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FROM : Bruce Loesch/Mary Gadiant Loc : Prairie Island
TO : UNDERWOOD, BETTY J
Copy Num: 515 Holder : US NRC DOC CONTROL DESK
SUBJECT : Revisions to CONTROLLED DOCUMENTS

Procedure # Rev Title

Revisions:

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F3-6 15 ACTIVATION & OPERATION OF TECHNICAL SUPPOR

UPDATING INSTRUCTIONS

Place this material in your Prairie Island Controlled Manual or File. Remove revised or cancelled material and recycle it. Sign and date this letter in the space provided below within ten working days and return to Bruce Loesch or Mary Gadiant, Prairie Island Nuclear Plant, 1717 Wakonade Drive E., Welch, MN 55089.

Contact Bruce Loesch (ext 4664) or Mary Gadiant (ext 4478) if you have any questions.

Received the material stated above and complied with the updating instructions

Date _____

NRR-037

AD45

<p>PRAIRIE ISLAND NUCLEAR GENERATING PLANT NORTHERN STATES POWER COMPANY</p>	<p>Title: Emergency Plan Implementing Procedures TOC</p> <p>Effective Date : 06/12/00</p>
<p>Approved By: <u>Joyce Chitty / mg</u> BPS Supt</p>	

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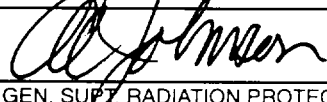
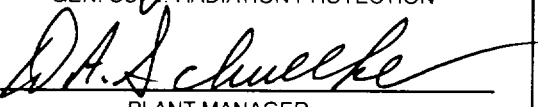
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F3 Section	TITLE: ACTIVATION AND OPERATION OF TECHNICAL SUPPORT CENTER	NUMBER: F3-6
		REV: 15

Reviewed By: <u></u> GEN. SUPT. RADIATION PROTECTION	Effective Date: <u>6-12-00</u>
Approved By: <u></u> PLANT MANAGER	OC Review: <u>5-22-00 S.C.</u>

1.0 PURPOSE

REFERENCE USE
<ul style="list-style-type: none">• <i>Procedure segments may be performed from memory.</i>• <i>Use the procedure to verify segments are complete.</i>• <i>Mark off steps within segment before continuing.</i>• <i>Procedure should be available at the work location.</i>

The purpose of this instruction is to describe the activation and monitoring requirements of the Technical Support Center.

2.0 APPLICABILITY

This instruction **SHALL** apply to all Shift Managers, Emergency Directors and all members of the TSC technical staff.

3.0 PRECAUTIONS

- 3.1 All unnecessary personnel **SHALL** be evacuated from the Technical Support Center when the Technical Support Center has been activated.
- 3.2 Monitoring of the Technical Support Center for direct radiation and airborne radioactive materials (particulate and iodine) **SHALL** be performed to ensure the habitability of the Technical Support Center.
- 3.3 Protective actions for individuals located in the Technical Support Center **SHALL** be taken at the prescribed levels of direct radiation or airborne radioactivity.

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4.0 RESPONSIBILITIES

- 4.1 The TSC Coordinator is responsible to implement the actions directed in this procedure as necessary.
- 4.2 The Radiological Emergency Coordinator (REC) is responsible to provide oversight of the radiation monitoring of personnel and the TSC as necessary.

5.0 DISCUSSION

The first and second floor of the Old Administration Building Office Annex is designated as the onsite Technical Support Center (TSC). This area **SHALL** be used by plant management, technical and engineering groups, and NRC representatives as a center outside the main control room from which support for emergency operating conditions can be provided. The TSC **SHALL** be activated when an Alert, Site Area, or General Emergency is declared.

6.0 PREREQUISITES

An Alert, Site Area, or General Emergency has been declared.

7.0 PROCEDURE

7.1 Activation of TSC

- 7.1.1 Activation of the Technical Support Center **SHALL** occur whenever an Alert, Site Area or General Emergency is declared. Activation of the TSC may occur during normal work hours or during off normal work hours:
- A. During normal work hours, the Technical Support Center **SHALL** be activated whenever an Alert, Site Area, or General Emergency is declared, as announced over the public address system. All members of the Operations Committee and other designated engineers and staff members **SHALL** report to the TSC.
 - B. If activation of the Technical Support Center occurs during off normal hours, the Emergency Director **SHALL** designate the Shift Emergency Communicator (SEC) to contact all Emergency Organization personnel, in accordance with F3-5.
- 7.1.2 All nonessential personnel **SHALL** evacuate the TSC area when the TSC has been activated.

