONTAINMENT continued on the next page]

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CONTAINMENT (Cont'd)

2.3) Rapid unexplained loss of RB pressure, following an initial pressure increase above normal levels.

BASIS:

- The rapid (<1 minute) decrease in pressure is not attributable to containment spray or condensation effects.
- The pressure drop is to normal or near normal RB pressure (i.e., less than 2 psig, typically 0 psig).
- Normal RB pressure is between -1 and +2 psig.

2.4) A LOCA has occurred and the RB sump and/or RB pressure indications are not increasing.

BASIS:

- Radiation monitors support that a loss of coolant has occurred but other containment parameters are in disagreement.
- This address the condition when RB pressure and sump level do not increase as a result of mass and energy released into the RB from a LOCA (≥ 100 gpm).
- This lack of increase (pressure sump level) indicates preincident failure of the RB or that the LOCA is outside the RB (e.g., interfacing system LOCA or a V-sequence failure).

3) Plant Exhaust
RM-A-8 Gas Hi Range ≥ 200 CPM

BASIS:

This is indicative of a 120 gpm leak with the RCS activity \geq Tech Spec, assuming leakage in the Auxiliary building that cannot be isolated. This provides for fission products to be outside the containment barrier (bypassed) and can be considered as lost.

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3.0 ELECTRICAL

| GENERAL EMERGENCY | SITE AREA EMERGENCY | ALERT | UNUSUAL EVENT |
|--|--|---|---|
| <p>G3.1 (AC) Prolonged Station Blackout exists as indicated by:</p> <p>1) LOOP AND 2) No emergency 4KV Bus (1D or 1E) energized. AND 3a) > 25° Superheat OR 3b) 4 KV restoration not likely within 4 hours of loss.</p> <p>APPLICABILITY: Pwr Ops, HStby, HSD, SU, HU/CD (BASIS Page 32)</p> | <p>S3.1 (AC) Station Blackout exists as indicated by:</p> <p>1) LOOP > 15 minutes AND 2) No emergency 4KV Bus (1D or 1E) energized for greater than 15 minutes.</p> <p>APPLICABILITY: Pwr Ops, HStby, HSD, SU, HU/CD (BASIS Page 33)</p> | <p>A3.1 (AC) Risk of Station Blackout, redundant power NOT available, as indicated by</p> <p>1) LOOP >15 minutes; AND 2a) Only 1 emergency 4KV Bus (1D or 1E) energized. OR 2b) ONE on-site power source available</p> <p>APPLICABILITY: Pwr Ops, HStby, HSD, SU, HU/CD (BASIS Page 34)</p> | <p>U3.1 (AC) Risk of Station Blackout, with redundant power available, as indicated by:</p> <p>1) LOOP >15 minutes; AND 2) Both emergency 4 KV Buses (1D or 1E) energized. AND 3) ≥ TWO on-site power sources available</p> <p>APPLICABILITY: All Plant Conditions (BASIS Page 35)</p> |
| | | <p>A3.2 (Shutdown AC) Station Blackout, during Cold Shutdown or Refueling Shutdown, as indicated by:</p> <p>1) LOOP > 15 minutes AND 2) No emergency 4KV Bus (1D or 1E) energized for greater than 15 minutes.</p> <p>APPLICABILITY: CSD, RSD (BASIS Page 36)</p> | |
| | <p>S3.3 (DC) Unplanned loss of ALL on-site DC power for greater than 15 minutes as indicated by:</p> <p>1) Receipt of all annunciators per EP 1202-9A or local meter < 105 volts. AND 2) Receipt of all annunciators per EP 1202-9B or local meter < 105 volts</p> <p>APPLICABILITY: Pwr Ops, Hstby, HSD, SU, HU/CD (BASIS Page 37)</p> | | <p>U3.3 (DC) Unplanned loss of ALL on-site DC power for greater than 15 minutes as indicated by:</p> <p>1) Receipt of all annunciators per EP 1202-9A or local meter < 105 volts. AND 2) Receipt of all annunciators per EP 1202-9B or local meter < 105 volts.</p> <p>APPLICABILITY: CSD, RSD (BASIS Page 38)</p> |

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G3.1 (AC) (GENERAL EMERGENCY)

Prolonged Station Blackout exists as indicated by:

- 1) Loss of off-site power (LOOP) to both 1A and 1B Auxiliary Transformers
- AND**
- 2) No emergency 4KV Bus (1D or 1E) energized
- AND**
- 3a) > 25° Superheat
- OR**
- 3b) Restoration of a 4KV Bus (1D or 1E), from any source, is not likely within 4 hours of the loss

(1 **AND** 2 **AND** 3a or 1 **AND** 2 **AND** 3b)

APPLICABILITY: Power Operations, Hot Standby, Startup, Hot Shutdown, Heatup/Cooldown

BASIS:

- When assessing whether or not it is likely that a 4KV Bus will be restored within 4 hours of the loss, consider the following:
 - a. The likelihood that power can be restored in time to prevent a loss of two Fission Product Barriers with a potential loss of the third.
 - b. The level of damage and resources available to restore at least 1 4KV Bus.
 - c. The availability of indications to monitor the transient.
- The **GENERAL EMERGENCY** declaration should be made as early as appropriate, based on a reasonable assessment of the event trajectory.
- TMI is a 4 hour coping plant.
- Beyond the 4 hours the potential exists to breach the RCS and CLAD. The **CONTAINMENT** is still intact. This is an anticipatory declaration.
- This satisfies NESP-007 **GENERAL EMERGENCY** SG.1.

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S3.1 (AC) (SITE AREA EMERGENCY)

Station Blackout condition exists, as indicated by:

- 1) Loss of off-site power (LOOP) to both 1A and 1B Auxiliary Transformers for greater than 15 minutes.
- AND**
- 2) No emergency 4 KV bus (1D or 1E) energized for greater than 15 minutes.

(1 AND 2)

APPLICABILITY: Power Operation, Hot Standby, Hot Shutdown, Startup, Heatup/Cooldown

BASIS:

Loss of AC power compromises all plant safety systems requiring electric power, including Decay Heat Removal, ECCS, containment heat removal systems, and closed/river water cooling systems. Fifteen minutes was selected as a threshold to exclude transient or momentary losses.

- The 1D or 1E 4KV busses may be energized automatically or manually by their respective emergency diesel generators or manually by the SBO diesel generator. Additionally the Main Turbine Generator may be used to energize the buses.
- Prolonged loss of all AC power will cause core uncovering and loss of containment integrity, thus the event can escalate to a General Emergency via a Fission Product Barrier Degradation EAL, or SM/ED judgement.
- Subsequent start and load of one on-site power source (EG-Y-1A, EG-Y-1B, EG-Y-4 or Main Turbine) to energize 1D or 1E 4KV bus enables the event to be downgraded to an Alert.
- Subsequent start and load of two on-site power sources (EG-Y-1A, EG-Y-1B, EG-Y-4 or Main Turbine) to energize 1D or 1E 4KV bus enables the event to be downgraded to an Unusual Event
- This EAL satisfies NESP-007 Site Area Emergency SS1.

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A3.1 (AC) (ALERT)

Risk of Station Blackout, redundant backup power is **NOT** available, as indicated by:

- 1) Loss of off-site power (LOOP) to both 1A and 1B Auxiliary Transformers for greater than 15 minutes
- AND**
- 2a) Only one (1) emergency 4KV Bus (1D or 1E) energized.
- OR**
- 2b) There is only ONE on-site power source available and supplying power to ONE emergency bus.

(1 **AND** 2a **OR** 1 **AND** 2b)

APPLICABILITY: Power Operation, Hot Standby, Hot Shutdown, Startup, Heatup/Cooldown

BASIS:

This EAL is based upon degradation of off-site and on-site power systems such that any additional single failure would result in a station blackout.

- This EAL is met if a loss of off-site power is sustained for more than 15 minutes, and if 1D or 1E 4KV bus remains energized or becomes energized without a backup on-site power source.
- The 1D or 1E 4KV busses may be energized automatically or manually by their respective emergency diesel generators or manually by the SBO diesel generator or the Main Turbine Generator.
- A load rejection (separation from the grid with the main generator supplying station loads) meets this EAL if either 1D or 1E 4KV bus is de-energized and there are no emergency diesel generators operable.
- The subsequent loss of the single on-site power source would escalate the event to a SITE AREA EMERGENCY.
- This EAL satisfies NESP-007 Alert SA5.

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U3.1 (AC) (UNUSUAL EVENT)

A risk of a Station Blackout exists although redundant backup power is available, as indicated by:

- 1) Loss of off-site power (LOOP) to both 1A and 1B Auxiliary Transformers for greater than 15 minutes
- AND**
- 2) Both emergency 4KV Buses (1D or 1E) energized
- AND**
- 3) There are 2 or more on-site power sources providing power to at least one emergency bus.

(1 AND 2 AND 3)

APPLICABILITY: All Plant Conditions

BASIS:

Loss of off-site AC power reduces required redundancy and potentially degrades the level of safety of the plant by rendering the plant more vulnerable to a complete Loss of AC Power (Station Blackout). Fifteen minutes was selected as a threshold to exclude transient or momentary losses.

- This EAL is met if a loss of off-site power is sustained for 15 minutes and, either 1D or 1E 4KV bus remains energized or becomes energized within that 15 minutes.
- The 1D or 1E 4KV busses may be energized automatically or manually by their respective emergency diesel generators or manually by the SBO diesel generator. Additionally, a second on-site source of power must be available.
The 2 or more sources of power are made up from the following list:
 - 'A' Diesel Generator
 - 'B' Diesel Generator
 - 'SBO' Diesel Generator
 - Main Turbine Generator (Load Rejection)
- A load rejection (separation from the grid with the main generator supplying station loads) meets this EAL.
- This EAL satisfies NESP-007 Unusual Event SU1.

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A3.2 (Shutdown AC) (ALERT)

Station Blackout during Cold Shutdown or Refueling Shutdown as indicated by:

- 1) Loss of off-site power (LOOP) to both 1A and 1B Auxiliary Transformers for greater than 15 minutes.
- AND**
- 2) No emergency 4KV bus (1D or 1E) energized for greater than 15 minutes.

(1 AND 2)

APPLICABILITY: Cold Shutdown, Refueling Shutdown

BASIS:

Loss of AC power compromises all safety systems requiring electric power, including Decay Heat Removal, Spent Fuel Cooling, and closed/river water cooling systems. When in Cold Shutdown, refueling, or defueled, the event can be classified as an Alert because of the significantly reduced decay heat, temperature, and pressure, increasing the time to restore one of the emergency busses, relative to that specified for the Site Area Emergency EAL. Fifteen minutes was selected as a threshold to exclude transient or momentary losses.

- The 1D or 1E 4KV busses may be energized automatically or manually by their respective emergency diesel generators (EG-Y-1A or EG-Y-1B) or manually by the SBO diesel generator (EG-Y-4).
- Subsequent start and load of at least one on-site power source (EG-Y-1A, EG-Y-1B OR EG-Y-4) to energize the 1D or 1E 4K bus enables the event to be downgraded to an Unusual Event.
- Escalation to a Site Area Emergency, if appropriate, would be due to abnormal radiation levels/radiological effluent, or SM/ED judgement.
- This EAL satisfies NESP-007 Alert SA1.

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S3.3 (DC) (SITE AREA EMERGENCY)

Unplanned loss of ALL on-site DC power for greater than 15 minutes as indicated by:

1) Receipt of all annunciators listed under the SYMPTOMS in EP 1202-9A (1A DC Distribution) or local meter < 105 volts.

AND

2) Receipt of all annunciators listed under the SYMPTOMS in EP 1202-9B (1B DC Distribution) or local meter < 105 volts.

(1 **AND** 2)

APPLICABILITY: Power Operations, Hot Standby, Hot Shutdown, Startup, Heatup/Cooldown

BASIS:

Extended loss of DC requires coordination of efforts for control of equipment. This has the potential to reduce capability of public protection. The 15 minute threshold was selected to exclude transient or momentary losses.

- Emergency Organization activation is necessary to mitigate the event to allow sufficient capability to operate equipment locally in the plant.
- The loss of DC compromises the ability to monitor and control the plant safely.
- This EAL satisfies NESP-007 Site Area Emergency SS3.

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U3.3 (DC) (UNUSUAL EVENT)

Unplanned loss of ALL on-site DC power for greater than 15 minutes as indicated by:

1) Receipt of all annunciators listed under the SYMPTOMS in EP 1202-9A (1A DC Distribution) or local meter < 105 volts.

AND

2) Receipt of all annunciators listed under the SYMPTOMS in EP 1202-9B (1B DC Distribution) or local meter < 105 volts.

(1 **AND** 2)

APPLICABILITY: Cold Shutdown, Refueling Shutdown

BASIS:

Extended loss of DC requires coordination of efforts for control of equipment. This has the potential to reduce capability of public protection. The 15 minute threshold was selected to exclude transient or momentary losses.

- Emergency Organization activation is necessary to mitigate the event to allow sufficient capability to operate equipment locally in the plant.
- The loss of DC compromises the ability to monitor and control the plant safely.
- This EAL satisfies NESP-007 Site Area Emergency SU7.

4.0 INSTRUMENTATION, ACTUATION AND TECH SPECS

| GENERAL EMERGENCY | SITE AREA EMERGENCY | ALERT | UNUSUAL EVENT |
|--|--|--|--|
| | <p>S4.1 (Transient with Annunciator/Indicator Loss)</p> <p>1) Loss of ALL safety system annunciators, AND</p> <p>2) Loss of indicators needed to monitor safety functions AND</p> <p>3) Loss of compensatory non-alarming indicators, AND</p> <p>4) A significant plant transient is in progress.</p> <p>APPLICABILITY: Pwr Ops, Hot Stby, HSD, SU, HU/CD (BASIS Page 41)</p> | <p>A4.1 (Transient with Annunciator/Indicator Loss)</p> <p>1a) Unplanned loss of majority of Safety System ANNUNCIATORS for ≥15 minutes; OR</p> <p>1b) Unplanned loss of majority of Safety System INDICATORS for ≥15 minutes AND</p> <p>2a) Compensatory non-alarming indicators are unavailable, OR</p> <p>2b) A significant plant transient is in progress, AND</p> <p>3) SM requires increased surveillance to safely operate the plant.</p> <p>APPLICABILITY: Pwr Ops, Hot Stby, HSD, SU, HU/CD (BASIS Page 42)</p> | <p>U4.1 (Annunciator/Indicator Loss)</p> <p>1a) Unplanned loss of majority of Safety System ANNUNCIATORS for ≥15 minutes; OR</p> <p>1b) Unplanned loss of majority of Safety System INDICATORS for ≥15 minutes AND</p> <p>2) Compensatory non-alarming indicators are available; AND</p> <p>3) SM requires increased surveillance to safely operate the plant.</p> <p>APPLICABILITY: Pwr Ops, Hot Stby, HSD, SU, HU/CD (BASIS Page 43)</p> |
| | | | <p>U4.1.1 (Communications)</p> <p>Unplanned loss of</p> <p>1) All on-site communications; OR</p> <p>2) All off-site communications</p> <p>APPLICABILITY: All Plant Conditions (BASIS Page 44)</p> |
| <p>G4.2 (ATWS Unsuccessful followup)</p> <p>1) Failure of RPS to execute an auto reactor trip with Reactor power ≥ 5%; AND</p> <p>2) Manual trip from Control Room was <u>NOT</u> successful AND</p> <p>3a) $T_{clad} > 1800^{\circ}\text{F}$ OR</p> <p>3b) All means of heat removal (MFW/EFW/HPI-PORV) lost</p> <p>APPLICABILITY: Pwr Ops, Hstby, HSD, SU, HU/CD (BASIS Page 45)</p> | <p>S4.2 (ATWS, unsuccessful followup)</p> <p>1) Failure of RPS to execute an auto reactor trip with reactor power ≥ 5%; AND</p> <p>2) Manual trip from Control Room was <u>NOT</u> successful.</p> <p>APPLICABILITY: Pwr Ops (BASIS Page 46)</p> | <p>A4.2 (ATWS, successful followup)</p> <p>1) Failure of RPS to execute an auto reactor trip; AND</p> <p>2) Manual trip from Control Room was successful.</p> <p>APPLICABILITY: Pwr Ops, Hstby, HSD, SU, HU/CD (BASIS Page 47)</p> | <p>U4.2 (TS SD)</p> <p>Failure to complete TS required shutdown or cooldown within LCO time limit.</p> <p>APPLICABILITY: Pwr Ops, Hstby, HSD, SU, HU/CD (BASIS Page 48)</p> |

4.0 INSTRUMENTATION, ACTUATION AND TECH SPECS

| GENERAL EMERGENCY | SITE AREA EMERGENCY | ALERT | UNUSUAL EVENT |
|-------------------|--|--|---------------|
| | <p>S4.3 (DHR) 1) Loss of ALL means of DHR (Core Heat Removal) per EP 1202-35 AND 2a) Indicated level < 0 inches OR 2b) Core exit temperature indicates > 25° SH</p> <p>APPLICABILITY: (CSD and RSD) (BASIS Page 49)</p> | <p>A4.3 (DHR) 1) Loss of ALL means of DHR (Core Heat Removal) per EP 1202-35 AND 2a) Temperature is ≥ 200°F OR 2b) Temperature is approaching 200°F in an uncontrolled manner</p> <p>APPLICABILITY: (CSD and RSD) (BASIS Page 50)</p> | |
| | <p>S4.4 (HSD Function) 1) Loss of all means to feed AND steam OTSGs AND 2) Loss of RCS makeup and Pzr level < 20"</p> <p>APPLICABILITY: Pwr Ops, HStby, SU, HSD (BASIS Page 51)</p> | | |

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S4.1 (Transient with Annunciator/Indicator Loss) (SITE AREA EMERGENCY)
Inability to monitor a significant transient in progress as indicated by:

- 1) Loss of ANNUNCIATORS associated with ALL safety systems
- AND**
- 2) Loss of indicators needed to monitor essential safety functions
- AND**
- 3) Loss of compensatory non-alarming indicators
- AND**
- 4) A significant plant transient is in progress

(1 **AND** 2 **AND** 3 **AND** 4)

APPLICABILITY: Power Operations, Hot Standby, Hot Shutdown, Startup, Heatup/Cooldown

BASIS:

This EAL addresses the inability of the control room staff to monitor plant response to a transient. A Site Area Emergency is considered to exist if the control room staff cannot monitor safety functions needed for the protection of the public.

- Planned and Unplanned losses are included in the EAL, (e.g., scheduled maintenance and testing activities) since the loss of this much instrumentation during a transient is a significant factor.
- Specific ANNUNCIATORS for this EAL include only those identified in ATOG, Abnormal and Emergency operating procedures, and in other EALs (e.g., area, process, and/or effluent radiation monitors).
- Specific INDICATORS needed to monitor safety functions necessary for protection of the public include control room indications and dedicated annunciation capability used to shutdown the reactor, maintain core cooling and a coolable core geometry, to maintain the integrity of the RCS and containment.
- "Compensatory non-alarming indications" may include computer based information and displays such as SPDS. This may include all other computer systems available for use.
- "Significant transient" includes response to automatic or manually initiated functions such as reactor trips, runbacks greater than 25% thermal power change, ECCS injections, or thermal power oscillations of 10% or more.
- This EAL satisfies NESP-007 Site Area Emergency SS6.

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|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
| Emergency Classification and Basis | Revision No. 7 | |

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A4.1 (Transient with Annunciator/Indicator Loss) (ALERT)

Unplanned, sustained loss of Control Room ANNUNCIATORS or INDICATORS with a significant transient in progress or compensatory non-alarming INDICATORS unavailable as indicated by:

- 1a) Unplanned loss of the majority of safety system ANNUNCIATORS \geq 15 minutes
OR
- 1b) Unplanned loss of the majority of safety system indications \geq 15 minutes
AND
- 2a) Compensatory non-alarming indications are not available
OR
- 2b) A significant plant transient is in progress
AND
- 3) In the opinion of the Shift Manager, the loss of the ANNUNCIATORS or INDICATORS requires increased surveillance to safely operate the plant.

(1a OR 1b **AND** 2a OR 2b **AND** 3)

APPLICABILITY: Power Operations, Hot Standby, Hot Shutdown, Startup, Heatup/Cooldown

BASIS:

This EAL recognizes the difficulty associated with monitoring changing plant conditions without the use of a major portion of the annunciation or indication equipment.

- "Unplanned" losses exclude scheduled maintenance and testing activities. Fifteen minutes was selected as a threshold to exclude transient or momentary losses.
- Specific ANNUNCIATORS and INDICATORS for this EAL shall include those associated with:
 - ESAS
 - RPS
 - Radiation Monitors
 - Core Flood
 - BWST/NaOH
 - EFW/HSPS
 - ES Diesel Generators
 - ES Electrical
 - RBAT/BAMT
- "Compensatory non-alarming indications" may include computer based information and displays such as SPDS. This may include all other computer systems available for use.
- "Significant transient" includes response to automatic or manually initiated functions such as reactor trips, runbacks greater than 25% thermal power change, ECCS injections, or thermal power oscillations of 10% or more.
- This EAL satisfies NESP-007 Alert SA4.

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|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
| Title | Revision No. 7 | |
| Emergency Classification and Basis | | |

EXHIBIT 4

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U4.1 (Annunciator/Indicator Loss) (UNUSUAL EVENT)

Unplanned, sustained loss of Control Room ANNUNCIATORS or INDICATORS requiring increased surveillance to safely operate the plant as indicated by:

- 1a) Unplanned loss of the majority of safety system ANNUNCIATORS \geq 15 minutes
OR
- 1b) Unplanned loss of the majority of safety system INDICATORS \geq 15 minutes.
AND
- 2) Compensatory non-alarming indications are available.
AND
- 3) In the opinion of the Shift Manager, the loss of the ANNUNCIATORS or INDICATORS requires increased surveillance to safely operate the plant.

(1a OR 1b **AND** 2 **AND** 3)

APPLICABILITY: Power Operations, Hot Standby, Hot Shutdown, Startup, Heatup/Cooldown

BASIS:

This EAL is intended to recognize the difficulty associated with monitoring changing plant conditions without the use of a major portion of the annunciation or indication equipment.

- "Unplanned" losses exclude scheduled maintenance and testing activities. Fifteen minutes was selected as a threshold to exclude transient or momentary losses.
- Specific ANNUNCIATORS and INDICATORS for this EAL shall include those associated with:
 - ESAS
 - RPS
 - Radiation Monitors
 - Core Flood
 - BWST/NaOH
 - EFW/HSPS
 - ES Diesel Generators
 - ES Electrical
 - RBAT/BAMT
- "Compensatory non-alarming indications" may include computer based information and displays such as SPDS. This may include all other computer systems available for use.
- If the majority of the safety system ANNUNCIATORS or INDICATORS are lost, there is increased risk that a degraded plant condition could go undetected. It is not intended that plant personnel perform a detailed count of the instrumentation lost but use the value as a judgement threshold for determining the severity of the plant conditions. This judgement is supported by the specific opinion of the Shift Manager that additional operating personnel will be required to provide increased monitoring of system operation to safely operate the plant.
- This EAL satisfies NESP-007 Unusual Event SU3.

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| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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U4.1.1 (Communications) (UNUSUAL EVENT)

- 1) Unplanned loss of **ALL** on-site communications capabilities affecting the ability to perform routine operations
- OR**
- 2) Unplanned loss of **ALL** off-site communications capabilities.

(1 **OR** 2)

APPLICABILITY: All Plant Conditions

BASIS:

The purpose of this EAL is to recognize a loss of communications capability that either defeats the plant operations staff ability to perform routine tasks necessary for plant operations or the ability to communicate problems to off-site authorities.

- "Unplanned" losses as specified in the EAL exclude scheduled maintenance and testing activities.
- On-site communications systems addressed in this EAL include all means of routine communications (plant page, telephones, sound powered phones, radios, etc.) Loss of all of these capabilities would severely hamper routine operations. This would degrade the level of safety of the plant.
- Off-site communications systems include those systems addressed in EPIP-TMI-.03, which also provides guidance for alternate methods of communications.
- This EAL satisfies NESP-007 Unusual Event SU6.

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|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
| Emergency Classification and Basis | Revision No 7 | |

EXHIBIT 4

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G4.2 (ATWS, unsuccessful followup) (GENERAL EMERGENCY)

1) Failure of the Reactor Protection System (RPS trip string) to; automatically INITIATE AND COMPLETE a reactor trip when any RPS trip set point has been exceeded with Reactor Power remaining $\geq 5\%$.

AND

2) The manual reactor trip from the Control Room was NOT successful

AND

3a) $T_{clad} > 1800^\circ$.
OR

3b) All means of heat removal (Main Feedwater, Emergency Feedwater, PORV-HPI Cooling) have been lost.

(1 **AND** 2 **AND** 3a OR 1 **AND** 2 **AND** 3b)

APPLICABILITY: Power Operations, Hot Standby, Startup, Hot Shutdown, Heatup/Cooldown

BASIS:

- This meets the anticipatory criteria for a General Emergency because of the loss of coolant and failure of the CLAD.
- No RCS leakage is expected. However, the heatup will reduce RCS inventory.
- Under this condition the reactor is producing more heat than is being removed and a General Emergency is warranted because conditions exist for loss of fuel clad and RCS inventory.
- This EAL satisfies NESP-007 GENERAL EMERGENCY SG.2.

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|---|-------------------------------------|------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
| Emergency Classification and Basis | Revision No. 7 | |

EXHIBIT 4

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S4.2 (ATWS, unsuccessful followup) (SITE AREA EMERGENCY)

- 1) Failure of the Reactor Protection System (RPS trip string) to; automatically INITIATE AND COMPLETE a reactor trip when any RPS trip setpoint has been exceeded with Reactor Power remaining $\geq 5\%$.

AND

- 2) The manual reactor trip from the Control Room was **NOT** successful.

(1 **AND** 2)

APPLICABILITY: Power Operations

BASIS:

- Automatic and manual tripping of the reactor is not considered successful if action outside the control room was required to trip the reactor.
- Under this condition the reactor is producing more heat than the design decay heat load (5%) and a Site Area Emergency is warranted because conditions exist that lead to imminent loss or potential loss of both fuel clad and RCS inventory.

NOTE

It is recognized that this specific condition closely parallels the Fission Product Barrier EALs, but is provided for rapid declaration in the event that the Alert condition (ATWS) occurred.

- This EAL satisfies NESP-007 Site Area Emergency SS2.

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|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
| Emergency Classification and Basis | Revision No. 7 | |

EXHIBIT 4

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A4.2 (ATWS, successful followup) (ALERT)

- 1) Failure of the Reactor Protection System (RPS trip string) to automatically INITIATE AND COMPLETE a reactor trip when any RPS trip setpoint has been exceeded

AND

- 2) The manual reactor trip from the Control Room was successful.

(1 AND 2)

APPLICABILITY: Power Operations, Hot Standby, Hot Shutdown, Startup, Heatup/Cooldown

BASIS:

Reactor Protection System (RPS) trip setpoints are designed and set to maintain the plant inside (less than) the Core Safety Limits.

- An Alert is warranted because conditions exist that lead to potential loss of fuel clad or RCS inventory.
- Successful followup to the ATWS means that the Control Personnel were able to de-energize the Control Rod drives from the control room. This may occur by depressing the main or backup trip pushbutton. Additionally, the electrical bus may be de-energized from the Control Room.
- The activation of the Emergency Organization is essential to evaluate and possibly mitigate the consequences of the event.
- This EAL satisfies NESP-007 Alert SA2.

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|---|-------------------------------------|------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
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EXHIBIT 4

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U4.2 (TS SD) (UNUSUAL EVENT)

Failure to complete a Technical Specification plant shutdown or plant cooldown within the Limiting Condition for Operation (LCO) time limit.

APPLICABILITY: Power Operations, Hot Standby, Hot Shutdown, Startup, Heatup/Cooldown

BASIS:

This condition exceeds the normal Technical Specification envelope and the plant safety is in a potentially degraded condition. Declaration of an Unusual Event is based on the time at which the LCO specified action statement time period elapses under the Technical Specifications and is not related to how long a condition may have existed.

NOTE

A Technical Specification LCO has an associated time limit to allow continued operation while actions are taken to correct the deficiency. If during the LCO time limit, it becomes apparent that the time limit will be exceeded before repairs are effected then the required actions must be taken to shutdown and/or cooldown the plant. If ANY of the shutdown or cooldown times are NOT met then the EAL is met.

- This EAL satisfies NESP-007 Unusual Event SU2.

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|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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S4.3 (DHR) (SITE AREA EMERGENCY)

1) Loss of ALL means of Decay Heat Removal (Core Heat Removal) per EP 1202-35

AND

2a) Indicated RCS level is < 0 inches on draindown level indicator (RC-LT-1037 or RC-LT-1138)
OR

2b) Core exit temperature indicates $\geq 25^\circ$ Superheat.

(1 **AND** 2A OR 2b)

APPLICABILITY: Cold Shutdown, Refueling Shutdown

BASIS:

This EAL addresses prolonged boiling following a loss of Decay Heat Removal and is indicative of potential core damage without RCS boundary integrity being assured.

