M-32

RECORDS MANAGEMENT DEPARTMENT

TO: J. PARROTT --- NRC HEADQUARTERS DATE: 09/29/1999
FROM: D.L. HORTON AOC-21 TEL: 716 942-4300 PAGE: 1

TRANSMITTAL NUM: 000014304

CONTROLLED COPY TRANSMITTAL / RECEIPT ACKNOWLEDGEMENT

Attached is a CONTROLLED COPY of the following document(s) and its applicable index. Add or replace your existing copy with the attached.
COMMENTS: NEW TYPE REVISION

CONTROLLED COPY#	PROC ID	REV#	FC#	ISSUE DATE	PROCEDURE TITLE
008	PSR-5	2		09/28/1999	STANDBY AND BACKUP POWER REQUIREMENTS

Copies made from a controlled document MUST be marked UNCONTROLLED before distribution. Signature below signifies all previous revisions, if applicable, have been destroyed or marked superseded.

I have complied with the above instructions:

original signed by:
Jack D. Parrott 10/20/99
Signature (BLACK INDELIBLE INK ONLY) Date

RETURN BY: 10/13/1999

NF08

PNO5 M-32

FOR YOUR CONVENIENCE, A SELF-ADDRESSED, STAMPED ENVELOPE HAS BEEN INCLUDED.

INDEX

PROC ID	REV	FC	PROCEDURE TITLE	STATUS	ISSUE DATE	COGNIZANT MANAGER
WVDP-218	8		PREFACE FOR PROCESS SAFETY REQUIREMENTS	ACTIVE	06/12/1998	CHILSON,L.J.
WVDP-218	8	1	PREFACE FOR PROCESS SAFETY REQUIREMENTS	ACTIVE	12/03/1998	CHILSON,L.J.
WVDP-218	8	2	PREFACE FOR PROCESS SAFETY REQUIREMENTS	ACTIVE	03/03/1999	CHILSON,L.J.
WVDP-218	8	3	PREFACE FOR PROCESS SAFETY REQUIREMENTS	ACTIVE	06/29/1999	CHILSON,L.J.
PSR-1	1		REQUIREMENTS FOR LIQUID TRANSFERS OF FISSILE MATERIAL	ACTIVE	03/15/1996	ZUPPINGER,W.L.
PSR-1	1	1	REQUIREMENTS FOR LIQUID TRANSFERS OF FISSILE MATERIAL	ACTIVE	04/03/1997	ZUPPINGER,W.L.
PSR-2	1		MAIN PLANT STACK AIRBORNE EFFLUENT SAMPLING SYTEM REQUIREMENTS	ACTIVE	03/15/1996	ZUPPINGER,W.L.
PSR-3	1		BUILDING AND VESSEL VENTILATION SYSTEM REQUIREMENTS	ACTIVE	03/15/1996	ZUPPINGER,W.L.
PSR-3	1	1	BUILDING AND VESSEL VENTILATION SYSTEM REQUIREMENTS	ACTIVE	05/02/1997	ZUPPINGER,W.L.
PSR-3	1	2	BUILDING AND VESSEL VENTILATION SYSTEM REQUIREMENTS	ACTIVE	08/13/1998	ZUPPINGER,W.L.
