

**SHOP FABRICATION  
 QUALITY SURVEILLANCE ASSIGNMENT "INTERIM" REPORT**

Assignment No.	Insp. PO No. TBD	AFE No.	QSI Ref No. 12-004	Report No. 1C	Page No. 1 of 3
Vendor Brothers Specialized Coatings		Location Edmonton, AB.		Vendor Shop No. 26760	
Project Title Muskwa Booster Station 16-22-84-2W5M		Equipment Description 5' x 25' Inlet Separator Vessel (Previously Used)		Equipment Tag No.(s) S/N 476275 V-100	
Surveillance Date(s) January 19 and 24, 2012				Date of Report February 20, 2012	

**STATUS OF FABRICATION**  
 X ON SCHEDULE AHEAD DELAYED (State Reason for Delay and Schedule Impact below)

**CONTRACT REFERENCE**  
 State Drawing No.(s) , Code or Specification(s) {c/w Revision No.} used to verify compliance to Contract this Report Surveillance Assignment, Husky PS-MW-07 Internal Coating (Rev.0 2006-09-15) , Husky PS-MW-05 Painting (Rev.2 Mar-11-2010, Coating Manufacturers Product Data Sheet and Application Guidelines.

**VENDOR CONTACT THIS REPORT**  
 Bob Payne Shop Foreman  
NAME POSITION

**SURVEILLANCE ACTIVITIES** (Describe Surveillance Activities performed and their Status of Acceptability)  
**Summary** - Visual Inspection of vessel to ensure welds meets NACE SPO 178. Ensure internal abrasive blast inspection meets Husky PS-MW-07 for Internal Coating (Rev.0 2006-09-15) NACE 1 White Metal finish. Surface profile test as per NACE SPO 0287, environmental conditions, Quantitative Chloride test of the pitting on the floor (less than 5 ppm). Final internal coating inspection to include visual, thickness readings, holiday testing as per NACE SPO 188 and a cure test.  
 January 19, 2012  
 Brothers spent time removing weld spatter, smoothing welds and opened up pitting on the floor (bottom 1/3) removing sharp edges prior to blasting. Blasting is performed indoors in a controlled environment.  
Ambient Temperature (at the time of inspection): 18.5°C Substrate Temperature: 15 to 18°C Relative Humidity: 12% Dew Point: -11.2%  
Blast Media: KB 30/60 - # 7 nozzle.  
Surface Profile: as per NACE SPO 287, 2.2 to 3.8 mils using Testex Replica X-Coarse tape.  
S.C.A.T. Results: Completed using Kitigawa Chloride Ion tubes, Lot # 226021, Expiry Date March 2013. Testing found chloride levels that are less than 3ppm.

**PROBLEMS , CONCERNS & NONCONFORMANCES** (Identify all fabrication concerns , problems and nonconformances)  
 Indicate when resolution is required by Husky, response date and schedule impact.  
Pitting on the floor was brought to the attention of Roman Wynnnyk, Roman measured the pitting depth and pitting was found to be not deep enough to require attention.

<b>Man-hours</b> This Report <u>10</u> To Date <u>10</u>	<b>Est. Man-hours to Completion</b> <u>10</u>	<b>Total Man-hours Allocated</b> TBA
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*APPROVAL MUST BE OBTAINED FROM HUSKY FACILITY LEAD INSPECTOR IF ADDITIONAL HOURS ARE REQUIRED*

Chris Hook <small>TYPE OR PRINT NAME</small>	 <small>QUALITY SURVEILLANCE INSPECTOR SIGNATURE</small>	January 19, 2012 <small>DATE</small>
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**COMMENTS** *HUSKY USE ONLY*

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**SURVEILLANCE ACTIVITIES** (Describe Surveillance Activities performed and their Status of Acceptability)

**Comments:** All spent blast media was removed by sweeping and vacuuming, vessel was blown down with clean filtered compressed air. Blast was found to be acceptable and suitable for the application of the internal coating (Devoe 253) to be applied holiday free to a thickness of 10 – 15 mils.



Vessel V-100



Pitting



Pitting on the floor



Acceptable internal Blast

January 24, 2012

Final Coating Inspection of the internal of vessel V-100. Brothers have completed the internal coating (Devoe 253).

**Visual Appearance:** is acceptable, no runs, sags or misses. Coating appears uniform and smooth. Pitts on the floor have been addressed by grinding with a pencil grinder to radius sharp edges of the pits. Devoe 142 epoxy grout was used to fill the pitting; grout was applied after the first coat of Devoe 253. Three coats of Devoe 253 was applied by airless spray.

**Coating Thickness:** of applied Devoe 253. Readings were taken with a Positector 6000 calibrated prior to use.

Front Head: high: 17.9 mils, low: 10.09 mils, Average: 14.2 mils

Rear Head: high: 17.9 mils, low: 10.5 mils, Average: 13.6 mils

Shell: high: 17.5 mils, low: 9.85 mils, Average: 13.5 mils

Nozzles: high: 17.9 mils, low: 10.5 mils, Average: 13.5 mils

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**SURVEILLANCE ACTIVITIES** (Describe Surveillance Activities performed and their Status of Acceptability)

**Holiday Testing:** was performed following NACE SPO 188 procedures using a wet sponge with surfactant. The voltage is 67.5 (80,000 ohms). Internal vessel including nozzles was found to be 100% holiday free.

**Coating Batch Numbers:**

Devoe 253 Blue used as 1<sup>st</sup> and 3<sup>rd</sup> coats.

Devoe 253 White used as 2<sup>nd</sup> coat.

Base: APV11A 29557 Catalyst: HU9J35268

Base: APV11K 35005 Catalyst: HU1G73745

Base: APV 11K35005 Catalyst: HU1G73745

**Coating Cure:** 12 hours at 58 - 67°C plus an additional 24 hours at 22-27 °C. was performed by wetting a clean white cotton rag with M.E.K. no discoloration was seen indicating that the coating is considered substantially cured.

**Status:** Internal coating has been inspected and accepted. Brothers Quality Assurance documents have been reviewed and found to be accurate. Brothers have cleaned the interior of the building containing the vessel removing all debris. Vessel is released for shipping.

