# Pressure Equipment Integrity Management System
## Installation Inspection Form



| | | | |
|---|---|---|---|
| Owner: | Arsenal Energy Inc | District/Area: | British Columbia |
| Facility: | Osborn | Location (LSD) ♦: | B-33-J/94-a-9 |

**Vessel Data**

| | | | |
|---|---|---|---|
| **A Number ♦ :** | N/A | Serial Number ♦: | SNT-1066 |
| CRN ♦: | P6356.2 | Vessel Type: | Separator |
| Description ♦: | Flare Knock Out | Process: | Flare |
| Tag No: | | Current Status: | Out of Service |

**Course #1 (Main)**

| | | | |
|---|---|---|---|
| Orientation: | Horizontal | Coated? | No Type: Vessel is not coated. |
| Fluids: | | Anodes? | No Type: None Quantity: |
| Sour ♦? | Yes | Hand Holes? | No |
| Manufacturer ♦: | Sunwell Ind. | Manway? | Yes |
| MAWP ♦: | 100 kPa | MAWP Temp: | C° |
| Shell Material: | Not Specified | Nom. Shell Thick: | 25.4 mm |
| Head Material: | Not Specified | Min. Head Thick: | 9.53 mm |
| Diameter: | mm & | Length: | mm & |
| Year Built ♦: | 2005 **Installation Date ♦:** | Corrosion Allow: | mm |
| Volume: | m³ | Stress Relieved? | No |
| Radiography: | | ABSA Grade: | 1 |

**Course #2**

| | | | |
|---|---|---|---|
| Description: | | Course Type: | ☐Tubes ☐Boot ☐Vessel ☐Firetube( )Qty: |
| Fluids: | | Sour? | ☐Yes ☐ No |
| MAWP: | ☐kPa ☐ psi | MAWP Temp: | ☐ C° ☐ F° |
| Tube/Shell Material: | | Nom. T/S Thick: | ☐mm ☐ in. |
| Head Material: | | Min. Head Thick: | ☐mm ☐ in. |
| Diameter: | ☐mm ☐ in & ☐ID ☐ OD | Length: | ☐mm ☐ in.. |

| | | | |
|---|---|---|---|
| **PRV #1** | Course #1 PRV Location or Position: | Flare Knock Out Tank top shell | |
| Serial No ♦: | 24757-1 | Model No: | T-8200-2 |
| Set Pressure ♦: | 90 kPa | Ports: | 2" |
| Capacity: | 892 scfm | Manufacturer: | Taylor |
| Service date ♦: | Jun 11 2008 | Serviced by: | Dalco |
| Block Valve? | No **Install Date:** | Tag no: | 81189 |

| | | | |
|---|---|---|---|
| **PRV #2** | Course #2 PRV Location or Position: | | |
| Serial No: | | Model No: | |
| Set Pressure: | psi | Ports: | |
| Capacity: | scfm | Manufacturer: | |
| Last Service date: | | Serviced by: | |
| Block Valve? | **Install Date:** | Tag no: | |

Comments:

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SN: SNT-1066 Vessel Description: Flare Knock Out Location(LSD): B-33-J/94-a-9

| Installation Inspection | O.K. | Comment |
|---|---|---|
| Name Plate Accessible | ☒ | |
| PRV Outlet Piping Check | ☐ | Atmosphere |
| Piping Connections Made | ☒ | |
| Inspection Access (i.e. skirt) | ☒ | |
| Flare Line Slope Check | ☒ | |
| Bolting Check | ☒ | |

| External Inspection | O.K. | Comments |
|---|---|---|
| Paint/Coating Condition: | ☒ | |
| Insulation Condition: | ☒ | |
| External Condition: | ☐ | |
| Foundation: | ☒ | |
| Leaks/Drips/Seeping: | ☐ | N/A |
| Bending/Warping/Distortion: | ☒ | |
| Dents/Cuts/Gouges: | ☒ | |
| Condition of Gauges: | ☐ | N/A |
| Current operating pressure (shell): | ☐ psi ☐ kPa | Range: ☐ psi ☐ kPa |
| Current operating pressure (tube): | ☐ psi ☐ kPa | Range: ☐ psi ☐ kPa |
| Current operating temperature: (shell): | ☐ °F ☐ °C | Range: ☐ °F ☐ °C |
| Current operating temperature: (tube): | ☐ °F ☐ °C | Range: ☐ °F ☐ °C |
| Ladders/Walkways: | ☒ | |
| Ground Wire Connection: | ☒ | |
| Other Equipment: | ☐ | PRV discharges to atmosphere, tie in to the flare. No discharge line, exposed to elements. |

**PRV Data**

| | Vessel MAWP | | PRV Set Pressure | PRV Capacity | PRV Size | Last Service Date | Serviced By | Block Valve Present? | Locked Open? |
|---|---|---|---|---|---|---|---|---|---|
| Shell Side | 100 kPa | #1 | 90 kPa | 892 scfm | 2" | Jun 11 2008 | Dalco | No | No |
| | | | | | | | | | |
| Tube Side | | | | | | | | | |
| | | | | | | | | | |

**PRV Check:** ☒ OK- PRV Set pressure is not greater than vessel MAWP ☐ PRV is set too high. Reset PRV to vessel MAWP

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# Installation Inspection Form