PSR-3	1	3	BUILDING AND VESSEL VENTILATION SYSTEM REQUIREMENTS	ACTIVE	12/23/1998	ZUPPINGER,W.L.
PSR-4	1		FUEL ASSEMBLY STORAGE AND HANDLING REQUIREMENTS	ACTIVE	11/18/1997	WEISS,T.G.
PSR-5	2		STANDBY AND BACKUP POWER REQUIREMENTS	ACTIVE	09/28/1999	ZUPPINGER,W.L.
PSR-6	1	1	FISSILE MATERIAL PACKAGING AND STORAGE REQUIREMENTS	ACTIVE	04/07/1997	TARANTELLO,F.A.
PSR-6	1	2	FISSILE MATERIAL PACKAGING AND STORAGE REQUIREMENTS	ACTIVE	07/02/1998	TARANTELLO,F.A.
PSR-6	1		FISSILE MATERIAL PACKAGING AND STORAGE REQUIREMENTS	ACTIVE	07/10/1996	TARANTELLO,F.A.
PSR-7	1		EVACUATION ALARM, EMERGENCY PAGING SYSTEM, AND SHELTERING ALARM REQUIREMENTS	ACTIVE	03/15/1996	ELLIOTT,D.I.
PSR-7	1	1	EVACUATION ALARM, EMERGENCY PAGING SYSTEM, AND SHELTERING ALARM REQUIREMENTS	ACTIVE	11/03/1998	ELLIOTT,D.I.
PSR-8	1		FIRE PROTECTION SYSTEMS REQUIREMENTS	ACTIVE	03/15/1996	ZUPPINGER,W.L.
PSR-8	1	1	FIRE PROTECTION SYSTEMS REQUIREMENTS	ACTIVE	01/23/1997	ZUPPINGER,W.L.
PSR-8	1	2	FIRE PROTECTION SYSTEMS REQUIREMENTS	ACTIVE	08/05/1998	ZUPPINGER,W.L.
PSR-10	2		HIGH-LEVEL WASTE TANK LEAK DETECTION SYSTEM REQUIREMENTS	ACTIVE	05/08/1996	MEESS,D,C.
PSR-11	1		HIGH-LEVEL WASTE TANK SPARE CAPACITY REQUIREMENTS	ACTIVE	03/15/1996	MEESS,D,C.
PSR-11	1	1	HIGH-LEVEL WASTE TANK SPARE CAPACITY REQUIREMENTS	ACTIVE	03/26/1997	MEESS,D,C.
PSR-12	3		VITRIFICATION FACILITY VENTILATION AND OFF-GAS SYSTEMS REQUIREMENTS	ACTIVE	02/21/1997	KOCIALSKI,T.F.
PSR-12	3	1	VITRIFICATION FACILITY VENTILATION AND OFF-GAS SYSTEMS REQUIREMENTS	ACTIVE	11/03/1998	KOCIALSKI,T.F.
PSR-12	3	2	VITRIFICATION FACILITY VENTILATION AND OFF-GAS SYSTEMS REQUIREMENTS	ACTIVE	03/03/1999	KOCIALSKI,T.F.
PSR-12	3	3	VITRIFICATION FACILITY VENTILATION AND OFF-GAS SYSTEMS REQUIREMENTS	ACTIVE	05/20/1999	KOCIALSKI,T.F.
PSR-13	2		VITRIFICATION FACILITY STANDBY POWER REQUIREMENTS	ACTIVE	03/28/1996	KOCIALSKI,T.F.
PSR-13	2	1	VITRIFICATION FACILITY STANDBY POWER REQUIREMENTS	ACTIVE	05/24/1996	KOCIALSKI,T.F.

