



ENGINEERING SPECIFICATIONS SPECIFICATION DEVIATION REQUEST FORM

DS-GS-01-FM-02

Rev. 1

Company/Department:	Spectrum Process Systems	Deviation Request No: (For SE&P Technical Services use only)	DR-
Project Name:	02-20 Raven Creek Compressor Station	Project Deviation Request No:	
Location:	Edson Area, Alberta, LSD: 02-20-050-18 W5M	Project No: SPS-14-05110 / 4178HUS	
Subject:	Skid NDT requirements	Specification / Rev No:	
		Date Requested (yyyy/mm/dd):	2015/01/12

SECTION A: Excerpt(s) Taken From the Engineering Specification**PS-VT-01 Pressure Vessels Rev 3**

7.11.7 Both sides of the skirt to head welds shall be 100% WFMT or WVMT examined prior to pressure testing.

SECTION B: Description of Deviation(s)

MPI of weld between JT Vessel (V-326) vessel and skirt not completed

SECTION C: Impacts and Justification

Design Impacts ☒ No ☐ Yes If yes, describe below (List affected documents, if any):

Health, Safety & Environment Impacts: ☒ No ☐ Yes If yes, describe below:

Reliability/Operational Performance Impacts: ☒ No ☐ Yes If yes, describe below:

Maintenance Impacts: ☒ No ☐ Yes If yes, describe below:

Cost Impacts: ☒ No ☐ Yes If yes, describe below:

Justification:

Final Accepted ITP and drawings did not include this NDE. Spectrum was able to MPI the Contactor and Flash Vessel prior to shipping as they did not have insulation. JT vessel has 3" Cellular Glass insulation that made it impractical to be removed and complete NDE.

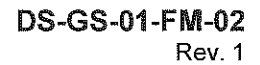
Requested By:
(Name & Company) Joe Laing / Spectrum Process Systems

Signature:

Husky Project

Signature:

Lead:



Project:	Raven Creek, Dehy / JT Package	Job. No.:	14-05110
Customer:	Husky Oil Operations Ltd. c/o Excelsior Eng.	Document:	Inspection and Test Plan
P.O. #	8400843246	Revision:	4
		Date:	Aug 28, 2014

LEGEND

C	- CHECKPOINT: Checks performed in-house with no Documentation.
P	- PROCESS: Quality surveillance verification activities to be performed which do not require advance client notification and are documented for review.
R	- REVIEW: Submit to client prior to performance of the activity, or make available for review the results of the tests conducted as the case may be.
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Section 1: DEHY

TASK DESCRIPTION	Location Code (I = Internal S = Subcontract)	Controlling Procedure / Acceptance	Verifying Document	Inspection / Action	Spectrum ACCEPTED (Date & Initial)	3 rd Party Inspector Inspection / Action ACCEPTED (Date & Initial)	Purchaser Inspection / Action Sign & Date
Drawing Issuance	I	Issuance from Drafting	IFC Drawings	H		R	R -
WPS / PQRs.	I	ASME Sec.VIII, Div.1/Sec. IX	Approved WPS/ ITP Sign-Off	H		R	R -
Welders' Qualification	I	ASME Sec.IX.	QW-484 / Continuity	R		R	R -
Material Identification & Traceability	I	ASME Sec.VIII, Div.1, UG 77, UG 80	Drawings & MTR's	R		R	R -
Mill Test Report (MTR) Review	I	ASME Section II	Stamp per QC Manual	R		R	R -
Fit up & welding of Long/Circ. seams	I	ASME Sec.VIII, Div. 1	Travel Sheet Sign Off or Rev.00	P		P	P -
Nozzle, Flange, Coupling Fit up and welding	I	ASME Sec.VIII, Div. 1	Travel Sheet Sign Off	P		P	P -
Radiography - Density 2-4 Class 1 Film Required	I	ASME Sec. VIII Div. 1 - RT-1 Incl nozzle bw	RT Reports	R		R	R -
MPI Inspection	I	ASME Sec. VIII, Div. 1	MPI Report	R		R	R -
Visual inspection before closing	I	Check Internals & Review	Travel Sheet Sign Off	H		H	W -
Dimensional Inspection	I	Spectrum Mapped Drawings	ITP Sign Off	P		P	P -
Pneumatic Testing of Split Re-Pads	I	ASME VIII Div 1	Report	H		P	P -
Visual Inspection of all Welds / Final QC	I	ASME VIII Div 1	Travel Sheet Sign Off	H		P	P -
Hydrotest of vessel.	I	Hold = 1 Hr. / ASME Section VIII Div. 1	Report / Chart	H		H	W -
Clean & Air Dry Vessel	I		Confirmed Observation	P		P	P -
Sandblast, prime and painting	I	Per Drawing.	Coating Report	R		R	R -
CRN - AB	I	Design Registration	Design Acceptance Letters	R		R	R -
Manufacturer's Affidavit	I	ASME Sec. VIII Div. 1	U1/U1A/U4 Sign Off	H		R	R -
Nameplate Installation/Supplementary Info as per Drawing	I	ASME Sec. VIII Div. 1	Travel Sheet Sign Off	H		P	P -
* Husky Spec. PS-VT-01 R.3 & • PS-MW-05 Rev_1A • PS-MW-01 Rev. 2& Quote & below requirement only							