SN: SNT-1066 Vessel Description: Flare Knock Out Location(LSD): B-33-J/94-a-9

**Additional Field Notes/Comments**

**Remedial Actions Required? no ☒ yes ☐** If yes, indicate required work and RA #: **Remedial Action No.:** ____

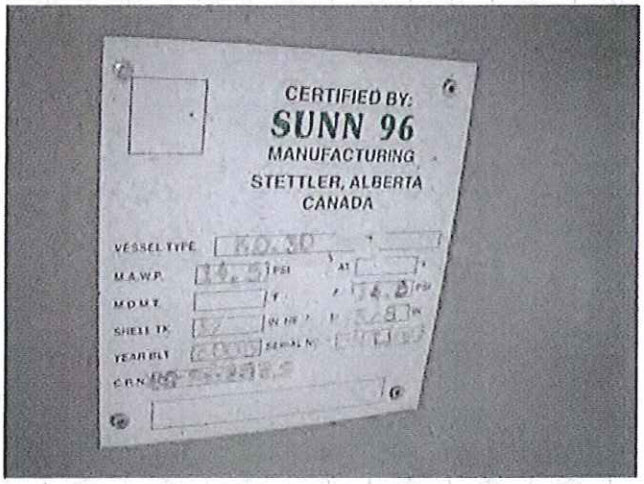
CRN not registered in BC. PRV is open to elements.

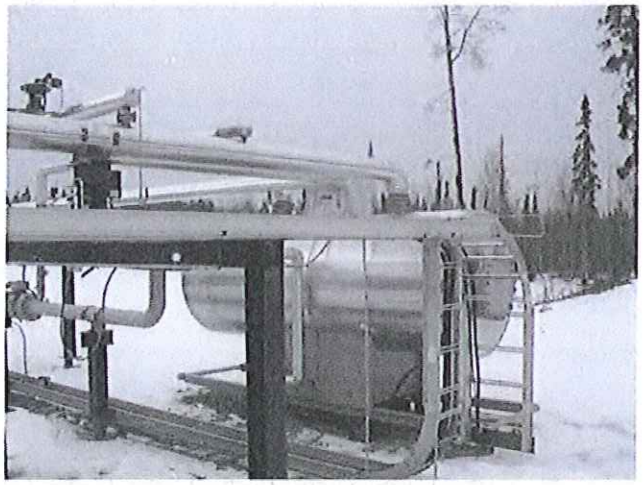
**External condition is acceptable to warrant continued service? yes ☒ no ☐**

Inspector Name: Tyler Letourneau Inspector Company: Northern Materials Engineering LTD.

Inspector Signature: Inspection Date: Mar 11, 2010

**Sketch / Image Area**



**Documentation**

ABSA Documents Acquired: ☐Manufactures Data Report (U-1A) ☐ABSA Certificate of Inspection

Name Plate Information is correct? ☐Yes ☐No ☐To be completed through routine ABSA reporting process

Design is registered in province (CRN)? ☐Yes ☒ No, Generate a remedial action and arrange for design registration

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### Service Conditions

| | | | | |
|---|---|---|---|---|
| Process Fluids Description: | ☒Sour | ☒Produced Water | ☐OWE | ☐Solids |
| | ☒Condensed Water | ☐Amine | ☐Air | ☐Frac. Sand |
| | ☒Liquid Hydrocarbon | ☐Glycol | ☒NG | ☐_____ |
| Potential Mode(s) of Deterioration: | ☒Pitting | ☒Crevice | ☐High Temp | ☐Sulphidation |
| | ☒General Corrosion | ☐Erosion | ☐Cavitation | ☒Under Deposit Corr |
| | ☐External Atm. Corrosion | ☐Under Insulation | ☐Mechanical Damage | |
| Cracking> | ☐SCC | ☐Hydrogen | ☐ Fatigue | ☐ Other |
| Area(s) Most Likely to Deteriorate: | ☐Top Head | ☒Bottom Head | ☐Nozzles | ☐Welds |
| | ☐Attachments | ☒Shell (lower) | ☐Shell (Upper) | ☐Shell (other) |
| | ☐Tubes | ☐Piping (inlet) | ☐Piping (outlet) | ☒Piping (drain) |

Current Mitigation Program? ☐Yes ☒No (if yes, describe) _____

Other Considerations? ☐Yes ☒No (if yes, describe) _____

### Additional Process Monitoring ☐Yes ☒No (if yes, describe in area below or attach details)

Fluids Sample (Type / Frequency/Analysis Req'd) _____

Corrosion Monitoring (Coupons / Probes) _____

Other (describe) _____

### Inspection History

(Complete this section if the vessel is new and a baseline inspection was completed or if the vessel is used)

Inspection Company _____ Last Inspection Date _____

### Inspection – Plan

Assigned Inspection Grade ____ (if different than Grade 1, describe basis for exception in **Notes** section below)

| Activity Required | Yes | No | Interval (years) | Due Date (dd / mmm / yy) | Comments |
|---|---|---|---|---|---|
| Offline Internal Visual | ☐ | ☐ | | / / | |
| UT Inspection | ☐ | ☐ | | / / | |
| Crack Inspection | ☐ | ☐ | | / / | |
| Additional Inspection(s) | ☐ | ☐ | | / / | |
| External Visual | | | N/A | / / | |
| Initial PRV service interval | | | | / / | |

### Notes

**Out of service.**

### Complete if Assessor is different than Inspector

Assessor Name: _____ Company: _____

Assessor Signature: _____ Assessment Date: _____

### Report Certification

Report Certified By (signature) _____ ISPVI No: 000328