



**LSD:** 03-07-054-20W5

|  |  |                       |  |                            |  |                |  |  |  |  |  |
|--|--|-----------------------|--|----------------------------|--|----------------|--|--|--|--|--|
| <b>Plant:</b> GALLOWAY                   |  |                       |  | <b>OP Unit:</b>            |  |                |  | <b>System:</b>                           |  |  |  |
| <b>Prov. Insp . #:</b>                   |  |                       |  | <b>CRN:</b> R9083.231      |  |                |  | <b>Equip Tag#:</b> 66174597              |  |  |  |
| <b>Equipment Description:</b> GAS COOLER |  |                       |  |                            |  |                |  | <b>Serial #:</b> 2004B5821A              |  |  |  |
| <b>Manufacturer:</b> Smithco             |  |                       |  |                            |  |                |  | <b>Vessel Class:</b> vessel              |  |  |  |
| <b>Internal Access:</b> No               |  |                       |  | <b>Description:</b>        |  |                |  | <b>Year Built:</b> 2004                  |  |  |  |
| <b>MAWP:</b> 6895 kpa                    |  |                       |  | <b>At Temp</b> 149 C       |  |                |  | <b>MDMT:</b> -20 C                       |  |  |  |
| <b>Code:</b>                             |  |                       |  |                            |  |                |  | <b>RT:</b> None                          |  |  |  |
| <b>Diameter:</b> 0 mm                    |  | <b>Length:</b> 0 mm   |  | <b>(T/T):</b> mm           |  | <b>OAL:</b> mm |  | <b>Orientation:</b> Vertical             |  |  |  |
| <b>SHELL</b>                             |  | <b>Mat'l:</b> Unknown |  | <b>Thickness:</b> 0 mm     |  |                |  | <b>Corr Allowance:</b> 0 mm              |  |  |  |
| <b>Nozzle</b>                            |  | <b>Mat'l:</b>         |  | <b>Thickness:</b>          |  |                |  | <b>Corr Allowance:</b>                   |  |  |  |
| <b>Internal Coating:</b> No              |  |                       |  | <b>Internal Clad:</b> No   |  |                |  | <b>Capacity:</b> m3                      |  |  |  |
| <b>Manway:</b> No                        |  |                       |  | <b>Inspection Port:</b> No |  |                |  | <b>Skirt</b> <b>Legs</b> <b>Saddle</b> X |  |  |  |
| <b>Nozzle Rating:</b> 600 lb ANSI        |  |                       |  | <b>Painted:</b> Yes        |  |                |  | <b>Insulated:</b> No                     |  |  |  |

|                                |     |                        |     |       |
|--------------------------------|-----|------------------------|-----|-------|
| <b>Production Description:</b> |     | Sweet                  | Yes | Sour: |
| <b>Operating Pressure</b>      | kpa | <b>Operating Temp:</b> |     | C     |

| Tag # | Serial No.  | Location | Size(mm) |        | Set Press<br>(kPa) | Capacity<br>Imperial<br>(SCFM) | Manufacturer | Model        | Last<br>Service | Service<br>Company |
|-------|-------------|----------|----------|--------|--------------------|--------------------------------|--------------|--------------|-----------------|--------------------|
|       |             |          | Inlet    | Outlet |                    |                                |              |              |                 |                    |
| 37-2  | 472427-2-DA | Piping   | 25.40    | 50.80  | 6895               | 2632                           | FARRIS       | DC13-120/9PC | 2012/06/07      |                    |


|                 |  |
|-----------------|--|
| FIT FOR SERVICE |  |
|-----------------|--|

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| INSPECTION PLANNING |            |                   |                     |
|---------------------|------------|-------------------|---------------------|
| Inspection Strategy |            | Availability      | Inspection Interval |
| Inspection Date     | 2013/03/21 | Date of Last Insp | Date of Next Insp   |

The SignatureS below certify that inspections/tests have been completed in accordance with the identified inspection strategy and that the specified equipment is considered fit for service until the date of next inspection.

|                               |                      |   |        |               |      |                   |
|-------------------------------|----------------------|---|--------|---------------|------|-------------------|
| Inspected by                  | <u>Roger Dlugosz</u> |  | Cert # | <u>000566</u> | Date | <u>2013/03/21</u> |
| Reviewed and Approved by      | <u></u>              | <u></u>   |        |               | Date | <u></u>           |
| Criticality Assessment Rerun  | <u></u>              | Inspection Planning Rerun   |        |               |      |                   |
| Assessed Next Inspection Date | <u></u>              |   |        |               |      | <u></u>           |