EXCELSIOR ENGINEERING LTD.	
SQUAD CHECK #	<u>SQU-0022</u>
EXC #	<u>4178HUS-POP 0003-1NS-001</u>
TAG #	<u>2-320</u>
DESIGN LEAD	<u>TAMARA</u>
RESPONSIBLE ENG	<u>MARK N</u>
REVIEW DUE DATE	<u>2014-09-29</u>

Project:	Raven Creek, Dehy / JT Package	Job. No:	14-05110
Customer:	Husky Oil Operations Ltd. c/o Excelsior Eng.	Document:	Inspection and Test Plan
P.O. #	8400843246	Revision:	4
		Date:	Aug 28, 2014

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Section 1: FLASH VESSEL

TASK DESCRIPTION	Location Code (I = Internal SE Substructure)	Controlling Procedure / Acceptance	Verifying Document	Inspection / Action	Spectrum	3 rd Party Inspector	Purchaser
					ACCEPTED (Date & Initial)	ACCEPTED (Date & Initial)	Sign & Date
Drawing Issuance	I	Issuance from Drafting	IFC Drawings	H		R	-
WPS / PQRs.	I	ASME Sec.VIII, Div.1/Sec. IX	Approved WPS/ ITP Sign-Off	H		R	-
Welders' Qualification	I	ASME Sec.IX.	QW-484 / Continuity	R		R	-
Material Identification & Traceability	I	ASME Sec.VIII, Div.1, UG 77, UG 80	Drawings& MTR's	R		R	-
Mill Test Report (MTR) Review	I	ASME Section II	Stamp per QC Manual	R		R	-
Fit up & welding of Long/Circ. seams	I	ASME Sec.VIII, Div. 1	Travel Sheet Sign Off or Rev.00	P		P	-
Nozzle, Flange, Coupling Fit up and welding	I	ASME Sec.VIII, Div. 1	Travel Sheet Sign Off	P		P	-
Radiography - Density 2-4 Class 1 Film Required	I	ASME Sec. VIII Div. 1 - RT-2	RT Reports	R		R	-
MPI Inspection 100% Lifting Lugs	I	ASME Sec. VIII, Div. 1	MPI Report	R		R	-
Visual Inspection before closing	I	Check Internals & Review	Travel Sheet Sign Off	H		H	-
Dimensional Inspection	I	Spectrum Mapped Drawings	ITP Sign Off	P		P	-
Pneumatic Testing of Split Ro-Pads	I	ASME VIII Div 1	Report	H		P	-
Visual Inspection of all Welds / Final QC	I	ASME VIII Div 1	Travel Sheet Sign Off	H		P	-
Hydrotest of vessel.	I	Hold = 1 Hr. / ASME Section VIII Div. 1	Report / Chart	H		H	-
Clean & Air Dry Vessel	I		Confirmed Observation	P		P	-
Sandblast, prime and painting	I	Per Drawing.	Coating Report	R		R	-
CRN - AB	I	Design Registration	Design Acceptance Letters	R		R	-
Manufacturer's Affidavit	I	ASME Sec. VIII Div. 1	U1/U1A/U4 Sign Off	H		R	-
Nameplate Installation/Supplementary Info as per Drawing	I	ASME Sec. VIII Div. 1	Travel Sheet Sign Off	H		P	-

