**Canadian Natural Resources Limited**
**GENERAL PRESSURE VESSEL INFORMATION** **Job # 10.113377**

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|---|---|
| District: **Grande Prairie AB.** | Skid No. |
| Facility: **La Glace Gas Gathering** | Location (LSD): **06-14-76-09W6M** |
| Tank Name / Equipment Number: **Produced Water Tank** | |
| Orientation: **Vertical** | |
| Status: **In Service** | **Regulatory Inspection** |

**PRESSURE VESSEL NAMEPLATE DATA**

| | | | |
|---|---|---|---|
| "A" or "G" or "S" (Sask.) or BC Registration Number. **C75590** | | CRN Number: | |
| Tank serial number: STTK-J1-13465-B90 | | Size: 9 ft. 6 in. X 8 ft. | |
| Shell thickness: 4.8mm | | Shell material: SA 36 | |
| Bottom thickness: 6.4mm | | Bottom material: SA 36 | |
| Deck thickness: 4.8mm | | Deck material: SA 36 | |
| Tube diameter: | | Tube length: | |
| Channel thickness: | | Channel material: | |
| Design pressure | Shell: Atmospheric | Operating pressure | Shell: |
| | Tubes: | | Tubes: |
| Design Temp. | Shell: | Operating temperature | Shell: |
| | Tubes: | | Tubes: |
| X-ray: No | | Heat treatment: Nil | |
| Code parameters: API 12 F | | Coated: not stated | |
| Manufacturer: Bilton | | Year built: 2004 | |
| Corrosion allowance: Not Stated | | Manway: yes | |

**PRESSURE SAFETY VALVE NAMEPLATE DATA**

| PSV Tag # | Manufacture | Model # | Serial # | Set Pressure (kPa) | Capacity (scfm) | Service Date |
|---|---|---|---|---|---|---|
| | | | | | | |
| CRN # | Service By | Block Valve | Location | Size | Code Stamp | |
| | | | | | | |

**SERVICE CONDITIONS-INDICATE ALL THAT APPLY**

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|---|---|---|---|---|
| Sweet X | Sour | Oil | Gas | Water X |
| Amine | LPG | Condensate | Air | Glycol |
| Other (Describe): | | | | |

**Inspection Interval** _____ **PSV Service Interval**_____

(Determined by MIC in conjunction with Chief Inspector following guidelines of CNRL's Owner-User Inspection Program)

Reports reviewed and accepted by:

**Mechanical Integrity Coordinator**_____ **Date**_____

**Fill out all forms as completely as possible. <u>All information</u> is important! Use back of sheets to record additional information or sketch if required.**
**Copy of report to be filed by MIC at site, and copy sent to Chief Inspector**

| External Inspection Items | G | F | P | N/A | Comments |
|---|---|---|---|---|---|
| **Insulation** Verify sealed around man way, nozzles, no damage present, and there is no egress of moisture. | **X** | | | | **Tank insulated and covered with metal cladding. Sealed around nozzles and man way.** |
| **External Condition** Assess paint condition, areas peeling, record any corrosion, damage, etc (record location, size and depth of corrosion or damage) | **X** | | | | **Paint in good condition - no exposed metal.** |
| **Leakage** Record any leakage at flanges, threaded joints, weep holes on repads, etc. | **X** | | | | **No leaks observed.** |
| **Base** Assess condition of paint, fire protection, concrete. Look for corrosion, buckling, dents, etc. Is tank mounted above ground water level – on pilings? Ground wire attached? | **X** | | | | **Tank above ground on pilings - Tank is welded to skid frame. No buckling or dents. No sign of leakage at attachment welds to tank. Ground wire attached to tank.** |
| **Anchor Bolts** Hammer tap to ensure secure. Look for cracking in treads or signs of deformation. Is tank resting on deck – welded to supports? | | | | **X** | **Tank welded to skid frame.** |
| **Concrete foundation** There may be a concrete ring under the tank. Check for cracks, spalling, etc. | | | | **X** | |
| **Ladder / Platform** Describe general condition, ensure support is secure to vessel, describe any hazards. | **X** | | | | **Ladder on side of tank is in good condition and is secure to vessel. Paint in good overall condition. No loose or broken sections.** |
| **Nozzle** Assess paint, look for leakage, and ensure stud threads are fully engaged. Record any damage, deflection, etc. Are nozzles gusseted? | | | | | **Flanged and threaded nozzles are fully engaged -No leaks observed - No damage or deflections. Nozzles are not gusseted.** |
| **Gauges** Ensure gauges are visible, working, no leakage, and suitable for range of MAWP/ Temp. Remember some tanks require fuel gas or other positive protection so a pressure gauge may be installed. | | | | **X** | **Level indicator clean and operational – sight leak gage clear.** |
| **External Piping** Ensure pipe is well supported. All clamps, supports, shoes, etc. in place. Look for evidence of structural overload, deflection, etc. Paint condition, insulation condition, any wet insulation, any external corrosion? | **X** | | | | **Well supported - all clamps and supports in place and secure. Piping insulated – no damage or open sections.** |
| **Valving** Ensure no leaks are visible. Valves are properly supported and chained if necessary. | **X** | | | | **No leaks are visible at time on inspection. Valves are supported properly** |
| **PSV** Ensure PSV is set at pressure at or below that of vessel. | | | | **X** | **No PSV on tank system.** |
| **NDE methods** Was UT/ MPI done on vessel (MI coordinator to review results) | | | | **X** | |
| **Secondary Containment: This may be a double wall tank with a pressure gauge or level gauge indicator. Also a concrete or steel dike with vinyl liner – describe.** | **X** | | | | **Metal containment system around abd under tank – no leaks.** |

**Recommendations or corrective actions : Vessel is Fit for Service or describe corrective actions required)**
**(**MIC to review corrective actions with Operations, discuss with Chief Inspector where necessary, and get remedial action implemented)
**Recommendations: No recommendations.**
**Summary:** Tank is in overall good condition, visual external survey performed
**Tank is fit for service.**

**Inspected By**: Gerry Avery **Date**: September 3, 2013

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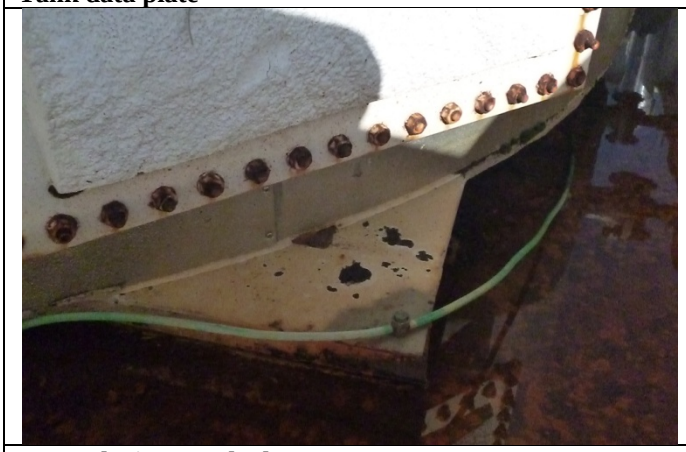
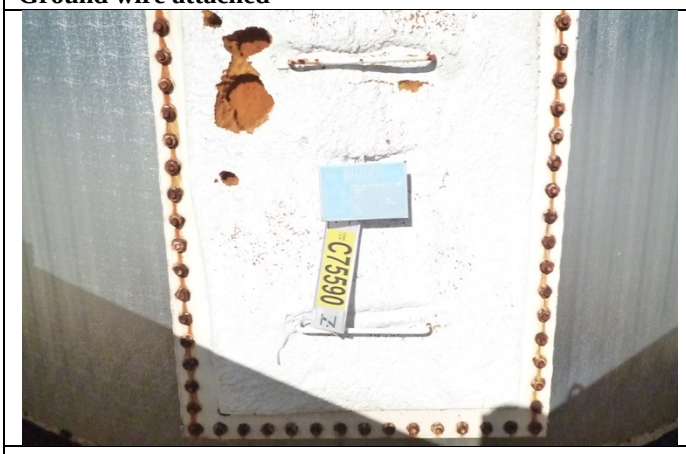
| **Tank data plate** | **C tag** |
|  | |
| **Ground wire attached** | **Tank nozzles** |
|  | |
| **Man way** | **overview** |