# PRESSURE VESSEL & COLUMN INSPECTION REPORT

**LSD:** 03-07-054-20W5

**Date:** 2013-03-21

**SAP Equipment ID**

66174597

## DETAILED INSPECTION VISUAL EXTERNAL

| ID  | Description                           | Condition | Location | NCR | Comments                                      |
|-----|---------------------------------------|-----------|----------|-----|---|
| V1  | General Other (Please Explain)        | Accept    |          |     | COOLER IN GOOD CONDITION                      |
| V2  | General Corrosion                     | Accept    |          |     |   |
| V3  | General Leaks                         | Accept    |          |     | NO LEAKS/WEEPS                                |
| V4  | Vibration                             | N/A       |          |     |   |
| V5  | Dissimilar Flange Rating              | N/A       |          |     |   |
| V6  | Ladder/Stairway                       | N/A       |          |     |   |
| V7  | Heads                                 | Accept    |          |     | NO DAMAGE                                     |
| V8  | Guy Wires                             | N/A       |          |     |   |
| V9  | Electrical Ground                     | N/A       |          |     |   |
| V10 | Painted Inactive Corrosion            | N/A       |          |     |   |
| V11 | Coating/Painting                      | Accept    |          |     | MINOR CRACKING AND PEELING                    |
| V12 | Expansion Joint or Bellows            | N/A       |          |     |   |
| V13 | Gauge/Site Glass                      | N/A       |          |     |   |
| V14 | Shell                                 | Accept    |          |     | NO DAMAGE                                     |
| V15 | Jacket                                | N/A       |          |     |   |
| V21 | Support Other (Please explain)        | Accept    |          |     | COOLER SADDLE                                 |
| V22 | Foundation                            | N/A       |          |     |   |
| V23 | Anchor Bolts                          | Accept    |          |     | SECURE VESSEL                                 |
| V24 | Saddle/Skirt                          | Accept    |          |     | NO DAMAGE                                     |
| V25 | Davit                                 | N/A       |          |     |   |
| V26 | Fireproofing                          | N/A       |          |     |   |
| V31 | Connections Other (Please explain)    | N/A       |          |     |   |
| V32 | Small Branches                        | N/A       |          |     |   |
| V33 | Nozzles                               | Accept    |          |     | FLANGED CONNECTIONS, FULLY ENGAGED, NO DAMAGE |
| V34 | Manways                               | N/A       |          |     |   |
| V35 | Reinforcing Pads                      | N/A       |          |     |   |
| V36 | Inadequate Thread Engagement          | N/A       |          |     |   |
| V37 | Bolting                               | Accept    |          |     | NO SHORTBOLTING                               |
| V38 | Flanges                               | Accept    |          |     | NO DAMAGE                                     |
| V39 | Leak Clamps                           | N/A       |          |     |   |
| V41 | Insulation Other (Please explain)     | N/A       |          |     |   |
| V42 | Damage                                | Accept    |          |     |   |
| V43 | Penetrations                          | N/A       |          |     |   |
| V44 | Insulation Jacket                     | N/A       |          |     |   |
| V45 | Banding                               | N/A       |          |     |   |
| V46 | Seals/Joints                          | N/A       |          |     |   |
| V51 | Relief Devices Other (Please explain) | Accept    |          |     | SET AT 1000 PSI/SERVICED 2012                 |
| V52 | Corrosion                             | Accept    |          |     |   |
| V53 | Leaks                                 | Accept    |          |     | NO LEAKS/WEEPS                                |
| V54 | Restricted Inlet/Outlet               | N/A       |          |     |   |

## PRESSURE VESSEL & COLUMN INSPECTION REPORT

**LSD:** 03-07-054-20W5**Date:** 2013-03-21**SAP Equipment ID**

66174597

|     |                        |     |  |  |  |
|-----|------------------------|-----|--|--|--|
| V55 | Manual Operation Lever | N/A |  |  |  |
|-----|------------------------|-----|--|--|--|