* Husky Spec. PS-VT-01 R.3 • PS-MW-05 Rev_1A • PS-MW-01 Rev. 2 & Quote & below requirement only

Project:	Raven Creek, Dehy / JT Package		Job. No:	14-05110	
Customer:	Husky Oil Operations Ltd. c/o Excelsior Eng.		Document:	Inspection and Test Plan	
P.O. #	8400843246		Revision:	4	
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Section 3: PRESSURE PIPING				Spectrum	3 rd Party Inspector		Purchaser		
TASK DESCRIPTION	Location Code (I Internal S External)	Controlling Procedure / Acceptance	Verifying Document	Inspection / Action	ACCEPTED (Date & Initial)	Inspection / Action	ACCEPTED (Date & Initial)	Inspection / Action	Sign & Date
Drawing Issuance	I	Issuance from Drafting	IFC Drawings	H		R		R	-
Welding Procedure review	I	Review WPS, PQR as per ASME Section IX	Approved WPS	H		R		R	-
Welder Qualification verification	I	Review WQR as per ASME Section IX & jurisdictional requirements	Spectrum Mapped Drawings	R		R		R	-
Review Mill test reports (Required for all materials including Pipe, flanges, fittings, valves, studs/nuts, strainers, traps, etc.)	I	ASME Section II Part A	Spectrum Mapped Drawings	R		R		R	-
Material identity, heat numbers	I	ASME Section VIII UG-77	pipng drawings / MTR's	P		P		P	-
Pipe check (Review for grade, size, schedule & visible damage)	I	IFC drawings & applicable ASTM Standard	pipng drawings / MTR's	P		P		P	-
Fitting check (fitting & flanges for grade, size, sch. & visible damage)	I	IFC drawings & applicable ASTM Standard	pipng drawings / MTR's	P		P		P	-
Layout check (Review configuration of pipe arrangement)	I	IFC drawings	Piping Travel Sheet	P		P		P	-
Internal check (Review inside of piping as visibly accessible including any internals)	I	ASME B31.3 Para. 341.1 & Table 341.3.2	Piping Travel Sheet	P		P		P	-
Dimensional check (Review dimensions on piping i.e nozzles, attachments, etc.)	I	IFC drawings	Spectrum Mapped Drawings	P		P		P	-
Orientation check (Review orientation of piping attachments & nozzles)	I	IFC drawings	Piping Travel Sheet	P		P		P	-
Support check: (saddles, etc.) - review supports for dimensional accuracy	I	IFC drawings	Spectrum Mapped Drawings	P		P		P	-
Visual weld check	I	ASME B31.3 Para. 341.1 & Table 341.3.2	Piping Travel Sheet	P		P		P	-
Magnetic Particle Inspection - N/A	I	ASME B31.3 Normal - 10% Socketwelds	MT Reports	R		R		R	-
Radiography - Film Density 2-4 Class 1 Film Required	I	ASME B31.3 Sect. 344.5 & 341.3.2 - 10% Buttwelds/Normal	RT Reports	R		R		R	-
Hydrostatic test	I	ASME B31.3 Section 345 Hold = 1 Hour	pressure test report/chart when required	H		H		W	Large amount only
Sandblasting, prime and paint	I	Per Drawing,	Piping Travel Sheet	R		R		R	-
Piping Registration - AB	I	Design Registration	CRN Acceptance Letter	R		R		R	-
Manufacturer's construction data report	I	CSA B.51 report format & IFC drawings	AB-83	H		H		H	-

* Husky Spec. PS-PF-04 • PS-MW-05 Rev_1A • PS-MW-01 Rev. 2 & Quote & per list below only