- This EAL addresses the special condition of Shutdown and the available inventory to maintain the integrity of the fuel clad. In these particular plant conditions it is possible to have the RCS open (Breached) and to not have Containment Integrity as it may not be required by Technical Specifications.
- This is an unexpected and potentially prolonged condition with normal and backup means of cooling not available.
- This level ensures that the Emergency Organization is activated to insure protection of the health and safety of the public.
- A core exit temperature of 25° Superheat is an indication that fuel is uncovered and is relied upon when level indication is not available. The loss of level indication is anticipatory because inventory is still available for some finite time. Conservatively core uncover is assumed when the level indication is lost.
- Zero inches on the draindown level indicators (RC-LT-1037 or RC-LT-1138) is at the 314' elevation and the centerline of the cold legs.
- This EAL does not apply if all irradiated fuel has been removed from the Reactor vessel.
- This satisfies NESP-007 EAL SS5.

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|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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A4.3 (DHR) (ALERT)

1) Loss of ALL means of Decay Heat Removal (Core Heat Removal) per EP 1202-35

AND

2a) Temperature is $\geq 200^{\circ}\text{F}$
OR

2b) Temperature is approaching 200°F in an uncontrolled manner.

(1 AND 2a OR 2b)

APPLICABILITY: Cold Shutdown, Refueling Shutdown

BASIS:

This EAL addresses potential boiling following a loss of Decay Heat Removal and is indicative of potential core damage without RCS boundary integrity being assured.

- This EAL addresses the special condition of Shutdown and the available inventory to maintain the integrity of the fuel clad. In these particular plant conditions it is possible to have the RCS open (Breached) and to not have Containment Integrity as it may not be required by Technical Specifications.
- This is an unexpected and potentially prolonged condition with normal and backup means of cooling not available.
- This level ensures that the Emergency Organization is activated to insure protection of the health and safety of the public.
- The time to uncover the fuel is based on level before the loss of Decay Heat Removal and the time since reactor shutdown. The loss of Decay Heat Removal Emergency Procedure (1202-35) contains the information to predict core uncover.
- This EAL satisfies NESP-007 Alert SA.3.

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|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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S4.4 (HSD Function) (SITE AREA EMERGENCY)

- 1) Loss of all means to feed AND steam the Once Through Steam Generators (OTSG)
- AND**
- 2) Loss of RCS makeup AND pressurizer level is less than 20".

(1 AND 2)

APPLICABILITY: Hot Shutdown, Hot Standby, Startup and Power Operations

BASIS:

Under the conditions listed there is an actual major failure of systems/components intended for the protection of the public.

- Loss of both functions that are necessary to achieve and maintain Hot Shut Down
- This is a case where functions needed for the protection of the health and safety of the public have been lost (Heat Sink, and RCS inventory).
- RCS makeup is "normal makeup" and HPI.
- The emergency organization is activated to monitor and control the situation to restore the lost protection. Accident mitigation is essential.
- This satisfies NESP-007 EAL SS4.

5.0 NATURAL PHENOMENA

| GENERAL EMERGENCY | SITE AREA EMERGENCY | ALERT | UNUSUAL EVENT |
|-------------------|---------------------|--|---|
| | | A5.1 (High River Water) Actual river water elevation \geq 302 ft. APPLICABILITY: All Plant Conditions (BASIS Page 53) | U5.1 (High River Water) Actual river water elevation $>$ 300 ft. APPLICABILITY: All Plant Conditions (BASIS Page 54) |
| | | A5.2 (High Wind) Wind Speeds $>$ 80 mph sustained $>$ 1 minute APPLICABILITY: All Plant Conditions (BASIS Page 55) | U5.2 (High Wind) Wind speed $>$ 70 mph sustained $>$ 1 minute APPLICABILITY: All Plant Conditions (BASIS Page 56) |
| | | A5.3 (Tornado) Report of Tornado with damage to structures/equipment inside Vital Area APPLICABILITY: All Plant Conditions (BASIS Page 57) | U5.3 (Tornado) Report of Tornado inside Protected Area APPLICABILITY: All Plant Conditions (BASIS Page 58) |
| | | A5.4 (Earthquake) VALID alarm PRF-1-3 "Operating Basis Earthquake" APPLICABILITY: All Plant Conditions (BASIS Page 59) | U5.4 (Earthquake) VALID alarm PRF-1-2 "Threshold Seismic Condition" APPLICABILITY: All Plant Conditions (BASIS Page 60) |

Number

TMI - Unit 1
Emergency Procedure

EPIP-TMI-.01

Title

Revision No

Emergency Classification and Basis

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EXHIBIT 5

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A5.1 (High River Water) (ALERT)

High River Water Level, as indicated by:

Actual river water level elevation at the river water intake structure \geq 302 ft.

APPLICABILITY: All Plant Conditions

BASIS:

- Portions of the site would be flooded at this level and there is a potential for damage to vital equipment.
- The design flood corresponds to river water level at 303 ft. elevation at the river water intake structure.
- Dike elevation at the intake structure is 305 ft.
- Southern dike elevation is 304 ft.
- This EAL partially satisfies NESP-007 Alert HA1.

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|---|-------------------------------------|-------------------------------|
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U5.1 (High River Water) (UNUSUAL EVENT)
High River Water Level, as indicated by:

Actual river water level elevation at the river water intake structure ≥ 300 ft.

APPLICABILITY: All Plant Conditions

BASIS:

- The design flood corresponds to river water level at 303 ft. elevation at the river water intake structure.
- Dike elevation at the intake structure is 305 ft.
- Southern dike elevation is 304 ft.
- This EAL partially satisfies NESP-007 Unusual Event HU1.

| | | |
|---|---|-----------------------------------|
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A5.2 (High Wind) (ALERT)

High wind speeds, as indicated by:

Wind speed greater than 80 mph sustained for greater than 1 minute, indicated on Wind Speed Recorder NDS-501.

APPLICABILITY: All Plant Conditions

BASIS:

This EAL recognizes potential damage to vital equipment or structures due to exceeding structural design limits.

- The containment building is designed to withstand 80 mph sustained winds and 300 mph tangential tornado winds. Only F5 tornadoes have tangential winds in excess of 300 mph. There is a potential for damage to vital equipment.
- The wind speed may be determined by the strip chart in the Control Room or the PPC. These indications are from the weather tower located on the island. Failure of the weather tower requires alternate sources of data such as the Harrisburg Airport or the National Weather Service.
- Evaluate, as a minimum, the following areas for damage:
Reactor Building, Intake Building, Intermediate Building, Control Tower, Aux. and Fuel Handling Building, and Diesel Generator Building.
- This EAL partially satisfies NESP-007 Alert HA1.

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|--|---|----------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
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EXHIBIT 5

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U5.2 (High Wind) (UNUSUAL EVENT)

High wind speeds, as indicated by:

Wind speed greater than 70 mph sustained for greater than 1 minute, indicated on Wind Speed Recorder NDS-501.

APPLICABILITY: All Plant Conditions

BASIS:

This EAL recognizes potential damage to vital equipment or structures due to exceeding structural design limits.

- The containment building is designed to withstand 80 mph sustained winds and 300 mph tangential tornado winds. Only F5 tornadoes have tangential winds in excess of 300 mph. There is a potential for damage to vital equipment.
- The wind speed may be determined by the strip chart in the Control Room or the PPC. These indications are from the weather tower located on the island. Failure of the weather tower requires alternate sources of data such as the Harrisburg Airport or the National Weather Service.
- Evaluate, as a minimum, the following areas for damage:
Reactor Building, Intake Building, Intermediate Building, Control Tower, Aux. & Fuel Handling Buildings, and Diesel Generator Building.
- This EAL partially satisfies NESP-007 Unusual Event HU1.

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|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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EXHIBIT 5

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A5.3 (Tornado) (ALERT)

Report by station personnel that a Tornado has touched down damaging structures/equipment inside the Vital Area.

APPLICABILITY: All Plant Conditions

BASIS:

Plant design is to be able to withstand severe winds on specific buildings (refer to EP 1202-33) and protect Safety equipment. This EAL addresses where equipment necessary for the protection of the public is damaged.

- Damage to equipment or structures inside the Vital Area that could impact on the ability of the plant to protect the health and safety of the public.
- Evaluate, as a minimum, the following areas for damage:
Reactor Building, Intake Building, Intermediate Building, Control Tower, Aux. and Fuel Handling Building, and Diesel Generator Building.
- This EAL is meant to satisfy NESP-007 EAL HA1.

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| | TMI - Unit 1 Emergency Procedure | Number EGIP-TMI-01 |
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U5.3 (Tornado) (UNUSUAL EVENT)

Report by station personnel that a Tornado has touched down inside the Protected Area.

APPLICABILITY: All Plant Conditions

BASIS:

This EAL is a precursor to actual evaluation of damage and assumes that the tornado damages structures and components.

- Potential damage to equipment or structures inside the Protected Area that could impact on the safe shutdown of the plant.
- This EAL partially satisfies NESP-007 Alert HU1.

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|---|-------------------------------------|------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
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EXHIBIT 5

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A5.4 (Earthquake) (ALERT)

VALID alarm PRF-1-3 "Operating Basis Earthquake".

APPLICABILITY: All Plant Conditions

BASIS:

An earthquake of this magnitude may cause damage to safety equipment and additional evaluation is warranted.

- The Operating Basis Earthquake assumes some minor damage has occurred to the plant, therefore the emergency organization is needed for evaluation and potential event mitigation.
- Evaluate, as a minimum, the following areas for damage:
Reactor Building, Intake Building, Intermediate Building, Control Tower, Aux. and Fuel Handling Building, and Diesel Generator Building.
- This EAL is meant to satisfy NESP-007 EAL HA1.

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|---|-------------------------------------|------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
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EXHIBIT 5

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U5.4 (Earthquake) (UNUSUAL EVENT)

VALID alarm PRF-1-2 "Threshold Seismic Condition".

APPLICABILITY: All Plant Conditions

BASIS:

An earthquake of this magnitude may cause damage to some portions of the plant but it is not expected to affect safety systems.

- This EAL insures that the emergency plan is implemented even though the Operating Basis Earthquake levels have not been reached or exceeded.
- The emergency organization is established if escalation is required.
- This EAL is meant to satisfy NESP-007 EAL HU1.

6.0 MAN-MADE PHENOMENA

| GENERAL EMERGENCY | SITE AREA EMERGENCY | ALERT | UNUSUAL EVENT |
|-------------------|--|--|--|
| | | A6.1 (Fire) 1) Fire affects operability of 1 safety system train OR 2) Fire inside Protected Area requires off-site assistance APPLICABILITY: All Plant Conditions (BASIS Page 62) | U6.1 (Fire) VALID fire inside Protected Area which CANNOT be controlled within 15 minutes of verification. APPLICABILITY: All Plant Conditions (BASIS Page 63) |
| | S6.2 (Control Room Evacuation) Control Room evacuation initiated and plant control is NOT established within 15 minutes APPLICABILITY: All Plant Conditions (BASIS Page 64) | A6.2 (Control Room Evacuation) Control Room evacuation initiated APPLICABILITY: All Plant Conditions (BASIS Page 65) | |
| | | A6.3 (Hazardous Gas) Report flammable/toxic gases detected in Vital Area in life threatening concentrations APPLICABILITY: All Plant Conditions (BASIS Page 66) | U6.3 (Hazardous Gas) Report of flammable/toxic gases potentially affecting normal plant operations APPLICABILITY: All Plant Conditions (BASIS Page 67) |
| | | A6.4 (Equipment Failure) NON Bomb explosion inside Vital Area (Violent combustion/pressurized equipment failure) APPLICABILITY: All Plant Conditions (BASIS Page 68) | U6.4 (Equipment Failure) NON Bomb explosion inside Protected Area (Violent combustion/pressurized equipment failure) APPLICABILITY: All Plant Conditions (BASIS Page 69) |
| | | | U6.5 (Turbine Failure) 1) Turbine failure penetrating casing OR 2) Damage to generator seals APPLICABILITY: Pwr Ops, H Stby, HSD (BASIS Page 70) |
| | | A6.6 (Vehicle Crash) Vehicle Crash inside Vital Area (Equipment/Structure damage) APPLICABILITY: All Plant Conditions (BASIS Page 71) | U6.6 (Vehicle Crash) Vehicle crash inside Protected Area (Potential Equipment/Structure damage) APPLICABILITY: All Plant Conditions (BASIS Page 72) |

| | | |
|--|-------------------------------------|------------------------------|
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A6.1 (Fire) (ALERT)

1) Fire which affects the operability of one safety system train.

OR

2) A fire inside the Protected Area which requires off-site fire fighting assistance, as determined by the Shift Manager/Emergency Director,

(1 OR 2)

APPLICABILITY: All Plant Conditions

BASIS:

The purpose of this EAL is to identify when the level of safety of the plant is in question because of a fire. The fire may be impacting safety systems directly (Fire in a Vital Area) or indirectly (Fire in the Protected Area) but it is challenging a Vital Area (Area where vital equipment for Safe Shutdown is located).

- Evaluate, as a minimum, the following areas (TMI-1) for damage based on fire location:
Reactor Building, Intake Building, Intermediate Building, Control Tower, Aux. and Fuel Handling Building, and Diesel Generator Building.
- Part **one** is considered to be met if a single Emergency Diesel Generator or Engineered Safeguards system string is rendered inoperable AND it is required to be operable for present plant conditions for event mitigation.
- Part **two** considers that extensive damage to a structure inside the Protected Area may affect normal day to day operations. This is especially true for the TMI-2 buildings that do not have water and off-site assistance is required to extinguish a fire.
- This EAL is meant to satisfy NESP-007 EAL HA2.

| | | |
|---|-------------------------------------|-------------------------------|
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EXHIBIT 6

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U6.1 (Fire) (UNUSUAL EVENT)

A **VALID** fire inside the Protected Area which **CANNOT** be controlled by the Fire Brigade within 15 minutes from the time of verification.

APPLICABILITY: All Plant Conditions

BASIS:

The purpose of this EAL is to address fires whose extent and magnitude may be potentially significant precursors to damage to safety systems.

- This condition is considered met if the Fire Brigade cannot bring the fire under control within 15 minutes of verification that a fire exists.
- This excludes fires in administrative buildings, trash containers and other small fires with NO safety consequences.
- Verification is confirmatory alarms or visual indication.
- This EAL is meant to satisfy NESP-007 EAL HU2.

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|---|-------------------------------------|-------------------------------|
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S6.2 (Control Room Evacuation) (SITE AREA EMERGENCY)

Evacuation of the Control Room has been INITIATED and all of the following have NOT been performed within 15 minutes of the evacuation as determined by the Shift Manager/Emergency Director:

- protected supply of electrical power established or available
- protected supply of RCS make-up, letdown and seal injection is established
- primary to secondary heat transfer is established and controlled.

APPLICABILITY: All Plant Conditions

BASIS:

- The level of safety of the plant is further degraded and thus warrants additional Emergency Organization personnel to assist in evaluation and event mitigation. This level of commitment is essential for the protection of the health and safety of the public.
- The concern of this EAL is when the plant is above Cold Shutdown to maintain plant safety by following ATOG guidance.
- When the plant is in Cold Shutdown or colder the main concern is for keeping the core cooled.
- This EAL is meant to satisfy NESP-007 EAL HS2.

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|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number ETIP-TMI-.01 |
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A6.2 (Control Room Evacuation) (ALERT)
Evacuation of the Control Room is initiated.

APPLICABILITY: All Plant Conditions

BASIS:

- The level of safety of the plant is uncertain and thus warrants activation of the Emergency Organization to assist in evaluation and event mitigation.
- Control Room evacuation warrants additional support, monitoring, and direction from the TSC and other facilities essential for event mitigation.
- This EAL is meant to satisfy NESP-007 EAL HA5.

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|---|-------------------------------------|-------------------------------|
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EXHIBIT 6

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A6.3 (Hazardous Gas) (ALERT)

Report (On-Site personnel) that flammable/toxic gases have been detected within the Vital Area in concentrations that are life threatening and will affect the safe operation of the plant.

APPLICABILITY: All Plant Conditions

BASIS:

Hazardous materials (toxic/flammable) inside the Vital Area places operation of equipment and safety of personnel in great danger, substantially degrading the safety of the plant.

- Detectable concentrations of toxic/flammable gases inside the Vital Area could be life threatening (Plant personnel) and affect the safe operation of the plant.
- Additionally, it could jeopardize the ability to establish and maintain Cold Shutdown.
- This EAL is meant to satisfy NESP-007 EAL HA3.

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|--|---|-----------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
| Title Emergency Classification and Basis | Revision No. 7 | |

EXHIBIT 6

Page 7 of 12

U6.3 (Hazardous Gas) (UNUSUAL EVENT)

Report (On-Site personnel or Off-Site) that flammable/toxic gases could enter within the Site Area potentially affecting normal plant operation or requiring evacuation per DOT Emergency Response.

APPLICABILITY: All Plant Conditions

BASIS:

Certain Hazardous Materials, if released off-site, can impact plant personnel safety and equipment operation on-site.

- Concentrations of toxic/flammable gases are projected on the site because the site is within an evacuation zone. Hazardous materials evacuation zone guidance is published by the Department of Transportation (DOT). Environmental Controls has a current document with the recommended evacuation zones for all hazardous materials.
- Hazardous materials (toxic/flammable) may impact the safety and health of plant personnel.
- Hazardous materials could impact the operation of safety related equipment, potentially degrading in the level of safety of the plant.
- This EAL is meant to satisfy NESP-007 EAL HU3.

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| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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EXHIBIT 6

Page 8 of 12

A6.4 (Equipment Failure) (ALERT)

Unanticipated NON Bomb explosion detected inside the Vital Area.

APPLICABILITY: All Plant Conditions

BASIS:

This EAL addresses violent unconfined combustion or a catastrophic failure of pressurized equipment.

- Evaluate, as a minimum, the following areas (TMI-1) for damage based on the explosion location: Reactor Building, Intake Building, Intermediate Building, Control Tower, Aux. and Fuel Handling Building, and Diesel Generator Building.
- Damage to equipment or structures inside Vital Area that could impact on the ability of the plant to protect the health and safety of the public.
- This EAL is meant to satisfy NESP-007 EAL HA2.

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| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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EXHIBIT 6

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U6.4 (Equipment Failure) (UNUSUAL EVENT)

Unanticipated NON Bomb explosion detected inside the Protected Area.

APPLICABILITY: All Plant Conditions

BASIS:

This EAL addresses violent unconfined combustion or a catastrophic failure of pressurized equipment.

- This EAL does not attempt to assess the actual magnitude of damage.
- The occurrence of the explosion with reports of damage is sufficient for event declaration.
- Potential damage to equipment or structures inside Protected Area that could impact on the safe shutdown of the plant.
- This EAL is meant to satisfy NESP-007 EAL HU1.

| | | |
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EXHIBIT 6

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U6.5 (Turbine Failure) (UNUSUAL EVENT)
 1) Turbine failure resulting in casing penetration
OR
 2) Damage to generator seals

 (1 OR 2)

APPLICABILITY: Power Operations, Hot Standby, Hot Shutdown

BASIS:

- The hazard of projectiles from the turbine and penetration of the casing decreases the level of plant safety.
- An additional concern is for the release of combustible fluids (lubricating oils) and gases (hydrogen).
- Any fires resulting from this event would be classified via U6.1 or A6.1.
- This EAL is meant to satisfy NESP-007 EAL HU1.

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| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
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EXHIBIT 6

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A6.6 (Vehicle Crash) (ALERT)

Vehicle crash inside the Vital Area (Equipment/Structure damage).

APPLICABILITY: All Plant Conditions

BASIS:

- Damage to equipment or structures inside Vital Area that could impact the ability of the plant to protect the health and safety of the public.
- This EAL is limited to vehicles (train, airplane, helicopter, etc.) which can inadvertently enter the Vital Area. Other vehicles entering the Vital Area by crashes are covered under Security events.
- This EAL is meant to satisfy NESP-007 EAL HA1.

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|---|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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EXHIBIT 6

Page 12 of 12

U6.6 (Vehicle Crash) (UNUSUAL EVENT)

Vehicle crash inside the Protected Area (Potential Equipment/Structure Damage).

APPLICABILITY: All Plant Conditions

BASIS:

- Potential damage to equipment or structures inside Protected Area that could impact the safe shutdown of the plant.
- The EAL is limited to those vehicles (train, airplane, helicopter, etc.) which can inadvertently enter the Protected Area. Other vehicles entering the Protected Area by crashes are covered under Security events.
- This EAL is meant to satisfy NESP-007 EAL HU1.

7.0 SECURITY

| GENERAL EMERGENCY | SITE AREA EMERGENCY | ALERT | UNUSUAL EVENT |
|--|--|--|--|
| <p>G7.1 (Security) Security Event resulting in inability to reach or maintain Cold Shutdown as indicated by:</p> <ul style="list-style-type: none"> 1) Loss of physical control of the Control Room. <p>OR</p> <ul style="list-style-type: none"> 2) Loss of physical control of remote shutdown capability. <p>APPLICABILITY: All Plant Conditions (BASIS Page 74)</p> | <p>S7.1 (Security) Security Event in the VA indicated by:</p> <ul style="list-style-type: none"> 1) Bomb explosion inside the VA. <p>OR</p> <ul style="list-style-type: none"> 2) Hostile force inside the VA. <p>APPLICABILITY: All Plant Conditions (BASIS Page 75)</p> | <p>A7.1 (Security) Security Event degrading Plant safety indicated by:</p> <ul style="list-style-type: none"> 1) Bomb discovered inside the VA. <p>OR</p> <ul style="list-style-type: none"> 2) Hostile force inside the PA. <p>APPLICABILITY: All Plant Conditions (BASIS Page 76)</p> | <p>U7.1 (Security) Confirmed Security Event indicated by:</p> <ul style="list-style-type: none"> 1) Bomb discovered inside the PA. <p>OR</p> <ul style="list-style-type: none"> 2) Hostile force inside the OCA. <p>APPLICABILITY: All Plant Conditions (BASIS Page 77)</p> |

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EXHIBIT 7

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G7.1 (Security) (GENERAL EMERGENCY)

Security Event resulting in loss of ability to reach and maintain Cold Shutdown as indicated by:

- 1) Loss of physical control of the control room due to security event.
- OR**
- 2) Loss of physical control of remote shutdown capability due to security event.

(1 OR 2)

APPLICABILITY: All Plant Conditions

BASIS:

This class of security event represents conditions under which a hostile force has taken physical control of vital area(s) required to reach and maintain Cold Shutdown.

- A hostile force is defined as one or more persons that have entered the site, without the company's permission, for the purpose of committing an illegal act against the plant.
- Bomb explosions in the control room or remote shutdown control areas are included in this EAL. Bomb damage represents loss of physical control in the effected area.
- This EAL satisfies NESP-007 General Emergency HG1.

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| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-01 |
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EXHIBIT 7

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S7.1 (Security) (SITE AREA EMERGENCY)

Security Event in a Vital Area (VA) as indicated by:

- 1) Bomb device exploding inside the Vital Area (VA).
- OR**
- 2) Hostile Force inside the Vital Area (VA).

(1 **OR** 2)

APPLICABILITY: All Plant Conditions

BASIS:

This class of security event represents an escalated threat to plant safety above that contained in the Alert.

- A hostile force is defined as one or more persons that have entered the site, without the company's permission, for the purpose of committing an illegal act against the plant.
- A civil disturbance that penetrates the Vital Area can be considered a hostile force.
- A bomb exploding inside the Vital Area represents a significant threat to plant safety. Equipment essential for protection of the health and safety of the public is located here. Damage to this equipment raises a doubt on insuring the health and safety of the public. Timely classification activates assistance to assess the magnitude of damage and mitigate the consequences.
- This EAL satisfies NESP-007 Site Area Emergency HS1.

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EXHIBIT 7

Page 4 of 5

A7.1 (Security) (ALERT)

Security Event degrading level of plant safety as indicated by:

- 1) Bomb device discovered inside a Vital Area (VA).
- OR**
- 2) Hostile Force inside the Protected Area (PA).

(1 **OR** 2)

APPLICABILITY: All Plant Conditions

BASIS:

This class of security event represents an escalated threat to plant safety above that contained in the Unusual Event.

- A hostile force is defined as one or more persons that have entered the site, without the company's permission, for the purpose of committing an illegal act against the plant.
- A civil disturbance that penetrates the Protected Area can be considered a hostile force.
- A bomb inside the Vital Area represents a significant threat to plant safety even though it has not exploded. A Vital Area is where equipment essential for protection of the health and safety of the public is located. Damage to this equipment places a greater risk on insuring the health and safety of the public.
- This EAL satisfies NESP-007 Alert HA-4.

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EXHIBIT 7

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U7.1 (Security) (UNUSUAL EVENT)

Confirmed Security Event which represents a potential degradation in the level of safety of the plant as indicated by:

- 1) Bomb device discovered inside the Protected Area (PA).
- OR**
- 2) Hostile Force inside the Owner Controlled Area (OCA).

(1 OR 2)

APPLICABILITY: All Plant Conditions

BASIS:

This is based upon the TMI Physical Security Contingency Plan.

- A hostile force is defined as one or more persons that have entered the site, without the company's permission, for the purpose of committing an illegal act against the plant.

A civil disturbance that penetrates the Owner Controlled Area can be considered a hostile force.
- A bomb inside the Protected Area represents a threat to plant safety even though it has not exploded. The threat to the safety of the plant is by damaging equipment or employees responsible for plant operations and maintenance.

NOTE

Security events that do not represent potential degradation in the level of safety of the plant not included in the EAL are still reported under 10 CFR 73.71 or 10 CFR 50.72.

- This EAL satisfies NESP-007 Unusual Event HU-4.

8.0 JUDGEMENT

| GENERAL EMERGENCY | SITE AREA EMERGENCY | ALERT | UNUSUAL EVENT |
|--|---|--|--|
| <p>G8.1 (Judgement) Actual or imminent substantial core damage and potential uncontrolled release that exceeds EPA PAG levels at the Site Area Boundary (SM/ED judgement)</p> <p>APPLICABILITY: All Plant Conditions (Basis Page 79)</p> | <p>S8.1 (Judgement) Actual or likely failures of functions needed for the protection of the public (SM/ED judgement)</p> <p>APPLICABILITY: All Plant Conditions (Basis Page 80)</p> | <p>A8.1 (Judgement) Actual or potential substantial degradation of the level of safety of the plant (SM/ED judgement)</p> <p>APPLICABILITY: All Plant Conditions (Basis Page 81)</p> | <p>U8.1 (Judgement) Potential degradation of the level of safety of the plant (SM/ED judgement)</p> <p>APPLICABILITY: All Plant Conditions (BASIS Page 82)</p> |

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| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.01 |
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EXHIBIT 8

Page 2 of 5

G8.1 (Judgement) (GENERAL EMERGENCY)

Other conditions existing which may indicate actual or imminent substantial core damage and potential uncontrolled radionuclide release such that the EPA PAG levels are exceeded at the Site Area Boundary as determined by the judgement of the Shift Manager/Emergency Director.

NOTE

In exercising the judgement as to the need for declaring a General Emergency, uncertainty concerning the status of plant functions needed for the protection of the public, the length of time the uncertainty exists, and the prospects for resolution of ambiguities in a reasonable time period is sufficient basis for declaring a General Emergency.

APPLICABILITY: All Plant Conditions

BASIS:

This provides the Shift Manager/Emergency Director the flexibility to declare an event, within the bounds of accident analysis, when it is believed to be necessary based on conditions not specifically covered by an EAL.

- The inability to monitor the parameters to make a proper EAL classification.
- EAL criteria is not presently met, but there are no foreseen possible actions that would prevent meeting or exceeding the criteria.
- A Fission Product Barrier may be assumed to be lost if there are no indicators available to determine its status.
- If it is known or expected that an action can not be taken to prevent exceeding Fission Product Barrier criteria, the Fission Product Barrier is to be regarded as LOST.
- This relies heavily on the judgement of the Shift Manager/Emergency Director and it is not feasible to give specific guidance.
- This EAL satisfies NESP-007 Alert HG2 item 1.

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EXHIBIT 8

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S8.1 (Judgement) (SITE AREA EMERGENCY)

Other conditions existing which may indicate an actual or likely failure of plant functions needed for the protection of the public as determined by the judgement of the Shift Manager/Emergency Director.

NOTE

In exercising the judgement as to the need for declaring a Site Area Emergency, uncertainty concerning the status of plant functions needed for the protection of the public, the length of time the uncertainty exists, and the prospects for resolution of ambiguities in a reasonable time period is sufficient basis for declaring a Site Area Emergency.

APPLICABILITY: All Plant Conditions

BASIS:

This provides the Shift Manager/Emergency Director the flexibility to declare an event, within the bounds of accident analysis, when it is believed to be necessary based on conditions not specifically covered by an EAL.

- The inability to monitor the parameters to make a proper EAL classification.
- EAL criteria is not presently met, but there are no foreseen possible actions that would prevent meeting or exceeding the criteria.
- A Fission Product Barrier may be assumed to be lost if there are no indicators available to determine its status.
- If it is known or expected that an action can not be taken to prevent exceeding Fission Product Barrier criteria, the Fission Product Barrier is to be regarded as LOST.
- This relies heavily of the judgement of the Shift Manager/Emergency Director and it is not feasible to give specific guidance.
- This EAL satisfies NESP-007 Alert HS3 item 1.

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EXHIBIT 8

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A8.1 (Judgement) (ALERT)

Other conditions existing which may indicate an actual or potential substantial degradation in the level of safety of the plant as determined by the judgement of the Shift Manager/Emergency Director.