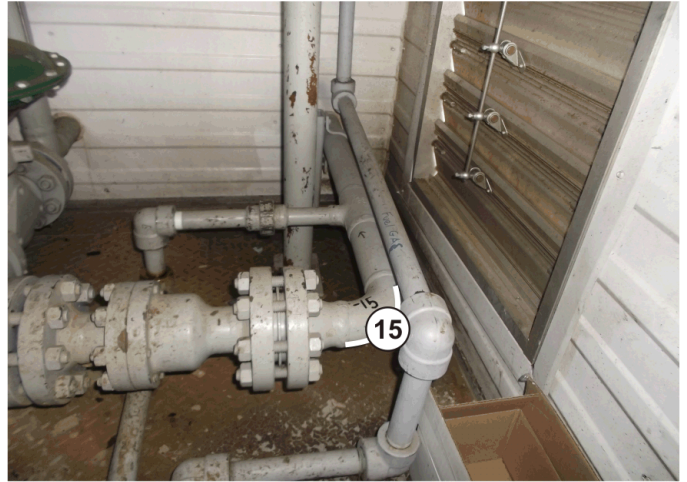
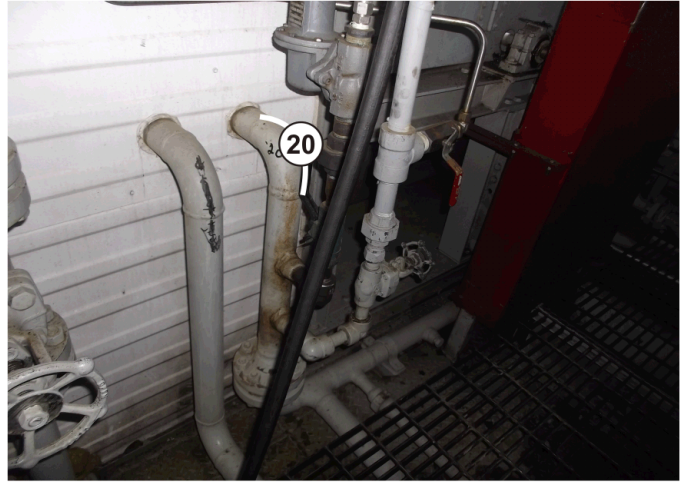
### DETAILED INSPECTION OTHER TECHNIQUES

| ID | Location | Observation/Measurement | Acceptance Criteria | NCR | Comments |
|----|----------|-------------------------|---------------------|-----|----------|
|    |          |                         |                     |     |          |

### DETAILED INSPECTION UT THICKNESS

| CML        | Nom.<br>Thickness | CURRENT<br>READINGS | short term<br>corr rate | long term<br>corr rate | remaining<br>half life | Survey Date | Comments |
|------------|-------------------|---------------------|-------------------------|------------------------|------------------------|-------------|----------|
| 05 (Shell) | 0.00              | 13.39               | 0.0000                  | 0.0000                 | 99.0                   | 2013/03/21  |          |
| 10 (Shell) | 0.00              | 13.39               | 0.0000                  | 0.0000                 | 99.0                   | 2013/03/21  |          |

|                |      |      |        |        |      |            |  |
|----------------|------|------|--------|--------|------|------------|--|
| 15 (90L 2 160) | 8.74 | 6.68 | 0.0087 | 0.0087 | 11.7 | 2013/03/21 | LOW READING OBSERVED-MONITORING<br>RECOMMENDED |
| 20 (90L 2 160) | 8.74 | 7.47 | 0.0054 | 0.0054 | 21.9 | 2013/03/21 |  |



