

STORAGE TANK INSPECTION REPORT

IR 191125RJWa

LSD: 2-29-79-23 W4

Date: NOV 25 / 2019

Equipment ID: 66083224

| STORAGE TANK STATIC DATA | | | | | | | | | | | | | |
|--|----------|---------------|------------------|----------|--------------|-----------------------|-----------------|------------------------|--------------|------------------|---------------------|--|--|
| Plant: McMullen | | | Op Unit: HOG | | | System: TBG GAS PROD. | | | | | | | |
| Equipment Description: 100 BBL DW STORAGE TANK | | | | | | Equip #: 66083224 | | | | | | | |
| Manufacturer: HOTPASS | | | | | | Serial #: 10187 | | | | | | | |
| CODE: | | | RT: 1 | | 2 | | 3 | | 4 | | | | |
| Diameter: 9 FT. | | Length: (T/T) | | mm/in | | Height: | | mm / in | | Year Built: 2002 | | | |
| MDMT: | | | °C / °F | | PWHT | | YES | | NO | | Vertical Horizontal | | |
| Shell Mat'l: N/A | | | Thickness: | | 3/16" | | Corr Allowance: | | mm / in | | | | |
| Roof Mat'l: N/A | | | Thickness: | | 3/16" | | Corr Allowance: | | mm / in | | | | |
| Floor Mat'l: N/A | | | Thickness: | | 1/4" | | Corr Allowance: | | mm / in | | | | |
| Internal Coating: YES | | | Internal Clad: | | NO | | Capacity: | | 100 | | BBL | | |
| Manway: YES | | | Inspection Port: | | YES | | Skid X | | Legs | | Ground | | |
| Nozzle Rating | | lb ANSI | | Painted: | | YES | | Insulated: | | NO | | | |
| PROCESS DATA | | | | | | | | | | | | | |
| Product Description: | | | | | | Sweet | | Sour | | | | | |
| Operating Pressure: | | | | | | kPa / PSI | | Operating Temperature: | | °C / °F | | | |
| PSV / VACUUM BREAKER STATIC DATA | | | | | | | | | | | | | |
| Serial No. | Location | Inlet | Size | Outlet | Set Pressure | Capacity | Manufacturer | Model / Type | Service Date | | | | |
| | | | | | | SCFM / Lbs/Hr / GPM | | | | | | | |

INSPECTION SUMMARY

VISUAL EXTERNAL:

A visual external inspection was done to confirm the integrity of the tank. The tank is vertically set on a skid and set on piles above the ground. The underside is visible but spray foam insulated. It is used to store produced water from the well. The skid attached to the tank is secure with no visible damage. Secondary containment is double walled tank. The tank is vented on top with the bird cage securely attached. The Load / Unload line is capped to prevent any spillage. The tank is properly grounded. The tank is completely insulated with metal clad strapped insulation. A head view of the inside of the tank indicates the tank is coated with the coating appearing in fair condition. The tank is mostly empty with only approx. 6" of liquid inside the tank. The overall external condition of the tank is Good. The tank is fit for service.

VISUAL INTERNAL: No full visual Internal inspection was performed on the tank. Only a top view from the thief hatch was performed to assess the level in the tank and part of the shell coating.

UT THICKNESS: No UT thickness readings were taken on the tank. The tank is completely insulated.

RECOMMENDATIONS


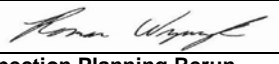
NONCONFORMANCES / INSPECTION DEFICIENCIES

INSPECTION PLANNING

| | | | | |
|---------------------|--------------|----------------------|----------------------|-------------|
| Inspection Strategy | Availability | On Line | Inspection Interval | 5 YEAR |
| Inspection Date | NOV 25 / 19 | Date of Last Inspect | Date of Next Inspect | NOV 24/2024 |

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.

| | | | | |
|-------------------------------|--------------|--|------|-------------|
| Inspected by | Roman Wynnyk |  | Date | NOV 25 / 19 |
| Reviewed and Approved by | Roman Wynnyk |  | Date | DEC 2 / 19 |
| Criticality Assessment Rerun | | Inspection Planning Rerun | | |
| Assessed Next Inspection Date | | | | |

