FORM U-DR-1 USER'S DESIGN REQUIREMENTS FOR SINGLE-CHAMBER PRESSURE VESSELS

Owner:	Operator:	Country of Installation:	State/Province of Installation:	City of Installation:

Service:	Liquid Level: _____ Specific Gravity: _____	Item No.:
Diameter:	Length, Tangent-to-Tangent:	Type: Vertical ☐ Horizontal ☐ Sphere ☐
National Board Registration Required: Yes ☐ No ☐ Canadian Registration Required: Yes ☐ No ☐	Special Service: Lethal (L) ☐ Direct Firing (DF) ☐ Unfired Steam Boiler (UB) ☐	Overpressure Protection: Valve ☐ Rupture Disk ☐ Other ☐ System Design ☐

OPERATING CONDITIONS:	Minimum Pressure	Maximum Pressure	Minimum Temperature	Maximum Temperature
Case 1				
Case 2				

DESIGN CONDITIONS:	Pressure	Temperature
Internal Design Pressure:		
External Design Pressure:		
MAWP Internal:	Same as Design Pressure ☐	Calculated by Manufacturer: ☐
MAWP External:	Same as Design Pressure ☐	Calculated by Manufacturer: ☐
Minimum Design Metal Temperature (MDMT) – Case 1	Deg @	Due to: Process ☐ Other ☐ Ambient Temperature ☐
Minimum Design Metal Temperature (MDMT) – Case 2	Deg @	Due to: Process ☐ Other ☐ Ambient Temperature ☐

Corrosion Allowance:	Shell		Heads		Nozzles		Jacket		Coil		Supports		Internals	Corrosive Service?	
	Int.	Ext.	Int.	Ext.	Int.	Ext.	Int.	Ext.	Int.	Ext.	Int.	Ext.		Yes	No
														☐	☐

Cyclic Service: Yes ☐ No ☐	_____ Cycles per _____	Design Life _____ years	Fatigue Analysis? Yes ☐ No ☐

Wind Loading: ASCE 7 ☐ UBC ☐ IBC ☐ Other ☐ None ☐	Wind Speed	Classification Category	Exposure Category	Topographic Factor	Elevation

Seismic Loading: ASCE 7 ☐ UBC ☐ IBC ☐ Other ☐ None ☐	Soil Profile Classification: _____	PWHT: Per Code ☐ Process Required ☐	Other Loadings per UG-22: Temp. Gradients ☐ Deflagration ☐ Diff. Thermal Exp. ☐

Insulated: Yes ☐ No ☐ By Manufacturer ☐ By Others ☐	Type Thickness External _____ Internal _____	Density _____ _____	Coating Specification _____ Permitted Prior to Pressure Test Yes ☐ No ☐

Vessel Support: Legs ☐ Skirt ☐ Lugs ☐ Saddles ☐	Fireproofing: Yes ☐ No ☐	Type:	Rating (hr):

MATERIALS

Component	Specification	Component	Specification
Shell		Ellipsoidal Head	
Hemispherical Head		Torispherical Head	
Toriconical Head		Conical Head	
Nozzles		Flanges	
Stiffener Rings		Pressure-Retaining Bolts	
Attachments		Internals	
Reinforcing Pads		Other _____	

NOZZLE SCHEDULE

Description	Number Required	Size	Flange Type	Class	Description	Number Required	Size	Flange Type	Class

FORM U-DR-1 (Back)

WELDED PRESSURE JOINT REQUIREMENTS			
DESIGN BASIS:	SHELL AND CONE THICKNESS BASED ON: JOINT EFFICIENCY *E* = _____		HEAD THICKNESS BASED ON: JOINT EFFICIENCY *E* = _____
JOINT LOCATION UW-3		TYPE OF JOINT (Use Types as Described in UW-12)	NDE WITH COMMENTS
Category A			
Category B	Head-to-Shell		
	Other		
Category C	Body Flanges		
	Nozzle Flanges		
Category D			

BODY FLANGE REQUIREMENTS				
Description	Type	Facing/Surface Finish	Gasket Style	Joint Assembly (See ASME PCC-1)

SKETCH

GENERAL NOTES

CERTIFICATION

We certify that the statements made in this form are accurate and represent all details of design as per the user or his designated agent [see Nonmandatory Appendix NN]

Date: _____

User: _____

Signed: _____
(Representative)

Registration Identification: _____
(Optional)

Registration Seal (Optional)