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- 7.1.3 Additional personnel should be notified and requested to report to the Technical Support Center as deemed necessary.

NOTE:	Nonessential personnel from the OSC may position themselves in the TSC lower level due to high radiation dose rates or airborne contamination in the OSC.
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- 7.1.4 As the emergency proceeds from the initial phase, (the period immediately following the emergency initiation) into the recovery phase, all Protective Actions for radiological hazards in the Technical Support Center **SHALL** be consistent with the plant Radiation Protection Program.
- 7.1.5 The Technical Support Center **SHALL** remain activated until the emergency situation has been terminated or as otherwise directed by the Emergency Director.
- 7.1.6 The TSC Coordinator **SHALL** ensure proper activation and operation of the TSC by completing the duties listed on PINGP 573, TSC Coordinator Checklist.

7.2 Radiological Monitoring of TSC

NOTE:	If airborne radioactivity is present in the TSC, manual dampers can be manipulated to route 100% of the upper level OR lower level return air through the filter unit per 7.3.4 of this procedure.
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- 7.2.1 Monitor radiation dose rates on the TSC Area Monitor, R-68.
- 7.2.2 If R-68 fails, or is not working, set up the AM-2 for monitoring:
- Obtain** the AM-2 from the TSC Locker.
 - Plug** the AM-2 in.
 - Verify** the green power light is on.
 - Source check** the AM-2 with the button source in the TSC Locker and **verify** an upscale reading of meter.
 - If the AM-2 fails (power loss, incorrect reading, etc.), contact the Radiation Protection Group for additional radiation monitoring.

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7.2.3 Establish operation of the TSC CAM.

NOTE:	The CAM, located in the Turbine Bldg. near the west entrance to the TSC, is in a hot standby condition with the electronics energized and the blower, chart, and filter paper off.
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- A. Turn the blower switch to the ON position (located next to the recorder) to start the blower, strip chart recorder, and the filter paper drive.
- B. Adjust the blower flow rate to 3 SCFM using the toggle switch located on the right side of the CAM.
- C. Verify the CAM is in operation (i.e., verify the blower, filter, strip charts are operating; meters are on scale, etc.).
- D. If the CAM fails to operate properly, contact the Radiation Protection Group for additional sampling.

7.2.4 Routinely monitor R-68 and/or VAMP (if set up) for direct radiation levels, and the CAM for airborne particulate and iodine activity.

7.2.5 Take the following Protective Actions based on readings from the R-68, AM-2 or CAM.

A. DIRECT RADIATION

1. at about 15mR/hr consider evacuating all nonessential personnel from the Tech Support Center
2. at 1 R/hr evacuation to the Control Room is recommended

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B. CAM - Particulate

- $< 1 \times 10^{-9} \mu\text{Ci/cc}$
no protective action necessary
- $> 1 \times 10^{-9}$ but $< 1 \times 10^{-6} \mu\text{Ci/cc}$
consider use of respiratory protection and evacuation of all unnecessary personnel
- $> 1 \times 10^{-6} \mu\text{Ci/cc}$
evacuation to the Control Room is recommended

C. CAM - Iodine

- If CAM alarms for iodine ($5 \times 10^{-9} \mu\text{Ci/cc}$), establish program of regular portable air samples by the Radiation Protection Group.
- If portable air sample results > 1 DAC, consider evacuation of unnecessary personnel and limit exposures to less than 40 DAC - hours/week if possible.
- If portable air sample results > 10 DAC, consider evacuation to the Control Room.

NOTE:	The Radiological Emergency Coordinator (REC) should recommend the use of potassium iodide pills (thyroid blocking agent) if the projected thyroid exposure approaches 25 REM CDE. See F3-18, Thyroid Iodine Blocking Agent (Potassium Iodide), for determining projected thyroid exposures.
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7.3 TSC Ventilation System

