

PRESSURE VESSEL & COLUMN INSPECTION REPORT

LSD: 07-27-051-19W5 Date: 2013-02-20 **SAP Equipment ID** 66130670 **VESSEL STATIC DATA** ANSELL OP Unit: Plant: System: 66130670 CRN: Prov. Insp . #: Equip Tag#: Equipment Description: FLARE STACK Serial #: 7-3077 Manufacturer: Tornado Technologies **Vessel Class:** vessel Internal Access: No Description: Year Built: 0 At Temp 38 С MDMT: С kpa MAWP: Code: RT: None PWHT: No 273 0 (T/T): OAL: **Orientation:** Vertical Diameter: mm Length: mm mm mm **SHELL** Mat'l: SA-333 GR 6 Thickness: 0 mm **Corr Allowance:** 0 mm Nozzle Mat'l: Thickness: **Corr Allowance:** No **Internal Clad:** No Capacity: m3 Internal Coating: No No Skirt **Inspection Port:** Legs Saddle Manway: No Nozzle Rating: lb ANSI Yes Insulated: Painted: **PROCESS DATA** Production Description: Sweet Sour: Operating Pressure Operating Temp: С kpa **PSV STATIC DATA** Capacity Set Press Manufacturer Size(mm) Last Service **Imperial** Model Tag # Serial No. Location (kPa) Service Company Outlet Inlet (SCFM) 0.00 0.00 0 **INSPECTION SUMMARY** FIT FOR SERVICE. **RECOMMENDATIONS NONCONFORMANCES/INSPECTION DEFICIENCES INSPECTION PLANNING** Inspection Strategy Availability Inspection Interval 2013/02/20 Inspection Date Date of Last Inspect Date of Next Insp REPORT CERTIFICATION 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. Jamey Tanasichuk 2013/02/20 Inspected by Cert # 000411 Date Reviewed and Approved by Date Criticality Assessment Rerun Inspection Planning Rerun Assessed Next Inspection Date



Husky Energy PRESSURE VESSEL & COLUMN INSPECTION REPORT Patrix 2013-02-20 SAP Equipment ID

Date: 2013-02-20 **SAP Equipment ID** 66130670

DETAILED INSPECTION VISUAL EXTERNAL

| | VISUAL EXTERNAL | | | | | | | | | |
|-----|---------------------------------------|-----------|----------|-----|----------------------------------|--|--|--|--|--|
| ID | Description | Condition | Location | NCR | Comments | | | | | |
| V1 | General Other (Please Explain) | Accept | | | GOOD CONDITION. | | | | | |
| V2 | General Corrosion | Accept | | | NO CORROSION OBSERVED. | | | | | |
| V3 | General Leaks | Accept | | | | | | | | |
| V4 | Vibration | N/A | | | | | | | | |
| V5 | Dissimilar Flange Rating | Accept | | | | | | | | |
| V6 | Ladder/Stairway | N/A | | | | | | | | |
| V7 | Heads | N/A | | | | | | | | |
| V8 | Guy Wires | Accept | | | GOOD CONDITION. | | | | | |
| V9 | Electrical Ground | Accept | | | | | | | | |
| V10 | Painted Inactive Corrosion | N/A | | | | | | | | |
| V11 | Coating/Painting | Accept | | | GOOD CONDITION. | | | | | |
| V12 | Expansion Joint or Bellows | N/A | | | | | | | | |
| V13 | Gauge/Site Glass | N/A | | | | | | | | |
| V14 | Shell | Accept | | | | | | | | |
| V15 | Jacket | N/A | | | | | | | | |
| V21 | Support Other (Please explain) | Accept | | | ALL SUPPORTS IN GOOD CONDITION. | | | | | |
| V22 | Foundation | Accept | | | | | | | | |
| V23 | Anchor Bolts | Accept | | | SECURE. | | | | | |
| V24 | Saddle/Skirt | Accept | | | | | | | | |
| V25 | Davit | N/A | | | | | | | | |
| V26 | Fireproofing | N/A | | | | | | | | |
| V31 | Connections Other (Please explain) | Accept | | | GOOD CONDITION. | | | | | |
| V32 | Small Branches | Accept | | | | | | | | |
| V33 | Nozzles | Accept | | | | | | | | |
| V34 | Manways | N/A | | | | | | | | |
| V35 | Reinforcing Pads | N/A | | | | | | | | |
| V36 | Inadequate Thread Engagement | Accept | | | | | | | | |
| V37 | Bolting | Accept | | | | | | | | |
| V38 | Flanges | Accept | | | | | | | | |
| V39 | Leak Clamps | N/A | | | | | | | | |
| V41 | Insulation Other (Please explain) | N/A | | | | | | | | |
| V42 | Damage | N/A | | | | | | | | |
| V43 | Penetrations | N/A | | | | | | | | |
| V44 | Insulation Jacket | N/A | | | | | | | | |
| V45 | Banding | N/A | | | | | | | | |
| V46 | Seals/Joints | N/A | | | | | | | | |
| V51 | Relief Devices Other (Please explain) | N/A | | | NO PSV ATTACHED. ATMOSPHERIC. | | | | | |
| V52 | Corrosion | N/A | | | | | | | | |
| V53 | Leaks | N/A | | | | | | | | |
| V54 | Restricted Inlet/Outlet | N/A | | | | | | | | |
| | • | - | - | - | • | | | | | |



| <u>.</u> | usky Energy | PRES: | SURE V | ESSEL & | COLUM | N INSF | PECTI | ON REPORT | | |
|----------|------------------------|-------|-----------|---------|-------|-----------|---------------|-----------------|----------|--|
| | | LSD: | 07-27-051 | -19W5 | Date: | 2013-02-2 | 20 S A | AP Equipment ID | 66130670 | |
| V55 | Manual Operation Lever | | N/A | | | | | | | |

DETAILED INSPECTION OTHER TECHNIQUES

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

DETAILED INSPECTION UT THICKNESS

| CML | | Nom. Thickness | CURRENT READINGS | short term corr rate | long term corr rate | remaining half life | Survey Date | Comments |
|-----|------------|-------------------|---------------------|-------------------------|------------------------|------------------------|-------------|----------|
| 05 | (Shell) | 0.00 | 9.60 | 0.0000 | 0.0000 | 99.0 | 2013/02/20 | |
| 10 | (Shell) | 0.00 | 9.75 | 0.0000 | 0.0000 | 99.0 | 2013/02/20 | |
| 15 | (Shell) | 0.00 | 9.73 | 0.0000 | 0.0000 | 99.0 | 2013/02/20 | |
| 20 | (90L 2 40) | 3.91 | 3.40 | 0.0000 | 0.0000 | 99.0 | 2013/02/20 | |











| OWNER: HUSKY | SERIAL # 07-3077 | NOTES |
|-----------------------------|------------------|-------|
| EQUIPMENT NAME: FLARE STACK | NB# | |
| REGISTRATION # | OWNER ID | |
| EQUIPMENT # 66130670 | | |



TOTAL INTEGRITY MANAGEMENT SOLUTIONS





NAMEPLATE

OVERALL



OVERALL

| OWNER: HUSKY | SERIAL # 7-3077 | NOTES |
|-----------------------------|-----------------|-------|
| EQUIPMENT NAME: FLARE STACK | NB# | |
| REGISTRATION # | OWNER ID | |
| EQUIPMENT # 66130670 | ONCOR ID | |