BECHTEL	**MECHANICAL SYSTEMS DATA SHEET: VESSEL**	**PLANT ITEM No.** R10803468 ***24590-HLW-MV-HOP-ABS-00003***

ISSUED BY
RPP-WTP PDC

Project:	***RPP-WTP***	P&ID:	***24590-HLW-M6-HOP-20008***
Project No:	***24590***	Process Calculation.	***24590-HLW-M4C-HOP-00011*** 6
Project Site.	***Hanford***	Vessel Drawing	***24590-HLW-3PS-MBT0-T0001 (Vendor Supplied Dwg's TBD)***
Description:	***Melter 2 Silver Mordenite Column***		

Reference Data

Charge Vessels (Tag Numbers)	***None***
Pulsejet Mixers / Agitators (Tag Numbers)	***None***
RFDs/Pumps (Tag Numbers)	***None***

Design Data

Quality Level		***QL-2***	Fabrication Specs	***24590-HLW-3PS-MBT0-T0001***		
Seismic Category		***SC-III***	Design Code	***ASME AG-1/1a & ASME Section VIII, Div. 1***		
Service/Contents		***Filtered Radioactive Gas***	Code Stamp	***No***		
Design Specific Gravity		***0.588***	NB Registration	***No***		
Maximum Operating Volume	gal	***N/A***	Weights (lbs)	Empty	Operating	Test
Total Volume	gal	***N/A***	Estimated	***14,200***	***35,200***	***35,200***
Environmental Qualification		***None***	Actual *	***39,600***	***55,900***	***55,900***

Inside Diameter	inch	***N/A***			Wind Design	***Not Required***	
Length/Height (TL-TL)	inch	***See note 1***			Snow Design	***Not Required***	
		Vessel Operating	Vessel Design	Coil/Jacket Design	Seismic Design	***24590-WTP-3PS-FB01-T0001 & 24590-HLW-3PS-MBT0-T0001***	
Internal Pressure	psig	***0***	***3***	***N/A***	Seismic Base Moment *	ft*lb	***0***
External Pressure	psig	***1.3 (see note 3)***	***3***	***N/A***	Postweld Heat Treat	***Not Required***	
Temperature	°F	***330***	***330***	***N/A***	Corrosion Allowance	Inch	***0.04***
Min. Design Metal Temp.	°F	***59***			Hydrostatic Test Pressure *	psig	***See note 2***
Max Operating Pressure Drop	in-WG	***10***					

Materials of Construction

Component	Material	Minimum Thickness / Size	Containment
Top Head	***N/A***	***N/A***	***N/A***
Shell	***316L***	***1/4" Plate***	***Primary***
Bottom Head	***N/A***	***N/A***	***N/A***
Support	***316L***	***1/4" 3 x 3 angle***	***N/A***
Jacket/Coils/Half-Pipe Jacket	***N/A***	***N/A***	***N/A***
Internals	***316L***	***1/4" Plate***	***N/A***
Pipe	***316L***	***SCH 40***	***N/A***
Forgings/ Bar stock	***N/A***	***N/A***	***N/A***
Gaskets	***Silicone HT***	***N/A***	***N/A***
Bolting	***Varies - See DWGs***	***N/A***	***N/A***

Miscellaneous Data

Orientation	***Horizontal***	Support Type	***20" x 2 7/16" x 1/4" Fabricated Flange 304L***
Insulation Function	***Personnel protection and process temperature control***	Insulation Material	***Calcium Silicate w/0.024" thk, 304 SST Jacket***
Insulation Thickness (inch)	***6"***	Internal Finish	***N/A***
		External Finish	***N/A***

Remarks

* To be determined by the Vendor.

BECHTEL	**MECHANICAL SYSTEMS DATA SHEET: VESSEL**	**PLANT ITEM No.** ***24590-HLW-MV-HOP-ABS-00003***

Equipment Cyclic Data Sheet

Component Plant Item Number:	***24590-HLW-MV-HOP-ABS-00003*** 6
Component Description	***Silver Mordenite Column containment housing***

The information below is provisional and envelopes operational duty for fatigue assessment. It is not to be used as operational data.