NOTE

In exercising the judgement as to the need for declaring an Alert, uncertainty concerning the safety of the plant, the length of time the uncertainty exists, and the prospects for resolution of ambiguities in a reasonable time period is sufficient basis for declaring an Alert.

APPLICABILITY: All Plant Conditions

BASIS:

This provides the Shift Manager/Emergency Director the flexibility to declare an event, within the bounds of accident analysis, when it is believed to be necessary based on conditions not specifically covered by an EAL.

- The inability to monitor the parameters to make a proper EAL classification.
- EAL criteria is not presently met, but there are no foreseen possible actions that would prevent meeting or exceeding the criteria.
- A Fission Product Barrier may be assumed to be lost if there are no indicators available to determine its status.
- If it is known or expected that an action can not be taken to prevent exceeding Fission Product Barrier criteria, the Fission Product Barrier is to be regarded as LOST.
- This EAL relies heavily on the judgement of the Shift Manager/Emergency Director, it is difficult to give very specific guidance.
- This EAL satisfies NESP-007 Alert HA6.

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EXHIBIT 8

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U8.1 (Judgement) (UNUSUAL EVENT)

Other conditions existing which may indicate a potential degradation in the level of safety of the plant as determined by the judgement of the Shift Manager/Emergency Director.

NOTE

In exercising the judgement as to the need for declaring an Unusual Event, uncertainty concerning the safety of the plant, the length of time the uncertainty exists, and the prospects for resolution of ambiguities in a reasonable time period is sufficient basis for declaring an Unusual Event.

APPLICABILITY: All Plant Conditions

BASIS:

This provides the Shift Manager/Emergency Director the flexibility to declare an event when it is believed to be necessary based on conditions not specifically covered by an EAL. Since this relies heavily of the judgement of the Shift Manager/Emergency Director, it is difficult to give very specific guidance.

- The inability to monitor the parameters to make a proper EAL classification.
- EAL criteria is not presently met, but there are no foreseen possible actions that would prevent meeting or exceeding the criteria.
- However, examples of conditions that may require the judgement of the Shift Manager/Emergency Director are as follows:
 - Aircraft crash on-site (not in the Protected Area)
 - Train derailment on-site
 - Explosion near the site which may adversely affect normal site activities
 - Uncontrolled RCS cooldown due to secondary depressurization

This list is NOT intended to be all inclusive or limit the discretion of the Shift Manager/Emergency Director.

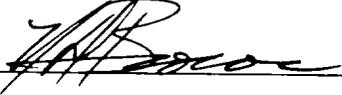
- This EAL satisfies NESP-007 Unusual Event HU5 item 1.

FOR INFORMATION ONLY

| | | |
|---------------------------------------|---|--------------------------------------|
| AmerGen | TMI Emergency Plan Implementing Document | Number EPIP-TMI-.02 |
| Title Emergency Direction | | Revision No. 14 |
| Applicability/Scope | USAGE LEVEL 1 | Effective Date OCT 20 2000 |
| TMI Division | | |
| This document is within QA plan scope | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| Safety Reviews Required | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

List of Effective Pages

| <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 | 14 | 21 | 14 | 41 | 14 | 61 | 14 |
| 2 | 14 | 22 | 14 | 42 | 14 | | |
| 3 | 14 | 23 | 14 | 43 | 14 | | |
| 4 | 14 | 24 | 14 | 44 | 14 | | |
| 5 | 14 | 25 | 14 | 45 | 14 | | |
| 6 | 14 | 26 | 14 | 46 | 14 | | |
| 7 | 14 | 27 | 14 | 47 | 14 | | |
| 8 | 14 | 28 | 14 | 48 | 14 | | |
| 9 | 14 | 29 | 14 | 49 | 14 | | |
| 10 | 14 | 30 | 14 | 50 | 14 | | |
| 11 | 14 | 31 | 14 | 51 | 14 | | |
| 12 | 14 | 32 | 14 | 52 | 14 | | |
| 13 | 14 | 33 | 14 | 53 | 14 | | |
| 14 | 14 | 34 | 14 | 54 | 14 | | |
| 15 | 14 | 35 | 14 | 55 | 14 | | |
| 16 | 14 | 36 | 14 | 56 | 14 | | |
| 17 | 14 | 37 | 14 | 57 | 14 | | |
| 18 | 14 | 38 | 14 | 58 | 14 | | |
| 19 | 14 | 39 | 14 | 59 | 14 | | |
| 20 | 14 | 40 | 14 | 60 | 14 | | |

| | Signature | Date |
|-----------------|--|----------|
| Originator | N. D. Brown  | 10/9/00 |
| Procedure Owner | /s/ N. D. Brown | 09/11/00 |
| PRG | /s/ E. R. Frederick for J. S. Schork | 09/13/00 |
| Approver | /s/ N. D. Brown | 10/03/00 |

| | | |
|----------------------------|---|------------------------------|
| | TMI Emergency Plan Implementing Document | Number EPIP-TMI-02 |
| Emergency Direction | Revision No. 14 | |

1.0 **PURPOSE**

This procedure provides guidance for the Emergency Director, Emergency Director Assistant and Operations Coordinator. The guidance is to ensure that resources are mobilized to mitigate the consequences of an accident. The procedure verifies actions are initiated to protect the health and safety of the public following determination that an EAL has been exceeded which warrants an emergency declaration.

2.0 **APPLICABILITY/SCOPE**

This procedure applies to all Emergency Plan Implementations at TMI.

3.0 **DEFINITIONS**

- a. Refer to EPIP-TMI-.01, Emergency Classification, Section 3.0
- b. Optional - This implies "as necessary" or "if required" for a stated action.

4.0 **RESPONSIBILITIES**

- a. The Emergency Director is responsible for the implementation of this procedure.
- b. The Emergency Director is vested with certain authority and responsibility that may not be delegated. Included are:

NOTE

The following items are numbered for reference only, performance in sequence is not required or expected.

- 1. Approving and directing official notifications to offsite agencies.
- 2. Approving information releases to the media.

NOTE

ED/ESD approval is not required for public announcement of formal emergency declarations and changes of emergency classifications.

- 3. Approving Protective Action Recommendation
 - 3.1 If possible, personally conveying appropriate Protective Action Recommendations to the Senior Official at the State EOC.

| | | |
|----------------------------|---|-------------------------------|
| | TMI Emergency Plan Implementing Document | Number EPIP-TMI-.02 |
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- 4. Brief the NRC Site Team Leader
 - 4.1 Serve as the point of official contact for TMI for receiving NRC directives.

NOTE

NRC will interface with other TMI Emergency Response personnel in mitigating the consequences of the emergency.

- 5. Classification of an emergency event.
- 6. Directing onsite evacuation at the Alert or lower level emergency classification based on potential hazard to non-essential personnel.
- 7. Authorizing emergency workers to exceed 10CFR20 Radiation Exposure Limits.

NOTE

This is in accordance with EPA-400 Guidance.

- 8. Approving and directing deviation from established operating procedures, emergency operating procedures, normal equipment operating limits, EPIP's, Safeguards Measures, License Conditions or technical specifications during attempts to control the plant during an emergency or a declared National Security Emergency.

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| | TMI Emergency Plan Implementing Document | Number EPIP-TMI-.02 |
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NOTE 1

For National Security Emergencies, the following conditions must be met:

- a) When this action is immediately needed to implement National Security Objectives as designated by the National Command Authority through the NRC, and
- b) No action consistent with licensee conditions and technical specifications that can meet National Security Objectives is immediately apparent.

NOTE 2

In essence, no one below a licensed SRO individual can make the decision to depart from the License in accordance with 10 CFR 50.54 (X) and (Y). Invoking this option requires that the deviation is documented and the NRC is notified in accordance with 10 CFR 50.72. However, if a more senior manager is present (i.e., Emergency Director) even though he does not possess an SRO License the decision authority would be passed to him as a higher authority in the chain of command. The licensed SRO shall provide his best judgment to the ED for his consideration. Beyond that the SRO shall follow the orders of his supervisor.

It is imperative that the Emergency Director consult to the fullest extent practicable with the SRO and the technical staff in arriving at a decision to deviate from prescribed procedures. However, Emergency Operating Procedures should not generally be deviated from. If the decision is made to depart from license conditions, safeguards measures or Technical Specifications, notify the NRC before taking such action, if time permits and if not then within one hour.

- c. When the designated Emergency Support Director (ESD) arrives at the EOF and declares himself to be ready to assume that role, he will assume overall responsibility for management of the response to the accident and recovery operations.
 - With activation of the ESD function, the ESD specifically will assume decision authority for Items 2., 3., 3.1, 4. and 4.1 and may assume Item 1. if requested by the Emergency Director (ED). However, decision authority for Items 5., 6., 7., and 8. will be retained by the Emergency Director (ED).
 - Decisions on all of the listed actions normally will result from close and continuous consultation between the ESD and the ED and it is the responsibility of the ED to ensure the ESD is provided with the necessary information to arrive at timely and appropriate decisions.
 - In the special case of event classification, the ESD shall retain the prerogative to overrule the ED if, in the judgement of the ESD, uncertainty or other considerations exist to the extent warranting classification of a higher level of emergency than that classified by the ED.

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- The ESD can also overrule the ED to direct a site evacuation at the alert or lower level emergency, if he deems it prudent.
- d. The ED (Vice President TMI-Unit 1 or designee, ESD, Chief Nuclear Officer TMI Unit 1) is responsible for authorizing personnel to work in the plant (ECC, OSC, TSC) during an emergency if they are not Fit For Duty (i.e., $\geq 0.04\%$ BAC).

5.0 PROCEDURE

- 5.1 Following the determination that a condition in EPIP-TMI-.01, Emergency Classification, has been reached or exceeded warranting declaration of an emergency, the Shift Manager/Emergency Director shall ensure that Exhibit 1, Emergency Director's Checklist is adhered to throughout the course of the emergency.
- a. Exhibit 4, ED/ESD Turnover Checklist, is to be used to enhance the transition from On-Shift to Initial Response ED duties.
 - Exhibit 4, ED/ESD Turnover Checklist is to be used by the ED to turnover duties to the ESD.
 - b. Exhibit 5, ED Briefing Sheet, SHALL be used to conduct periodic briefings.
 - c. Exhibit 8, Protective Action Recommendation Logic Diagram, SHALL be used as guidance for development of a protective action recommendation.
 - Review of the Logic Diagram SHALL start at the declaration of a Site Area Emergency.
- 5.2 The Operations Coordinator will assist the Emergency Director in accident mitigation.
- a. The Operations Coordinator will follow, as appropriate, Exhibit 9, Operations Coordinator Checklist.
- 5.3 The Emergency Director Assistant will assist the Emergency Director in accident mitigation.
- a. The Emergency Director Assistant will follow, as appropriate, Exhibit 10, Emergency Director Assistant Checklist.

6.0 REFERENCES

- a. TMI Nuclear Emergency Plan (AP 1092)
- b. TMI Emergency Plan Implementing Documents

7.0 EXHIBITS

- 7.1 Exhibit 1, Emergency Director's Checklist
- 7.2 Exhibit 2, Emergency Report Form - TMI
- 7.3 Exhibit 3, EAL Descriptions

| | | |
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- 7.4 Exhibit 4, ED/ESD Turnover Checklist
- 7.5 Exhibit 5, Emergency Director Briefing Sheet
- 7.6 Exhibit 6, ECC Accountability
- 7.7 Exhibit 7, Emergency Director Authorization Form for Deviations From Requirements
- 7.8 Exhibit 8, Protective Action Recommendation Logic Diagram
- 7.9 Exhibit 9, Operations Coordinator Checklist
- 7.10 Exhibit 10, Emergency Director Assistant Checklist
- 7.11 Exhibit 11, Site Evacuation Message
- 7.12 Exhibit 12, PI REP-ECC Checklist
- 7.13 Exhibit 13, Press Release Guidance
- 7.14 Exhibit 14, Site Access Policy for Media during Emergencies
- 7.15 Exhibit 15, TMI/NRC Emergency Response Interface Criteria

EXHIBIT 1

EPIP-TMI-02
Revision 14
Page 1 of 9

1.0 Emergency Conditions
 This is _____ This is _____ This is _____ This is _____
 I have declared an UNUSUAL I have declared an ALERT per EAL I have declared a SITE AREA I have declared a GENERAL
 EVENT per EAL _____ at _____ hours and I _____ at _____ hours and I am assuming the _____
 am assuming the duties of Emergency duties of Emergency duties of Emergency duties of Emergency
 Director Director Director Director

| UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|------------------|-------|------------------------|----------------------|
|------------------|-------|------------------------|----------------------|

1.1 Immediately complete Part 1 of an Emergency Report Form (ERF) using EP Notification for Lotus Notes.

If Lotus Notes is not available THEN use a 4-part form as follows:

- Use Exhibit 3 for EAL Number and Title in the Event Description area of the form
- Include plant status (e.g., Power Operations, Hot Shutdown, etc.)

NOTE:

Consider activating the Emergency Support Organization, Call Out Level 3, if an **ALERT** is declared.

1.1.1 Direct the ECC Communications Coordinator to perform the following:

- Initiate CALL OUT and NOTIFICATION using Page 1 of the Emergency Report Form
- Initiate CONTACT via an ECC Communicator using Page 2 of the Emergency Report Form.

1.1.2 Consult BRIEFLY with the RAC and SECURITY (if applicable) for limitations on Mustering and Evacuation of non-essential personnel, before completing the ERF.

- Direct that Page 4 of the ERF is read over the PLANT PAGE SYSTEM and RADIO to alert on-site personnel of the emergency

| | | | |
|-------|-------|-------|-------|
| _____ | _____ | _____ | _____ |
| _____ | _____ | _____ | _____ |

NOTE

- Off-site agency NOTIFICATION **SHOULD** be started within 5 minutes of event declaration and **SHALL** be made within 15 minutes of event declaration.
- INITIAL** completion of steps or mark N/A in accordance with the applicable level of emergency.
- Plant Page announcements and CONTACT **SHOULD** be performed in parallel or immediately following off-site notifications.
- The off-site notification process may be assigned TEMPORARILY to a qualified communicator that is not a CRO, when the CRO's attention is required for plant operations.
 - Such reassignment **SHOULD** only occur under the most extreme conditions for initial plant stabilization and **ONLY** if a qualified alternative is already present in the Control Room
 - The CRO-ECC Communications Coordinator is expected to be available to continue with notifications within 30 minutes of event declaration and **SHALL** be the individual performing the notification to the NRC on the ENS line, unless relieved by the IREO communicator.

| | UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|---|------------------|-------|------------------------|----------------------|
| 1 2 Evaluate dose projections and/or plant conditions and develop a PAR in accordance with Exhibit 8, <u>Protective Action Recommendation Logic Diagram</u> | N/A | N/A | | |
| 1 2 1 If the EOF is NOT activated, personally provide the PAR to the SENIOR person at the STATE EOC by one of the following methods: State EOC (717) 651-2011 Governor (717) 652-2148 PEMA DLM-6, Notification Line dial 37 | N/A | N/A | N/A | |

NOTE

The following steps are provided in an order likely to result in the most efficient response. However, due to the dynamic and unpredictable nature of emergencies associated with a nuclear power facility, the order of performing the steps may be modified to cope with existing conditions. Modifying the specific order of performance will have no adverse consequences. If the level of emergency escalates, stop and proceed with step 1 for the escalated condition.

| | | | | |
|--|----------|--|--|--|
| a. Direct the Security Supervisor/Coordinator (Ext. 8039) to reset the accountability system (Optional at Unusual Event, required for Alert or greater declarations). This is a ONE TIME ONLY action. Once performed it is NOT repeated. | Optional | | | |
| b. Contact the duty Emergency Director to discuss: | | | | |
| <ul style="list-style-type: none"> • Plant Status • Which members of the duty section are required to augment the emergency organization. | | | | |

| | UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|---|------------------|-------|------------------------|----------------------|
| <p>c. Implement EPIP-TMI- 05, Communications and Record Keeping</p> <ul style="list-style-type: none"> • Communications equipment operation information • Communications documentation • Implementation/Maintenance of logs <ul style="list-style-type: none"> i. Ensure applicable Operations Procedures are being implemented ii. For SECURITY Events contact the Security Coordinator (Site Protection Shift Supervisor) • Ensure Security Procedures are being implemented. • Discuss the specifics of the situation (i.e., Accountability/Muster, Emergency personnel response, radio communications, Design Basis Security Event, etc) | _____ | _____ | _____ | _____ |
| <p>d. If deviation from requirements such as procedures (beyond the flexibility provided by AP 1001G), Tech Specs, and others per ED responsibilities (4.2.8) are needed, perform the following as necessary:</p> <ul style="list-style-type: none"> • Consult management/Technical Staff if time permits. • Consider alternatives prior to deviation. • Log deviation and provide reason by using Exhibit 7. • Notify NRC before taking actions, if time permits. If not, notify the NRC within 1 hour after the deviation. <ul style="list-style-type: none"> a. Notification of the NRC is documented by using Exhibit 7, except for the condition in Step b, below b. If a Design Basis Security threat occurs, notify the NRC that deviations from the Security Plan commitments are being made in accordance with the TMI Contingency Plan. Complete Exhibit 7 as time permits | | | | |
| <p>NRC Notified _____</p> <p>Name _____ Time _____ Date _____</p> | | | | |

| | UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|----|--|-------|------------------------|----------------------|
| e | Depending on the nature of the event (Security, Fire, Chemical Hazards, or Environmental incidents) evaluate dispatching a qualified Emergency Duty Roster person to the scene for local emergency control. | | | |
| f | Direct that any ongoing normal liquid (e.g., WECST) or gaseous (e.g., WDGTS or RB purge) effluent releases that are in progress be stopped, until an assessment of their impact is performed. | | | |
| g. | If local emergency services such as fire, ambulance, or police are required | | | |
| | <ul style="list-style-type: none"> Direct the ECC Communications Coordinator to notify Dauphin County Emergency Operations Center and request the appropriate assistance. | | | |
| | <ul style="list-style-type: none"> Notify Security to begin preparations to expedite entry of responding emergency personnel. | | | |
| | <ul style="list-style-type: none"> i. Identify the gate(s) to be used ii. Identify the expected response such as fire, ambulance or police iii. Advise Security to implement EPIP-TM-19, <u>Emergency Security / Dosimetry Badge Issuance</u> | | | |
| | <ul style="list-style-type: none"> Implement EPIP-TMI-16, <u>Contaminated Injuries</u>, as necessary | | | |

| | UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|-----|---|----------|------------------------|----------------------|
| h. | If the emergency involves radiological problems, direct the Radiological Assessment Coordinator to: | | | |
| | <ul style="list-style-type: none"> Ensure implementation of EPIP-TMI- 07, <u>Activation of the RAC</u>. | | | |
| | <ul style="list-style-type: none"> Implement EPIP-TMI- 29, Exhibit 2, <u>In-Plant Rad Controls Checklist</u>. | | | |
| | <ul style="list-style-type: none"> Direct the RAC to implement EPIP-TMI- 16, <u>Contaminated Injuries</u>. If person(s) are injured or ill and are in a radiologically controlled area or are potentially contaminated | | | |
| 1.3 | Complete the <u>ED/ESD TURNOVER Checklist</u> , Exhibit 4 for all turnovers. (This is ED to ED and ED to ESD) | | | |
| a. | Verify activation of the Technical Support Center (TSC) in accordance with EPIP-TMI- 28, <u>Activation of the Technical Support Center</u> . | | | |
| | Optional | | | |
| | <ul style="list-style-type: none"> Instruct the TSC Coordinator to initiate Core Damage estimate calculations, if core damage is suspected and inform the RAC of the results | | | |
| | N/A | Optional | | |
| b. | Verify activation of the Operations Support Center (OSC) in accordance with EPIP-TMI- 29, <u>OSC Operations</u> . | | | |
| | Optional | | | |
| c. | Accountability is initiated at the declaration of a Site Area Emergency, General Emergency or at the discretion of the Emergency Director. | | | |
| | Optional | Optional | | |
| | <ul style="list-style-type: none"> If personnel are still missing 60 minutes (1 hour) after the initiation of accountability, direct the Operations Support Center Coordinator to initiate search and rescue in accordance with EPIP-TMI- 29, <u>OSC Operations</u>. | | | |
| | Optional | Optional | | |

| UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|------------------|-------|------------------------|----------------------|
|------------------|-------|------------------------|----------------------|

d Periodically (hourly or as conditions change) consult with the lead personnel:

- Obtain a completed Exhibit 5, Emergency Director Briefing Sheet from the Operations Coordinator
- Use the ED intercom. About 30 seconds before a briefing, press the "ALERT TONE" button, release and announce "Standby for an ED briefing."

Place a checkmark each time this step is completed

NOTE

The backup OSC is not equipped with an ED Intercom. If the backup OSC is manned, have the Coordinator come to the ECC for the briefing.

- Conduct the periodic briefing

Record the time each briefing is conducted.

| UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|------------------|-------|------------------------|----------------------|
|------------------|-------|------------------------|----------------------|

1.4 Press release approval refer to Exhibit 13, Press Release Guidance

NOTE

During the initial stages of an emergency, the Duty Public Information representative may request verbal approval (i.e., via telephone) of a press release. If so, ensure you are completely satisfied with the content before granting verbal approval.

1.4.1 Reviews are coordinated by the ED Assistant

- Technical
- Radiological
- Security

(SAFEGUARDS Security Events Only!)

Record the time each news release is approved.

a. If a site evacuation is anticipated, direct the ED Assistant to implement EPIP-TMI- 36, Emergency Assembly and Site Evacuation, in preparation for the evacuation.

- Direct an evacuation of non-essential personnel by private vehicle to a Remote Assembly Area (RAA) (Training Center or EOF) through the ED Assistant
- If a General Emergency was declared without escalating through a Site Area Emergency, request the Security Coord. perform a "sweep" outside the Protected Area, to ensure notification of all site personnel, in accordance with EPIP-TMI- 36, Exhibit 7.

| | UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|--|------------------|----------|------------------------|----------------------|
| | Optional | Optional | Optional | N/A |
| | Optional | Optional | | |
| | N/A | N/A | N/A | |
| | | | | |

b. Refer to Exhibit 15 for TMI/NRC Emergency Response Interface Criteria.

- Request all NRC directives in writing
- Use of Exhibit 4, ED/ESD Turnover Checklist as well as Exhibit 5, Emergency Director Briefing Sheet, will be useful for any NRC briefings.

c. If media access to the site is required, refer to Exhibit 14, "Site Access Policy for Media during Emergencies".

| | | UNUSUAL EVENT | ALERT | SITE AREA EMERGENCY | GENERAL EMERGENCY |
|-----|--|------------------|-------|------------------------|----------------------|
| 1 5 | Evaluate plant conditions in accordance with AP 1044, <u>Incident Reporting Procedure</u> and AP 1097, <u>Corrective Action Process</u> , to ensure that reporting requirements are met | _____ | _____ | _____ | _____ |
| 1 6 | Based upon assessment of plant condition, either close out the current emergency classification, escalate to a higher emergency classification or downgrade to a lower classification as follows | _____ | _____ | _____ | _____ |

NOTE

Information Notifications are made as a minimum for the following conditions:

- a. A change in plant status without a change in level of declared emergency.
- b. When an extended period of time has transpired (e.g., 2-3 hours) without any change in plant status. The purpose of this notification is to inform the off-site agencies of the status of the event.

1 6 1 Conditions exceed the emergency action levels for the current emergency classification (Refer to EPIP-TMI-.01, Emergency Classification), escalate to a higher classification. Go to the beginning of this checklist.

| | | | |
|-------|-------|-------|-------|
| _____ | _____ | _____ | _____ |
| N/A | N/A | _____ | _____ |

1 6 1 1 If the EOF is activated discuss the basis with the ESD prior to escalation to a General Emergency

NOTE

Do not de-escalate from a General Emergency.

1 6 2 Refer to EPIP-TMI-.45, Classified Emergency Termination/Recovery, and EPIP-TMI-.01, Emergency Classification, to determine if the listed criteria has been met to enter recovery, de-escalate or terminate the event for current conditions. However, the actions implemented by off-site agencies should be considered before such action is taken.

| | | | |
|-------|-------|-------|-------|
| _____ | _____ | _____ | _____ |
|-------|-------|-------|-------|

| | | |
|----------------------------|---|-------------------------------|
| | TMI Emergency Plan Implementing Document | Number EPIP-TMI-.02 |
| Emergency Direction | Revision No. 14 | |

EXHIBIT 1

Page 9 of 9

2.0 FINAL CONDITIONS

2.1 Emergency Status

a. The current emergency has been closed out since no long term recovery operations are required.

OR

b. The current emergency has been shifted to the recovery mode. implementing EPIP-TMI-.45, Classified Emergency Termination/Recovery.

2.2 At the close of the emergency, ensure that all logs, checklists, procedures and other documentation generated in the Control Room associated with the event are gathered and sent to the Emergency Preparedness Group for review and filing.

2.3 An inventory of the ECC is required to be performed by the end of the working day following the end of the event. The inventory is the responsibility of Plant Operations Director. Notify the Plant Operations Director of the need to perform the inventory in accordance with procedure, TEP-ADM-1300.01, Maintaining Emergency Preparedness.

