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RECORDS MANAGEMENT DEPARTMENT

TO: J. PARROTT --- NRC HEADQUARTERS DATE: 02/17/2000
FROM: L.S. DICKSON AOC-21 TEL: 716 942-4187 PAGE: 1

TRANSMITTAL NUM: 000015204

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

CONTROLLED COPY#	PROC ID	REV#	FC#	ISSUE DATE	PROCEDURE TITLE
009	PSR-5	2	2	02/17/2000	STANDBY AND BACKUP POWER REQUIREMENTS

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Jack D. Parrott
Signature (BLACK INDELIBLE INK ONLY)

2/23/00
Date

RETURN BY: 03/02/2000

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NMSS01 Public

WVNS CONTROLLED DOCUMENT SYNOPSIS FORM

Date: 01/24/00

Document ID Number: PSR-5 Revision: 2

Field/Page Change (if applicable): PC2

Document Title: Standby and Backup Power Requirements

Cognizant Author: D. N. Snyder Ext. 4820
(Printed Name)

Describe the following information below:

(1) Where the change appears in the procedure. (2) What was changed. (3) Why the change was made. (4) What organizations/personnel [by title] are affected by change.

Revised title of table 1, Pages 5-6, & 8.

Removed references to backup power from procedure:

Reason for change: Over the past several years, mechanical "Backup Power" has been removed. And all systems are now supplied by electrical standby power.

Personnel affected: Administrative change only.

PROCESS SAFETY REQUIREMENTS
WVDP-218
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	11/05/1999	ZUPPINGER,W.L.
PSR-5	2	1	STANDBY AND BACKUP POWER REQUIREMENTS	ACTIVE	11/23/1999	ZUPPINGER,W.L.
PSR-5	2	2	STANDBY AND BACKUP POWER REQUIREMENTS	ACTIVE	02/17/2000	ZUPPINGER,W.L.
PSR-6	1		FISSILE MATERIAL PACKAGING AND STORAGE REQUIREMENTS	ACTIVE	07/10/1996	TARANTELLO,F.A.
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-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	2		FIRE PROTECTION SYSTEMS REQUIREMENTS	ACTIVE	12/16/1999	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.

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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-15	3	1	NOX MONITORING INSTRUMENTATION REQUIREMENTS	ACTIVE	11/23/1999	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 11/05/99

PROCESS SAFETY REQUIREMENTS

STANDBY AND BACKUP POWER REQUIREMENTS

APPROVED BY:

W. L. Zuppinger
Cognizant Manager — Date 2/9/00

APPROVED BY:

J. J. Little
Radiation & Safety Committee
Chairman — Date 2/9/00

AUTHORIZATION TO IMPLEMENT:

S. A. MacVean
Site Operations & Facility
Closure Projects — Date 2/16/00

Westinghouse
Government Services Group

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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	11/05/99
PC1	Section 2, replaced 50-D-003 to "50-D-009A" Table 2, replaced 50-D-003 to "50-D-009A"	3 7	11/23/99
PC2	Table of Contents updated; Deleted references to mechanical "Backup Power" which has been removed over the last several years. All systems are now supplied with electrical standby power; BASIS, Added "References to backup...;" Table 1, Deleted Backup from title and added "Sources and Supplied."	1 1-6, 8 4 6	02/17/00

PROCESS SAFETY REQUIREMENT - 5

TITLE: STANDBY AND BACKUP POWER Requirements

PC2> CRITERIA: STANDBY/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.

PROCESS SAFETY REQUIREMENT

STANDBY AND BACKUP POWER REQUIREMENTS

APPLICABILITY

This Process Safety Requirement (PSR) applies to systems, instruments, and equipment PC2 required to supply STANDBY POWER to systems providing ventilation to Hazard Category 2 facilities at the West Valley Demonstration Project (WVDP).

OBJECTIVES

PC2 The objective of this PSR is to ensure that STANDBY POWER is available for ventilation systems in Hazard Category 2 facilities during periods when normal electrical power is interrupted.

SPECIFICATIONS

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1. LIMITING CONDITION FOR OPERATION

PC2 STANDBY 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 PC2 shall be made to restore its OPERABILITY. If the OPERABILITY of Supernatant Treatment System (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

PC1> a. The minimum quantity of diesel fuel in storage Tanks 31D-2, 31D-102, 31-D-103, 50-D-009A and 50-D-009 during NORMAL OPERATIONS shall be as specified in Table 2 for standby quantity.

PC1> b. The minimum quantity of diesel fuel in Tanks 31D-2, 31D-102, 31-D-103, 50-D-009A 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

PC1> a. If the quantity of diesel fuel in Tanks 31D-2, 31D-102, 31-D-103, 50-D-009A 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-009A 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

PC1> The quantity of diesel fuel in Tanks 31D-2, 31D-102, 31-D-103, 50-D-009A and 50-D-009 shall be checked and recorded DAILY.

PC2> 3. LIMITING CONDITION FOR OPERATION

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

ACTION

PC2 If it is determined that STANDBY POWER is not available for a component listed in Table 3, IMMEDIATE efforts shall be taken to restore the STANDBY POWER capability.

SURVEILLANCE REQUIREMENT

PC2 The capability to supply STANDBY 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

PC2 STANDBY POWER is provided to maintain ventilation within Hazard Category 2 facilities at the WVDP in the event of loss of normal (off-site) power. References to BACKUP POWER have been deleted from this PSR, because equipment requiring BACKUP POWER has been removed from service and replaced by equipment supplied by STANDBY 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 POWER system is not being used 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

PC2> be present during operations or following recent operations of the associated STANDBY 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

PC2> Table 1 STANDBY POWER Sources And Supplied System Components

PC2> Table 2 Standby and Operating Quantities of Diesel Fuel

PC2> Table 3 Equipment Supplied with STANDBY POWER

REFERENCES

None

TABLE 1

PC2

STANDBY POWER SOURCES AND SUPPLIED SYSTEM COMPONENTS

Component Description	Component Designation
Main Plant Generator	30P-1
Air Compressor	31K-005
Air Compressor	31K-006
Supernatant Treatment System (STS) 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

PC1>

Fuel Storage Tank	Minimum Standby Quantity (gallons)	Minimum 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-009A (SDT)	75	50

PC2>

TABLE 3

EQUIPMENT SUPPLIED WITH STANDBY 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-44A	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-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	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