

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

DATE: **15-DEC-2023** TIME: **0520** HOURS

STRUCTURAL DAMAGE

CRANE

OTHER LIFTING

2. OPERATOR: **Talos ERT LLC**

DAMAGED/DISABLED SAFETY SYS. **Life saving equip/FFE**

REPRESENTATIVE:

TELEPHONE:

INCIDENT >\$25K **Pipeline riser damage**

CONTRACTOR:

H2S/15MIN./20PPM

REPRESENTATIVE:

REQUIRED MUSTER

TELEPHONE:

SHUTDOWN FROM GAS RELEASE

OTHER

3. OPERATOR/CONTRACTOR REPRESENTATIVE/SUPERVISOR ON SITE AT TIME OF INCIDENT:

8. OPERATION:

4. LEASE: **G02280**

PRODUCTION

DRILLING

WORKOVER

COMPLETION

HELICOPTER

MOTOR VESSEL

PIPELINE SEGMENT NO. **5114**

DECOMMISSIONING

PA

PIPELINE

SITE CLEARANCE

TA

PLATFORM

OTHER

AREA: **SM** LATITUDE:

BLOCK: **130** LONGITUDE:

5. PLATFORM: **B**

RIG NAME:

6. ACTIVITY:

EXPLORATION(POE)

DEVELOPMENT/PRODUCTION

(DOCD/POD)

9. CAUSE:

7. TYPE:

EQUIPMENT FAILURE

HUMAN ERROR

EXTERNAL DAMAGE

SLIP/TRIP/FALL

WEATHER RELATED

LEAK

UPSET H2O TREATING

OVERBOARD DRILLING FLUID

OTHER _____

INJURIES:

HISTORIC INJURY

OPERATOR

CONTRACTOR

REQUIRED EVACUATION

LTA (1-3 days)

LTA (>3 days)

RW/JT (1-3 days)

RW/JT (>3 days)

FATALITY

Other Injury

10. WATER DEPTH: **215** FT.

11. DISTANCE FROM SHORE: **79** MI.

12. WIND DIRECTION: **E**

SPEED: **28** M.P.H.

13. CURRENT DIRECTION:

SPEED: M.P.H.

14. SEA STATE: **15** FT.

15. PICTURES TAKEN:

16. STATEMENT TAKEN:

POLLUTION

FIRE

EXPLOSION

LWC HISTORIC BLOWOUT

UNDERGROUND

SURFACE

DEVERTER

SURFACE EQUIPMENT FAILURE OR PROCEDURES

COLLISION HISTORIC >\$25K <=\$25K

17. INVESTIGATION FINDINGS:

On December 15, 2023, at approximately 0520 hours, an explosion occurred on the Talos ERT LLC (Talos) OCS-G02280, South Marsh Island (SM) 130 B Facility. Employees heard a loud noise which appeared to originate from the northwest side of the facility. As the operators proceeded around the firewall, a fire was coming from a pipeline below the +10 level up to the production deck. There was damage to life saving equipment and other items such as wiring on the northwest side of the facility. Also, minor structural damage near the +10. There were no injuries to personnel.

Sequence of Events:

On December 15, 2023, at approximately 0520 hours, operators heard a loud noise that seemed to originate from the northwest side of the facility. As the operators on the quarters side of the firewall walked to the production side, a fire was observed originating from the 8" bi-directional gas pipeline (Segment 5114) that contained 1220 psi. The pipeline departs from SM 130 B to SM 130 A which is a distance of approximately 1 mile. The flame traveled from below the +10 level to the bottom of the production deck which was approximately 80 feet high. The Emergency Shut Down (ESD) was activated and instructions were given to the remaining platforms in the SM 130 field to shut in. All non-essential personnel mustered across the bridge to the SM 130 D facility. The flame lasted approximately 5 to 7 minutes before the gas pressure bled down. Operators utilized the fire hose to soak the smoldering boards under the wet oil tank and four 30 lb. dry chemical fire extinguishers were used to extinguish the lifesaving equipment and other items in the area that caught on fire or were smoldering due to the pipeline fire. After the flame had descended, it was discovered that a 3-foot section of the pipeline from the +4 to the +7 was missing. There was minor structural damage near the +10 and no injuries due to this incident.