**OWNER:** HUSKY  
**EQUIPMENT NAME:** GAS COOLER  
**REGISTRATION #**  
**EQUIPMENT #** 66174597

**SERIAL #** 2004B5821A  
**NB#** 9823  
**OWNER ID**

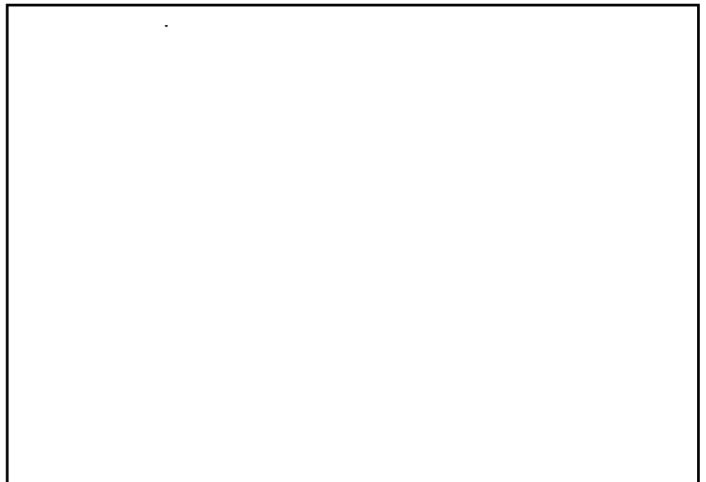
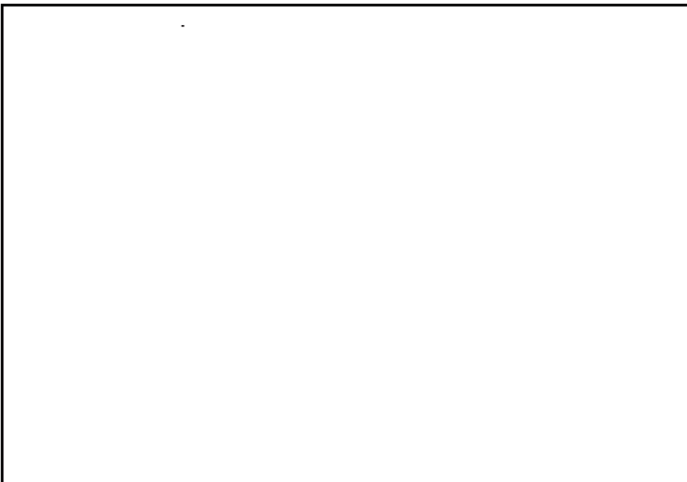
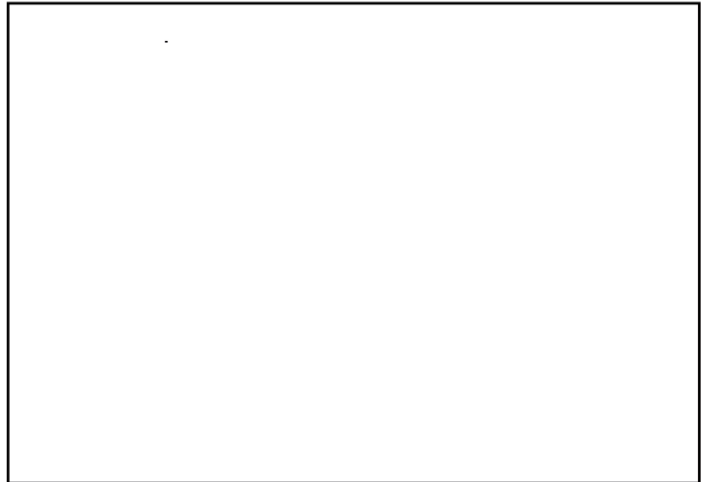
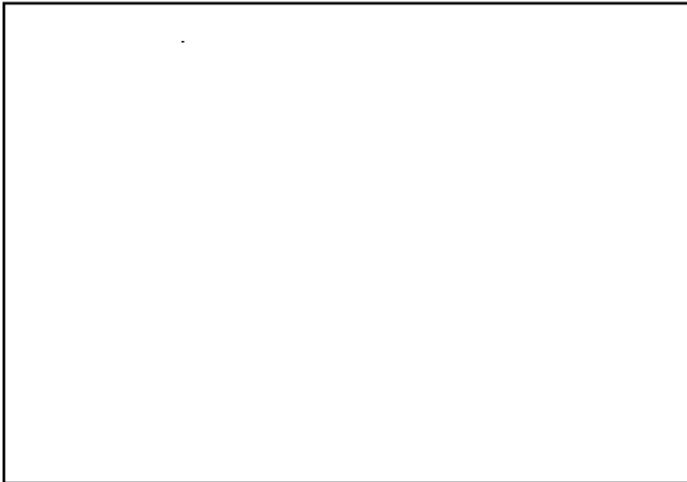
NOTES



NAMEPLATE



PSV



|                                   |  |                            |
|-----------------------------------|--|----------------------------|
| <b>OWNER: HUSKY</b>               |  | <b>SERIAL # 2004B5821A</b> |
| <b>EQUIPMENT NAME: GAS COOLER</b> |  | <b>NB# 9823</b>            |
| <b>REGISTRATION #</b>             |  | <b>OWNER ID</b>            |
| <b>EQUIPMENT # 66174597</b>       |  | <b>ONCOR ID</b>            |

NOTES