NOTE:	<p>For information regarding TSC electrical supply, See Figure 2, TSC/WCC HVAC, Lighting and Receptacles Electrical Block Diagram.</p> <p>Following a loss of offsite power the TSC ventilation should be repowered as follows:</p> <p>BKR 422-60 TSC Clean up Unit Fan on MCC 2FA1 is repowered automatically via D4</p> <p>BKR 422-62 TSC Lower Level HVAC Unit on MCC 2FA1 is repowered automatically via D4</p> <p>BKR 263-8 TSC Upper Level HVAC Unit on MCC 2F2 is manually repowered</p> <p>via D3 using procedure C20.16 AOP1 which is invoked in procedure 1ES-0.1 or 2ES-0.1 to restore battery room cooling and TSC cooling following a loss of offsite power,</p> <p><u>OR</u></p> <p>via D4 using procedure C20.16 AOP2 which is invoked in procedure 1ES-0.1 or 2ES-0.1 to restore battery room cooling and TSC cooling following a loss of offsite power.</p>
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NOTE:	<p>The upper and lower TSC HVAC supply air ducts are connected with a crossover duct and manual dampers, located on the roof of the TSC. By changing the normal position of the manual dampers, either HVAC unit can be used to supply either floor. See Appendix A for damper lineup using the crossover duct.</p>
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7.3.1 System Startup

- A. **CLOSE** or ensure the TSC doors are closed.
- B. At the TSC Control Panel, turn ES-82601 from "NORMAL" to "EMERGENCY."
- C. Place the Upper and Lower Level HVAC thermostat "AUTO-ON" fan switches in the "ON" position. (Thermostats located on north wall of upper level and south wall of lower level.)

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D. **Check** the following indications at the TSC Control Panel (refer to Figure 1, TSC Clean-up System):

1. Filter Unit Trouble Light (Red light should be OFF).

NOTE:	The TSC Return Fans should stop.
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2. The Clean Up Unit Fan (253-60) should start (Red "ON" Light should be lit).
3. Lower Level Outside Air Isolation Damper (MD-34602) should close (Green "CLOSE" light should be lit).
4. Upper Level Outside Air Isolation Damper (MD-34603) should close (Green "CLOSE" light should be lit).
5. Outside Air Volume Control Damper (MD-34604) should modulate open. (This damper modulates and will normally show mid position-both lights may or may not be lit).
6. Clean Up Unit Volume Control Damper (MD-34605) should modulate open. (This damper modulates and will normally show mid position-both lights may or may not be lit).
7. In the "EMERGENCY" mode, the TSC should be at a positive pressure greater than 0.125 inches W.G. as indicated by TSC Positive Pressure Gauge 82608.

E. **Place** the magnetic signs "TSC Vent System in Operation" on both sides of the 3 TSC Boundary doors (two on the West end and one on the East end).

7.3.2 Trouble Alarm

NOTE:	The filter unit red trouble light will also be lit for a few seconds right after startup until the cleanup fan comes up to speed.
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A. The Filter Unit Red Trouble light will be lit if the following occurs:

1. TSC Cleanup Unit Fan Differential Pressure Lo (DPIS-82321).

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2. Prefilter Differential Pressure Hi (DPIS-82331).
3. 1st HEPA Filter Differential Pressure Hi (DPIS-82332).
4. Charcoal Filter Differential Pressure Hi (DPIS-82333).
5. 2nd HEPA Filter Differential Pressure Hi (DPIS-82334).

- B. If the above light should be lit, investigate the local dp filter indications. The filters may require changing.

7.3.3 System Shutdown

- A. At the TSC Control Panel, turn ES-82601 from "EMERGENCY" to "NORMAL."
- B. **CHECK** the following indications at the TSC Control Panel (refer to Figure 1, TSC Clean-up System):
1. Filter Unit Trouble Light (Red light should be OFF).

NOTE:

The TSC Return Fans should start.

2. The Clean Up Unit Fan (253-60) should stop (Green "OFF" light should be lit).
 3. Lower Level Outside Air Isolation Damper (MD-34602) should open (Red "OPEN" light should be lit).
 4. Upper Level Outside Air Isolation Damper (MD-34603) should open (Red "OPEN" light should be lit).
 5. Outside Air Volume Control Damper (MD-34604) should close (Green "CLOSE" light should be lit).
 6. Clean up Unit Volume Control Damper (MD-34605) should close (Green "CLOSE" light should be lit).
- C. Remove the magnetic signs "TSC Vent System in Operation" from the TSC doors and place inside the TSC Control Panel.

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- D. **Place** the upper and lower level HVAC thermostat "AUTO-ON" fan switches in the "AUTO" position. (Thermostats located on the north wall of the upper level and south of the lower level.)