Materials of Construction	***316L***
Design Life	***40 yr***
Component Function and Life Cycle Description	***Removal of Iodine-129 and other halogens***

Load Type		Min	Max	Number of Cycles	Comment
Design Pressure (-ve/+ve)	psig	***-3***	***+3***	***1***	***Based on 3 yr melter life***
Operating Pressure (-ve/+ve)	psig	***-1.3***	***+1.5***	***13***	***Based on 3 yr melter life***
Operating Temperature	°F	***59***	***330***	***13***	***Based on 3 yr melter life***
Contents Specific Gravity		***0.588***	***0.588***	***N/A***	
Contents Level	inch	***N/A***	***N/A***	***N/A***	***Gas service, flow through operation***
Localized Features					
Nozzles		***Sampling & Testing Connections***		***3/4" - 150 lb WNF x3***	
Air Inlet		***Flange***			
Delivery		***Flange***			
Supports		****TBD***			

Notes

1. *Maximum outside dimensions: 19'-9 1/4" L (w/o insulation) x 15'-3 1/4" W (w/insulation) x 7'-0" H (bottom of column to top of column grating). Dimensions are ±1/2".*
2. *Pneumatic Test of Housing Pressure Boundary per ASME Section VIII, Div 1. All other testing per ASME AG-1/1a & N509*
3. *Normal operating pressure will be 1.3 psig External. The other pressures shown are design, off-normal conditions.*
4. *The information contained in revision 2 data sheet supercedes the information contained in SDDR 24590-WTP-SDDR-PROC-03-0003.*
5. *Contents of this document are Dangerous Waste Permit affecting.* 6

Safety Screening required?: Yes _X_ No ___ (If yes per 24590-WTP-GPP-SREG-002, E&NS signature required below)

Approval

Rev	Description	System Eng.	Equip. Eng.	Checked	Reviewed/ E&NS	Approved	Date
0	Issued for Purchase	Anthony Cutrona	N/A	David Evans	N/A / N/A	Suzanne Kirk	8/14/02
1	Updated Process datasheet number, revised Vessel Drawing reference (added equipment spec no., & Vendor dwg's are TBD), corrected seismic category from II to III, revised seismic specification number, and added 1a supplement to design code ASME AG-1.	Anthony Cutrona	N/A	David Evans	N/A / N/A	Mark Hoffman	11/14/02
2	Secondary offgas rearrangement: Revised operating and design pressure, and operating temperature per 24590-HLW-M6C-HOP-00011 R/C. Added max operating pressure drop. Added note 4. Revised Approval block	Anthony Cutrona	David Pease	Pat Harrigan	Donna Yarbrough/ N/A	Marla Wright	10/3/03

3	Updated actual weights, materials of construction, and insulation thickness based on Vendor submittal. Revised norm/max/design temperature per 24590-WTP-SDDR-PROC-03-0411	Anthony Cutrona	David Pease	Pat Harrigan	Donna Yarbrough/ N/A	Marla Wright	12/16/03
4	Revised to comply with CODE 1 vendor submittal 24590-QL-POA-MBT0-00001-11-01, in accordance with CAR: 24590-WTP-CAR-QA-05-120. Incorporated DCN 24590-HLW-MKN-HOP-00008	Jim Rouse	David Pease	Anthony Cutrona	Chris Morley/ N/A	John Julyk	11/27/05
5	Revised note 1: Changed width from 15'-3 1/8" to 15'-3 1/4", added tolerance. Added E&NS to Approval section.	Jim Rouse	Anthony Cutrona	Satish Jain	Grant Goolsby/ Chris Meng	John Julyk	11/22/06
6	Revised Process Data Sheet reference to Process Calculation, the data sheet is cancelled Corrected plant item number in Cyclic Data section. Added Note 5.	Tom Galioto	Anthony Cutrona	Suren Thakkar	Grant Goolsby/ Chris Meng	John Julyk	7/12/07