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 MAJOR CHANGE 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-Ype 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.	All	08/31/95
2	Revision to reflect current operational conditions.	All	03/28/96
PC1	Revised Table 1 to clarify segregated functions of 67-T-002A and 67-T-002B, (Incell & Excell air streams of the secondary filter unit). Corrected nomenclature for filter pressure differential transmitters and pen recorders. Changed "BANK" to "BANK/MODULE" in Table heading.	12, 13	07/11/96

WVNS RECORD OF REVISION CONTINUATION FORM

Rev. No.	Description of Changes	Revision On Page(s)	Dated
PC2	Editorial changes made to surveillance requirements to clarify that annual DOP tests can be performed on FILTER TRAIN	3	10/07/96
3	General Revision including technical clarification provided regarding filter units, FILTER BANKS, and FILTER MODULES. Established requirements for systems to be OPERATING with OPERABLE backup equipment and provided ACTIONS with respect to Vit Operations if conditions are not met. Tables clarified and document has an improved consistency of terminology throughout. Headings added for clarity.	All	02/21/97
PC1	Change was made in response to a DOE health hazard alert concerning the use of dioctylphthalate (DOP)	3, 17 18	11/03/98

SURVEILLANCE REQUIREMENT - HEPA FILTER BANK and FILTER MODULE Collection Efficiency

HEPA FILTER BANKS or FILTER MODULES identified in Table 1 or Table 2 shall be
PC1> tested in-place ANNUALLY and after each filter replacement before return to
stand-by or operation, to establish that the installed filters provide a
collection efficiency of at least 99.95 percent for particulates 0.3 microns
PC1> in diameter and larger. In-place testing shall be performed per an approved
procedure.

2. LIMITING CONDITION FOR OPERATION - HEPA FILTER BANK and FILTER MODULE Differential Pressure Instrumentation Calibration and OPERABILITY

a. Instrumentation (identified in Table 1 or Table 2) for monitoring differential pressure across the HEPA FILTER BANKS or FILTER MODULES shall have current calibration.

b. Instrumentation (identified in Table 1 or Table 2) for monitoring differential pressure across the OPERATING HEPA FILTER BANKS or FILTER MODULES shall be OPERATING.

c. Instrumentation (identified in Table 1 or Table 2) for monitoring differential pressure across the backup FILTER BANKS or FILTER MODULES shall be OPERABLE.

ACTION - Differential Pressure Instrumentation Calibration

a. If any instrument (identified in Table 1 or Table 2) for monitoring differential pressure across HEPA FILTER BANKS or FILTER MODULES does not have current calibration, that instrument shall be declared INOPERABLE and IMMEDIATE efforts shall be taken to calibrate that instrument.

ACTION - Differential Pressure Instrumentation OPERABILITY (In-Cell Airstream)

b. If OPERATING instrumentation (identified in Table 1) monitoring differential pressure across a single OPERATING FILTER BANK or FILTER MODULE in either the In-Cell Airstream (exhaust air drawn directly from the Vit Cell only) Primary Filter Units 67-T-001A, B, or C or the Secondary Filter Sub-Unit (67-T-002A), FILTER MODULES A, B, or C, should become INOPERABLE, the associated FILTER BANK or FILTER MODULE may continue OPERATING for ten days, provided that the instrumentation monitoring the differential pressure across the other three OPERATING HEPA FILTER BANKS or FILTER MODULES for the In-cell Airstream is OPERATING. However, immediate action shall be taken to restore the OPERABILITY of the affected equipment.

If OPERATING INSTRUMENTATION monitoring differential pressure across an additional OPERATING FILTER BANK or FILTER MODULE in the In-Cell Airstream Primary Filter Units 67-T-001A, B, or C, or Secondary Filter Sub-Unit (67-T-002A), FILTER MODULES A,B, or C, should become INOPERABLE, a backup FILTER MODULE or FILTER BANK with associated OPERABLE INSTRUMENTATION shall IMMEDIATELY be placed on-line and IMMEDIATE efforts shall be taken to restore the OPERABILITY of the affected equipment.

If instrumentation monitoring differential pressure across all three of the In-Cell Airstream Primary Filter Units 67-T-001-A, B, and C, and/or all three FILTER MODULES of the Secondary Filter Sub-Unit (67-T-002A), FILTER MODULES A, B, and C becomes INOPERABLE, IMMEDIATE ACTION shall be taken to restore the OPERABILITY of the affected equipment.

NOTE: During FILTER MODULE switchover activities, additional filters may be OPERATING until the new configuration is established.

b. The Vitrification Facility Filtered Exhaust System shall maintain at least two backup OPERABLE FILTER MODULES in the Secondary Filter Sub-Unit (67-T-002B).

ACTION - Ex-Cell Airstream

a. If more than two backup FILTER MODULES in the Secondary Filter Sub-Unit (67-T-002B) are not OPERABLE, IMMEDIATE effort shall be taken to restore the OPERABILITY of at least two backup FILTER MODULES.

b. If the Ex-Cell Airstream FILTER BANK is INOPERABLE, IMMEDIATE effort shall be taken to restore the OPERABILITY of the Ex-Cell Airstream FILTER BANK.

SURVEILLANCE REQUIREMENTS - Ex-Cell Airstream FILTER BANK

SURVEILLANCE 2.b shall be used to establish that the FILTER BANK for the Vitrification Facility Filtered Exhaust System Ex-Cell Airstream is OPERATING. Surveillance requirements 1, 2a, 2c, 3, 6, and 9 shall be used to establish the OPERABILITY of the backup FILTER MODULES. OPERABILITY shall be determined per an approved procedure.

BASES

1. HEPA filters provide the primary barrier to the release of airborne contamination to the environment. A minimum mass removal efficiency has been determined for ventilation system filters to ensure that these releases are maintained As Low As Reasonably Achievable (ALARA). Filter system efficiency
PC1> is determined at the WVDP through testing new filters in-place before operation and through subsequent annual tests.

HEPA filters purchased for use at the WVDP are required to have been previously tested to ensure an acceptable particulate removal efficiency. Demonstration of acceptable HEPA FILTER BANK or FILTER MODULE efficiency
PC1> following filter replacement potentially requires filter adjustments. An in-
PC1> place test is performed after each adjustment to determine that the filter has sealed adequately. Once it has been determined that the filter seal is acceptable, the filter must successfully pass subsequent tests.

2. Failure of a HEPA filter could potentially result in the release of a significant amount of radioactive contamination. High differential pressure across a filter could result in filter failure and indicates that the filter needs to be changed. Low differential pressure across a filter indicates a possible filter failure. Differential pressure instrumentation has therefore been incorporated into facility ventilation and off-gas systems to ensure detection of abnormal differential pressure conditions.

Instrumentation accuracy and OPERABILITY is ensured through routine calibration. Routine SHIFT readings are used to determine the status of systems which are OPERATING. OPERABILITY of backup instrumentation is determined through ANNUAL calibration and readings taken during periodic testing of backup equipment.

Differential pressure associated with HEPA FILTER BANKS and FILTER MODULES provides continuous monitoring of the operation of the redundant elements of a FILTER TRAIN. This is further backed up by the annual collection efficiency
PC1> verification by in-place testing. Loss of instrumentation on either of the HEPA filters (FILTER BANKS) will not, by itself, degrade performance. It is therefore considered a reasonable risk to operate for a ten-day time period without working instrumentation on a single FILTER BANK or FILTER MODULE.