7.3.4 TSC Airborne Radioactivity Fast Clean Up

- A. **Start** System per 7.3.1.

NOTE:	Mark the normal position of each damper prior to changing position.
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- B. **OPEN** the Lower Level PAC Filter Return Manual Damper (Damper B) (Reference Figure 1).
- C. **CLOSE** the Upper Level PAC Filter Return Manual Damper (Damper D).
- D. **CLOSE** the Lower Level Return Manual Damper (Damper A).
- E. Partially **CLOSE** MD 34604 by changing the set point on FC 82103 to 10.
- F. **Monitor** airborne levels in the Lower Level TSC until they are acceptable.
- G. **OPEN** the Upper Level PAC Filter Return Manual Damper (Damper D).
- H. **Return** the Lower Level Return Manual Damper to the Normal Position (Damper A).
- I. **CLOSE** the Lower Level PAC Filter Return Manual Damper (Damper B)
- J. **CLOSE** the Upper Level Return Manual Damper (Damper C).
- K. **Monitor** Airborne Levels in the Upper Level TSC until they are acceptable.
- L. **Return** the Upper Level Return Manual Damper (Damper C) to the Normal Position.
- M. **Return** the Lower Level PAC Filter Return Manual Damper (Damper B) to the Normal position.

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- N. Return the Upper Level PAC Filter Return Manual Damper (Damper D) to the Normal position.
- O. Return the setpoint on FC 82103 to 25.

7.4 Dosimetry Issue

NOTE:	The purpose of issuing dosimetry to personnel in the TSC is to provide a record of exposures received while working in the TSC and exposures received while in transit to and from the emergency centers.
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- 7.4.1 If the event is a radiological event or has potential to be a radiological event, issue personnel dosimetry to each individual in the TSC and log initial dosimeter readings on PINGP 652, Emergency Center Activation Exposure Records.
- 7.4.2 As more personnel report to the TSC throughout the radiological event, ensure they are issued personnel dosimetry.
- 7.4.3 If a Secondary Access Control Point is set up for plant access, PINGP 652 should be forwarded to the Secondary Access Control Point for dosimetry logging when personnel leave the site at the end of their shift.
- 7.4.4 All entrances to the Aux Bldg **SHALL** be made via the OSC where each individual is advised of current radiological conditions in the Aux Bldg and issued additional dosimetry, as appropriate.
- 7.4.5 In those cases when an individual is going to an area where there exists high potential for the presence of radioactive contamination or radiation, the individual should go to the OSC first to be advised of current conditions and issued additional dosimetry, as appropriate.