INDEX

PROC ID	REV	FC	PROCEDURE TITLE	STATUS	ISSUE DATE	COGNIZANT MANAGER
PSR-13	2	2	VITRIFICATION FACILITY STANDBY POWER REQUIREMENTS	ACTIVE	07/11/1996	KOCIALSKI,T.F.
PSR-15	3		NOX MONITORING INSTRUMENTATION REQUIREMENTS	ACTIVE	09/30/1998	KOCIALSKI,T.F.
PSR-16	6		ANHYDROUS AMMONIA MONITORING INSTRUMENTATION AND STORAGE REQUIREMENTS	ACTIVE	11/12/1998	KOCIALSKI,T.F.
PSR-17	4		MINIMUM STAFFING LEVELS FOR SAFE FACILITY OPERATION	ACTIVE	09/24/1999	KEEL,R.B.
PSR-9	1		TN-BRP AND TN-REG SHIPPING CASK LID INSTALLATION	CANCELLED	03/15/1996	CHILSON,L.J.
PSR-14	1		VITRIFICATION FACILITY CONFINEMENT BARRIER REQUIREMENTS	CANCELLED	03/15/1996	CHILSON,L.J.

West Valley Demonstration Project

Doc. ID Number PSR-5

Revision Number 2

Revision Date 09/28/99

Controlled Copy No. 8

PROCESS SAFETY REQUIREMENTS

STANDBY AND BACKUP POWER REQUIREMENTS

APPROVED BY:

W. L. Zuppinger
Cognizant Manager

9/27/99
Date

Westinghouse
Government Services Group

West Valley Nuclear Services Co.
10282 Rock Springs Road
West Valley, NY 14171-9799

WVNS RECORD OF REVISION

DOCUMENT

If there are changes to the controlled document, the revision number increases by one. Indicate changes by one of the following:

- Placing a vertical black line in the margin adjacent to sentence or paragraph that was revised.
- Placing the words GENERAL REVISION at the beginning of the text.
- Placing either FC#> or PC#> (whichever applies) in the left-hand margin at the beginning of the paragraph or section where the field/page change has been made AND placing a vertical black line in the margin adjacent to the actual change.
- Placing the words "New-Type Revision" or "On-Hold" in the description of changes.

Example:

The vertical line in the margin indicates a change. |

FC1> The FC#> in the margin along with the vertical line (redline) indicates a change. |

Rev. No.	Description of Changes	Revision On Page(s)	Dated
0	Document approved - Reference Letter WD:95:0195, J. A. Lazzaro to T. J. Rowland "WVDP Process Safety Requirements (PSRs)," dated 03/03/95. Original document approved, but not issued through controlled distribution.	All	03/03/95
1	Incorporate DOE-WV comments received from review of Rev. 0. General Revision.	All	03/15/96
PC1	Table 2 - Change Standby Quantity from 400 to 300 gallons based on the actual working capacity of the tank. This change is an insignificant modification per WV-365, Section 7.11, DOE approval is not required.	7	01/24/97
PC2	Table 3 - Add references to differential pressure alarms for consistency with alarm operability requirements stated in PSR-3. Change filter train differential pressure recorder for Main Plant backup ventilation system to reflect current conditions. Add differential pressure recorders, alarms, and controls for Head End backup ventilation system to reflect current conditions.	8	05/02/97
PC3	Table 1 - Replace Air Compressor 31K-1 with Compressors 31K-5 & 31K-6.	6	06/18/97

WVNS RECORD OF REVISION CONTINUATION FORM

Rev. No.	Description of Changes	Revision On Page(s)	Dated
PC4	Table 3 - Under the "Comments" column for the "Main Plant," change "15K-10A is powered by a steam-driven turbine," to "STANDBY POWER supplied to 15K-10A from URE Generator 30P-2."	8	01/21/98
PC5	Add: Section 2a, tanks 31-D-103 and 50-D-003 Add: Section 2b, tanks 31-D-103 and 50-D-003 Add" "Fuel Oil Day Tank..."	3 3 7	09/07/99
2	New-Type Revision Incorporate of page changes	All	09/28/99

PROCESS SAFETY REQUIREMENT - 5

TITLE: Standby and Backup Power Requirements

CRITERIA: Standby and backup power shall be provided to HEPA-filtered ventilation and off-gas systems within Hazard Category 2 facilities. (PSR Criterion 3.c)

UNACCEPTABLE EVENTS: Loss of power to HEPA-filtered ventilation and off-gas systems within hazard category 2 facilities.

Process Safety Requirement - 5 Page No.

APPLICABILITY 2
OBJECTIVES 2
SPECIFICATIONS 2
BASIS 4
ATTACHMENTS 5
REFERENCES 5
TABLE 1 - Standby and Backup Power System Components 6
TABLE 2 - Standby and Operating Quantities of Diesel Fuel 7
TABLE 3 - Equipment Supplied with Standby or Backup Power 8

PROCESS SAFETY REQUIREMENT

STANDBY AND BACKUP POWER REQUIREMENTS

APPLICABILITY

This Process Safety Requirement (PSR) applies to systems, instruments, and equipment required to supply STANDBY or BACKUP POWER to systems providing ventilation to Hazard Category 2 facilities at the West Valley Demonstration Project (WVDP).

OBJECTIVES

The objective of this PSR is to ensure that STANDBY and BACKUP POWER is available for ventilation systems in Hazard Category 2 facilities during periods when normal electrical power is interrupted.

SPECIFICATIONS

1. LIMITING CONDITION FOR OPERATION

   STANDBY or BACKUP POWER system components (identified in Table 1) shall be OPERABLE.