Signature

/ Date

| | | |
|---|---|---|
|  <p>AmerGen <small>A PLCO Energy/Bechtel Energy Company</small></p> | <p>EMERGENCY REPORT FORM - TMI <i>(Press Firmly and Write Clearly)</i></p> | <p>Part 1 of 4 Call Out/Notification</p> |
| CALL OUT | | |
| (Select one) <input type="checkbox"/> LEVEL 1 Onshift (Required for Unusual Event) <input type="checkbox"/> LEVEL 2 Initial Response Emergency Organization & Onshift (Required for Alert) <input type="checkbox"/> LEVEL 3 Emergency Support Organization & Initial Response Emergency Organization & Onshift (Required for SAE & GE) | | |
| Start Here for Notifications Read message - slowly - clearly. | | |
| (Select) <input type="checkbox"/> This is a drill. This is a drill. <input type="checkbox"/> This is NOT a drill. This is NOT a drill. | | |
| Completed by Communicator This is _____ at TMI, my phone number is (Select) 944 _____ Name 948 Extension | | |
| EMERGENCY CLASSIFICATION | | |
| (Select One) <input type="checkbox"/> An Unusual Event has been declared <input type="checkbox"/> A Site Area Emergency has been declared <input type="checkbox"/> An Alert has been declared <input type="checkbox"/> A General Emergency has been declared <input type="checkbox"/> The event has been terminated | | |
| at _____ hours on _____ <i>Emergency Classification Time (24 hour clock)</i> <i>Emergency Classification Date</i> | | |
| (Select) This represents: <input type="checkbox"/> An initial Classification Status <input type="checkbox"/> An escalation in Classification Status <input type="checkbox"/> No change in Classification Status <input type="checkbox"/> A reduction in Classification Status | | |
| EVENT DESCRIPTION | | |
| (Enter EAL number, EAL title and plant status) | | |
| <hr/> <hr/> <hr/> | | |
| There is: <input type="checkbox"/> No abnormal radioactive <input type="checkbox"/> An abnormal radioactive airborne <input type="checkbox"/> An abnormal radioactive liquid release to the environment as a result of this emergency. | | |
| MUSTER/EVACUATION | | |
| ONLY if the initial event classification is a GENERAL EMERGENCY then TRANSMIT the Protective Action Recommendation (PAR) to the risk counties PROTECTIVE ACTION RECOMMENDATION (Select One) <input type="checkbox"/> EVACUATE the 5 mile radius around the plant and SHELTER the 5 to 10 mile radius around the plant <input type="checkbox"/> SHELTER the 10 mile radius around the plant (Use SHELTER ONLY option when it is clear that EVACUATION is NOT appropriate) | | |
| METEOROLOGICAL CONDITIONS | | |
| Wind direction is from _____ and the wind speed is _____ miles per hour. | | |
| (Select) <input type="checkbox"/> This is a drill. This is a drill. <input type="checkbox"/> This is NOT a drill. This is NOT a drill. | | |
| Approved - ED/ESD _____ | | |

| | | |
|---|------------------------------------|-------------------------------|
| AmerGen <small>A RECO Energy Company</small> | EMERGENCY REPORT FORM - TMI | Part 2 of 4 Contact |
| CALL OUT | | |
| <input type="checkbox"/> LEVEL 1 Onshift <input type="checkbox"/> LEVEL 2 Initial Response Emergency Organization & Onshift <input type="checkbox"/> LEVEL 3 Emergency Support Organization & Initial Response Emergency Organization & Onshift | | |
| Start Here for Contact Read Message - slowly - clearly. | | |
| <input type="checkbox"/> This is a drill. This is a drill. <input type="checkbox"/> This is NOT a drill. This is NOT a drill. | | |
| EMERGENCY CLASSIFICATION | | |
| <input type="checkbox"/> An Unusual Event has been declared <input type="checkbox"/> An Alert has been declared <input type="checkbox"/> The event has been terminated | | |
| <input type="checkbox"/> A Site Area Emergency has been declared <input type="checkbox"/> A General Emergency has been declared | | |
| at _____ hours on _____ <i>Emergency Classification Time</i> <i>Emergency Classification Date</i> | | |
| This represents: <input type="checkbox"/> An initial Classification Status <input type="checkbox"/> No change in Classification Status | | |
| <input type="checkbox"/> An escalation in Classification Status <input type="checkbox"/> A reduction in Classification Status | | |
| EVENT DESCRIPTION | | |
| There is: <input type="checkbox"/> No abnormal radioactive <input type="checkbox"/> An abnormal radioactive airborne <input type="checkbox"/> An abnormal radioactive liquid release to the environment as a result of this emergency. | | |
| <input type="checkbox"/> This is a drill. This is a drill. <input type="checkbox"/> This is NOT a drill. This is NOT a drill. | | |
| Approved: ED/ESD | | |

| | | |
|--|------------------------------------|---------------------------|
| AmerGen <small>A PECO Energy Group Company</small> | EMERGENCY REPORT FORM - TMI | Part 4 of 4 Plant Page |
| CALL OUT | | |
| (Info only) <input type="checkbox"/> LEVEL 1 Onshift <input type="checkbox"/> LEVEL 2 Initial Response Emergency Organization & Onshift <input type="checkbox"/> LEVEL 3 Emergency Support Organization & Initial Response Emergency Organization & Onshift | | |
| Turn on whelen speakers. Read message - slowly - clearly. Attention all personnel. Attention all personnel. <input type="checkbox"/> This is a drill. This is a drill. <input type="checkbox"/> This is NOT a drill. This is NOT a drill. | | |
| EMERGENCY CLASSIFICATION | | |
| <input type="checkbox"/> An Unusual Event has been declared <input type="checkbox"/> A Site Area Emergency has been declared <input type="checkbox"/> An Alert has been declared <input type="checkbox"/> A General Emergency has been declared <input type="checkbox"/> The event has been terminated | | |
| at _____ hours on _____ <i>Emergency Classification Time</i> <i>Emergency Classification Date</i> | | |
| EVENT DESCRIPTION | | |
| _____ _____ _____ | | |
| All members of the following organization(s) (Refer to Call Out Above). Report to your stations. | | |
| MUSTER/EVACUATION | | |
| <i>All non-essential personnel</i> | | |
| <input type="checkbox"/> Remain at your stations and await further instructions. <input type="checkbox"/> In radiologically controlled areas, report to the Rad-Con access point, and those outside radiologically controlled areas REPORT TO: <input type="checkbox"/> Your supervisor and await further instructions <input type="checkbox"/> Warehouse 1 <input type="checkbox"/> Warehouse 3 via _____ <input type="checkbox"/> Training Center <input type="checkbox"/> EOF via _____ using the <input type="checkbox"/> North Bridge <input type="checkbox"/> South Bridge <input type="checkbox"/> North and South Bridges <i>Assemble with your supervisor and await further instructions.</i> | | |
| RADIOLOGICAL INSTRUCTIONS | | |
| <input type="checkbox"/> No smoking, drinking, or eating until further notice. <input type="checkbox"/> Sound station emergency alarm <input type="checkbox"/> This is a drill. This is a drill. <input type="checkbox"/> This is NOT a drill. This is NOT a drill. | | |
| Repeat message. Turn off whelen speakers. | | |
| Approved - ED | | |

EXHIBIT 3

| EAL | BRIEF TITLE | EVENT DESCRIPTION |
|------|--|--|
| U1.1 | Radiological Effluent Limits Are Being Exceeded | <i>An Unusual event is declared because an abnormal release of radiation from the power plant has or will exceed 60 minutes and could lead to very low level radiation dose rates at or beyond the outer boundary of the plant site.</i> |
| U1.2 | Unexpected Radiation Readings Inside the Power Plant | <i>An Unusual Event is declared because of abnormally high radiation levels measured inside the power plant that indicates a degradation in the control of radioactive material. No abnormal releases to the environment are occurring.</i> |
| U1.3 | Liquid Radioactive Release That Exceeds Limits | <i>An Unusual Event is declared because a release of radioactive liquid that exceeds the limits of government regulations has lasted for 60 minutes or more. This event indicates a degradation in the ability to control the release of radioactive materials to the river.</i> |
| U1.4 | Low Spent Fuel Pool Level | <i>An Unusual Event is declared because of the uncontrolled leakage of water from the Spent Fuel Pool. The leakage exceeds or is expected to exceed the ability to refill the pool. No abnormal releases of radioactivity to the environment are occurring.</i> |
| U1.5 | Low Fuel Transfer Canal Level | <i>An Unusual Event is declared because of the uncontrolled leakage of water from the Fuel Transfer Canal. The leakage exceeds or is expected to exceed the ability to refill the canal. No abnormal releases of radioactivity to the environment are occurring.</i> |
| U1.6 | Fuel Clad Damage With Increased Radiation | <i>An Unusual Event is declared because of indications that there has been damage to the metal tubes that hold the nuclear fuel pellets. Increased radiation has been detected in the water that flows through the nuclear reactor. No abnormal releases of radioactivity to the environment are occurring.</i> |
| U2.1 | Potential Loss or Loss of Containment | <i>An Unusual Event is declared because of the: Potential Loss of Containment as a Fission Product Barrier. - OR – Loss of Containment as a Fission Product Barrier.</i> |
| U2.2 | Reactor Coolant System or Steam Generator Leakage | <i>An Unusual Event is declared because of: an unidentified leak (location unknown) greater than or equal to 10 gallons a minute from the Reactor Coolant System. - OR - an unidentified leak (location unknown) greater than or equal to 10 gallons a minute from the Steam Generator tubes. - OR - an identified leak (location known) greater than or equal to 25 gallons a minute from the Reactor Coolant System.</i> |
| U3.1 | A Risk of Station Blackout Exists - Backup Power Is Available | <i>An Unusual Event is declared because of the loss of all normal electrical power sources for to the power plant for more than fifteen minutes. Emergency backup power is available.</i> |
| U3.3 | Loss of "A" or "B" Plant DC Electricity For More than 15 Minutes during Cold Shutdown or Refueling Shutdown | <i>An Unusual Event is declared because of the loss of ALL of the DC (Direct Current) electrical power supply for more than fifteen minutes.</i> |

Enter the EAL number AND the Brief Title (this is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM – TMI.

EXHIBIT 3

| EAL | BRIEF TITLE | EVENT DESCRIPTION |
|--------|--|--|
| U4.1 | Unplanned Loss of Control Room Safety Indicators | <i>An Unusual Event is declared because of the unplanned loss of the majority of the control room's Safety Related Equipment alarms - or - indications. Although other non-alarming indications are available to the Control Room Operators, this situation requires increased surveillance of the safety related equipment and there is the risk that a degraded plant condition could go undetected.</i> |
| U4.1.1 | Unplanned Loss of Onsite or Offsite Communications | <i>An Unusual Event is declared because of the unplanned loss of all onsite communications capabilities. - OR – all offsite communications capabilities.</i> |
| U4.2 | Failure to Complete a Plant Shutdown or Cooldown Within the Required Time Limit | <i>An Unusual Event is declared because the required time limit to perform a plant shutdown - OR - a plant cooldown was exceeded. The Technical Specifications are the power plant's operational guidelines. A Limiting Condition for Operation (LCO) sets a specific time limit that allows continued plant operation while actions are being taken to correct the problem. If the problem cannot be corrected and the plant cannot be shut down or cooled down within the time limit, an Unusual Event must be declared.</i> |
| U5.1 | High River Water Level | <i>An Unusual Event is declared because flood waters are within a few feet of the top of the stone dike that surrounds the power plant. Water is NOT flooding onto the plant site.</i> |
| U5.2 | High Wind Speeds Near Hurricane Force | <i>An Unusual Event is declared because of Sustained Winds greater than 70 mph recorded at TMI. These winds have the potential to damage Plant Equipment.</i> |
| U5.3 | Tornado Strikes Protected Area | <i>An Unusual Event is declared because of a report that a tornado touched down inside the Protected Area of the power plant. There is the potential for damage to structures and equipment inside the Protected Area.</i> |
| U5.4 | Earthquake At Threshold Levels | <i>An Unusual Event is declared because of a minor earthquake detected at the power plant. An earthquake of this magnitude has the potential to damage some equipment, but it is not expected to affect any safety systems. The occurrence of any detectable earthquake warrants increased monitoring by the operators.</i> |
| U6.1 | Fire In The Protected Area | <i>An Unusual Event is declared because of a fire in the Protected Area of the power plant that our site Fire Brigade could not bring under control within 15 minutes of when the fire was confirmed. This fire has the potential to involve Safety Related Equipment if it spreads.</i> |
| U6.3 | Flammable / Toxic Gas That May Affect Operation | <i>An Unusual Event is declared because of the detection of flammable / toxic gas that could enter the power plant site. This gas could affect the safety and health of plant personnel and disrupt normal operation of the power plant.</i> |
| U6.4 | Unexpected Explosion In The Protected Area | <i>An Unusual Event is declared because of an unexpected explosion that caused damage inside the Protected Area of the power plant. This explosion was NOT caused by a bomb. The damage could affect the operation of the plant.</i> |

Enter the EAL number AND the Brief Title (this is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM – TMI.

EXHIBIT 3

| EAL | BRIEF TITLE | EVENT DESCRIPTION |
|-------------|--|--|
| U6.5 | Steam Turbine Damage | <i>An Unusual Event is declared because of damage to the steam turbine, including puncturing of the steel casing around the turbine or damage to the generator seals. The hazard of projectiles from the turbine and puncturing of the casing around it decreases the safety level of the plant and could affect the safety and health of plant personnel which affects the operation of the power plant.</i> |
| U6.6 | Vehicle Crash In The Protected Area | <i>An Unusual Event is declared because of a vehicle (airplane, train, helicopter, etc.) that accidentally crashed inside the Protected Area of the power plant. There is the potential for damage to structures and equipment inside the Protected Area.</i> |
| U7.1 | Confirmed Security Event | <i>An Unusual Event is declared because of a confirmed security event, which could potentially degrade the safety level of the power plant (This event involves: A bomb discovered inside the Protected Area The Protected Area includes major plant structures like the turbine and service buildings that are protected by a security fence and to which access is controlled.) - OR - A Hostile Force inside the Owner Controlled Area (The Owner Controlled Area includes the area between the perimeter chain link fence and the Protected Area).</i> |
| U8.1 | Judgment of the Shift Manager/ Emergency Director - Potential Degradation of Plant Safety | <i>An Unusual Event is declared by the Shift Manager / Emergency Director. The Shift Manager / Emergency Director has the flexibility to declare an event if conditions exist that indicate a potential decrease in the safety level of the plant. These conditions may not be specifically addressed in an emergency procedure. In this situation, the decision to declare an emergency relies on the judgment of the Shift Manager / Emergency Director.</i> |

Enter the EAL number AND the Brief Title (this is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM – TMI.

EXHIBIT 3

| EAL | BRIEF TITLE | EVENT DESCRIPTION |
|------|--|--|
| A1.1 | Radiological Effluent Limits Are Being Significantly Exceeded | <i>An Alert is declared because an abnormal release of radiation from the power plant has or will exceed 15 minutes and could lead to low level radiation dose rate at or beyond the outer fence line of the plant site.</i> |
| A1.2 | Unexpected Radiation Readings Inside the Power Plant that Affect the Safe Operation of the Plant | <i>An Alert is declared because of abnormally high radiation levels measured inside the power plant, which indicate a serious degradation in the control of radioactive material.</i> |
| A1.3 | Liquid Radioactive Release That Significantly Exceeds Limits | <i>An Alert is declared because a release of radioactive liquid that significantly exceeds the limits of government regulations has lasted for 15 minutes or more.</i> |
| A1.4 | Low Spent Fuel Pool Level With Increased Radiation Levels | <i>An Alert is declared because of the uncontrolled leakage of water from the Spent Fuel Pool with higher than normal radiation levels in the spent fuel pool area of the plant. This condition indicates a serious degradation in the control of radioactive material.</i> |
| A1.5 | Low Fuel Transfer Canal Level With Increased Radiation Levels | <i>An Alert is declared because of the uncontrolled leakage of water from the Fuel Transfer Canal with higher than normal radiation levels in the reactor building. This condition indicates a serious degradation in the control of radioactive material.</i> |
| A2.1 | Potential Loss or Loss of the Fuel Clad - OR - the Reactor Coolant System | <i>An Alert is declared because ONE Fission Product Barrier (other than Containment) has been impacted due to the: Potential Loss of the Fuel Clad Fission Product Barrier - OR - the Reactor Coolant System Fission Product Barrier. - OR - Loss of the Fuel Clad Fission Product Barrier - OR - the Reactor Coolant System Fission Product Barrier.</i> |
| A3.1 | A Risk of Station Blackout Exists – Limited Backup Power Is Available | <i>An Alert is declared because of the loss of all normal electrical power sources for the power plant for more than fifteen minutes. Only one of several sources of emergency electrical power sources is available.</i> |
| A3.2 | Prolonged Station Blackout - Greater than 15 minutes - During Cold Shutdown or Refueling Shutdown | <i>An Alert is declared because of the loss of all normal electrical power sources - AND - the loss of all emergency electrical power sources for more than fifteen minutes (a prolonged Station Blackout) during Cold Shutdown or a Refueling Shutdown.</i> |
| A4.1 | Unplanned Loss of Control Room Safety Indicators With Transient | <i>An Alert is declared because of the unplanned loss of the majority of the control room's Safety Related Equipment alarms - or – indications. - AND - The loss of other non-alarming indications. - OR - A significant change in the power plant's status is in progress. This situation requires increased surveillance of the safety related equipment in order to safely operate the power plant and there is the risk that a degraded plant condition could go undetected.</i> |

Enter the EAL number AND the Brief Title (this is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM – TMI.

EXHIBIT 3

| EAL | BRIEF TITLE | EVENT DESCRIPTION |
|------|---|---|
| A4.2 | Failure of the Reactor to Automatically Shutdown - AND - a Successful Manual Reactor Shutdown was Accomplished | <i>An Alert is declared because the Reactor Protection System that is designed to automatically shut down (trip) the reactor failed to do so. The Control Room Operators have manually shut down (tripped) the reactor, but the failure of the automatic system degrades the safety level of the power plant.</i> |
| A4.3 | Loss of All Means of Decay Heat Removal and the Nuclear fuel is Predicted to be Uncovered | <i>An Alert is declared because the operators are unable to provide sufficient cooling water to the reactor following a plant shutdown. This condition reduces the ability of the operators to keep the nuclear fuel cool and degrades the safety level of the power plant.</i> |
| A5.1 | High River Water Level Near Flood Level | <i>An Alert is declared because of flood waters that have the potential to flow over the top of the stone dike that surrounds the power plant. Portions of the plant site may be flooded. This flood has the potential to damage Safety Related Equipment.</i> |
| A5.2 | High Wind Speeds Greater Than Hurricane Force | <i>An Alert is declared because of Sustained Winds greater than 80 mph recorded at TMI. There is the potential for damage to Safety Related Equipment.</i> |
| A5.3 | Tornado Strikes Vital Area | <i>An Alert is declared because of a report that a tornado touched down and has damaged structures and equipment inside the Vital Area of the power plant. This damage could affect Safety Related Equipment.</i> |
| A5.4 | Earthquake At Operating Design | <i>An Alert is declared because of an earthquake at the power plant. An earthquake of this magnitude has the potential to damage some Safety Related Equipment that could affect the ability to protect the public's health and safety. The power plant may be shut down and increased monitoring will be performed by the operators.</i> |
| A6.1 | Fire Affecting Safety Related Equipment | <i>An Alert is declared because of a fire that has affected one of the Safety Related Equipment systems in the Vital Area. (The Vital Area includes structures where safety related equipment is located.) - OR - A fire is in the Protected Area and requires local fire company assistance. The Protected Area includes major plant structures like the turbine and service buildings that are protected by a security fence and to which access is controlled.</i> |
| A6.2 | Control Room Evacuation Initiated | <i>An Alert is declared because of the order to evacuate the Control Room. The absence of personnel in the control room can affect the safe operation of the power plant.</i> |
| A6.3 | Flammable / Toxic Gas Affects Plant Operation | <i>An Alert is declared because of life threatening concentrations of flammable / toxic gas within the Vital Area of the power plant. This presence can affect the safety of plant personnel and the operation of Safety Related Equipment. Evacuation of plant personnel is possible.</i> |

Enter the EAL number AND the Brief Title (this is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM – TMI.

EXHIBIT 3

| EAL | BRIEF TITLE | EVENT DESCRIPTION |
|------|--|--|
| A6.4 | Unexpected Explosion In The Vital Area | <i>An Alert is declared because of an unexpected explosion that caused damage inside the Vital Area of the power plant. This explosion was NOT caused by a bomb. The damage could potentially affect the ability to protect the public's health and safety.</i> |
| A6.6 | Vehicle Crash In The Vital Area | <i>An Alert is declared because of a vehicle (airplane, train, helicopter, etc.) that accidentally crashed inside the Vital Area of the power plant. The damage could affect Safety Related Equipment.</i> |
| A7.1 | Confirmed Security Event Potentially Affecting Safety Related Equipment | <i>An Alert is declared because of a confirmed security event, which degrades the safety level of the power plant. This event involves: A bomb discovered inside the Vital Area. The Vital Area includes buildings where Safety Related Equipment is located. Damage to this equipment would reduce the ability to protect the public's health and safety. - OR - A Hostile Force inside the Protected Area. The Protected Area includes major plant structures like the turbine and service buildings that are protected by a security fence and to which access is controlled.</i> |
| A8.1 | Judgment of the Shift Manager / Emergency Director – Actual Degradation of Plant Safety | <i>An Alert is declared by the Shift Manager/Emergency Director. The Shift Manager / Emergency Director has the flexibility to declare an event if conditions exist that indicate a potential substantial decrease in the safety level of the plant. These conditions may not be specifically addressed in an emergency procedure. In this situation, the decision to declare an emergency relies on the judgment of the Shift Manager / Emergency Director.</i> |

Enter the EAL number AND the Brief Title (this is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM – TMI.

EXHIBIT 3

| EAL | BRIEF TITLE | EVENT DESCRIPTION |
|------|---|--|
| S1.1 | High Radiological Doses at the Boundary of the Power Plant | <i>A Site Area Emergency is declared because an abnormal release of radiation from the power plant could lead to significant doses of radiation at the boundary of the power plant.</i> |
| S2.1 | Potential Loss or Loss of the Fuel Clad – AND- Potential Loss or Loss of the Reactor Coolant System | <i>A Site Area Emergency is declared because TWO of the Fission Product Barriers have been impacted due to the: Loss of the Fuel Clad Fission Product Barrier - AND - the Potential Loss of the Reactor Coolant System Fission Product Barrier. - OR - Potential Loss of the Fuel Clad Fission Product Barrier - AND - the Potential Loss of the Reactor Coolant System Fission Product Barrier. - OR – Potential Loss of the Fuel Clad Fission Product Barrier - OR – the Potential Loss of the Reactor Coolant System Fission Product Barrier - AND - the Loss of Any Other Fission Product Barrier.</i> |
| S3.1 | Prolonged Station Blackout - Greater than 15 Minutes | <i>A Site Area Emergency is declared because of the loss of all normal electrical power sources for the power plant for more than fifteen minutes – AND - the loss of all emergency electrical power sources for more than fifteen minutes. This is called a Station Blackout.</i> |
| S3.3 | Loss of All Plant DC Electricity For More than 15 Minutes when the plant is not in Cold Shutdown or Refueling Shutdown | <i>A Site Area Emergency is declared because of the loss of all DC (Direct Current) electrical power for more than fifteen minutes.</i> |
| S4.1 | Unplanned Loss of All Control Room Safety Indicators With Transient | <i>A Site Area Emergency is declared because of the unplanned loss of all Safety Related Equipment indications and alarms - AND - A significant change in the power plant's status is in progress. The control room staff is unable to adequately monitor the systems necessary to safely control the power plant and insure protection of the public's health and safety.</i> |
| S4.2 | Failure of the Reactor to Automatically Shutdown - AND - a Manual Reactor Shutdown could not be Accomplished | <i>A Site Area Emergency is declared because the Reactor Protection System that is designed to automatically shut down (trip) the reactor failed to do so AND the Control Room Operators were unable to manually shut down (manually trip) the reactor from the control room. This condition reduces the ability of the operators to control the power plant and creates conditions that could lead to damage of the nuclear fuel or the steel reactor vessel and associated piping. This condition impacts the ability to protect the health and safety of the public.</i> |
| S4.3 | Loss of All Means of Decay Heat Removal - AND – Indications that the Nuclear fuel is Uncovered | <i>A Site Area Emergency is declared because the operators are unable to provide sufficient cooling water to the reactor following a plant shutdown – AND - the increased heat has caused the water in the reactor to boil and uncover the fuel. This condition reduces the ability of the operators to keep the nuclear fuel cool, degrades the safety level of the power plant and decreases the ability to protect the public's health and safety.</i> |

Enter the EAL number AND the Brief Title (this is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM – TMI.

EXHIBIT 3

| EAL | BRIEF TITLE | EVENT DESCRIPTION |
|-------------|---|--|
| S4.4 | Loss of Both Methods Needed to Maintain the Nuclear Reactor in Hot Shut Down | <i>A Site Area Emergency is declared because of the loss of the ability to cool the reactor after it is shut down. This condition reduces the ability of the operators to keep the nuclear fuel cool and degrades the safety level of the power plant and the ability to protect the public's health and safety.</i> |
| S6.2 | Control Room Evacuation Completed Without Complete Plant Control | <i>A Site Area Emergency is declared because of the evacuation of the Control Room - AND - the inability to confirm effective cooling of the nuclear fuel within 15 minutes. The absence of personnel in the control room and the lack of effective cooling of the nuclear fuel can affect the operation of Safety Related Equipment and the ability to protect the public's health and safety.</i> |
| S7.1 | Confirmed Security Event Affecting Safety Related Equipment | <i>A Site Area Emergency is declared because of a confirmed security event that degrades the safety level of the power plant and the ability to protect the public's health and safety. This event involves: A bomb that has exploded inside the Vital Area. The Vital Area includes buildings where Safety Related Equipment is located. Damage to this equipment would reduce the ability to protect the public's health and safety. - OR - A Hostile Force inside the Vital Area.</i> |
| S8.1 | Judgment of the Shift Manager / Emergency Director – Actual Failures of Safety Systems | <i>A Site Area Emergency is declared by the Shift Manager / Emergency Director. The Shift Manager / Emergency Director has the flexibility to declare an event if conditions exist that indicate the likely or actual major failure of plant functions needed to protect the public's health and safety. These conditions may not be specifically addressed in an emergency procedure. In this situation, the decision to declare an emergency relies on the judgment of the Shift Manager / Emergency Director.</i> |

Enter the EAL number AND the Brief Title (this is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM – TMI.

EXHIBIT 3

| EAL | BRIEF TITLE | EVENT DESCRIPTION |
|------|---|--|
| G1.1 | High Radiological Doses at the Boundary of the Power Plant that Exceed Protective Action Guideline (PAG) Limits | <i>A General Emergency is declared because an abnormal release of radiation from the power plant that could lead to high doses of radiation at the boundary of the power plant. This condition may require that protective actions be implemented for members of the public living around Three Mile Island.</i> |
| G2.1 | Loss of ANY TWO of the Fission Product Barriers - AND - the Potential Loss of the third | <i>A General Emergency is declared because TWO of the Fission Product Barriers have been Lost and there is at least the Potential Loss of the third barrier.</i> |
| G3.1 | Prolonged Station Blackout - Greater than 4 hours | <i>A General Emergency is declared because of the loss of all normal electrical power sources for the power plant for more than four hours - AND - the loss of all emergency electrical power sources for more than four hours (a prolonged Station Blackout) - AND - the overheating of the nuclear fuel.</i> |
| G4.2 | Failure of the Reactor to Automatically Shutdown - AND - a Manual Reactor Shutdown could not be Accomplished - AND - Operators are Unable to Cool the Nuclear fuel | <i>A General Emergency is declared, because the Reactor Protection System that is designed to automatically shut down (trip) the reactor failed to do so AND, the Control Room Operators were unable to manually shut down (manually trip) the reactor from the control room AND, the operators are unable to cool the nuclear fuel.</i> |
| G7.1 | Confirmed Security Event Loss of Plant Control | <i>A General Emergency is declared because of a confirmed security event that prevents the operators from being able to place the power plant in Cold Shutdown. This condition seriously degrades the safety level of the power plant and the ability to protect the public's health and safety. This event involves: The loss of physical control of the Control Room. - OR - The loss of physical control of the Remote Shutdown Control Area.</i> |
| G8.1 | Judgment of the Shift Manager / Emergency Director - Safety System Failures and Potential Radioactive Release | <i>A General Emergency is declared by the Shift Manager / Emergency Director. The Shift Manager / Emergency Director has the flexibility to declare an event if conditions exist that could result in substantial fuel damage and a substantial uncontrolled radiation release. - OR - have resulted in substantial fuel damage and a potential uncontrolled radiation release.</i> |

Enter the EAL number AND the Brief Title (this is the **bold** information) in the Event Description area of the EMERGENCY REPORT FORM – TMI.

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EXHIBIT 4

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***** INFORMATION REGARDING PARs, NOT FOR PUBLIC RELEASE *****

PAR has been provided to the STATE

| | | | | | |
|----------------|--|---------------|--|----------------|--|
| YES (√) | | NO (√) | | N/A (√) | |
|----------------|--|---------------|--|----------------|--|

If YES, PAR RECOMMENDED

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PROTECTIVE ACTION IMPLEMENTED BY THE STATE, IF KNOWN

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PLANT STATUS

REACTOR STATUS

POWER OPERATION

- _____ % POWER STEADY STATE MANUAL SHUTDOWN @ _____ %/min
 HOT STANDBY HOT SHUTDOWN

SHUTDOWN

- REACTOR TRIP _____ AUTOMATIC _____ MANUAL

COOLDOWN

- COOLDOWN @ _____ °F/hr via
 FORCED CIRC with _____ PUMPS NATURAL CIRC with _____ ΔT
 Other (Explain) _____

COLD SHUTDOWN

- DHR 'A' DHR 'B' LPI 'A' LPI 'B'
 OTHER (Specify) _____

ELECTRICAL STATUS (Available)

- System GRID
 Main Generator
 Emergency Diesels 'A' 'B' SBO
 Battery 'A' 'B'
 OTHER (Specify) _____

| | | |
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EXHIBIT 4

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FISSION PRODUCT BARRIER STATUS

REACTOR COOLANT SYSTEM

| Barrier | INTACT (√) | POTENTIAL LOSS (√) | Leak rate (gpm), If KNOWN | LOSS (√) | Leak rate (gpm), If KNOWN |
|----------------|---------------|-----------------------|---------------------------------|----------|---------------------------------|
| RCS (NOT OTSG) | | / | | / | |
| OTSG 'A' | | / | | / | |
| OTSG 'B' | | / | | / | |

CONTAINMENT BUILDING

| Barrier | INTACT (√) | POTENTIAL LOSS (√) | LOSS (√) |
|---------------------------------------|------------|--------------------|----------|
| Building Integrity | | | |
| Bypass RB (e.g., OTSG leak to atmos.) | | | |

FUEL CLAD INTEGRITY

| Barrier | INTACT (√) | POTENTIAL LOSS (√) | LOSS (√) |
|---------|------------|--------------------|----------|
| Clad | | | |

EMERGENCY SYSTEMS ACTUATED

- NONE
- EMERGENCY FEEDWATER (EFW)
- HIGH PRESSURE INJECTION (HPI)
- CORE FLOOD (CF)
- LOW PRESSURE INJECTION (LPI)
- REACTOR BUILDING SPRAY (BS)

PROBLEMS AT UNIT 2

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OPEN TECHNICAL ISSUES (Provide specific details, including priority)

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RADIOLOGICAL CONDITIONS

Is an abnormal, unplanned or uncontrolled release (monitored or unmonitored) in progress or suspected?

YES **NO** **N/A**

If **YES**, specify the release pathway:

If **YES**, describe release type:

Airborne release **Liquid** release **Unknown**
 Other (Specify

Have Field Monitoring Teams (**FMT**) been dispatched? **YES** **NO**

Have abnormal **ON SITE** or **OFF SITE** radiological conditions been detected by:

Reuter Stokes **Field Monitoring Team**

Details:

Abnormal radiation levels **IN PLANT**: **YES** **NO**

Details (Location):

HAZMAT

A **HAZARDOUS MATERIAL EVENT** HAS OCCURRED (See **1203-44**) **YES** **NO**

HAS **ENVIRONMENT AFFAIRS** BEEN INFORMED? **YES** **NO**

HAS THE **HAZARDOUS MATERIAL** ENTERED THE RIVER? **YES** **NO**

DETAILS (Location, Chemical, actions taken, etc.)

| | | |
|-------------------------------------|---|-------------------------------|
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PERSONNEL STATUS

PERSONNEL INJURED **YES** HOW MANY _____ **NO**
 INJURED & CONTAMINATED **YES** HOW MANY _____ **NO**
 TRANSPORT OFFSITE **YES** HOW MANY _____ **NO**
 SPECIFY THE OFFSITE FACILITY _____

PERSONNEL CONTAMINATED **YES** HOW MANY _____ **NO**

DETAILS:

IS ONSITE ACCOUNTABILITY REQUIRED? **YES** **NO**
 IF YES, IS IT COMPLETE? **YES** **NO**

IS NON-ESSENTIAL PERSONNEL MUSTER REQUESTED? **YES** **NO**
 IF YES, LOCATION; _____

HAVE NON-ESSENTIAL PERSONNEL BEEN EVACUATED? **YES** **NO**
 IF YES, LOCATION; _____

OTHER ISSUES

DETAILS (Security, 10CFR50.54(x), etc.)