BSEE INVESTIGATION:

On December 15, 2023, the Bureau of Safety & Environmental Enforcement (BSEE) Lafayette District (LD) Accident Investigator (AI) received a phone call notification of a fire that occurred on Talos's SM 130 B Facility. The AI requested additional information pertaining to the incident such as the pipeline information, statements, pipeline inspections and other relevant documents from Talos.

The BSEE LD AI, Civil Penalty Enforcement Specialist (CPES), and Office of Incident Investigation (OII) conducted an onsite investigation at SM 130 B on December 18, 2023. BSEE conducted interviews with the personnel involved with extinguishing the fire. According to the witnesses, winds were exceeding 28 mph blowing the flame away from the platform which may have saved the facility from severe damage. The sea conditions were 11 to 20 feet at the time of the incident.

On February 28, 2024, an analysis was conducted by a laboratory, located in Houston, Texas, on sections of the flange and piping adjacent to the failed section of the pipeline. According to the findings, the entire flange and fracture surface suffered from severe corrosion. The wall thickness of the flange was visibly thinner where the failure occurred. The wall loss due to corrosion was severe enough near the fracture surface, that a hole is visible. The cross section of the fracture surface shows the corrosion was much more significant at the outside diameter (OD) than the internal diameter (ID).

CONCLUSION:

The results of the metallurgical failure examination completed by the laboratory indicate that the as-received flange failed due to severe OD corrosion that caused significant wall loss and material property degradation resulting in a circumferential brittle failure of the flange. The loads on the flange are unknown, but the external loads on the flange would have increased as the wall thickness of the flange decreased (from corrosion) resulting in a circumferential brittle failure.

The OD corrosion was driven by high concentrations of chlorine (12,000 ppm) in an oxygen containing environment. High concentrations of chlorine are known to dramatically accelerate the corrosion rates of carbon steels. The flange had been painted for corrosion protection; however, the coating was not maintained overtime to prevent corrosion of the underlying steel when exposed.

Due to the results of Level I inspection, a mechanical integrity inspection of Segment 5114 began on June 29, 2023. Rope access was needed to complete the mechanical integrity inspection near the waterline but that was not performed prior to the incident.

18. LIST THE PROBABLE CAUSE(S) OF ACCIDENT:

Equipment Failure: The flange failed due to severe OD corrosion that caused significant wall loss and material property degradation resulting in a circumferential brittle failure of the flange.

19. LIST THE CONTRIBUTING CAUSE(S) OF ACCIDENT:

Equipment Failure - Inadequate preventative maintenance:

- Due to the findings of the Level I inspection conducted on May 23, 2023, a mechanical integrity test was conducted on June 29, 2023. Rope access was needed to complete the mechanical integrity test for Segment 5114 near the waterline but was not performed prior to the incident.
- The mechanical integrity test on the Segment 5114 pipeline is required every 5 years. The last test that was completed prior to the incident was on September 16, 2015.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

Life Saving Equipment, wiring, minor structural damage near +10.

Fire

ESTIMATED AMOUNT (TOTAL): \$1,000,000

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

On December 15, 2023, Talos ERT LLC failed to perform operations in a safe and workmanlike manner as follows: Operators heard a loud noise that seemed to originate from the

northwest

side of the facility. As the operators on the quarters side of the firewall walked to the production side, a fire was observed originating from the 8" KAA-615 Bi-Directional Gas Pipeline (Pipeline Segment # 5114) that contained 1220 psi. Pipeline Segment # 5114 departs from SM 130 B to SM 130 A, which is a distance of approximately 1 mile. The flame traveled from below the facility's +10 level to the bottom of the production deck, which was approximately 80 ft. high. After the flame had descended, it was discovered that a 3-foot section of pipeline from the +4 to the +7 elevation was missing. This was a high-potential incident with minor damage near the +10; no injuries were reported due to this incident.

25. DATE OF ONSITE INVESTIGATION:

18-DEC-2023

28. ACCIDENT CLASSIFICATION:

29. ACCIDENT INVESTIGATION PANEL FORMED:

26. Investigation Team Members/Panel Members:

NO

27. OPERATOR REPORT ON FILE:

OCS REPORT:

30. DISTRICT SUPERVISOR:

Mark Malbrue

APPROVED

DATE:

08-AUG-2024