7.5 Set up of TSC Frisking Station

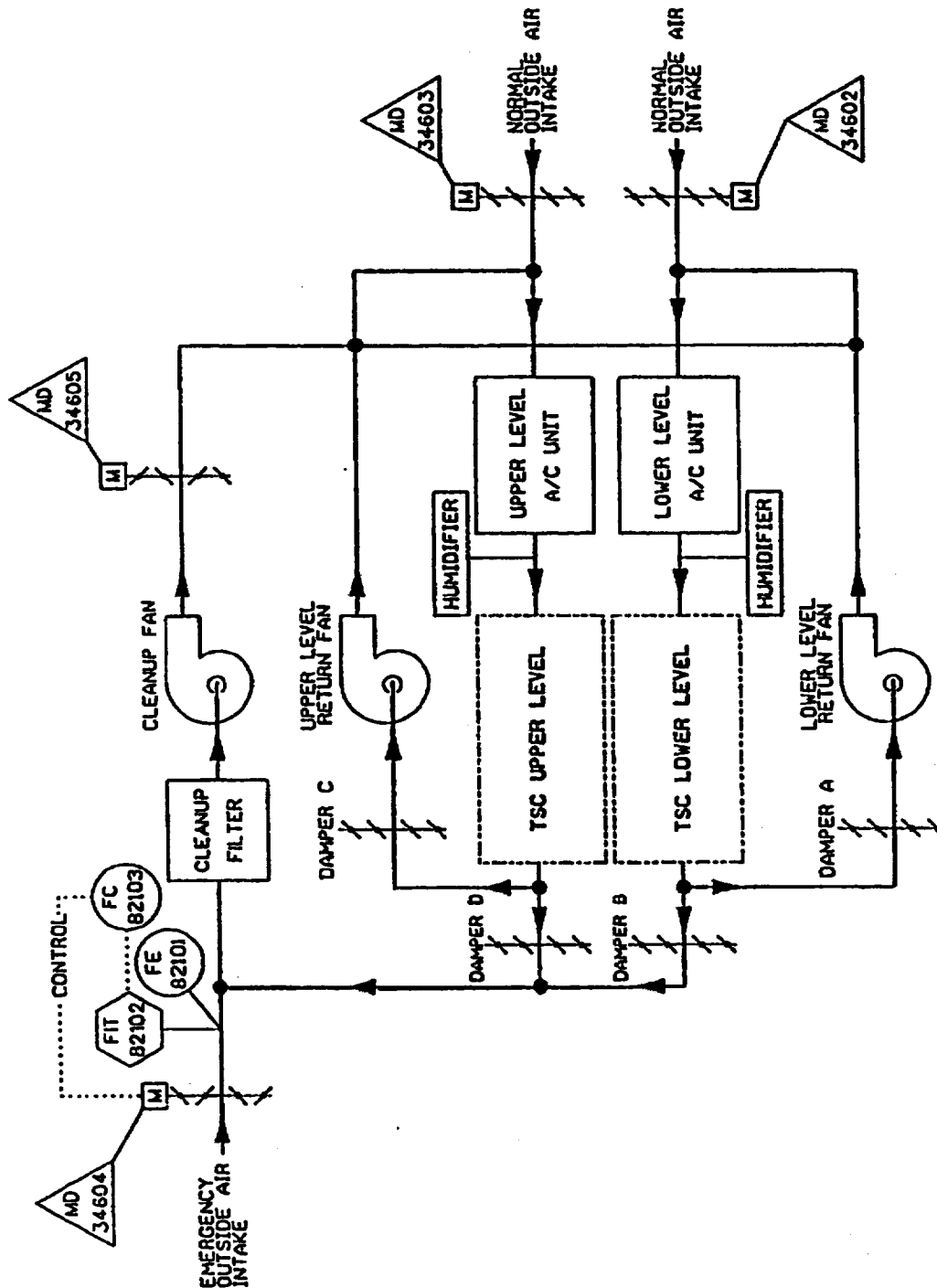
- 7.5.1 Place portable frisker on shelf, located in hallway outside east TSC entrance door, and plug into AC outlet.
- 7.5.2 Place Step-Off-Pad on floor outside East TSC entrance door.
- 7.5.3 All personnel entering TSC should frisk hands and feet (at a minimum) and areas of concern for possible radiological contamination.

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- 7.5.4 If no radiological contamination exists outside the normal radiological controlled areas, the TSC frisking station may be removed.