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FORM COMPLETED BY _____ DATE _____ TIME _____
 (NAME)

| | | |
|----------------------------|---|-------------------------------|
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EXHIBIT 5

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Emergency Director Briefing Sheet

NOTE
This checklist may be completed by the Operations Coordinator.

1.0 Conduct a briefing periodically. (Hourly and after significant changes in plant conditions).

Briefing Time _____

a. Emergency classification/emergency organization status

b. Plant status (temperature, pressure, leak rate, equipment status etc.)

| | | |
|----------|-----------|------------|
| RCS Temp | RCS Press | RCP Status |
| RB Sump | RB Flood | BWST |

c. Radiological conditions (specific release pathway, verify release duration, in plant radiological conditions, etc.)

| | | |
|-------------------------------------|---|-------------------------------|
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d. Work in progress (equipment problems, evolutions in progress, etc.)

Priority jobs to mitigate event

1) _____

2) _____

3) _____

4) _____

Other _____

e. Personnel status (muster, accountability, evacuation, contamination, etc.)

f. Security and offsite support (security conditions, required offsite support)

g. Mitigating activities, future plans

1) Refer to Exhibit 7 and attach any authorized deviations from requirements.

Briefing Completed _____

Emergency Director

| | | |
|-------------------------------------|---|-------------------------------|
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EXHIBIT 6

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ECC Accountability

1. The Emergency Director has directed NON-ESSENTIAL personnel to muster (warehouse 1 or 3) or Evacuate (Training Center or EOF) initiating protected area accountability.
2. Instruct all ECC personnel to process through the accountability key-card reader on the right side of the computer console (above the printer).

NOTE

DO NOT use the normal door key-card reader for accountability processing.

3. The green light on the accountability key-card reader should flash after each card is read. This indicates that the person has been accounted for by the system.
 - 3.1 A flashing red light indicates that a problem exists. Notify Security of any badges that cause the red light to flash.
4. If the OSC is not activated and accountability is initiated perform the following:
 - 4.1 Contact all in-plant personnel that have been dispatched into the plant and obtain their key-card number. (This is a hand written number on the back side of the key-card). It is important to obtain the **key-card number and NOT the individuals security badge number**.
 - 4.2 Enter the key-card number, for personnel in the plant, using the key-pad on the accountability key-card reader as follows:
 - 4.2.1 Press the '*' button.
 - 4.2.2 Enter the number (using the number buttons).
 - 4.2.3 Press the '*' button and
 - 4.2.4 PAUSE, look for the green light to flash.
 - 4.2.5 Repeat the process for each number you must enter.
 - 4.3 Inform Security when the personnel in the ECC have been processed into the accountability key-card reader.
5. Contact the Security Coordinator (Ext. 8038, 8039 or 8040) for status of accountability (preliminary list of names) if not provided 30 minutes after Protected Area accountability was initiated.

Emergency Director Authorization Form
For Deviations From Requirements

DATE OF REQUEST _____

TIME OF REQUEST _____

- Are there any other alternatives available? YES / NO
 - Has an SRO concurred with the deviation? NAME _____ YES / NO
 - Has the Technical Staff been consulted (if time permits)? _____ YES / NO
Contact Name
- If yes, does the Technical Staff concur with the deviation? YES / NO

I. Deviations authorized under the Emergency Plan (Direction and Coordination; ED/ESD responsibilities):

Deviations from operating procedures, emergency procedures, emergency plan implementing procedures (beyond the flexibility of AP1001G), or normal equipment operating limits that do not result in a deviation from license condition.

II. Deviations authorized by 10 CFR 50.54(x) and (y) for the protection of public health and safety:

1. These deviations must be reported to the NRC under 10 CFR 50.72(b)(1)(i)(B), preferably before taking the action, and in ALL cases within one hour of taking the action.
 - A. Departure from a Technical Specification requirement.
 - B. Departure from the License (Specific limitations imposed on the plant operation)
 - C. Departure from a License condition (**Refer to Page 2 of Exhibit 7**)
 - D. Departure from NRC Rules, Regulations, or Orders.

Refer to Page 3 of Exhibit 7, for additional information and regulatory excerpts.

III. Specify the details of the deviation (I or IIA/B/C/D): _____

Why is the deviation necessary for the protection of public health and safety?

Authorized by the Emergency Director: _____ (Signature) _____ (Date)

NRC Notified under 50.72(b)(1)(i)(B) by: (Within one hour of the deviation)

(Name) (Time) (Date)

NRC Contact _____
Name

EXHIBIT 7

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Emergency Director Authorization Form For Deviations From Requirements
License Conditions

| REGULATION | REQUIREMENT | DESCRIPTION | DEVIATION Check II.C and complete page E10-1 of this Exhibit |
|---|------------------------------|--|--|
| 10 CFR 50.54(a) 10 CFR 50 APP. B | OQA PLAN | Plan to insure quality in all phases of Nuclear Plant operation and to enhance Safety. | A 50.54(x) DEVIATION consists of not implementing the OQA Plan or a section of the Plan to protect public safety and health. There are not any examples that meet the criteria for a DEVIATION that would still provide protection of public health and safety. Any instance of not complying is a violation, but not a valid DEVIATION . |
| 10 CFR 50.54(k) | RO or SRO at controls | Licensed operator must be at the plant controls at all times. | A 50.54(x) DEVIATION is when licensed operators are not "at the controls" in the Control Room or at the Remote Shutdown panels, taking actions to protect public health and safety. |
| 10 CFR 50.54(m) | SRO onsite | This is a regulatory requirement supplemented by Section 6 Tech Specs. | It is not conceivable to have a 50.54(x) DEVIATION for this item (No SRO on site) that would still protect public health and safety. |
| 10 CFR 50.54(p) 10 CFR 73.55 | Safeguards and Security Plan | Requirement for Physical Security and control of information pertaining to the methods employed. | A 50.54(x) DEVIATION is not implementing a portion of the Security Plan, and not decreasing the protection of public health and safety. Implementing a specific portion of the Plan but in a different manner is NOT a 50.54(x) DEVIATION . However, the alternate actions should have been approved by appropriate management. |
| 10 CFR 50.54(q) {10 CFR 50.47(b) & 10 CFR 50 APP. E} | Emergency Plan | The sub-parts of this item are: <ul style="list-style-type: none"> * Standard Classification * Notification of Local, State and Federal organizations * Radiological monitoring equipment for measurement and assessment * Protective Action Recommendations (PAR) * Controlling radiological exposures * Activation of the Emergency Response Organization (ERO) * Activation/use of Emergency Facilities * Use of ERDS (Emergency Response Data System) | All of these sub-parts of the Emergency Plan are implemented via Implementing procedures. Examples of 50.54(x) DEVIATIONS , while protecting public health and safety follow: Deciding intentionally to NOT- <ul style="list-style-type: none"> *Control exposures of all workers per EPA-400 limits *Activate the Emergency Response organization *Use/Activate Emergency Facilities <p>The other items of this part do not meet the criteria for a 50.54(x) DEVIATION that would still protect the public health and safety. Any instance of not complying with these parts is a violation, but not a valid DEVIATION.</p> |
| 10 CFR 50.54(z) | NRC Operations Center | Must notify and maintain communications. | A 50.54(x) DEVIATION is when the NRC is NOT notified or when communications with the NRC is being suspended without NRC concurrence for the protection of public health and safety. |

| | | |
|-------------------------------------|---|------------------------------|
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EXHIBIT 7

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Attachment to Emergency Director Authorization Form for Deviations from Requirements

- 50.54(x): A licensee may take reasonable action that departs from a license condition or a technical specification (contained in a license issued under this part) in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent.

NOTE

The NRC has interpreted 50.54(x) to apply to NRC rules, regulations and orders as well.

- 50.54(y): Licensee action permitted by paragraph (x) of this section shall be approved, as a minimum, by a licensed senior operator prior to taking the action.

- 73.55(a): In accordance with Sections 50.54(x) and (y) of Part 50, the licensee may suspend any safeguards measures pursuant to Section 73.55 in an emergency when this action is immediately needed to protect the public health and safety and no action consistent with license conditions and technical specifications that can provide adequate or equivalent protection is immediately apparent. This suspension must be approved as a minimum by a licensed senior operator prior to taking the action. The suspension of safeguards measures must be reported in accordance with the provisions of 73.71. Reports made under Section 50.72 need not be duplicated under 73.71.

NOTE

In essence, no one below a licensed SRO individual can make the decision to depart from the License. However, if a more senior manager is present (i.e., Emergency Director) even though he does not possess an SRO license the decision authority would be passed to him as a higher authority in the chain of command. The licensed SRO shall provide his best judgement to the ED for his consideration. Beyond that the SRO shall follow the orders of his supervisor. It is imperative that the Emergency Director consult to the fullest extent practicable with the SRO and the Technical Staff in arriving at a decision to deviate from prescribed procedures. However, Emergency Operating Procedures should not generally be deviated from.

- 50.72 Any deviation from the plant's technical specifications authorized pursuant 50.54(x) of this part.

NOTE

Such reports should be made as soon as practical, and in all cases within one hour. (See AP 1044 and AP 1097).

The NRC interprets the reporting requirement to cover ANY departure under 50.54(x) and (y), and is not limited to Technical Specification deviations.

TMI PAR LOGIC DIAGRAM

SITE AREA EMERGENCY IS DECLARED

Determine which initial PAR is appropriate if a **GENERAL EMERGENCY** is declared.

- (1) Evacuate the 5 mile radius around the plant and shelter the 5 to 10 mile radius around the plant
OR
 - (2) Shelter the 10 mile radius around the plant
- Continue assessment of all available Plant and Field Monitoring information.

GENERAL EMERGENCY IS DECLARED

EVACUATE THE 5 MILE RADIUS AROUND THE PLANT AND SHELTER THE 5 TO 10 MILE RADIUS AROUND THE PLANT UNLESS IT IS KNOWN THAT SHELTERING OF THE 10 MILE RADIUS AROUND THE PLANT WILL OFFER GREATER PROTECTION.

(See NOTE below)

CONTINUE ASSESSMENT BASED ON ALL AVAILABLE PLANT DATA AND FIELD MONITORING INFORMATION

Expand EVACUATION recommendation to the 10 mile radius around the plant if VALID dose assessment/measurement information indicates that areas outside the 5 mile radius will exceed 1 REM TEDE or 5 REM CDE (Child Thyroid)

NOTE

- The intent is to evacuate the 5 mile radius around the plant as an initial PAR. The decision to recommend sheltering rather than evacuation should be made **ONLY** when it is clear that the evacuation cannot be completed within the release time. For example, the release has already stopped, the release can be stopped simply by turning off a piece of equipment, or there is a deliberate venting of the Containment Building with more than one valve available for isolation.

SECURITY EVENT

- When **EITHER** the Control Room or the Remote Shutdown area is available the initial PAR should be to **SHELTER** the 10 mile radius around the plant.
- When **BOTH** the Control Room and the Remote Shutdown area are lost the initial PAR should be to **EVACUATE** the 5 mile radius and **SHELTER** the 5 to 10 mile radius around the plant.

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**EXHIBIT 9
Operations Coordinator Checklist**

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- _____ a. Assess current plant conditions.
- Verify that all controllable releases are stopped.
 - i) If necessary, due to potential contamination of non-contaminated sumps and/or tanks, closely monitor the contents or release.
 - ii) If any hazardous spill is involved (e.g., BWST, oil, etc.) verify implementation of Abnormal Procedure 1203-44.
 - iii) If any contaminated or potentially contaminated injuries occur insure that the ECC has implemented EPIP-TMI-.16.
 - Verify that the proper procedures are being used.
 - Verify that procedures are signed off.
 - Verify that the proper Emergency Plan declaration was made.
 - i) Perform a "Look Ahead" for event escalation.
 - Verify that deviations from requirements have been authorized in accordance with Exhibit 7.
 - Determine if Control Tower ventilation should be placed on recirc.
 - Verify that the RAC has appropriate assumptions for release calculations.
 - i) Leak rate
 - ii) Release rate
 - iii) Release path
 - iv) Release duration
 - v) Etc.
- _____ b. Complete Exhibit 5, ED Briefing Sheet for ED briefings.
- Insure Briefing Time is recorded on the Briefing Sheet. _____
Record Time of Briefing
- _____ c. Insure that ED briefings are given:
- At least once per hour.
 - After significant changes
- _____ d. Establish communications with the Technical Support Center.
- Brief the TSC upon its activation Time Activated _____
 - Prioritize
 - i) Jobs
 - ii) Requests

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- _____ e. Establish communications with the Operations Support Center.

 - Brief the OSC upon its activation Time Activated _____
 - Prioritize
 - i) Jobs
 - ii) Requests

- _____ f. The ECC is activated by the IREO (duty roster) personnel. Time Activated _____

- _____ g. Determine form the ESD when the EOF is activated. Time Activated _____

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ED Assistant Checklist

* Items which should be performed in a timely manner, upon arrival at the ECC

_____ *a. Obtain information on the Plant Status from:

- Operations Coordinator
- Emergency Director

_____ • Assist in the completion of or complete Exhibit 4. Turnover Checklist

b. Verify that the following communication requirements are being met:

- _____ • PEMA and the 5 risk counties are notified of the event within 15 minutes of declaration.

NOTE

If the ED has NOT retained offsite notifications, contact the ESD Assistant to obtain this information.

_____ • NRC is notified within 60 minutes of event declaration.

_____ • ERDS is activated within 60 minutes of ALERT or higher declaration.

_____ • EPIP-TMI-.16 notifications, if required.

*c. Verify the following:

_____ • Contact / Call out is in progress or has been completed.

_____ • If construction workers are at the Red Hill Dam perform the following:

- At an ALERT, discuss with the Emergency Director (ED) and RAC the Gate (Bridge) to use for their evacuation

_____ • Direct the EAAC to evacuate the Red Hill Dam construction workers in accordance with EPIP-TMI-.36.

_____ • At a SITE AREA EMERGENCY or GENERAL EMERGENCY direct the EAAC to immediately evacuate the Red Hill Dam construction workers.

- i) Immediately obtain the Gate (Bridge) information from the RAC and ED.

_____ *d. Meet with the PI REP-ECC as needed to provide information regarding plant status.

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ED Assistant Checklist

- _____ e. Periodically obtain a plant status update from the ECC Communications Coordinator.
- _____ f. Obtain Press Releases from the PI REP-ECC for review prior to submittal to the ED for APPROVAL.
 - _____ • Initial the Press Release to signify your review.
 - i) Use Exhibit 13, Press Release Guidance, to enhance your review.
 - _____ • Coordinate the following:
 - i) RAC review of the proposed Press Release with initials to verify review
 - ii) SECURITY review, if applicable, with initial to verify review
 - i) Security review and response is via Telecopy of the Press Release
 - _____ • Provide the reviewed Press Release to the ED for timely review and APPROVAL
 - i) The ED should be able to read and approve the Press Release in < 5 minutes.
- g. Serve as "Point of Contact" for the following:
 - _____ • PI REP-ECC
 - _____ • Emergency Assembly Area Coordinator (EAAC)
 - _____ • Security Coordinator
 - _____ • ECC Communications Coordinator and Communicators
 - _____ • NEI (Technical), until relieved by the ESD Assistant
 - _____ • EPRI, until relieved by the ESD Assistant
 - _____ • ANI, until relieved by the ESD Assistant
 - _____ • INPO, until relieved by the Group Leader Admin Support
- h. If the ED directs Accountability, complete Exhibit 6, ECC Accountability.
- _____ i. Contact Security to perform "Fitness for Duty" testing for anyone reporting to work that is suspected of NOT being "Fit for Duty" (Reported by the responder or others)

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ED Assistant Checklist

- j. Coordinate the site evacuation of non-essential personnel in accordance with EPIP-TMI-.36, as soon as possible after the Muster has been ordered but prior to the site evacuation.
 - _____ • Complete the evacuation announcement from Exhibit 11.
 - a. From ED and RAC discussions, obtain the following:
 - i) Remote Assembly Area (RAA)
 - ii) Route to RAA
 - iii) Gates/Bridge(s) for island exit
 - iv) Need for traffic control
 - _____ • Provide the following information to the Security Coordinator.
 - a. Evacuation is expected
 - b. Gate(s)/Bridge(s) to be used
 - c. RAA to be used
 - d. Prepare to distribute the appropriate maps at the designated Bridge(s)
 - _____ • Discuss the following with the EAAC.
 - a. Number of people expected to be evacuated
 - i) Insert this number on the Evacuation Announcement in Exhibit 11.
 - b. Evacuation is to be expected
 - c. Gate(s)/Bridge(s) to be used
 - d. RAA to be used
 - _____ • Complete the following when the ED directs (orders) the evacuation:
 - a. Direct the ECC Communications Coordinator to notify Dauphin County and PEMA using the ED approved message from Exhibit 11.
 - b. Inform the Security Coordinator of the evacuation BEFORE announcing the evacuation over the Plant Page system.
 - c. Inform the EAAC of the evacuation BEFORE announcing the evacuation over the Plant Page system.
 - d. Announce the site evacuation of non-essential personnel over the Plant Page system using the ED approved message from Exhibit 11.
 - i) If the EOF is the RAA, direct the Group Leader Admin Support to make preparations for the evacuees monitoring and potential decontamination.

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ED Assistant Checklist

- _____ • Direct the ECC Communications Coordinator to call the following agencies AFTER the EAAC informs you that non-essential personnel evacuation is complete:
 - a. Dauphin County
 - b. PEMA

- _____ k. Evaluate AP1044, Incident Report, and AP 1097, Corrective Action Process, and complete appropriate forms for ED review and concurrence.

- _____ l. Coordinate the development of a watchbill to support the emergency on a 24 hour per day basis for the ECC.

- _____ m. At the closeout of the event verify the following:
 - All logs, procedures and checklists are completed
 - All logs, procedures and checklists are turned over to the Shift Manager/Emergency Director.

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This form is completed by the Emergency Director Assistant and approved by the Emergency Director. This form directs the evacuation and informs Dauphin County and PEMA of the evacuation to a Remote Assembly Area (RAA).

Given to Dauphin County and PEMA, before the Evacuation for a Site Area Emergency / or optional evacuation ordered by the Emergency Director.

MESSAGE 1: Approximately _____ non-essential personnel will be evacuating the
(number)

TMI site at approximately _____
(time)

- to the (Select one) Training Center
 EOF

using the following route _____

- via the (Select one) North Bridge
 South Bridge
 North and South Bridge

Dauphin County _____ is / is not _____ requested to provide Traffic Control
(Select one)

XX
PLANT PAGE ANNOUNCEMENT

1. *Turn on Whelen speakers.*

READ MESSAGE SLOWLY

MESSAGE 2: Attention all personnel. Attention all personnel. All non-essential personnel report:
(Read shadowed information from above)

Assemble with your supervisor and await further instructions.

REPEAT MESSAGE

2. *Turn off Whelen speakers.*

Approved: _____ Date: _____
(Emergency Director)

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Public Information Representative - ECC

- _____ a. Verify that the Control Room fax and the Public Information telephone in the Shift Manager's office are operational.
- _____ b. Call 948-8817 and leave a message informing the Duty PI-Rep of your arrival at your Duty Station.
- _____ c. Gather information about the emergency and provide it to the Press Release Writer.
 - Remain at the counter in the Control Room, except to access the Radiological Assessment Coordinator (RAC), STA or ED Assistant, as necessary.
 - Be especially attentive to any radiological situation, whether or not a radiation release is occurring. ANY release of radiation in the context of the emergency SHOULD be reported to the Press Release Writer.
 - Use the "Plant Emergency Information Checklist" (Refer to Exhibit 1B of the TMI Emergency Communications Response Manual) to obtain plant information.

NOTE

Plant information is available from the Plant Process Computer - Area 38, Groups 19 & 20.

- i) Information not obtained directly from plant indications needs to have ED Assistant review and ED approval.
- ii) Fax the authorized information to the Media Briefer.
- Continually update the Media Briefer and the PI REP-EOF using the Emergency Information Checklist.

NOTE

You are also required to provide real-time information about plant conditions, without ED approval, to the JIC staff in order to assist the Medial briefer's understanding of changing plant conditions.

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Public Information Representative - ECC

d. Press Releases

- When DRAFT Press Releases are received REVIEW them for accuracy before submitting them to the ED Assistant for review and ED APPROVAL. Refer to Exhibit 13, Press Release Guidance, to enhance your review.
 - a. Depending on the change required either mark up the DRAFT and give it to the ED Assistant or have the Press Release Writer make the corrections before the ED Assistant sees the DRAFT release.
 - b. Press Releases announcing anything other than emergency level changes or Media advisories (e.g., JIC activated) must be approved by the Emergency Director
 - i) When the EOF is activated the approval responsibility for Press Releases is transferred to the ESD at the EOF.
 - ii) If review and approval of a Press Release has been started in the Control Room when the EOF becomes operational finish the approval process of that Press Release in the Control Room. DO NOT switch to the EOF in the middle of a review and approval process.
 - c. Fax the initialed (APPROVED) DRAFT Press Release to the Press Release Writer to obtain a final Press Release.
 - i) Call the Press Release Writer and provide the changes verbally to expedite the Press Release process.
 - d. Maintain copies of the Press Releases.
 - e. Provide a copy of ALL APPROVED Press Releases to the ED.
- Ensure that emergency level changes and the criteria for those changes are **IMMEDIATELY** communicated to the Media Briefer.
 - Obtain a copy of the completed Emergency Report Form-TMI from the ECC Communications Coordinator and transmit to the Media Briefer at the JIC.
- Upon termination of the emergency forward all logs, forms, draft Press Releases, approved Press Releases, completed checklists and other pertinent documentation to the Shift Manager/Emergency Director.

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Press Release Guidance

- 1.0 Press releases should be issued as soon as possible, typically within one hour from the time that a major plant event has occurred. Press releases shall be written in accordance with the following guidelines:
- a. The following categories of information should be included in press releases.
- Level of Emergency
This is simply identifying which of the four emergency levels was declared.
 - Basis for Emergency Declaration
This should be a simplified description of the plant condition which produced the emergency declaration (e.g., a leak of radioactive water within a plant building).
 - Operations Status of the Plant
A simple description of the plant status at the time of the emergency declaration (e.g., TMI was operating at 100% power, however, the plant is currently reducing power).
 - Company/Government Interface
This is intended to inform the public that TMI has notified and is working closely with government officials so that public confidence and company credibility can be increased, or maintained.
 - Corrective Actions
This should be a non-technical description of what plant personnel are doing to correct the problem. It may include such language as "attempts are being made to stop the leak" or "plant personnel are investigating the cause of the leak."
 - Off-site Impact
A statement which simply assess what impact this event may have on the environment. This is intended to provide factual information on off-site radiological conditions (e.g., a radioactive release is in progress, however, monitoring teams have not detected any radiation levels in excess of normal background).

The initial press release should include all or part of the above information, however, at the very least, it should contain information through 'Corrective Actions' above.

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Press Release Guidance

2.0 In addition, the following guidance should be used in issuing press releases:

- a. Speculation, Dose Projections and Protective Action Recommendations should not be included in press releases.
- b. Releases SHALL have the concurrence of the Emergency Director (ED). Press Releases should have Operations, Radiological and, as appropriate, Safeguards review.
 - Exceptions to this are limited to releases that are media advisories or releases that only contain 'boiler plate' information (e.g., level of emergency without any specific details or that the Joint Information Center is now activated).
 - i) The ED should be made aware of these advisories.
 - Original initialed copies are retained for records.
- c. Press releases shall be reviewed promptly to support timely (< 1 hour) issuance.
- d. Press releases should avoid undefined technical terms and abbreviations (e.g., plant names, trip, etc.)
 - Press releases should be written to be as simple as possible. Technical terms should be defined for example, Diesel Generators could be defined as a backup power source.
 - Additional list of Technical terms and alternate words.

| <u>Technical Terms</u> | <u>Suggested Definitions</u> |
|------------------------|--|
| Accountability | The process of accounting for all plant personnel |
| Auxiliary Building | Building housing support equipment for the Reactor |
| RMG22 RMG23 | A monitor which detects radiation levels inside the Reactor Building |
| Contaminated | Has loose radioactive material on it, him, her. |
| Contamination | Loose radioactive material |
| Containment Building | Building which houses the Reactor or, Reactor Containment Building |
| Cladding | A metal tube containing the nuclear fuel |
| Control Rod | A rod which when inserted in a reactor stops the generation of power |

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Press Release Guidance

| <u>Technical Terms</u> | <u>Suggested Definitions</u> |
|--------------------------|---|
| Critical | Sustained Chain Reaction |
| Diesel Generator | Emergency Power Unit or Back Up Power Source |
| Fission Products | Radioactive materials made from operating the Reactor. |
| Fission Product Barriers | Barriers designed to contain the radioactive materials made from operating the Reactor. |
| Fuel Cladding Failure | Damage to the metal tubes containing the nuclear fuel. |
| Fuel Pool | Underwater Storage Area for Nuclear Fuel |
| Grid | Electrical Distribution System |
| Hot Well | Tank that collects condensed steam. |
| Loss of Off Site Power | The plant has lost its connection to the Electrical Distribution System |
| Noble Gas | Radioactive Gas |
| Penetration | Opening |
| Plume | Radioactivity released in the air or water |
| Poison | A material which reduces power in the reactor |
| PORV | Pressure Relief Valve |
| Primary System | The system that circulates water through the Reactor to remove heat. |
| Protected Area | Security Barrier around the plant |
| Radionuclides | Radioactive material |
| Reactor Building | Building which houses the Reactor or, Reactor Containment Building |
| Reactor Building Purge | A means of exchanging air inside the Reactor Building with outside air |

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Press Release Guidance

Technical Terms

Suggested Definitions

Reactor Trip

Automatic or Manual Shutdown of the Reactor

Reuter Stokes

Off Site Electronic Radiation Monitors

SCRAM

Immediate or Fast Shutdown of the Reactor

Secondary System

Non Nuclear Steam System

Steam Generator

Heat Exchanger where steam is made

Subcritical

No self sustaining chain reaction

Half Life

Time it takes for half of the radioactive material to decay away

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EXHIBIT 14

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Site Access Policy for Media during Emergencies

- 1.0 Providing site access to media personnel during a plant emergency or in the recovery from a plant emergency is typically in the best interest of TMI and the public. However, media access to the site must not impair the response to the emergency.
- 2.0 Responsibility for approving site access rests with the Emergency Support Director, or, if the EOF is not activated, with the Emergency Director. Refer to Section 5 of this exhibit for responsibilities.
- 3.0 For purposes of media access to the site during an emergency, the same industrial safety and security standards and requirements that apply to non-essential employees will be applied to the media.
- 4.0 **Communication Department Responsibilities**
 - a. Requests for media access will be made to the ESD or ED by the Public Information Duty Representative or the Communications Emergency Team Leader.
 - b. Communications will provide the ED/ESD with the number of media to gain site access, areas to be accessed and length of time the media will be there. (Communications will decide the number of media gaining access based on conditions at the time of the emergency. An attempt will be made to gain access for, at a minimum, one representative each from radio, television, and print media.)
 - c. Communications will provide media transportation on and off site.
 - d. Communications will have each member of the media sign a Media Access Briefing Form, indicating they were briefed about the risks as they were known at the time by Company Management.
 - If media access does not involve entry into a posted radiologically controlled area:
 - i) The Communications staff will conduct the sign in and badging of media at TMI.
 - Communications will notify the Security Coordinator prior to proceeding with Site Access.
 - ii) Communications will supervise and escort the media while on site.
 - iii) Communications will conduct a briefing explaining the radiological and industrial conditions and risks on site.

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Site Access Policy for Media during Emergencies

- If media access involves entry into a posted radiologically controlled area:
 - i) Media will be processed at the EOF, as appropriate, receiving dosimetry, training, bioassay, waivers and briefings based on established procedural requirements.
 - Communications will notify the Security Coordinator prior to proceeding with Site Access.
 - ii) Communications in conjunction with Radiological Controls will supervise and escort the media while in posted radiologically controlled areas.

5.0 ED/ESD Responsibilities

- 5.1 The ED/ESD will consult with the RAC/Group Leader R&EC, and media will be granted access if the projected dose will not exceed the 500 millirem annual limit including external and internal exposure.
 - For Security driven events, media access to the site must also be approved by the Local Law Enforcement Agency/Security.
- 5.2 Approve media access to the site, if requirements are met.

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TMI/NRC Emergency Response Interface Criteria

This is a synopsis of the NRC emergency response process as it applies to TMI.

Upon arrival of the NRC, the ED/ESD should:

- Verify who is the senior NRC person in charge
- Ask the senior NRC person to inform the ED/ESD when the position of Director Site Operations is assumed and whether the responsibility to issue directives is included.
- Request that the NRC keep TMI informed of all substantive information exchanges between the NRC and the state.
- Request the NRC provide all DIRECTIONS in writing.

In essence, advice or directives from the NRC must come from the NRC Director (typically, the NRC Chairman) or from the NRC Director of Site Operations (typically, the NRC Regional Administrator). Such advice or directive can only be communicated to the Emergency Director (the Emergency Support Director once the EOF is activated). If a directive order is issued by the NRC Director or Director of Site Operations, the ED/ESD should request written confirmation which spells out the specific nature of the directive.

