



Mechanical Data Sheet: Vessel

Plant Item No. 24590-PTF-MV-FEP-SEP-00001B

Data Sheet No. 24590-PTF-MVD-FEP-P0007



Project: RPP-WTP, Project No: 24590, Project Site: DOE Hanford, System No: FEP, Building: PTF, Description: Waste Feed Evaporator Separator Vessel FEP-SEP-00001B

ISSUED BY RPP-WTP PDC

Reference Data

Charge Vessels (Tag Numbers): N/A, Pulse Jet Mixers / Agitators (Tag Numbers): N/A, RFDs/Pumps (Tag Numbers): N/A

Service Data

Quality Level: QL-1, Seismic Category: SC-1, Service/Contents: Radioactive Slurry, Design Specific Gravity: 1.50, Max Operating Volume: 3,341 gal, Total Volume: 13,359 gal, Postweld Heat Treat: Not Required, Seismic Base Moment: 11*lb N/A, Environmental Qualification: N/A 2

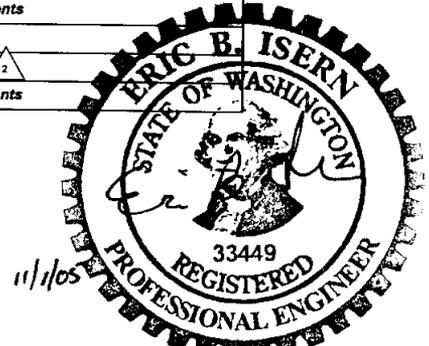
Design Data

Inside Diameter: 7'6" (Upper), 11'5" (Lower), Corrosion Allowance: 0.04, Internal Pressure: -13.4 PSIG, External Pressure: 0 PSIG, Temperature: 129 F, Min Design Metal Temp: 49 F, Hydrostatic Test Pressure: 65 PSIG

Materials of Construction

Component: Top Head, Shell, Bottom Head, Vessel Support, Jacket/Coils, Internals, Pipe, Forgings, Gaskets, Bolting, Other (Fittings)

Note: Please note that source, special nuclear and byproduct materials, as defined in the Atomic Energy Act of 1954 (AEA), are regulated at the U.S. Department of Energy (DOE) facilities exclusively by DOE acting pursuant to its AEA authority.



EXPIRES: 07/28/07

This Bound Document Contains a total of 2 sheets

Revision table with columns: Rev., Reason for Revision, Preparer, Checker, Reviewer, Approver, Date



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Miscellaneous Data

Orientation	Vertical
Support Type	Stainless steel legs
Insulation Function	None
Insulation Thickness	inch None
Insulation Material	None
External Finish	Welds descaled as laid
Internal Finish	Welds ground smooth; lower 16'-3 7/16" shell and cone to be #4 polished finish.

Notes

- (1) Nozzles located below the top of the overflow nozzle are primary containment. See 24590-WTP-3PS-MV00-TP001 for NDE requirements.
- (2) Nozzle tolerance +/- 1/4"
- (3) Material for demister pad is Inconel 625 fine mesh
- (4) Non-replaceable 40 years design life (except demister pads section)
- (5) NDE for this vessel must meet requirements per para. 6.1, 6.2 and 7.2 of specification 24590-WTP-3PS-MV00-TP001
- (6) All welds forming part of the primary and auxiliary containments, including the nozzle attachment welds shall be subjected to 100% volumetric examination.
- (7) This vessel is located in a Black Cell.
- (8) Vendor to specify all metal thicknesses
- (9) Contents of this document are Dangerous Waste Permit affecting 2
- (10) All vessel nozzle loads due to thermal expansion are estimated based on the maximum operating temperature of 150 degree F. 2
- (11) This vessel is Important-To-Safety (ITS) and must maintain containment post Design Basis Event (DBE). 2
However, Environmental Qualification is not applicable for this vessel since all the materials of construction are metallic (24590-WTP-GPG-ENG-086, Rev. 0) 2