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DETAILED INSPECTION
VISUAL EXTERNAL

| ID | Description | Condition | Location | NCR | Comments |
|-----|---------------------------------------|-----------|----------|-----|---|
| T1 | General Other (Please Explain) | FAIR | | | Nameplate is legible. |
| T2 | General Corrosion | GOOD | | | No External Surface corrosion noted on tank shell |
| T3 | General Leaks | NO | | | |
| T4 | Vibration | NO | | | |
| T5 | Dissimilar Flange Rating | NO | | | |
| T6 | Ladder/Stairway | GOOD | | | LADDER AND HOOP ARE SECURE. |
| T7 | Platform | NO | | | |
| T8 | Electrical Ground | GOOD | | | . |
| T9 | Cathodic Protection | NO | | | |
| T10 | Painted Inactive Corrosion | NO | | | |
| T11 | Coating/Painting | NO | | | |
| T12 | Level Gauge | GOOD | | | |
| T13 | Bottom | FAIR | | | Tank underside is insulated. |
| T14 | Secondary Containment | FAIR | | | Double walled interstitial space. |
| T15 | Shell | FAIR | | | NO VISIBLE PHYSICAL DAMAGE |
| T16 | Roof | FAIR | | | NO VISIBLE PHYSICAL DAMAGE |
| T17 | Agitator/Mixer | N/A | | | |
| T18 | Jacket | NO | | | |
| T31 | Support Other (Please explain) | FAIR | | | SKID IS SECURE WITH NO DAMAGE |
| T32 | Foundation | FAIR | | | PILES AND SKIDS. |
| T33 | Anchor Bolts | NO | | | |
| T34 | Wind girders | NO | | | |
| T41 | Connections Other (Please explain) | FAIR | | | NO LEAKS VISIBLE |
| T42 | Small Branches | FAIR | | | INLET /OUTLET LINE IS SECURE |
| T43 | Nozzles | FAIR | | | NO VISIBLE DAMAGE |
| T44 | Swing Lines | N/A | | | |
| T45 | Manways/Hatches | GOOD | | | SECURE AND ATTACHED |
| T46 | Reinforcing Pads | N/A | | | |
| T47 | Inadequate Thread Engagement | NO | | | |
| T48 | Bolting | GOOD | | | |
| T50 | Flanges | GOOD | | | |
| T51 | Leak Clamps | NO | | | |
| T61 | Insulation Other (Please explain) | NO | | | |
| T62 | Damage | NO | | | |
| T63 | Penetrations | NO | | | |
| T64 | Insulation Jacket | | | | |
| T65 | Banding | | | | |
| T66 | Seals/Joints | | | | |
| T71 | Relief Devices Other (Please explain) | | | | |
| T72 | Relief Devices Corrosion | | | | |
| T73 | Relief Devices Leaks | | | | |
| T74 | Restricted Inlet/Outlet | | | | |
| | | | | | |

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**DETAILED INSPECTION
VISUAL INTERNAL**

| ID | Description | Condition | Location | NCR | Comments |
|-----|-------------------------------------|-----------|----------|-----|----------------------------------|
| V1 | General Other (Please Explain) | | | | NO INTERNAL INSPECTION PERFORMED |
| V2 | Corrosion | | | | |
| V3 | Erosion | | | | |
| V4 | Distortion | | | | |
| V5 | Blisters | | | | |
| V6 | Deposits | | | | |
| V7 | Welds | | | | |
| V8 | Nozzles | | | | |
| V9 | Shell | | | | |
| V10 | Roof | | | | |
| V21 | Internals Other (Please explain) | | | | |
| V22 | Annual Ring | | | | |
| V23 | Sump | | | | |
| V24 | Roof Support | | | | |
| V25 | Thermowells | | | | |
| V26 | Metallic Linings | | | | |
| V27 | Nonmetallic Linings | | | | |
| V28 | Internal Steam Coil or other piping | | | | |
| V29 | Level Gauge | | | | |
| V30 | Other Welded Attachments | | | | |
| T11 | Floor | | | | |

**DETAILED INSPECTION
OTHER TECHNIQUES**

| ID | Location | Observation/Measurement | Acceptance Criteria | NCR | Comments |
|----|----------|-------------------------|---------------------|-----|----------|
| 1 | | | | | |
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| 10 | | | | | |

**DETAILED INSPECTION
UT THICKNESS**

| CML | Nom. Thk | Current Reading | Short Term Corr Rate | Long Term Corr Rate | Remaining Life | Comments |
|-----|----------|-----------------|----------------------|---------------------|----------------|----------|
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PHOTOS



LOCATION SIGN



TANK NAME PLATE



TANK MANWAY, WITH NO LEAKS VISIBLE



OVERALL VIEW OF TANK SET ON PILES



TANK SKID SET ON PILES ABOVE GROUND



UNDERSIDE OF TANK WITH SPRAY FOAM INSULATION LIQUID.

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INTERSTITIAL SPACE SITE GLASS



VIEW OF INSIDE OF TANK THROUGH THIEF HATCH



TANK VENT ON TOP OF TANK WITH BIRD CAGE

LIQUID.