While NRC advice may be challenged by the ED or ESD, directives must be complied with.

With respect to protective action recommendations for the public, the NRC may either endorse the TMI recommendation or opt to recommend a different one. The ED/ESD is encouraged to include the NRC and State representatives in the protective action recommendation discussions in order to arrive at a mutually agreeable recommendation. In the event that the NRC opts to recommend a different recommendation, they will attempt to resolve their differences with the utility prior to making recommendations to the State. Their recommendation, like the utility recommendation, will be considered by the State in the development of a Governor directive.

SYNOPSIS - NRC EMERGENCY RESPONSE

Revision 2 to NUREG 0728, supplemented by NUREG-0845 and NUREG-1471, describes the manner in which the NRC will respond to an incident and provides criteria for making preplanned response decisions. They provide procedural guidance, describe the functions related to NRC emergency response and define procedures for responding to the following NRC modes of operation.

1. Normal Mode
2. Standby mode
3. Initial Activation
4. Expanded Activation
5. Deactivation

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TMI/NRC Emergency Response Interface Criteria

Each mode defines the scope of NRC activities related to a particular level of emergency response in ascending order of degree of involvement to deactivation. The various modes are characterized as follows:

- Normal mode - Normal activities designed to maintain readiness.
- Standby mode - Regional Office activates the Incident Response Center (IRC) with an appropriate staff and NRC Headquarters Operations Center is staffed by a Standby Team.
- Initial Activation - NRC Operations Center is staffed by a response team, the Regional IRC is fully activated and a Site Team is dispatched under the leadership of the Regional Administrator, normally designated as Director of Site Operations (DSO).
- Expanded Activation - Focus of NRC response operations is shifted to the site. DSO is designated primary spokesman for the NRC and may be empowered with directive authority by the Chairman of the Nuclear Regulatory Commission.
- Deactivation - Follow-up activities (e.g., reviews, investigation and recovery operations).

The particular mode assumed by the NRC will be dependent upon Licensee event classification and "independent NRC perception of relative severity of uncertainty of accident conditions."

NRC functions defined in NUREG 0728 which impact directly on the Licensee are:

- Evaluate Incident and Plant Status

NRC personnel at the site, the Regional Office and the Headquarters will acquire the necessary data to develop and maintain a complete and accurate overview of the evolution and status of the event. This will involve data gathering via ERDS, ENS, HPN, and other FTS 2000 telephones as well as direct communications with the Licensee at the ERF's.
- Evaluate Licensee Actions

NRC personnel will evaluate Licensee actions to mitigate the consequences of the incident and recommendations concerning protective actions for the public.
- Project Incident Consequences and Plant Status

Based on information and evaluations discussed above, the NRC will develop an independent projection of the likely further course of events.

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TMI/NRC Emergency Response Interface Criteria

- Advise, Assist or Direct Licensee

The NRC may offer advice or assistance to the Licensee during an emergency, or may respond to Licensee requests for advice or assistance. This may involve diagnosis of critical problems, development of proposed remedial courses of action, and proposals to implement additional precautionary measures. The NRC is also prepared to direct that certain actions be taken if, after thorough discussion with the Emergency Director (the Emergency Support Director once the EOF is activated) it is decided that such direction is required. In the event that such action is taken by the NRC Director or the NRC Director of Site Operations, the ED/ESD should request written confirmation which spells out the specific nature of the directive. Advice or directives will be communicated directly to the ED/ESD from the NRC Director (NRC Chairman) or from the NRC Director of Site Operations (DSO), typically the Regional Administrator, once appointed and empowered to do so.

Several important concepts govern the NRC in providing advice, assistance, or direction. They are:

- a. The Licensee is at all times responsible for mitigating the consequences of the incident.
- b. Although the NRC could issue formal orders to the Licensee to take certain measures and to monitor implementation, ". . . licensee continues to make other key operational decisions and to operate and manage the facility . . .".
- c. The NRC must have a single voice when advising or directing the Licensee.
- d. The ED/ESD has the option to accept or challenge NRC advice.

At no time will advice or direction come from both the Director and the DSO and the Licensee will always be kept apprised of who is empowered to exercise authority as the NRC spokesman. All other NRC personnel in contact with Licensee personnel are responsible to make clear that discussions should not be construed as advice or direction but rather as a sharing or gathering of information.

- Inform Public and Monitor Public Information

During emergency situations, the NRC will formulate its own press releases based on information gathered from the Licensee and from NRC personnel. Procedures exist to ensure that press releases are approved by one person. That person may be the Regional Administrator, NRC Chairman, or DSO depending on the current NRC mode of operations. NRC draft press releases will normally be shared with the Licensee; however, this does not imply a request for approval by the Licensee. The intent is to identify issues needing clarification prior to release to avoid confusing or misleading the public.

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TMI/NRC Emergency Response Interface Criteria

- Recommend Protective Actions for the Public

The NRC responsibility during an emergency, as during normal operations, is to ensure that protection of public health and safety is adequate. One aspect of exercise of this responsibility is to provide protective action recommendations or advice to offsite authorities. This may take the form of an NRC endorsement of a Licensee protective action recommendation or the NRC may opt to recommend additional protective actions. The NRC is not normally involved in the process of recommending Protective Actions. However, they may get involved if a major problem is identified with the protective actions recommended by the licensee or protective actions undertaken by the State or local government. Additionally, NRC involvement may be requested by State or local officials.

- Review, Investigate and Document Response Actions

The scope of this task is not preplanned by the NRC; however, it is apparent that this may require a great deal of interaction between the Licensee and the NRC after-the-fact.

SYNOPSIS - REGION I SUPPLEMENT

The Region I Incident Response Supplement to NUREG 0845 restates many of the concepts of NUREG 0845 in greater detail as they apply specifically to Region I.

Section I - Concept of Operations delineates general duties and responsibilities and describes the NRC modes of operation. Relative to the authority of the DSO, it states:

"The Director of Site Operations (DSO) supervises/manages all NRC personnel and operations at the site, is the NRC spokesperson, represents the NRC in interactions with other agencies and carries out the authority delegated by the Director of the NRC Executive Team (Chairman).

Delegated authority will include one or more of the following:

(a) authority to recommend actions to the Licensee, (b) authority to direct the Licensee to take specified actions, and (c) authority to recommend actions offsite, including protective measures for the public.

The Chairman of the NRC, by memo dated 4/22/80, indicated he may delegate authority to the Regional Administrator as DSO, upon transfer of control of NRC actions and resources to the site, to issue orders to a Licensee during an emergency. It is intended that this authority be used as a last resort to mitigate the emergency conditions only if, in the judgement of the NRC, the Licensee has shown it is incapable of controlling the emergency. This authority is valid only in an emergency when the Regional Administrator (or other senior NRC official) is the DSO and specific authorities have been transferred to him by the Chairman or his designated alternate".

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| | TMI Emergency Plan Implementing Document | Number EPIP-TMI-.02 |
| Emergency Direction | Revision No. 14 | |

EXHIBIT 15

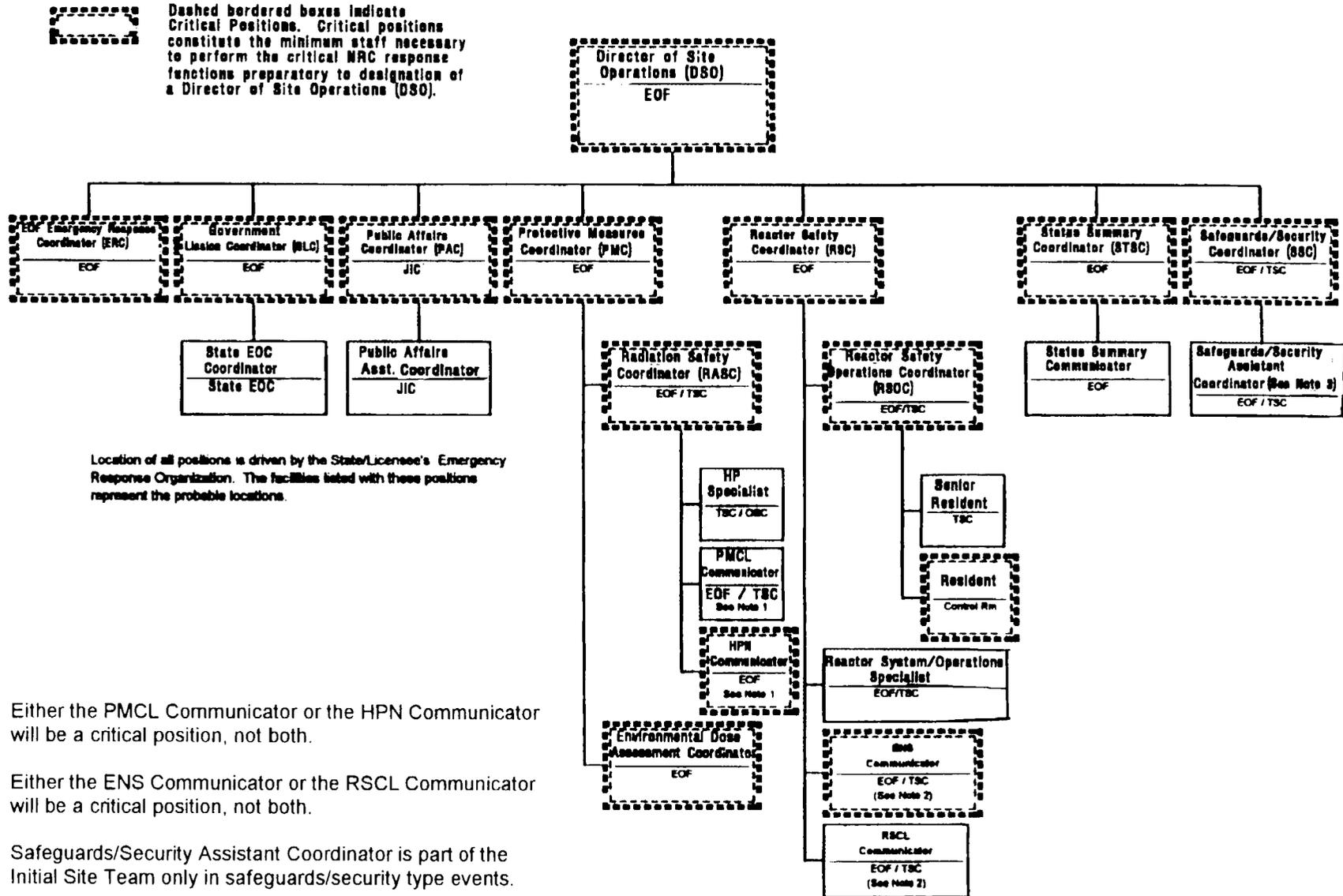
Page 5 of 6

TMI/NRC Emergency Response Interface Criteria

Sections II and III contain detailed procedures specific to Region I and present no new concepts of interest to the Licensee.

The attachment to the synopsis is provided for your information. This attachment depicts the Site Team Organization and is an extract from NUREG-1471. It defines the number of NRC personnel expected to operate in each facility and shows the lines of communications the NRC expects to use.

NRC Site Organization - Initial Site Team



FOR INFORMATION ONLY

| | | |
|---|---|--------------------------------------|
| AmerGen | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.03 |
| Title Emergency Notifications and Call Outs | | Revision No. 28 |
| Applicability/Scope TMI Division | USAGE LEVEL 1 | Effective Date OCT 20 2000 |
| This document is within QA plan scope | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |
| Safety Reviews Required | <input checked="" type="checkbox"/> Yes | <input type="checkbox"/> No |

List of Effective Pages

| <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 | 28 | 21 | 28 | | | | |
| 2 | 28 | 22 | 28 | | | | |
| 3 | 28 | 23 | 28 | | | | |
| 4 | 28 | 24 | 28 | | | | |
| 5 | 28 | 25 | 28 | | | | |
| 6 | 28 | 26 | 28 | | | | |
| 7 | 28 | 27 | 28 | | | | |
| 8 | 28 | 28 | 28 | | | | |
| 9 | 28 | 29 | 28 | | | | |
| 10 | 28 | 30 | 28 | | | | |
| 11 | 28 | 31 | 28 | | | | |
| 12 | 28 | 32 | 28 | | | | |
| 13 | 28 | 33 | 28 | | | | |
| 14 | 28 | 34 | 28 | | | | |
| 15 | 28 | 35 | 28 | | | | |
| 16 | 28 | 36 | 28 | | | | |
| 17 | 28 | 37 | 28 | | | | |
| 18 | 28 | 38 | 28 | | | | |
| 19 | 28 | 39 | 28 | | | | |
| 20 | 28 | 40 | 28 | | | | |

| | Signature | Date |
|-----------------|--------------------------------------|------------|
| Originator | A. J. Knoche <i>A. J. Knoche</i> | 10/11/2000 |
| Procedure Owner | /s/ A. J. Knoche <i>A. J. Knoche</i> | 09/12/00 |
| PRG | /s/ H. K. Olive for J. S. Schork | 10/02/00 |
| Approver | /s/ N. D. Brown | 10/03/00 |

| | | |
|--|-------------------------------------|-------------------------------|
| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.03 |
| Emergency Notifications and Call Outs | Revision No. 28 | |

1.0 **PURPOSE**

- a. To provide guidance in accomplishing initial notifications, reclassification notifications, and closeout notifications to off-site agencies.
- b. To provide guidance in accomplishing contact and call-out of emergency response personnel and facilities.

2.0 **APPLICABILITY/SCOPE**

- a. This procedure is applicable for all personnel performing notifications, contacts, and call-outs from the ECC.
- b. This procedure is to be used upon declaration of any emergency classification as specified in the Emergency Plan or when directed by the Emergency Director.

3.0 **DEFINITIONS**

- a. PEMARS - Pennsylvania Emergency Management Agency Radio System.

4.0 **RESPONSIBILITIES**

- a. Emergency Director
 - Oversees implementation of this procedure.
 - Selects and approves Emergency Report Forms.
- b. On-Shift ECC Communications Coordinator
 - Initiates/completes notifications until relieved.
 - Initiates the call-out process.
 - Provides a turn-over to the Initial Response Emergency Organization Communicator.
 - Arranges for repairs of malfunctioning communications circuits until relieved by the Initial Response Emergency Organization Communications Coordinator.

NOTE

- The Off-Site Notification process may be TEMPORARILY reassigned to another qualified communicator during circumstances where the CRO/SRO's attention is required for plant operations.
- Such reassignment should only occur under the most extreme conditions for initial plant stabilization and ONLY if a qualified alternative is already present in the Control Room.
- The CRO-SRO ECC Communications Coordinator is expected to be available to continue notifications within 30 minutes of event declaration and shall be the individual performing the notification to the NRC on the ENS line, unless relieved by the IREO communicator.

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- c. On-Shift Communicator
 - Completes the call-out/contact process.
 - Provides a turn-over to the Initial Response Emergency Organization Communications Coordinator or Communicator.

- d. Initial Response Emergency Organization ECC Communications Coordinator
 - Ensures initiation/completion of the notification and call-out processes.
 - Interfaces with the Emergency Director Assistant.
 - Arranges for repairs of malfunctioning communications circuits.

- e. Initial Response Emergency Organization Communicator
 - Initiates/completes notifications until relieved.
 - Initiates/completes call-outs. The call-out process is not turned over to the EOF Communicators.
 - Provides a notifications status to the Emergency Support Organization Communicator.

NOTE

Responsibility for performing off site notifications remains with the ECC Communicators and should not be turned over to the EOF Communicators except during extreme circumstances (e.g., evacuation of the ECC or failure of ECC telephones).

NOTE

All steps in Exhibits 1 through 5 and Exhibit 9 must be performed even if they appear to be redundant unless a qualifying term such as "if" or specific direction is provided in the step. The Emergency Director Assistant should be used to obtain Emergency Director concurrence for any step not performed. All steps not performed shall be marked "N/A".

NOTE

Steps required to be performed more than once (e.g., at an Alert before an escalation, and at an Alert a second time due to a later reduction in classification) should be initialed for each time performed.

NOTE

If communication system failures are experienced, refer to Exhibit 7, "Back Up Communications".

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| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.03 |
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5.0 **PROCEDURE**

5.1 Upon declaration/reclassification of an emergency, complete the appropriate exhibit listed below:

- _____ a. Unusual Event - Exhibit 1.
- _____ b. Alert - Exhibit 2.
- _____ c. Site Area Emergency - Exhibit 3.
- _____ d. General Emergency - Exhibit 4.

5.2 Upon termination of the incident, complete the appropriate following actions.

- _____ a. If off-site notification responsibilities were not transferred to the EOF Communicators, complete Exhibit 5, Closeout Notification Checklist, or
- _____ b. If off-site notification responsibilities were transferred to the EOF Communicators, confirm that the EOF Communicators are performing closeout notifications.
- _____ c. Ensure the appropriate event termination steps in Exhibit 9, "Call-Out Operations", have been completed.
- _____ d. Forward this procedure, all exhibits and associated paperwork to the Emergency Preparedness Department.

6.0 **REFERENCES**

- a. EPIP-TMI-.06, Additional Assistance and Notification
- b. EPIP-TMI-.27, Emergency Operations Facility

7.0 **EXHIBITS**

- a. Exhibit 1 - Unusual Event Checklist
- b. Exhibit 2 - Alert Checklist
- c. Exhibit 3 - Site Area Emergency Checklist
- d. Exhibit 4 - General Emergency Checklist
- e. Exhibit 5 - Closeout Notification Checklist
- f. Exhibit 6 - Emergency Response Data System Activation
- g. Exhibit 7 - Back Up Communications
- h. Exhibit 8 - Emergency Status Log
- i. Exhibit 9 - Call-Out Operations

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| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.03 |
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EXHIBIT 1

Page 1 of 3

UNUSUAL EVENT CHECKLIST

- _____ 1.0 **Obtain an Emergency Report Form** Part 1 and 2 from the Emergency Director or Shift Manager's computer printer.

NOTE

Do not allow problems encountered in Step 2.0 to interfere with completion of the 15 minute off site notifications per Step 3.0.

- 2.0 Activate the group pagers

- _____ 2.1 Lift the **EP Pager Call Out Phone receiver**.
- _____ 2.2 Push the **GROUP PAGE button**.
- _____ 2.3 After hearing the voice prompt "Please enter your caller password", **press the designated LEVEL button** [Designated on Part 1 of the Emergency Report Form, i.e., Level 1, Level 2, or Level 3]
- _____ 2.4 After hearing the voice prompt "Thank you" or when the page tones are heard, **Hang up**.

- 3.0 Perform 15 Minute Notifications.

- _____ 3.1 Confirm **Dial tone** on the **Notification Line**.
- _____ 3.2 **Toggle Switch up** to **OVERRIDE**.
- _____ 3.3 **Dial 91**.
- _____ 3.4 After the calling tone is heard, **Toggle Switch down** to **NORMAL**.
- _____ 3.5 As the agencies answer, state, ***"This is Three Mile Island Nuclear Station. Stand by for an emergency message."*** (State once and proceed immediately to the next step.)
- _____ 3.5.1 Log the time. _____

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EXHIBIT 1

_____ 3.6 Ask if each agency is on the line.

[PEMA, are you on the line? Dauphin County?, etc.]

- PEMA _____ (check when on line)
- Dauphin County _____
- Cumberland County _____
- Lancaster County _____
- Lebanon County _____
- York County _____

_____ 3.7 If one or more agencies do not answer promptly, instruct another qualified ECC Communicator to perform a **parallel notification** to the missing agency using the Off Site Notification Auto Dialer.

_____ 3.7.1 If necessary to perform parallel notifications, **log person contacted** for the correct county in step 3.10.

_____ 3.8 State, ***"Please stay on the line after the following message to provide a name or dispatcher number and to confirm receipt."***

_____ 3.9 **Read Emergency Report Form, Part 1.**

Time notification completed _____

_____ 3.10 Request receipt confirmation.

- "PEMA, name or dispatcher number?"*** _____
- "Dauphin County?"*** _____
- "Cumberland County?"*** _____
- "Lancaster County?"*** _____
- "Lebanon County?"*** _____
- "York County?"*** _____

_____ 3.11 **Flash the hook switch** until a dial tone is heard before hanging up.

_____ 4.0 If not already notified in parallel by another ECC Communicator **Notify remaining agencies** that did not receive the information by pre-set conference call.

_____ 4.1 **Log receipt confirmation** by recording name/dispatcher number and time notified in appropriate blank in Step 3.10.

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EXHIBIT 1

Page 3 of 3

- _____ 5.0 **I&C Technicians** performing the previous steps are to provide a **turn over** of this **exhibit** to a qualified ECC Communications Coordinator (CRO or IREO Communications Coordinator).
- _____ 6.0 **Direct** an **ECC Communicator** to perform **Exhibit 9** of this procedure and provide Part 2 of the Emergency Report Form to him/her.
- _____ 7.0 Pin on the **ECC Communications Coordinator pin**.
- 8.0 NRC Notification using the Emergency Notification System (ENS)
 - _____ 8.1 **Dial** the ten digit number attached on the **ENS telephone**.
 - _____ 8.2 **Read** the **Emergency Report Form**.
 - _____ 8.3 **Record** the **person** contacted.
 Name _____ Time _____
 - _____ 8.4 **Maintain continuous communications** unless directed otherwise by the NRC Duty Officer.
 - _____ 8.5 If continuous communications are terminated by the NRC Duty Officer, **record the name of the individual directing termination**.
 Name _____

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| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.03 |
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EXHIBIT 2

Page 1 of 4

ALERT CHECKLIST

- _____ 1.0 **Obtain an Emergency Report Form** Part 1 and 2 from the Emergency Director or Shift Manager's computer printer.

NOTE

Do not allow problems encountered in Step 2.0 to interfere with completion of the 15 minute off site notifications per Step 3.0.

- _____ 2.0 Activate the group pagers
- _____ 2.1 Lift the **EP Pager Call Out Phone** receiver.
- _____ 2.2 Push the **GROUP PAGE** button.
- _____ 2.3 After hearing the voice prompt "Please enter your caller password", **press the designated LEVEL button** [Designated on Part 1 of the Emergency Report Form, i.e., Level 2, or Level 3]
- _____ 2.4 After hearing the voice prompt "Thank you" or when the page tones are heard, **Hang up**.
- _____ 3.0 Perform 15 Minute Notifications.
- _____ 3.1 Confirm **Dial tone** on the **Notification Line**.
- _____ 3.2 **Toggle Switch up** to **OVERRIDE**.
- _____ 3.3 **Dial 91**.
- _____ 3.4 After the calling tone is heard, **Toggle Switch down** to **NORMAL**.
- _____ 3.5 As the agencies answer, state, ***"This is Three Mile Island Nuclear Station. Stand by for an emergency message."*** (State once and proceed immediately to the next step.)
- _____ 3.5.1 Log the time: _____

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EXHIBIT 2

_____ 3.6 Ask if each agency is on the line.
[PEMA, are you on the line? Dauphin County?, etc.]

PEMA _____ (check when on line)
 Dauphin County _____
 Cumberland County _____
 Lancaster County _____
 Lebanon County _____
 York County _____

_____ 3.7 If one or more agencies do not answer promptly, instruct another qualified ECC Communicator to perform a **parallel notification** to the missing agency using the Off Site Notification Auto Dialer.

_____ 3.7.1 If necessary to perform parallel notifications, **log person contacted** for the correct county in step 3.10.

_____ 3.8 State, ***"Please stay on the line after the following message to provide a name or dispatcher number and to confirm receipt."***

_____ 3.9 **Read Emergency Report Form, Part 1.**

Time notification completed _____

_____ 3.10 Request receipt confirmation.

"PEMA, name or dispatcher number?" _____
"Dauphin County?" _____
"Cumberland County?" _____
"Lancaster County?" _____
"Lebanon County?" _____
"York County?" _____

_____ 3.11 **Flash the hook switch** until a dial tone is heard before hanging up.

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EXHIBIT 2

Page 3 of 4

- _____ 4.0 If not already notified in parallel by another ECC Communicator **Notify remaining agencies** that did not receive the information by pre-set conference call.
- _____ 4.1 **Log receipt confirmation** by recording name/dispatcher number and time notified in appropriate blank in Step 3.10.
- _____ 5.0 **I&C Technicians** performing the previous steps are to provide a **turn over of this exhibit** to a qualified ECC Communications Coordinator (CRO or IREO Communications Coordinator).
- _____ 6.0 If not already performed, **direct an ECC Communicator** to perform **Exhibit 9** of this procedure and provide Part 2 of the Emergency Report Form to him/her.
- _____ 7.0 Pin on the **ECC Communications Coordinator pin**.
- _____ 8.0 **Verify activation of ERDS** (Emergency Response Data System) by the Shift Engineer.
 - _____ 8.1 **Provide Exhibit 6 to the Shift Engineer** if necessary.
 - _____ 8.2 If ERDS cannot be activated, **complete Exhibit 8**, Emergency Status Log before calling the NRC.
- _____ 9.0 NRC Notification using the Emergency Notification System (ENS)
 - _____ 9.1 **Dial** the ten digit number attached on the **ENS telephone**.
 - _____ 9.2 **Read** the **Emergency Report Form**.
 - _____ 9.3 **Record** the **person** contacted.
Name _____ Time _____
 - _____ 9.4 **Maintain continuous communications** unless directed otherwise by the NRC Duty Officer.

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EXHIBIT 2

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_____ 9.5 If continuous communications are terminated by the NRC Duty Officer, **record the name of the individual directing termination.**

Name _____

| | | |
|--|-------------------------------------|-------------------------------|
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**EXHIBIT 3
SITE AREA EMERGENCY CHECKLIST**

Page 1 of 4

- _____ 1.0 **Obtain an Emergency Report Form Part 1 and 2 from the Emergency Director or Shift Manager's computer printer.**

NOTE

Do not allow problems encountered in Step 2.0 to interfere with completion of the 15 minute off site notifications per Step 3.0.

- _____ 2.0 **Activate the group pagers**
- _____ 2.1 **Lift the EP Pager Call Out Phone receiver.**
- _____ 2.2 **Push the GROUP PAGE button.**
- _____ 2.3 **After hearing the voice prompt "Please enter your caller password", press the "LEVEL 3" button.**
- _____ 2.4 **After hearing the voice prompt "Thank you" or when the page tones are heard, Hang up.**
- _____ 3.0 **Perform 15 Minute Notifications.**
- _____ 3.1 **Confirm Dial tone on the Notification Line.**
- _____ 3.2 **Toggle Switch up to OVERRIDE.**
- _____ 3.3 **Dial 91.**
- _____ 3.4 **After the calling tone is heard, Toggle Switch down to NORMAL.**
- _____ 3.5 **As the agencies answer, state, "This is Three Mile Island Nuclear Station. Stand by for an emergency message."**
(State once and proceed immediately to the next step.)
- _____ 3.5.1 **Log the time: _____**

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EXHIBIT 3

- _____ 3.6 Ask if each agency is on the line.
[PEMA, are you on the line? Dauphin County?, etc.]
- PEMA _____ (check when on line)
 Dauphin County _____
 Cumberland County _____
 Lancaster County _____
 Lebanon County _____
 York County _____
- _____ 3.7 If one or more agencies do not answer promptly, instruct another qualified ECC Communicator to perform a **parallel notification** to the missing agency using the Off Site Notification Auto Dialer.
- _____ 3.7.1 If necessary to perform parallel notifications, **log person contacted** for the correct county in step 3.10.
- _____ 3.8 State, ***“Please stay on the line after the following message to provide a name or dispatcher number and to confirm receipt.”***
- _____ 3.9 **Read Emergency Report Form, Part 1.**
- Time notification completed _____
- _____ 3.10 Request receipt confirmation.
- “PEMA, name or dispatcher number?”*** _____
“Dauphin County?” _____
“Cumberland County?” _____
“Lancaster County?” _____
“Lebanon County?” _____
“York County?” _____
- _____ 3.11 **Flash the hook switch** until a dial tone is heard before hanging up.

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EXHIBIT 3

Page 3 of 4

- _____ 4.0 If not already notified in parallel by another ECC Communicator **Notify remaining agencies** that did not receive the information by pre-set conference call.
- _____ 4.1 **Log receipt confirmation** by recording name/dispatcher number and time notified in appropriate blank in Step 3.10.
- _____ 5.0 **I&C Technicians** performing the previous steps are to provide a **turn over of this exhibit** to a qualified ECC Communications Coordinator (CRO or IREO Communications Coordinator).
- _____ 6.0 If not already performed, **direct an ECC Communicator** to perform **Exhibit 9** of this procedure and provide Part 2 of the Emergency Report Form to him/her.
- _____ 7.0 Pin on the **ECC Communications Coordinator pin**.
- _____ 8.0 **Verify activation of ERDS** (Emergency Response Data System) by the Shift Engineer.
 - _____ 8.1 **Provide Exhibit 6 to the Shift Engineer** if necessary.
 - _____ 8.2 If ERDS cannot be activated, **complete Exhibit 8**, Emergency Status Log before calling the NRC.
- _____ 9.0 NRC Notification using the Emergency Notification System (ENS)
 - _____ 9.1 **Dial** the ten digit number attached on the **ENS telephone**.
 - _____ 9.2 **Read the Emergency Report Form**.
 - _____ 9.3 **Record** the **person** contacted.