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Section 4: STRUCTURAL SKID

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Drawing Issuance	I	Issuance from Drafting	IFC Drawings	H	R	R	
Review of Welding Procedures	I	CSA W47.1	Reference Dwg.	R	R	R	
Review of Welders Qualifications (WQR)	S	CSA W47.1	CWB Welder Tickets	R	R	R	
Material Identification	S	Audit project materials	Drawings, BOM, MTR	P	P	P	
Weld Check: Skid, Platform & Miscellaneous (Stairs, Handrails etc)	S	Review skid upside down for weld integrity on members and floor plate if applicable.	Weld map as per CSA W59, ASME Section V and approved drawing weld details	H	P	P	
Ultrasonic 10% main members only	S	ASME Sec. I/CSA & PS-CS-02	UT Reports	R	R	R	
MPI Inspection 100% B&White	S	ASME Sec. VIII Div.1 MT LIR Lugs	MT Reports	R	R	R	
Dimensional Check	S	Review dimensional tolerances	Approved drawings	P	P	P	
Orientation Check	S	Review orientation of material, attachments and holes	Approved drawings	P	P	P	
Support Check	S	Locational verification of cross beam & longitudinal beam supports for dimensional accuracy	Approved drawings	P	P	P	
Sandblast, prime and painting	S	Per Drawing, SP-6/1 Primer/2 Top Coat - Warm Grey F34	Coating Report	R	R	R	
Skid Insulation	S	3" Spray Urethane Insulation		P	P	P	

* Husky Spec. PS-CS-02 • PS-MW-05 Rev_1A • PS-MW-01 Rev. 2 per the below requirement only

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Section 5: ASSEMBLY				Spectrum	3 rd Party Inspector	Purchaser			
TASK DESCRIPTION	Location Code (H=Hull, S=Submersible)	Controlling Procedure / Acceptance	Verifying Document	Inspection	ACCEPTED (Date & Initial)	Inspection	ACCEPTED (Date & Initial)	Inspection	Sign & Date
Vessel placement (Review location & anchoring of vessels)	I	IFC drawings	ITP sign-off	R		R		R	-
Equipment placement (Review location & anchoring of equipment)	I	IFC drawings	ITP sign-off	R		R		R	-
Welded & screwed piping layout (Review run location for access & interference)	I	IFC drawings & Inspector's judgement, placement of flanges/unions for removal	ITP sign-off	R		R		R	-
Instrument location	I	Inspector's judgement & approved drawings / Confirm All Tagged	ITP sign-off	R		R		R	-
Pipe supports (Review number and location)	I	Inspector's judgement & approved drawings	ITP sign-off	R		R		R	-
Flow check including vents/drains		Approved P&ID & Inspector's judgement on high point vents & low point drains	ITP sign-off	W		W		W	-
Final Pressure Testing	I	Review Instrumentation & Function Test	ITP sign-off	H		H		H	-
Coating (Final Touch Ups)	I	Per Drawing	ITP sign-off	P		P		P	-
Package Final Walk Down	I	IFC drawings	ITP sign-off	H		H		H	-
Electrical Installation	I			R		R		R	-

Section 6: FINAL TESTING				Spectrum	3 rd Party Inspector	Purchaser			
TASK DESCRIPTION	Location Code (H=Hull, S=Submersible)	Controlling Procedure / Acceptance	Verifying Document	Inspection	ACCEPTED (Date & Initial)	Inspection	ACCEPTED (Date & Initial)	Inspection	Sign & Date
Instrumentation Function Test	I	Open / Close	ITP sign-off	H		H		H	-
Customer Release	I		Customer Acceptance Report	H		H		H	-

**EXCELSIOR ENGINEERING LTD
VENDOR DOCUMENT REVIEW**

- ☐ V1 - CORRECT AND RESUBMIT; WORK MAY NOT PROCEED
☐ V2 - CORRECT AND RESUBMIT; WORK MAY PROCEED
☐ V3 - RECEIVED AS IS; FOR INFORMATION ONLY
☐ V4 - ACCEPTED FOR CONSTRUCTION/ FABRICATION; SUBJECT TO INCORPORATION OF ANY COMMENTS
☒ V5 - ACCEPTED AS FINAL SUBMISSION

NOTE: This review does not relieve the Vendor/ Contractor from their due diligence, nor their responsibility for errors in design/ installation or the execution/ detailing in conformance with the contract and regulatory requirements

DATE:

PRINT:

SIGN: