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| **GENERAL DETAILS** | | | | | | | | | | |
| **BUSINESS UNIT:** | Ferus Inc. | | | | **AREA:** | | |  | **INSPECTOR:** | Terry Krasowski |
| **FACILITY:** | Estevan, Sask. | | | | **LOCATION(LSD):** | | | #10 Frontier Str. | **COMPANY:** | Ferus Inc. |
| **REGULATORY NUMBER:** | A-511794 | | | | **TAG NUMBER:** | | | C-1016 | **INSPECTION DATE:** | Nov 10/2017 |
| **SERIAL NUMBER:** | 38673A | | | | **CRN NUMBER:** | | | R9649.213 | **NAT’L BOARD NUMBER:** |  |
| **EQUIPMENT DESCRIPTION: CO2 Storage Vessel C-1016** | | | | | | | | | | |
| **INSPECTION SUMMARY** | | | | | | | | | | |
| **INSPECTION SUMMARY:**  Overview of inspection findings. | | Waiting for the arrival of the vessel. The surface area where the vessel is going to be placed appears to be level and firm.  Vessel was set down on two sets of two swamp mats. | | | | | | | | |
| **EXTERNAL INSPECTION ITEMS** | | **GOOD** | **FAIR** | **POOR** | | **N/A** | **COMMENTS** | | | |
| **GENERAL CONDITION:**  Look for obvious external corrosion, areas of wear or fretting, bulging, buckling, bending, misalignment or leaks. | |  |  |  | |  | On arrival the vessel is dirty with road grime (salt and snow).  Overall inspection of the vessel after it was set into position, no damage or issues found. | | | |
| **EXTERNAL COATING:**  State whether the vessels is painted or has an external coating, its condition (rusting spots, blisters, disbondment), and any corrosion where coating has failed. | |  |  |  | |  | The manufactured skid under the vessel shows signs of minimal rust with no structural damage. | | | |
| **INSULATION/CLADDING:**  Look for areas of moisture ingress, staining, and poor caulking that may indicate CUI. Record general condition of insulation and cladding, and if any insulation is asbestos (if stated). | |  |  |  | |  | The cladding on the vessel appears to be in good condition. | | | |
| **BURIED VESSELS:**  Look for corrosion at the soil to air interface, review CP records if available. | |  |  |  | |  |  | | | |

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| **EXTERNAL INSPECTION ITEMS** | **GOOD** | **FAIR** | **POOR** | **N/A** | **COMMENTS** |
| **NOZZELS, PIPING AND CONNECTIONS:** Assess condition of nozzles and associated piping (look for product staining/leaking from repad tell‐tale holes, misalignment of piping, buckling or bending at nozzle connections, possible dead legs, any short bolting of flanged connections, and any leaking valve packing glands or other leaks in the system). |  |  |  |  | All the piping and valves were removed from the vessel for transport.  Reinstalled the valves and piping with new flextaulic gaskets.  Any short bolting was addressed during reinstall.  Could not determine if any valves or connections are leaking. The vessel has not been put back into service yet. |
| **LADDERS, PLATFORMS AND WALKWAYS:**  Look at any ladders, platforms or walkways associated with the equipment and flag any loose hardware, cracked welds, or notable deflection in load carrying supports. |  |  |  |  | Ladder and top platform was reinstalled onto vessel. No cracked welds or any deformities were found at the time. |
| **SADDLES/SKIRTS:**  For skirts, inspect for corrosion of the skirt and any signs of leakage from  inside skirt. For saddles, ensure one end  is free to move during expansion/contraction (skid plate and loose stude/nuts), and that other end is secure. Look for any corrosion under fireproofing material. |  |  |  |  | Vessel, saddle and skid are manufactured as one unit. |
| **GROUNDING:**  Ensure equipment is directly grounded, or that grounding is achieved through the skit (if applicable). |  |  |  |  |  |
| **GAUGES AND INSTRUMENTATION:**  Look for general condition and accuracy of gauges and instrumentation, fouling or damage of sight glasses, and any instrumentation appearing not to be functioning properly. Ensure anode wires are secure and connected to equipment. |  |  |  |  | The pressure gauge was replaced with a new one.  No electrical power source connected to the vessel. |

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| **EXTERNAL INSPECTION ITEMS** | **GOOD** | **FAIR** | **POOR** | | **N/A** | **COMMENTS** | |
| **PRESSURE PROTECTION:**  Ensure equipment has a proper pressure protection (PSVs, rupture disks, etc.). Ensure anode wires are secure and connected to equipment. (Please provide service date, serial number and set pressure for each PSV) |  |  |  | |  | PSV -1 Farris Set Pres. 285psi S/N 462055-1-A10 Cap- 4508 SCFM Size-2”x3”  PSV-2 Quad Rego”s Set Pres.303psi S/N’s 12077-1/4 Cap-9885 SCFM Size 2”  Last test date of all PSV”s Nov/2017 | |
| **NDE SUMMARY:**  Summarize NDE performed to support the external inspection (corrosion surveys, MPI, LPI, etc.). |  |  |  | |  |  | |
| **OTHER:** |  |  |  | |  | Vessel is in good operating condition. | |
| **EQUIPMENT PICTURES** | | | | | | | |
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| **PICTURE 1:** | | | | **PICTURE 2:** | | | **PICTURE 3:** |
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| **PICTURE 4:** | | | | **PICTURE 5:** | | | **PICTURE 6:** |
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| **PICTURE 7:** | | | | **PICTURE 8:** | | | **PICTURE 9:** |

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| **PICTURE 10:** | | | **PICTURE 11:** | | | **PICTURE 12:** | |
| **INSEPCTION SUMMARY** | | | | | | | |
| **NON‐CONFORMANCES AND CORRECTIVE ACTIONS:** Document all non‐conformances and corrective actions identified as part of the inspection. Ensure NCR form is completed, if applicable. | |  | | | | | |
| **PREPARATORY WORK REQUIRED FOR NEXT INSPECTION:** Cleaning requirements, scaffold, ladders, man basket, scissor lift, etc. to facilitate proper inspection of the equipment. | | Require vessel to be cleaned to prevent further rusting of exposed metal. | | | | | |
| **RECOMMENDATIONS FOR NEXT INSPECTION:** Recommendations for inspection techniques and items requiring special attention or caution for next inspection. | |  | | | | | |
| **EQUPIMENT SUITABLE FOR CONTINUED SERVICE?** | | Fit for Continued Service | | | Not Fit for Continued Service (if not, explain). | | |
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| **INSPECTOR: Terry Krasowski** | **SIGNATURE:** | | | **INSPECTOR CERTIFACTION AND NUMBER:** | | | DATE: Nov21,2017 |
| **FACILITY INTEGRITY SPECIALIST/**  **CHIEF INSPECTOR:** | **SIGNATURE:** | | | **INSPECTOR CERTIFACTION AND NUMBER:** | | | **DATE:** |

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