   ACTION

   If a component identified in Table 1 is found to be INOPERABLE, IMMEDIATE efforts shall be made to restore its OPERABILITY. If the OPERABILITY of STS generator 50-P-1 is not restored within 8 hours, an orderly shutdown of the STS shall begin IMMEDIATELY and restart not permitted until generator 50-P-1 is OPERABLE.

   SURVEILLANCE REQUIREMENT

   A DAILY visual inspection via an approved procedure of the components identified in Table 1 shall be made and the results recorded.

   Components identified in Table 1 shall be tested for OPERABILITY QUARTERLY. OPERABILITY shall be determined per an approved procedure.

2. LIMITING CONDITION FOR OPERATION

a. The minimum quantity of diesel fuel in storage Tanks 31D-2, 31D-102, 31-D-103, 50-D-003 and 50-D-009 during NORMAL OPERATIONS shall be as specified in Table 2 for standby quantity.

b. The minimum quantity of diesel fuel in Tanks 31D-2, 31D-102, 31-D-103, 50-D-003 and 50-D-009 during operation of Main Plant generator 30P-1, Utility Room Expansion generator 30-P-2, and/or the STS generator 50-P-1 shall be as specified in Table 2 for operating quantity.

ACTION

a. If the quantity of diesel fuel in Tanks 31D-2, 31D-102, 31-D-103, 50-D-003 or 50-D-009 during NORMAL OPERATIONS is less than the standby quantity specified in Table 2, IMMEDIATE action shall be taken to fill the tank to a minimum of the standby quantity specified in Table 2.

b. If during operation of Main Plant generator 30P-1, Utility Room Expansion generator 30-P-2, or STS generator 50-P-1, the quantity of diesel fuel in Tank 31D-2, 31D-102, 31-D-103, 50-D-003 or 50-D-009 falls below the operating quantity specified in Table 2, IMMEDIATE actions shall be taken to fill the depleted tank to a minimum of the standby quantity specified in Table 2.

SURVEILLANCE REQUIREMENT

The quantity of diesel fuel in Tanks 31D-2, 31D-102, 31-D-103, 50-D-003 and 50-D-009 shall be checked and recorded DAILY.

3. LIMITING CONDITION FOR OPERATION

Equipment listed in Table 3 shall be capable of being supplied with STANDBY POWER or BACKUP POWER as appropriate.

ACTION

If it is determined that STANDBY POWER or BACKUP POWER is not available for a component listed in Table 3, IMMEDIATE efforts shall be taken to restore the STANDBY POWER or BACKUP POWER capability.

SURVEILLANCE REQUIREMENT

The capability to supply STANDBY POWER or BACKUP POWER to equipment listed in Table 3 shall be tested for OPERABILITY QUARTERLY. OPERABILITY shall be determined per an approved procedure.

4. LIMITING CONDITION FOR OPERATION

The on-line blower motors in the Waste Tank Farm Ventilation System (8K-1 or 8K-1A) and Vessel Off-Gas System (6K-2 or 6K-2A) shall be capable of restarting following an interruption of electrical power to the blower motor.

ACTION

If the restart capability of the motors for the on-line blower in the Waste Tank Farm Ventilation System (8K-1 or 8K-1A) or the Vessel Off-Gas System (6K-2 or 6K-2A) is found to be INOPERABLE, IMMEDIATE efforts shall be taken to restore OPERABILITY.

SURVEILLANCE REQUIREMENT

The capability to restart the on-line blower motor in the Waste Tank Farm Ventilation System (8K-1 or 8K-1A) and Vessel Off-Gas System (6K-2 or 6K-2A) shall be tested for OPERABILITY QUARTERLY. OPERABILITY shall be determined per an approved procedure.

BASIS

STANDBY and BACKUP POWER are provided to maintain ventilation within Hazard Category 2 facilities at the WVDP in the event of loss of normal (off-site) power. For those systems which rely upon diesel fuel for operations, the associated LIMITING CONDITION FOR OPERATION specifies a minimum quantity of fuel during NORMAL OPERATIONS, i.e., during the period of time when the STANDBY and/or BACKUP POWER system is not being utilized since the routine power source is

available. In addition, a LIMITING CONDITION FOR OPERATION is also provided which states a minimum quantity of fuel to be present during operations or following recent operations of the associated STANDBY and/or BACKUP POWER system. These quantities are based upon rate of consumption, alternative fuel supplies and operational constraints. The capability to readily restart blower motors following a loss of off-site power is important to minimize potential hazards (e.g., airborne contamination).