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FIGURE 1



Section **F3**

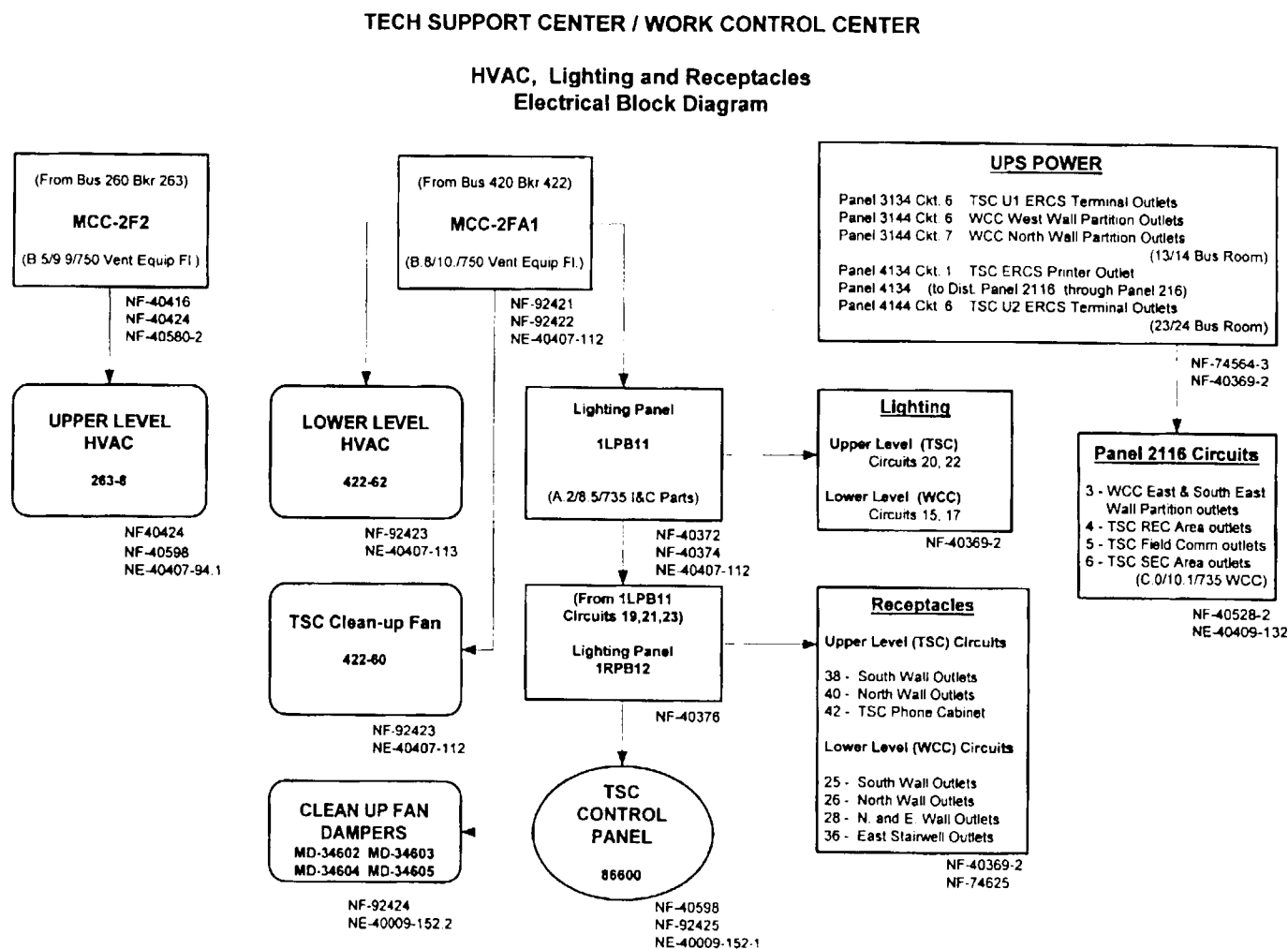
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FIGURE 2



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APPENDIX A

The upper and lower TSC HVAC supply air ducts are connected with a crossover duct and manual dampers, located on the roof of the TSC. The crossover damper is normally closed. By changing the normal position of the manual dampers, either HVAC unit can be used to supply either floor.

1. Manual damper lineup for normal operations:

TSC UPPER LVL SUPPLY UPSTRM DAMPER - OPEN

TSC UPPER LVL SUPPLY DWNSTRM DAMPER - OPEN

TSC X-OVER DAMPER - CLOSED

TSC LOWER LVL SUPPLY UPSTRM DAMPER - OPEN

TSC LOWER LVL SUPPLY DWNSTRM DAMPER - OPEN

2. Manual damper lineup for UPPER LVL HVAC Unit OUT OF SERVICE, LOWER LVL HVAC Unit supplying air to upper level:

TSC UPPER LVL SUPPLY UPSTRM DAMPER - CLOSED

TSC UPPER LVL SUPPLY DWNSTRM DAMPER - OPEN

TSC X-OVER DAMPER - OPEN

TSC LOWER LVL SUPPLY UPSTRM DAMPER - OPEN

TSC LOWER LVL SUPPLY DWNSTRM DAMPER - CLOSED to force all air to upper level as desired OR ADJUST to provide air to both levels.

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APPENDIX A

NOTE:	The TSC CAM sample tube is located in the TSC LOWER LVL HVAC return air duct. If the TSC LOWER LVL HVAC unit is out of service, use grab samples to monitor TSC air quality.
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3. Manual damper lineup for LOWER LVL HVAC Unit OUT OF SERVICE, UPPER LVL HVAC Unit supplying air to lower level:

TSC UPPER LVL SUPPLY UPSTRM DAMPER - **OPEN**

TSC UPPER LVL SUPPLY DWNSTRM DAMPER - **CLOSED** to force all air to lower level as desired OR **ADJUST** to provide air to both levels.

TSC X-OVER DAMPER - **OPEN**

TSC LOWER LVL SUPPLY UPSTRM DAMPER - **CLOSED**

TSC LOWER LVL SUPPLY DWNSTRM DAMPER - **OPEN**