Name _____ Time _____
 - _____ 9.4 **Maintain continuous communications** unless directed otherwise by the NRC Duty Officer.

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EXHIBIT 3

Page 4 of 4

_____ 9.5 If continuous communications are terminated by the NRC Duty Officer, **record the name of the individual directing termination.**

Name _____

| | | |
|--|-------------------------------------|------------------------------|
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**EXHIBIT 4
GENERAL EMERGENCY CHECKLIST**

Page 1 of 4

- _____ 1.0 **Obtain an Emergency Report Form** Part 1 and 2 from the Emergency Director or Shift Manager's computer printer.

NOTE

Do not allow problems encountered in Step 2.0 to interfere with completion of the 15 minute off site notifications per Step 3.0.

- _____ 2.0 Activate the group pagers
- _____ 2.1 Lift the **EP Pager Call Out Phone** receiver.
- _____ 2.2 Push the **GROUP PAGE** button.
- _____ 2.3 After hearing the voice prompt "Please enter your caller password", **press the "LEVEL 3" button.**
- _____ 2.4 After hearing the voice prompt "Thank you" or when the page tones are heard, **Hang up.**
- _____ 3.0 Perform 15 Minute Notifications.
- _____ 3.1 Confirm **Dial tone** on the **Notification Line.**
- _____ 3.2 **Toggle Switch up** to **OVERRIDE.**
- _____ 3.3 **Dial 91.**
- _____ 3.4 After the calling tone is heard, **Toggle Switch down** to **NORMAL.**
- _____ 3.5 As the agencies answer, state, ***"This is Three Mile Island Nuclear Station. Stand by for an emergency message."*** (State once and proceed immediately to the next step.)
- _____ 3.5.1 Log the time: _____

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EXHIBIT 4

- _____ 3.6 Ask if each agency is on the line.
[PEMA, are you on the line? Dauphin County?, etc.]
- PEMA _____ (check when on line)
 Dauphin County _____
 Cumberland County _____
 Lancaster County _____
 Lebanon County _____
 York County _____
- _____ 3.7 If one or more agencies do not answer promptly, instruct another qualified ECC Communicator to perform a **parallel notification** to the missing agency using the Off Site Notification Auto Dialer.
- _____ 3.7.1 If necessary to perform parallel notifications, **log person contacted** for the correct county in step 3.10.
- _____ 3.8 State, ***“Please stay on the line after the following message to provide a name or dispatcher number and to confirm receipt.”***
- _____ 3.9 **Read Emergency Report Form, Part 1.**
- Time notification completed _____
- _____ 3.10 Request receipt confirmation.
- “PEMA, name or dispatcher number?”*** _____
“Dauphin County?” _____
“Cumberland County?” _____
“Lancaster County?” _____
“Lebanon County?” _____
“York County?” _____
- _____ 3.11 **Flash the hook switch** until a dial tone is heard before hanging up.

| | | |
|---|-------------------------------------|-------------------------------|
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EXHIBIT 4

Page 3 of 4

- _____ 4.0 If not already notified in parallel by another ECC Communicator **Notify remaining agencies** that did not receive the information by pre-set conference call.

- _____ 4.1 **Log receipt confirmation** by recording name/dispatcher number and time notified in appropriate blank in Step 3.10.

- _____ 5.0 **I&C Technicians** performing the previous steps are to provide a **turn over of this exhibit** to a qualified ECC Communications Coordinator (CRO or IREO Communications Coordinator).

- _____ 6.0 If not already performed, **direct an ECC Communicator** to perform Exhibit 9 of this procedure and provide Part 2 of the Emergency Report Form to him/her.

- _____ 7.0 Pin on the **ECC Communications Coordinator pin**.

- _____ 8.0 **Verify activation of ERDS** (Emergency Response Data System) by the Shift Engineer.

- _____ 8.1 **Provide Exhibit 6 to the Shift Engineer** if necessary.

- _____ 8.2 If ERDS cannot be activated, **complete Exhibit 8**, Emergency Status Log before calling the NRC.

- _____ 9.0 NRC Notification using the Emergency Notification System (ENS)

- _____ 9.1 **Dial** the ten digit number attached on the **ENS telephone**.

- _____ 9.2 **Read the Emergency Report Form**.

- _____ 9.3 **Record the person** contacted.

- Name _____ Time _____

- _____ 9.4 **Maintain continuous communications** unless directed otherwise by the NRC Duty Officer.

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EXHIBIT 4

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_____ 9.5 If continuous communications are terminated by the NRC
Duty Officer, **record the name of the individual directing
termination.**

Name _____

| | | |
|---|-------------------------------------|-------------------------------|
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**EXHIBIT 5
CLOSEOUT NOTIFICATION CHECKLIST**

Page 1 of 2

- _____ 1.0 **Obtain an Emergency Report Form** from Emergency Director or Shift Manager's computer printer.
 - _____ 2.0 Perform Off Site Notifications.
 - _____ 2.1 Confirm **Dial tone** on the **Notification Line**.
 - _____ 2.2 **Toggle Switch up** to **OVERRIDE**.
 - _____ 2.3 **Dial 91**.
 - _____ 2.4 After the calling tone is heard, **Toggle Switch down** to **NORMAL**.
 - _____ 2.5 As the agencies answer, state, ***"This is Three Mile Island Nuclear Station. Stand by for an emergency message."***
(State once and proceed immediately to the next step.)
 - _____ 2.6 Ask if each agency is on the line.
[PEMA, are you on the line? Dauphin County?, etc.]
 - PEMA _____ (check when on line)
 - Dauphin County _____
 - Cumberland County _____
 - Lancaster County _____
 - Lebanon County _____
 - York County _____
 - _____ 2.7 State, ***"Please stay on the line after the following message to provide a name or dispatcher number and to confirm receipt."***
 - _____ 2.8 **Read Emergency Report Form.**
- Time notification completed _____

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EXHIBIT 5

_____ 2.9 Request receipt confirmation.

“PEMA, name or dispatcher number?” _____

“Dauphin County?” _____

“Cumberland County?” _____

“Lancaster County?” _____

“Lebanon County?” _____

“York County?” _____

_____ 2.10 **Flash the hook switch** until a dial tone is heard before hanging up.

_____ 3.0 **Notify remaining agencies** that did not receive the information by pre-set conference call.

_____ 3.1 **Log receipt confirmation** by recording name/dispatcher number and time notified in appropriate blank in Step 2.9.

4.0 NRC Notification using the Emergency Notification System (ENS)

_____ 4.1 **Dial** the ten digit number attached on the **ENS telephone**.

_____ 4.2 **Read the Emergency Report Form**.

_____ 4.3 **Record the person** contacted.

Name _____ Time _____

| | | |
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**EXHIBIT 6
EMERGENCY RESPONSE DATA SYSTEM ACTIVATION**

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NOTE

Activation of ERDS is performed by the Shift Technical Advisor. The ECC Communications Coordinator confirms establishment of the link.

NOTE

Perform the following steps at Control Room CRT 3 or CRT 4. If unavailable, use the TSC CRT.

- _____ 1.0 **Press "ERDS" key.** The Emergency Response Data System - Control Functions page should be displayed.
- _____ 2.0 **Press the "1" key.**
- _____ 3.0 **Press "EXEC" key.** The Emergency Response Data System - Parameter Display page 1 of 2 should be displayed.
- _____ 4.0 **Confirm link established** by the following indication displayed at the bottom of the Emergency Response Data System - Parameter Display page:
 - Modem Status: Connect
 - Link Status: Idle or Run
 - ERDS Status: Active
- _____ 5.0 **If the link cannot be established,** request the ECC Communications Coordinator to pursue resolution of the problem.
- _____ 6.0 The NRC has the capability to terminate the link. If requested to terminate:
 - _____ 6.1 Press "ERDS" key.
 - _____ 6.2 Press the "PAGE BACK" key.
 - _____ 6.3 Press the "3" key.
 - _____ 6.4 Press the "EXEC" key

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PROBLEM RESOLUTION

1. Failure to complete the link will be indicated by the following display at the bottom of the Emergency Response Data System - Parameter Display page:

Modem Status: Fail
Link Status: Fail
ERDS Status: Inactive

- _____ 2. Contact the NRC using the ENS Line or dial telephone to ensure a line is available and they are prepared to receive ERDS data.
3. The software should automatically re-establish the link in the event of a problem, but manual intervention may be required.
4. If manual intervention is required to re-establish the link.
 - _____ 4.1 Press "ERDS" key.
 - _____ 4.2 Press the "PAGE BACK" key.
 - _____ 4.3 Press the "2" key.
 - _____ 4.4 Press the "EXEC" key.
- _____ 5. To obtain assistance with ERDS problems not resolved by the previous actions, contact the computer support individual listed on the Initial Response Emergency Organization Duty Roster.

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EXHIBIT 7

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Back Up Communications

SECTION I - ADDITIONAL TELEPHONE NUMBERS/ALTERNATE COMMUNICATIONS PATHWAYS

Pennsylvania Emergency Management Agency

1. Lines specified in Exhibits 1, 2, 3, 4, & 5.

| | |
|------------------------|----|
| Notification Line..... | 37 |
|------------------------|----|
2. Commercial telephone lines 9-651-2001
3. PEMARS Radio Link
4. Message relay through a risk county.

Risk Counties

1. Lines specified in the Exhibits 1, 2, 3, 4, & 5.

| | | | |
|------------------------|--|--|----|
| Notification Line | | | |
| Dauphin County..... | | | 38 |
| York County..... | | | 30 |
| Lancaster County..... | | | 34 |
| Cumberland County..... | | | 35 |
| Lebanon County..... | | | 39 |
2. Commercial telephone lines

| | | | |
|------------------------|--|--|------------------|
| Dauphin County..... | | | |
| | | | 9-911 |
| | | | 9-558-6900 |
| | | | 9-558-6800 |
| York County..... | | | 9-854-5571 |
| | | | 9-840-7555 |
| | | | 9-1-800-427-8347 |
| Lancaster County..... | | | 9-664-1200 |
| | | | 9-664-1190 |
| Cumberland County..... | | | 9-238-9676 |
| | | | 9-243-4121 |
| | | | 9-532-8878 |
| Lebanon County..... | | | 9-272-2025 |
| | | | 9-272-7621 |
| | | | 9-272-2054 |
3. PEMARS Radio Link
4. Message relay through PEMA
5. Message relay through neighboring risk county.

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EXHIBIT 7

Nuclear Regulatory Commission

1. FTS 2000 Dedicated Telephone Circuits

- Emergency Notification System (ENS)
- Health Physics Network (HPN)
- Protective Measures Counterpart Link (PMCL)
- Reactor Safety Counterpart Link (RSCL)
- Management Counterpart Link (MCL)
- Local Area Network (LAN)

NOTE

When using the Emergency Notification System (ENS), Health Physics Network (HPN), Protective Measures Counterpart Link (PMCL), Reactor Safety Counterpart Link (RSCL), Management Counterpart Link (MCL), or Local Area Network (LAN) telephones, dial only the ten digit number. Do not dial "9" or "1" before dialing the numbers listed when using these NRC telephones.

Primary Number 301-816-5100
 Back up Number 1 301-951-0550
 Back up Number 2 301-415-0550

2. Commercial telephone lines

Primary Number 9-1-301-816-5100
 Back up Number 1 9-1-301-951-0550
 Back up Number 2 9-1-301-415-0550

3. Message relay through PEMA or Risk County.

NOTE

1. Although local telephone service may be affected, the microwave/fiber optics telephone system to remote facilities may be functional and allow a message relay.
2. If all telephone service to TMI is lost, a relay to the EOF over the Environmental Assessment Radio could be used for communications. Telephone service at the EOF may still be functional allowing notifications to be made by the EOF staff.

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SECTION II - EQUIPMENT FAILURE ALTERNATIVES

NOTE

All communications equipment failures should be reported to the ECC Communications Coordinator for resolution.

Meridian Telephone System Failure

1. Use available telephones with a 944 prefix. (e.g., EP Pager Call Out Phone) These telephones are connected directly to the Middletown Central Office and are independent of the Meridian System.

EP Pager Call Back Line Failure

1. Manually access the voice mail box. Refer to the instructions for "Performing Call-Outs From A Remote Location" in this exhibit.
2. If necessary, use the EP Pager Call Back Line at the Plant Reference Simulator
3. Answer calls manually using telephone extension 8801.

EP Pager Call Out Phone Failure (Group Pager Activation)

1. Obtain the group pager telephone number kept in the Shift Manager's Office safe or in the Control Room from the Shift Manager or Control Room Supervisor desk cabinet.
2. Using any functional touch-tone telephone, manually dial the group pager activation number.
3. When the voice prompt "Please enter your caller password" is heard, dial "1979".
4. Dial one of the following numbers as indicated on the Emergency Report Form:
 - a. Level 1 - Dial "948*8801*1#" to notify the Public Information Duty Representative.
 - b. Level 2 - Dial "948*8801*2#" to activate the Initial Response Emergency Organization, EACC, and the Public Information Duty Representative.
 - c. Level 3 - Dial "948*8801*3#" to activate the Emergency Support Organization, Initial Response Emergency Organization, the EACC, and the Public Information Duty Representative.
5. When the voice prompt "Thank you" or the page tones are heard, you may hang up.

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Group Pager Activation Failure

1. Attempt to manually activate the group pagers by performing the steps shown in the "EP Pager Call Out Phone Failure" section above.
2. Contact the duty Emergency Preparedness Representative (Position 504 on the Emergency Support Organization Duty Roster) using the telephone numbers provided in the phone list kept with the duty rosters and request assistance with the call outs.
3. In coordination with the Emergency Preparedness Representative, call personnel individually at the numbers provided in the duty roster and telephone number list.
4. Attempt to activate the pagers individually as follows:
 - a. Manually dial the individual's pager activation number shown on the duty roster.
 - b. When the voice prompt "Please enter your caller password" is heard, dial "1979".
 - c. Dial one of the following numbers as indicated on the Emergency Report Form:
 - Level 1 - Dial "948*8801*1#" to notify the Public Information Duty Representative.
 - Level 2 - Dial "948*8801*2#" to activate the Initial Response Emergency Organization, EACC and the Public Information Duty Representative.
 - Level 3 - Dial "948*8801*3#" to activate the Emergency Support Organization, the Initial Response Emergency Organization, the EACC, and the Public Information Duty Representative.
 - d. When the voice prompt "Thank you" is heard, you may hang up.
 - e. Repeat Steps a through d for each individual required to respond.

Performing Call-Outs From A Remote Location

1. Obtain the group pager activation number from the Shift Manager or Control Room Supervisor's desk cabinet in the Control Room or from the Tech Support Center File Cabinet.
2. Using any touch-tone telephone (i.e., non-rotary dial telephone), dial the group page activation number.
3. When the voice prompt "Please enter your caller password" is heard, dial "1979".

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4. Dial one of the following numbers as indicated on the Emergency Report Form:
 - a. Level 1 - Dial "948*8801*1#" to notify the Public Information Duty Representative.
 - b. Level 2 - Dial "948*8801*2#" to activate the Initial Response Emergency Organization, the EACC and the Public Information Duty Representative.
 - c. Level 3 - Dial "948*8801*3#" to activate Emergency Support Organization, the Initial Response Emergency Organization, the EACC and the Public Information Duty Representative.
5. When the voice prompt "Thank you" or the pager tones are heard, you may hang up.
6. After individuals have had time to respond to the page, use any Meridian telephone to dial "8424". (The voice prompt "Meridian mail. Mail box?" will be heard.)
7. Dial "8801#". (Voice prompt "Password?" will be heard.)
8. Dial "CALLOUT#" (or "2255688#"). Voice prompt "You have X new voice messages. Message one." will be heard. The first message will be played and end with voice prompt "End of message".
9. At this point the steps of Exhibit 9, starting at Step 3.5, may be followed.

Middletown Switching System (Central Office) Failure

NOTE

All TMI local telephone lines and dedicated emergency lines (ML-8000 lines) to off-site facilities require the Middletown Central Office to be functional.

Local service to Middletown will not be available regardless of the method used below.

1. Bypass the Middletown Central Office by using the GPU fiber optics system. Using any Shift Manager's Office, Control Room, or TSC telephone, dial 2911-9-1-Area Code (if other than 610)-telephone number.
2. Group pager activation may be completed by obtaining the number from the Shift Manager or Control Room Supervisor and dialing 2911-9-1-800-number from any Shift Manager's Office, Control Room, or TSC telephone.

| | | |
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Harrisburg Central Office Failure

1. Dial local calls to telephone numbers with 944,948, and 367 prefixes in the normal manner.

2. With the exception of Harrisburg exchanges, complete all other calls using the GPU fiber optics system. Using any Shift Manager's Office, Control Room, or TSC telephone, dial 2911-9-1-Area Code (if other than 610)-telephone number.

NOTE

As the paging company utilizes the Harrisburg Central Office, group and individual pager service may not be available.

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Emergency Status Log

NOTE

This exhibit should be used as a guide for transmittal of information to the NRC when the Emergency Response Data System is unavailable. Communicator mobility available through the use of the cordless head-set in the Control Room/ECC will allow this exhibit to be completed as and if needed after contact with the NRC has been established. Do not exceed the one hour notification time limit.

NOTE

If transmitting this information to the Region I Incident Response Center, it may be more efficient to telecopy these sheets to the telecopier number provided in the "Additional Assistance and Notification" procedure (EPIP-TMI-.06).

A. Type of Event (Check the appropriate area[s])

- | | | |
|--|--|--|
| <input type="checkbox"/> 50.72 (non-emergency) | <input type="checkbox"/> Site Area Emergency | <input type="checkbox"/> Physical Security |
| <input type="checkbox"/> Unusual Event | <input type="checkbox"/> General Emergency | <input type="checkbox"/> Safeguards |
| <input type="checkbox"/> Alert | <input type="checkbox"/> Transportation | <input type="checkbox"/> Other |

B. Facilities Activated

- | | |
|------------------------------|------------------------------|
| <input type="checkbox"/> ECC | <input type="checkbox"/> EOF |
| <input type="checkbox"/> OSC | |
| <input type="checkbox"/> TSC | |

C. Description of Emergency (Include basis for event and event details)

| | | |
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D. Event Time: _____

E. Power Level Prior to the Event: _____

Present Power Level: _____

F. Has the Reactor tripped? Yes / No

G. Were the Emergency Safeguards Systems actuated? Yes / No

If so, which ones (Check as applicable)

Mode of Actuation

(Circle as required)

_____ • High Pressure Injection AUTO / MANUAL

_____ • Low Pressure Injection AUTO / MANUAL

_____ • Core Flood AUTO / MANUAL

_____ • 4 psig Reactor Building Isolation AUTO / MANUAL

_____ • Reactor Building Spray Actuated AUTO / MANUAL

H. What is the status (mode) of the plant

_____ • At Power

Other Information:

_____ • Hot Standby

_____ • Hot Shutdown Reactor Pressure _____ psig

_____ • Cooling Down Reactor Temperature _____ °F

Describe Cooling Mode _____

I. Containment status (if applicable) _____

| | | |
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- J. Is Off Site power available Yes / No
- If no, are both diesel generators operable Yes / No
- K. Have any personnel injuries occurred Yes / No
- If so, is the injured person(s) contaminated Yes / No
 - a. What are the approximate radiation and/or contamination levels
 - _____ mR/hr
 - _____ DPM/100 cm²
- L. Are there excessive radiation levels and/or contamination levels. Yes / No
- If so, list below:
 - a. Radiation levels (Whole Body) _____
 - b. Contamination levels _____ DPM/100 cm² at
Location: _____
 - Plant Rad. Controls backup requested? Yes / No
- M. Other problems _____

- N. Plans _____

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O. The following additional information may be requested depending on the type of emergency.

- Procedures In Use
- Personnel in Control Room
 - a. Name
 - b. Position
- Emergency Ventilation Status (Control Room)
- DC Power Status
- Service Water Status
 - a. Decay Heat River Water
 - b. Reactor Building Emergency River Water
 - c. Nuclear Services River Water
 - d. Secondary Services River Water
- Primary Component Cooling Water Status
 - a. Nuclear Services Closed Cooling Water
 - b. Decay Heat Closed Cooling
 - c. Intermediate Closed Cooling
- Secondary Component Cooling Water Status
 - a. Secondary Services Closed Cooling
- Reactor Status
 - a. Average Temp, 5 Highest Incore T/C's _____/Trend_____
 - b. Reactor Vessel Water Level _____/Trend_____
 - c. Emergency Boration Source
 - d. Boron Concentration_____

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- Primary Coolant System Status
 - a. Reactor Coolant Pump Status
 - b. Pressurizer Temperature _____/Trend_____
 - c. Safety Valve Status
 - d. RCDDT (also called PRTR or PDT) Level _____/Pressure_____
 - e. Loop Temperatures (Wide Range) _____/Trend_____
 - f. Subcooling Margin
 - Loop Margin _____
 - Incore Margin _____
 - g. RCS Activity
 - Gas Concentrations _____
 - Specific Activity
Total _____ Dose Equivalent I-131_____

- Containment Status
 - a. Pressure _____
 - b. Sump Levels
Sump _____ Flood _____
 - c. Hydrogen Concentration _____
 - d. RB Spray Status
 - e. LOCA Monitor Status
 - RM-G22/23
 - Additional Rad Data should be requested over the Health Physics Network (HPN Line).

- ECCS Status
 - a. Makeup Pump Status/Indication (also called HPSI or Charging Pump Data)

| | | |
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- b. Decay Heat Removal Pump Status/Indication (also called LPSI or RHR Pump Data)
- Secondary Plant Status
 - a. Steam Generator Levels
 - OTSG "A" _____ OTSG "B" _____
 - b. Steam Generator Pressures
 - OTSG "A" _____ OTSG "B" _____
 - c. Steam Generator Status
 - Tube Leakage (OTSG "A"/"B")
 - Isolated
 - Cooling Supply
 - 1. Normal Feedwater Flow Rate
 - 2. Emergency (Auxiliary) Feedwater Flow Rate
 - Cooling Sink
 - 1. Atmospheric Dump Valves
 - 2. Turbine Bypass Valves
 - d. Condensate Storage Tank Levels
 - CO-T-1A _____ CO-T-1B _____

| | | |
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**EXHIBIT 9
CALL OUT OPERATIONS**

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NOTE

This exhibit and Emergency Report Form, Part 2 are required to perform the following steps.

- _____ 1.0 **Obtain** the Initial Response Emergency Organization and Emergency Support Organization **Duty Rosters** from the Shift Manager's Office bulletin board.

- _____ 2.0 If the declaration is an **Unusual Event with radiological considerations**, **call out the duty RAC** (Radiological Assessment Coordinator).
 - _____ 2.1 **Obtain telephone numbers for Position 105** (RAC) on the Initial Response Emergency Organization Duty Roster and call the individual listed.

 - _____ 2.2 To individually page the duty RAC:
 - _____ 2.2.1 **Dial the individual pager number.**

 - _____ 2.2.2 After hearing the voice prompt, "Please enter your caller password", **dial "1979"**.

 - _____ 2.2.3 **Dial the call back number** you wish the person to call. (for example: 948*8778#)

 - _____ 2.2.4 After hearing the voice prompt, "Thank you", **hang up.**

- _____ 3.0 Review Emergency Response Organization response using the **EP Pager Call Back Line.**
 - _____ 3.1 **Dial "8424"** on the EP Pager Call Back Line.

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- 3.2 If there are not a large number (≥ 20) of new voice mail messages, hang up the EP Pager Call Back Line and re-activate the group pagers as follows:
 - _____ 3.2.1 Lift the **EP Pager Call Out Phone receiver**.
 - _____ 3.2.2 Push the **GROUP PAGE button**.
 - _____ 3.2.3 After hearing the voice prompt "Please enter your caller password", **press the designated LEVEL button** [Designated on Part 1 of the Emergency Report Form, i.e., Level 1, Level 2, or Level 3]
 - _____ 3.2.4 After hearing the voice prompt "Thank you" or when the page tones are heard, **Hang up**.
- _____ 3.3 **Dial "8424"** on the EP Pager Call Back Line.
- 3.4 After dialing "8424", the first message will play.
- 3.5 **Check off the individual** on the duty roster.
- 3.6 **Press "76" to delete** the message.
- 3.7 **Press "6" and then "2"** to review the next message.
- _____ 3.8 **Repeat steps 3.5 through 3.7** until all messages are reviewed. (Voice prompt "End of Mailbox will indicate all messages have been reviewed.)
- _____ 4.0 **Determine unmanned positions** on the duty roster (i.e., the positions not checked).
- _____ 5.0 **Contact non-responding personnel** using the telephone numbers on the TMI Initial Response and Emergency Support Organization Telephone List. (Prioritize contacts to Coordinator positions and single person positions first.)
 - 5.1 To **individually page non-responding personnel**.
 - _____ 5.1.1 **Dial the individual pager number**.

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- _____ 5.1.2 After hearing the voice prompt, "Please enter your caller password", **dial "1979"**.
- _____ 5.1.3 **Dial "948*8801#" for the call back number.**
- _____ 5.1.4 After hearing the voice prompt, "Thank you", **hang up.**
- _____ 6.0 **Periodically repeat steps 3.3 through 3.8** to review any new messages.
- _____ 7.0 **Replace non-responding personnel** by contacting other qualified individuals indicated on the TMI Initial Response and Emergency Support Organization Telephone List.
- _____ 8.0 **Check Emergency Response Facilities** for emergency response personnel.
 - _____ 8.1 Shift Manager's Office/ECC/RAC. Visual check.
 - _____ 8.2 Operations Support Center. Call or 8082 or 8470.
 - _____ 8.3 Technical Support Center. Visual check.
 - _____ 8.4 Emergency Operations Facility. Call 8903 or 9-657-0739.
- _____ 9.0 If notified by the RAC that BRP call back has not been received, notify PEMA that BRP call back has not been received.
- _____ 10.0 **Contact the NRC Resident Inspector.**
 - _____ 10.1 **Call Craig Smith**

| | |
|----------------|------------------|
| Site telephone | 948-8253 |
| Home telephone | 9-566-4757 |
| Pager number | 9-1-800-398-8135 |
 - _____ 10.2 **Read Emergency Report Form, Part 2** when contacted.
 - _____ 10.3 **Record time contacted:** _____

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- _____ 10.4 If contact cannot be made, note this in the "time contacted" blank in step 10.3 and continue this procedure.

- _____ 11.0 **Confirm** with Control Room personnel that the **Public Information Duty Rep called** in response to the group page

- _____ 12.0 **If the Public Information Duty Rep did not call** in, perform the remainder of step 12.

- _____ 12.1 **Obtain telephone numbers for Position 111** (Public Info Duty Rep) on the Initial Response Emergency Organization Duty Roster and call the individual listed.

- _____ 12.2 **Read Emergency Report Form**, Part 2 to the Public Information Duty Representative.

- _____ 12.3 **Record** the **person** contacted.
Name _____ Time _____

- _____ 12.4 To individually page the Public Information Duty Rep:
 - _____ 12.4.1 **Dial the individual pager number.**
 - _____ 12.4.2 After hearing the voice prompt, "Please enter your caller password", **dial "1979"**.
 - _____ 12.4.3 **Dial** the call back number **948*8801#**.
 - _____ 12.4.4 After hearing the voice prompt, "Thank you", **hang up**.

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EXHIBIT 9

13.0 Contact the York Haven Power Station

_____ 13.1 Use the Auto-Dialer or **Dial 9-848-7277** or 9-266-3654.

_____ 13.2 **Read Emergency Report Form**, Part 2.

_____ 13.3 **Record** the **person** contacted.

Name _____ Time _____

14.0 Contact the GPU Energy System Generation Dispatcher

_____ 14.1 Use the Auto-Dialer or **Dial 9-1-610-375-5421**.

_____ 14.2 **Read Emergency Report Form**, Part 2.

_____ 14.3 **Record** the **person** contacted.

Name _____ Time _____

_____ 15.0 Inform the Emergency Director Assistant when all **contacts** have been **completed**.

16.0 **Event Termination** notifications.

_____ 16.1 **NRC Resident Inspector** contacted on step 10.0.

Person notified _____ Time _____

_____ 16.2 **York Haven Power Station** contacted in step 13.0.

Person notified _____ Time _____

_____ 16.3 **System Dispatcher** contacted in step 14.0.

Person notified _____ Time _____

_____ 17.0 **Forward this procedure** and all associated documentation to the Emergency Preparedness Department.

FOR INFORMATION ONLY

AmerGen

TMI Emergency Plan
Implementing Document

Number

EPIP-TMI-.05

Title

Communications and Record Keeping

Revision No.

9

Applicability/Scope

USAGE LEVEL

Effective Date

TMI Division

3

OCT 20 2000

This document is within QA plan scope
Safety Reviews Required

| | | | |
|-------------------------------------|-----|--------------------------|----|
| <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |
| <input checked="" type="checkbox"/> | Yes | <input type="checkbox"/> | No |

List of Effective Pages

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| 1 | 9 | | | | | | |
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| 6 | 9 | | | | | | |
| 7 | 9 | | | | | | |
| 8 | 9 | | | | | | |
| 9 | 9 | | | | | | |

| | Signature | Date |
|-----------------|--------------------------------------|------------|
| Originator | A. J. Knoche | 10-16-2000 |
| Procedure Owner | /s/ A. J. Knoche | 09/11/00 |
| PRG | /s/ E. R. Frederick for J. S. Schork | 10/06/00 |
| Approver | /s/ N. D. Brown | 10/09/00 |

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|--|---|-------------------------------|
| | TMI Emergency Plan Implementing Document | Number EPIP-TMI-.05 |
| Title | Revision No. 9 | |
| Communications and Record Keeping | | |

1.0 **PURPOSE**

- a. To provide guidance for the use of emergency communications equipment.
- b. To provide guidance for logs and records to be kept.