ATTACHMENTS

Table 1	Standby and Backup Power System Components
Table 2	Standby and Operating Quantities of Diesel Fuel
Table 3	Equipment Supplied with Standby or Backup Power

REFERENCES

None

TABLE 1

STANDBY AND BACKUP POWER SYSTEM COMPONENTS

Component Description	Component Designation
Main Plant Generator	30P-1
Air Compressor	31K-005
Air Compressor	31K-006
Supernatant Treatment System Generator	50-P-1
Main Plant Vent Exhaust Blower	15K-10A
Utility Room Expansion Generator	30-P-2

(Other Vitrification Facility components are covered by PSR-13.)

TABLE 2

STANDBY AND OPERATING QUANTITIES OF DIESEL FUEL

Fuel Storage Tank	Standby Quantity (gallons)	Operating Quantity (gallons)
Fuel Oil Storage Tank 31D-2	8,000	4,000
Fuel Oil Day Tank 31-D-103 (URF)	225	150
Fuel Oil Day Tank 31D-102	300	200
STS Fuel Oil Storage Tank 50D-009	200	100
STS Fuel Oil Day Tank 50-D-003 (SDT)	75	50

TABLE 3

EQUIPMENT SUPPLIED WITH STANDBY OR BACKUP POWER

VENTILATION SYSTEM EQUIPMENT							
Ventilation or Off-Gas System	Exhaust Blower Primary (P) Backup (B)	Final HEPA Filter ΔP Recorder/ Indicator	FILTER TRAIN ΔP Recorder (Backup)	Pressure Differential Alarm(A)/ Control(C) High	Pressure Differential Alarm(A)/ Control(C) Low	Exhaust Blower Control	Comments
Vessel Off Gas	6K-2 6K-2A	6PDR-17 6PDR-17	--- ---	06PDAH-10 (A) 06PDAH-10 (A)	--- ---	Manual	STANDBY POWER supplied from Main Plant generator 30P-1
Head End	15K-21 (B)	15PDR-45 15PDR-45A	15PDR-44 15PDR-44 A	15PDCH-33 (C) 15PDCH-33A (C) 15PDAH-34 (A) 15PDAH-34A (A)	15PDCL-34 (C) 15PDCL-34A (C) 15PDAL-35 (A) 15PDAL-35A (A)	15PCH-32[1]	STANDBY POWER supplied to 15K-21 from STS Generator 50-P-1
Main Plant	15K-10A (B)	15PDR-6	~~15PDR-6~~ 15PDR-5	15PDCH-6 (C) 15PDAH-6 (A)	15PDCL-7 (C) 15PDAL-3A (A)	15PDCH-6VE[1]	STANDBY POWER supplied to 15K-10A from URE generator 30-P-2
PVS (STS)	56-K-201 56-K-201A	56PDR-229 56PDR-230	56PDR-231 56PDR-232	56PDAH-229 (A) 56PDAH-230 (A)	56PDAL-229 (A) 56PDAL-230 (A)	56PDIS-219[1]	STANDBY POWER supplied from STS generator 50-P-1
WTF	8K-1 8K-1A	8PDR-2 8PDR-2	--- ---	08PDAH-4 (A) 08PDAH-4 (A)	--- ---	Manual	STANDBY POWER supplied from Main Plant generator 30P-1

[1] Automatic switchover capabilities.

MAIN STACK EFFLUENT MONITORING EQUIPMENT			
Primary Equipment	Designation	Standby (Backup)	Designation
Alpha CAM Beta CAM	On-Line 5A On-Line 3A	Alpha CAM Beta CAM	Standby 5B Standby 3B
Monitor Vacuum Pump	On-Line M-1 On-Line M-2	Standby Monitor Vacuum Pump	Standby SM-1
Sample Vacuum Pump	On-Line S-1	Standby Sample Vacuum Pump	Standby SS-1