2.0 **APPLICABILITY/SCOPE**

- a. This procedure applies to individuals performing record keeping and communications activities at all TMI Emergency Response Facilities and additional Support Facilities.
- b. This procedure is to be initiated upon declaration of any emergency classification as specified in the Emergency Plan or when directed by the Emergency director.
- c. This procedure is intended to provide supplemental guidance in the use of emergency communications equipment and log keeping to those members of the emergency response organization needing such guidance. All or any part of this procedure may be used as necessary. Sections not needed may be disregarded without introducing any adverse consequences.

3.0 **DEFINITIONS**

None

4.0 **RESPONSIBILITIES**

All TMI emergency response personnel assigned the duties of communications and record keeping by their duty roster position or by their emergency response facility coordinator or their designee should follow the guidelines in this procedure.

5.0 **PROCEDURE**

5.1 Emergency Telephone Operation (two digit ML-8000 telephones)

- a. Calling a station
 - 1. Dial the two digit telephone number for the desired station.
- b. Adding a station an existing conversation
 - 1. Flash the hook switch until a dial tone is heard.
 - 2. Dial the two digit number for the station to be added. All parties will be connected when the called station answers.
 - 3. To cancel a busy tone or unanswered ring tone, flash the hook switch.
- c. Pre-set conference call initiation (all stations)
 - 1. Dial the two digit code "91."
 - 2. To cancel a busy tone or unanswered ring tone, flash the hook switch.

| | | |
|--|---|-------------------------------|
| | TMI Emergency Plan Implementing Document | Number EPIP-TMI-.05 |
| Communications and Record Keeping | Revision No. 9 | |

- d. Gaining access to an existing conference call
 - 1. Contact one of the active stations using another circuit.
 - 2. Request to be added using add-on conferencing per Step 5.1.b.
- 5.2 Auto Ring Telephone Operation (ex. ED Line, In-Plant Rad Con Line)
 - a. Lift the hand set to complete the call. Dialing numbers is not required.
- 5.3 Box Car Jack Operation (connections for head-sets)
 - a. Rotary Switch Box Car Jacks (mounted to the side of the emergency telephone)
 - 1. Plug in the head-set.
 - 2. Turn the rotary switch clock-wise from the hand-set to the head-set position.
 - 3. Use the hook switch on the telephone to make or break calls.
 - b. Rocker Switch Box Car Jacks (mounted to the side of the emergency telephone).
 - 1. Plug in the head-set.
 - 2. Change the position of the rocker switch so that the red indicator is visible.
 - 3. Use the bar switch on the box car jack housing in place of the hook switch on the phone to make or break calls.
- 5.4 Head-Set Operation
 - a. Head-sets connected to box car jacks
 - 1. Control volume using the switch on the jack connector housing.
 - 2. Place the microphone 1/4 inch from mouth.
 - b. Cordless Head-Sets (ENS Line, Operations Line)

NOTES

- Range of the cordless head-set is anywhere in the control room or shift supervisor's office only.
- Batteries are rated for six hours of use.

- 1. Remove head-set from charger and don.
- 2. Rotate microphone down to mouth to energize the head-set unit.
- 3. Take the telephone hand set off the telephone cradle/hook switch.

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| Title Communications and Record Keeping | Revision No. 9 | |

4. Use telephone hook switch to make or break calls.

5.5 Telecopier Operation

- a. Place the paper(s) to be telecopied face down in the tray provided.
- b. If the receiving facility FAX number is programmed in your telecopier (button labeled with the facility name):
 - 1. Press the one-touch button labeled with the name of the facility receiving the FAX.
 - 2. No other action is necessary.
- c. If the receiving facility FAX number is not programmed in your telecopier (button not labeled with the facility name):
 - 1. Press the "Space Tel/Dial" button.
 - 2. Dial the receiving FAX machine telephone number.
 - 3. No other action is necessary.

5.6 Emergency Telephone Techniques

- a. Answer by identifying your facility followed by your name (e.g., OSC, Smith)
- b. Preface communication in conference calls by stating the facility you are addressing followed by your facility (e.g., ECC, OSC) then your message.
- c. Cover your mouth-piece when not conversing with another station on the telephone to reduce background noise for those on the circuit.
- d. Advise other station on the circuit if you must leave the telephone.
- e. Avoid informal or unnecessary discussions.

5.7 Malfunctions and Circuit Trouble Reporting

- a. Report all communications equipment malfunctions to the ECC Communications Coordinator in the control room.
- b. Be prepared to provide your name, the name/designation of the circuit malfunctioning, the location of that device, and a brief description of the problem.

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5.8 Record Keeping

NOTE

The information recorded in logs must be in sufficient detail so that plant and regulatory agencies are able to reconstruct the event after the incident is terminated.

- a. Logs should be started as soon as possible after an emergency declaration or assuming an emergency position.
- b. Logs should be taken with the detail necessary to allow reconstruction of the event once the incident has been closed out.
- c. The following logs should be kept as a minimum:
 - Emergency Director Log
 - Radiological Assessment Coordinator Log
 - Technical Support Center Coordinator Log
 - Operations Support Center Coordinator Log
 - Emergency Support Director Log
 - Technical Support Representative Log
 - Environmental Assessment Coordinator Log
 - Group Leader-Admin Support Log
 - Communicator Log (any facility)
 - Subordinate positions to facility coordinators should also maintain logs of their activities.
- d. Logs should follow the format of Exhibit 1 for position/facility logs and should follow the format of Exhibit 2 for telephone logs. Exhibit 1 and 2 sheets, a bound log book, or equivalent sheets are acceptable.
- e. All significant events and communications must be recorded, including but not limited to:
 - Emergency Position/Facility and person recording the information.
 - Personnel staffing key positions within the facility.
 - Changes or transfers of responsibilities.
 - Times and names associated with each log entry.

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- Time of emergency declarations.
- Significant events (relevant plant status information and changes, teams dispatched and mission, etc.).
- Orders and direction received and response to same.
- Recommendations provided or received.
- Significant communications with other facilities.
- All communications with off-site agencies.
- Radiation survey, monitoring, and sampling results as applicable to the facility/position keeping the log.
- Deviations from procedures and reason for the deviation.
- Justifications of event declarations based on the Judgement E.A.L.
- Basis for any significant decisions.

f. Watch Bills

NOTE

If directed by your facility coordinator, draft a watch bill for your facility using the following instructions.

- After facility activation is complete and priority tasks are being addressed, establish a watch bill for your emergency response facility if the event has a potential to extend beyond twelve hours.
- Coordinate the start time for a twelve-hour shift rotation with the facility coordinator and other facilities as appropriate.
- List qualified individuals for each facility position on a draft watch bill.
- Contact each listed individual to inform them of their assigned shift hours during the emergency.
 - a. A list of all duty roster personnel with their office, home, pager, and cellular (if applicable) telephone numbers is available in the Shift Supervisors office. If applicable, request the ECC Communicator to FAX a copy of the applicable pages to your facility.
 - b. Call out of bargaining unit personnel should be performed in accordance with established procedures if possible.

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- Modify the draft watch bill as necessary to compensate for personnel who could not be contacted. Periodically place follow up calls to obtain additional personnel.
- If all duty roster positions in your facility are manned, suggest the facility coordinator release all supplemental off duty personnel who responded so they may rest before their own shift begins.
- Provide a copy of the watch bill to the facility coordinator and post a copy on the appropriate status board.

5.9 Final Conditions

- a. Following the close-out of the emergency or drill, forward all logs, notes, calculations, and records to the Emergency Preparedness Department.
- b. Inform the Emergency Preparedness Department if additional time or attention is required to complete or clarify logs.

6.0 **REFERENCES**

None

7.0 **EXHIBITS**

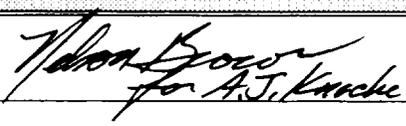
- Exhibit 1 - Incident Log
- Exhibit 2 - Telephone Communications Log Sheets

FOR INFORMATION ONLY

| | | |
|--|---|-------------------------------|
| AmerGen | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.06 |
| Title Additional Assistance and Notification | | Revision No. 34 |
| Applicability/Scope | USAGE LEVEL | Effective Date |
| TMI Division | 3 | OCT 20 2000 |
| This document is within QA plan scope | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |
| Safety Reviews Required | <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | |

List of Effective Pages

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| 8 | 34 | | | | | | |
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| 10 | 34 | | | | | | |
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| 13 | 34 | | | | | | |
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| | Signature | Date |
|-----------------|---|----------|
| Originator | A. J. Knoche  | 10/11/00 |
| Procedure Owner | /s/ A. J. Knoche | 09/12/00 |
| PRG | /s/ E. R. Frederick for J. S. Schork | 10/07/00 |
| Approver | /s/ N. D. Brown | 10/03/00 |

| | | |
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| | TMI - Unit 1 Emergency Procedure | Number EPIP-TMI-.06 |
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1.0 **PURPOSE**

To provide Emergency Response Personnel with a directory of additional emergency response personnel, organizations and agencies for the purpose of making reports and obtaining assistance during an incident at TMI.

2.0 **APPLICABILITY/SCOPE**

This procedure applies to all TMI Emergency Response personnel of the On-shift, Initial Response, and Emergency Support Organizations responsible for contacting on-site and off-site agencies.

3.0 **DEFINITIONS**

None

4.0 **RESPONSIBILITIES**

The Emergency Director and/or the Emergency Support Director is/are responsible for implementing this procedure through the communicators at the ECC and EOF.

5.0 **PROCEDURE**

5.1 In the event of a declared emergency at TMI that requires additional emergency response personnel, organizations or agencies, take the following steps if required:

- a. Determine the discipline, personnel, or equipment needed for the class of emergency declared.
- b. Refer to the Exhibits section in Step 7.0 and identify the general category needed.
- c. Turn to the appropriate exhibit to determine the telephone number needed.
- d. If problems are encountered with emergency telephones, report the problem to the ECC Communications Coordinator. The Communications Coordinator shall refer to Exhibit 5.

5.2 Contact the organization needed and identify yourself by name, position, and Three Mile Island Nuclear Station.

- a. Identify and give a brief description of the situation.
- b. Identify necessary personnel/equipment needed and request assistance.
- c. Identify a telephone number that can be used by the assisting organization to call back, if appropriate.
- d. Based on information obtained from the RAC or EAC, provide a "best approach route" to responding organizations so that exposure to the plume will be minimized.

5.3 Log all pertinent information in accordance with the "Communications and Record Keeping" procedure, EPIP-TMI-.05.

5.4 If further assistance is required, repeat 5.1 through 5.3 as needed.

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5.5 If additional telephone numbers are needed to obtain assistance, consider the following sources of information:

- a. TMI Employee Directory
- b. INPO Emergency Resources Manual
- c. Local telephone book

5.6 Forward procedures used during emergencies, drills, and exercises to the TMI Emergency Preparedness Group following the incident.

6.0 **REFERENCES**

- EPIP-TMI-.05, Communications and Record Keeping
- Employee Phone Directory
- INPO Emergency Resources Manual

7.0 **EXHIBITS**

- Exhibit 1 - TMI On-Site Emergency Response Directory
- Exhibit 2 - TMI Off-Site Emergency Response Directory
- Exhibit 3 - Off-Site Emergency Organizations and Assistance (non TMI Organizations)
- Exhibit 4 - Emergency Telephone Numbers for NRC Notification
- Exhibit 5 - Telephone, Pager and LAN Trouble Reporting Procedure
- Exhibit 6 - Emergency Aviation Support Instructions

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| | Number |
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EXHIBIT 1
TMI On-Site Emergency Response Directory

Page 1 of 4

EMERGENCY CONTROL CENTER (CONTROL ROOM)

TELEPHONE NO.

NOTE

For drills and exercises, the Plant Reference Simulator telephone numbers shall be used, not the actual Control Room telephone numbers.

| | | |
|---|---------------------------|----------|
| Shift Manager's Office | | 948-8778 |
| | (Telecopier) | 948-8779 |
| Control Room - Console | | 948-5579 |
| Control Room Operator | | 948-8069 |
| Control Room Supervisor | | 948-8071 |
| Shift Manager | | 948-8070 |
| Control Room - Dose Assessment (RAC) | | 948-8525 |
| Control Room - RAC-R&EC Telephone | | 944-0382 |
| COLA Computer Reboot Extension | | 948-8297 |
| Off-site Notification Auto-Dialer | | 948-8984 |
| EP Pager Call Out Phone | | 944-6623 |
| EP Pager Call Back Line | | 948-8801 |
| Plant Reference Simulator (for drills and exercises only) | (CRO) | 948-2069 |
| | (Control Room Supervisor) | 948-2071 |
| | (Shift Manager) | 948-2070 |
| | (RAC Area) | 948-2063 |
| | (Telecopier) | 948-2079 |
| | (Media Rep) | 948-2057 |
| | (ECC Communicators) | 948-2078 |
| | (EP Pager Call Out Phone) | 944-4300 |
| | (EP Pager Call Back Line) | 948-8801 |

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EXHIBIT 1

OPERATIONS SUPPORT CENTER

| | |
|-----------------------------------|---|
| OSC Coordinator | 948-8082 |
| GRCS/Rad Con Coordinator | 948-8470 |
| | (GRCS Cellular) 5444 |
| | (Outside access to GRCS Cellular) 948-8248, ext. 5444 |
| Radiological Controls Technicians | 948-8083 |
| | (Telecopier) 948-8821 |

TECHNICAL SUPPORT CENTER

| | |
|-------------------------------|----------|
| TSC Coordinator and Engineers | 948-8773 |
| | 948-8774 |
| | 948-8951 |

BACKUP TECH SUPPORT CENTER

| | |
|--|-----------------------|
| | 948-5505 |
| | 948-5506 |
| | 948-5507 |
| | (Telecopier) 948-8780 |

| | | |
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EXHIBIT 1

Page 3 of 4

SITE SECURITY

| | | |
|--|-------|----------|
| Processing Center | | 948-8038 |
| Central Alarm Station (CAS) | | 948-8039 |
| Secondary Alarm Station (SAS) | | 948-8040 |
| CAS Command Center (Central Alarm Station) | | 948-8132 |
| | | 948-8134 |
| | | 948-8159 |
| | (FAX) | 948-8422 |
| OSF Command Center | | 948-8314 |
| | | 948-8309 |
| | | 948-8302 |
| | (FAX) | 948-8044 |
| North Gate | | 948-8445 |
| | | 948-5554 |
| | | 948-8444 |
| South Gate | | 948-8446 |

MEDICAL DEPARTMENT

(Call the Control Room/ECC for medical emergencies)

948-8327

WAREHOUSES

| | | |
|---------------------------------------|----------------------------|----------|
| Warehouse 1 (Emergency Assembly Area) | (also 948-8248, ext, 5500) | 948-5500 |
| Warehouse 1 | | 948-8503 |
| Warehouse 3 (Emergency Assembly Area) | (also 948-8248, ext, 5042) | 948-5042 |

| | | |
|---|-------------------------------------|-------------------------------|
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EXHIBIT 1

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MISCELLANEOUS

| | |
|----------------|--|
| Dosimetry | 948-8473 |
| | 948-8474 |
| Computer Group | 948-8606 |
| | 948-8107 |
| | 948-2062 |
| | PPC Modem dedicated backup line 944-2691 |
| | PPC Modem dedicated backup line 944-3007 |
| Transportation | 948-8733 |
| Communications | 948-8197 |

| | | |
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EXHIBIT 2

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TMI Off-Site Emergency Response Directory

MERGENCY OPERATIONS FACILITY (SUSQUEHANNA TWP.)

WORK PHONE NO.

| | |
|---|------------|
| Admin Support | 948-8964 |
| | 948-8965 |
| | 9-657-2368 |
| | 9-657-2739 |
| Communicators | 948-8903 |
| | 9-657-0739 |
| Communications Division Area | 948-8417 |
| | 948-8968 |
| | 9-657-1039 |
| Environmental Assessment Command Center | 9-540-4500 |
| | 9-540-4501 |
| ESD Conference Room | 948-8966 |
| | 9-657-0471 |
| Group Leader - R&EC Area | 948-8966 |
| | 9-657-2097 |
| | 9-657-0564 |
| | 9-657-0629 |
| NRC Areas | 9-657-1967 |
| | 9-657-2225 |
| | 9-657-2435 |
| | 9-657-2818 |
| Engineering Area | 948-8967 |
| | 9-657-0471 |

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EXHIBIT 2

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| | | |
|---------------------------|-------------|------------|
| Telecopier | | 9-657-3509 |
| State Representative Area | (BRP Rep.) | 9-657-1234 |
| | (PEMA Rep.) | 9-657-0511 |

JOINT INFORMATION CENTER (COMMERCE PARK, SUSQUEHANNA TOWNSHIP)

| | | |
|--|---------------------------------------|------------|
| | | 9-540-4900 |
| | Rumor Control Telephone Number | 9-540-4909 |
| | (Joint Information Center Telecopier) | 9-540-4907 |

NEAR SITE JOINT INFORMATION CENTER (TMI TRAINING CENTER)

| | | |
|--|--------------------------|------------|
| | General Telephone Number | 948-2095 |
| | Rumor Control Number | 9-540-4909 |
| | Near Site JIC Telecopier | 948-2064 |

REMOTE ASSEMBLY AREAS

| | | |
|---------------------|-----------------|-------------------------|
| TMI Training Center | (Assembly Area) | 948-2001 Extension 5810 |
| | (Assembly Area) | 948-2001 Extension 5811 |
| | (Decon Area) | 948-2001 Extension 5815 |
| EOF | (Admin Support) | 948-8964 |

MISCELLANEOUS

| | | |
|-----------------------------|--|----------|
| Three Mile Island Help Desk | | 948-8393 |
|-----------------------------|--|----------|

| | |
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| | Number |
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EXHIBIT 3

Page 1 of 3

Off-site Emergency Organizations and Assistance (Non TMI Organizations)

GOVERNMENTAL AGENCIES

WORK PHONE NO.

FEDERAL

NOTE
U.S. Nuclear Regulatory Commission numbers are listed in Exhibit 4.

Department of Energy - Radiological Assistance Program (24 Hours) 9-1-631-344-2200
Duty Officer at Brookhaven National Laboratory

STATE

Pennsylvania Emergency Management Agency/State EOC (24 Hours) 9-651-2001
1-800-424-7362

Governor's Area 9-651-2148
9-651-2011

PEMA Fax's 9-651-2021
9-651-2024

Department of Environmental Protection (DEP) 9-787-2480

Bureau of Radiation Protection (BRP)

BRP Assessment Center

(9-5 and when manned) 9-783-9741

(9-5 and when manned) 9-787-1990

(9-5 and when manned) 9-787-9135

(Telecopier) 9-783-9748

BRP Emergency Operations Area (State EOC)

(when manned) 9-651-2128

9-651-2129

| | | |
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COUNTY

| | | |
|-------------------|---------------|---------------------|
| Dauphin County | Comm Center | 9-911 or 9-558-6900 |
| | EMA Offices | 9-558-6800 |
| | Fax | 9-558-6950 |
| Lancaster County | | 9-664-1200 |
| | | 9-664-1190 |
| | Fax | 9-664-1127 |
| | Fax | 9-664-1126 |
| York County | | 9-854-5571 |
| | | 9-840-7555 |
| | | 9-1-800-427-8347 |
| | Fax | 9-840-7406 |
| | Fax | 9-840-7243 |
| Lebanon County | (0800-1630) | 9-272-7621 |
| | | 9-272-2054 |
| | (After hours) | 9-272-2025 |
| | Fax | 9-272-9509 |
| Cumberland County | | 9-238-9676 |
| | | 9-243-4121 |
| | | 9-532-8878 |
| | Fax | 9-240-6406 |

| | | |
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EXHIBIT 3

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EMERGENCY SERVICES (Fire/Police/EMS)

| | | |
|------------------------------------|------------|------------|
| Dauphin County 911 Dispatch Center | | 9-911 |
| Pennsylvania State Police | (24 Hours) | 9-671-7500 |

HOSPITALS

| | | |
|---|----------------------------|------------|
| Hershey Medical Center (Emergency Room) | | 9-531-8333 |
| Harrisburg Hospital | Senior Attending Physician | 9-782-3131 |

METEOROLOGICAL INFORMATION

| | | |
|--------------------------------|------------|------------------|
| National Weather Service (NWS) | (Admin) | 9-1-814-234-9412 |
| | (24 Hours) | 9-1-814-237-1152 |
| | (24 Hours) | 9-1-814-237-1153 |

CONSULTANTS

| | | |
|---|----------------------|------------------|
| Institute of Nuclear Power Operations (INPO) | | 9-1-770-644-8000 |
| | (24 hours-Emergency) | 9-1-800-321-0614 |
| American Nuclear Insurers | | 9-1-860-561-3433 |
| Framatome, Lynchburg, VA. (formerly Babcock and Wilcox) | Brendon Brooks | 9-1-804-832-3000 |
| | Work | 9-1-804-832-3219 |
| | Home | 9-1-804-384-6598 |
| Aviation | | (See Exhibit 6) |
| Norfolk Southern Corporation - Supervisor of Train Operations | | 9-541-2158 |
| | | 9-541-2140 |

UTILITIES

| | | |
|--------------------------|--|------------|
| York Haven Power Station | | 9-848-7277 |
| | | 9-266-3654 |

| | | |
|------------------------------|--|------------------|
| System Generation Dispatcher | | 9-1-610-375-5421 |
|------------------------------|--|------------------|

Also refer to the INPO Emergency Resources Manual

| | | |
|---|-------------------------------------|-------------------------------|
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EXHIBIT 4

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Emergency Telephone Numbers for NRC Notification

| <u>COMMERCIAL TELEPHONE SYSTEM/TMI TELEPHONE SYSTEM</u> | <u>TELEPHONE NUMBER</u> |
|---|--------------------------------------|
| • To NRC Operations Center (Rockville, MD) | (Primary Number) 9-1-301-816-5100 |
| | (Backup Number) 9-1-301-951-0550 |
| | (Backup Number) 9-1-301-415-0550 |
| | (Telecopier Number) 9-1-301-816-5151 |
| • TMI USNRC Site Office | 9-948-1166 |
| | 9-948-1165 |
| | (Site Telephone) 948-8253 |
| Resident Inspectors | |
| Craig Smith | (Home) 9-1-717-566-4757 |
| | (Pager) 9-1-800-398-8135 |
| • USNRC Region I Incident Response Center | (Telecopier) 9-1-610-337-5067 |
| <u>USNRC FTS 2000 TELEPHONE SYSTEM</u> | |

NOTE

Only dial the ten digit number when using NRC FTS 2000 telephones. Do not dial a "1" or "9" before dialing the number.

| | | |
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EXHIBIT 4

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NOTE

These telephones are a stand-alone system. A call can be completed to the below listed lines at the numbers shown only from another FTS 2000 telephone.

- To USNRC (Rockville, MD) - Emergency Notification System (ENS), Health Physics Network (HPN), Reactor Safety Counterpart Link (RSCL), Protective Measures Counterpart Link (PMCL), Management Counterpart Link (MCL).

| | |
|-----------|--------------|
| (Primary) | 301-816-5100 |
| (Backup) | 301-951-0550 |
| (Backup) | 301-415-0550 |

- To TMI FTS 2000 Telephones

| | |
|---|--------------|
| Emergency Notification System (ENS) | |
| ECC/Control Room | 700-361-1181 |
| Technical Support Center | 700-361-1181 |
| Emergency Operations Facility | 700-361-1169 |
| Health Physics Network (HPN) | |
| ECC/Control Room | 700-361-2146 |
| Emergency Operations Facility | 700-361-1172 |
| Reactor Safety Counterpart Link (RSCL) | |
| ECC/Control Room | 700-361-2148 |
| Technical Support Center | 700-361-2148 |
| Emergency Operations Facility | 700-361-1168 |
| Protective Measures Counterpart Link (PMCL) | |
| ECC/Control Room | 700-361-2150 |
| Emergency Operations Facility | 700-361-1171 |
| Management Counterpart Link (MCL) | |
| Emergency Operations Facility | 700-361-1167 |
| Local Area Network (LAN) | |
| Emergency Operations Facility | 700-361-1170 |

| | | |
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EXHIBIT 5

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Communications Systems Reporting Guidance

NOTE

The ECC Communications Coordinator is responsible for coordinating repairs for emergency communications equipment.

- I. This exhibit provides guidance in reporting problems with the following communications circuits.
 - A. Emergency telephones
 - ML-8000 telephones (examples: Notification Line, Operations Line).
 - Ring-down Lines (examples: Emergency Director Line, In-Plant Rad Con Line, EOF-BRP Line).
 - B. Group pagers
 - See additional information in III.A below.
 - C. NRC FTS 2000 telephones
 - See additional information in III.B below.
 - D. Commercial or Meridian telephones
 - E. LAN and computers
 - F. FAX machines and telecopiers
 - G. Seltronics E-1000 Recorder
 - Records conversations on certain emergency telephones.
 - Located in the Service Building telephone equipment room.
- II. The following reporting sequence should be used in the order listed.
 - A. TMI Help Desk at 8393
 - B. Joe Clupp office telephone at 8518

| | | |
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- C. Joe Clupp pager at 1-800-672-2285
 - 1. Dial the pager number.
 - 2. Dial the PIN number of 7064.
 - 3. Dial your call-back telephone number.
 - D. Joe Clupp home telephone at 464-5041.
- III. Additional reporting requirements
- A. Group pagers
 - If contact cannot be made at any of the numbers listed above, contact Metrocall directly.
 - 238-4770 during regular business hours.
 - 255-5432 for after hours emergencies.
 - 237-0444 for after hours emergencies.
 - 1-800-344-1004 for after hours contact.
 - B. NRC FTS 2000 telephones
 - If contact cannot be made at any of the numbers listed above, contact the USNRC directly.
- NOTE**

Failures of the Emergency Notification System (ENS Line) or the Health Physics Line (HPN) are required to be reported to the NRC within one hour. Inform the Shift Manager and make the notification.
- Contact numbers
 - a. 1-301-816-5100
 - b. 1-301-951-0550
 - C. Seltronics E-1000 Recorder
 - If contact cannot be made at any of the numbers listed above, contact the Emergency Preparedness Representative.
 - This system is not regulatory required and repairs may be deferred until after the emergency.

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Emergency Aviation Support

NOTE

Emergency aviation support shall only be requested at the direction of the Emergency Director or Emergency Support Director.

1. Contact the Aviation Support Center shown below:

Horsham Valley Airways
451 Caredean Drive
Horsham, PA 19044

| | |
|--|----------------|
| 0800 to 1700, Mon. through Fri. | 1-215-674-2100 |
| After Hours - Hangar | 1-215-674-2101 |
| After Hours - Pager (after hearing the tone, dial your call back number) | 1-888-382-9666 |

2. Identify yourself by name and position and inform the individual that you are calling for Three Mile Island Nuclear Station.
3. Describe the emergency aviation support needed.
4. Provide location and cargo/personnel to be transported and the destination.

NOTE

Landing zone information is provided on the following pages. Provide this information to the aviation contractor as appropriate.

5. Obtain the following information from the representative of Horsham Valley Airways:

Name _____ Title _____

Estimated time of Arrival at Pick Up Location _____

Special Landing Zone requirements (if any) _____

6. Make the necessary arrangements to transport the cargo and/or personnel to the pick up location.
 7. Make the necessary arrangements to pick up the cargo and/or personnel at the destination point.
 8. Notify the aviation contractor when services are no longer required. Record the individual notified below.
- Name _____ Title _____

| | | |
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LANDING ZONE INFORMATION

HARRISBURG INTERNATIONAL AIRPORT

- Able to handle helicopter and fixed wing aircraft.

CAPITAL CITY AIRPORT

- Able to handle helicopter and fixed wing aircraft.

THREE MILE ISLAND NUCLEAR STATION

- Helicopter access only.
- FAA Site Number 20920.011H.
- Within Harrisburg International Airport's surface to 6000 feet control zone.
- Equipped with marker lights and wind sock.
- Gravel surface at approximately 300 feet elevation.
- Primary Obstructions - four cooling towers north of landing site are 672 feet elevation (372 feet above ground level).

PENNSYLVANIA STATE POLICE HELIPAD

- This site is located at the Troop H Headquarters Building on Elmerton Avenue in Susquehanna Township.
- Landing site is located approximately 2½ miles north of center city Harrisburg, immediately south of Interstate Route 81.
- Permission to use the site must be granted in advance. Use the following numbers to obtain permission.

| | |
|----------------|-------------------------------------|
| 1-717-712-5003 | Normal working hours (0815 to 1615) |
| 671-7500 | Off hours (Troop H Headquarters) |
- Provide estimated time of arrival to State Police to allow activation of landing lights.
- The State Police do not have a Unicom base station. Communication with State Police aircraft is possible if the contractor frequency is provided to the State Police.