

UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
GULF OF MEXICO REGION

ACCIDENT INVESTIGATION REPORT

FOR PUBLIC RELEASE

1. OCCURRED

DATE: 04-FEB-2023 TIME: 1405 HOURS

2. OPERATOR: Talos ERT LLC

REPRESENTATIVE:

TELEPHONE:

CONTRACTOR: Danos & Curole Marine Contracto

REPRESENTATIVE:

TELEPHONE:

- STRUCTURAL DAMAGE
- CRANE
- OTHER LIFTING
- DAMAGED/DISABLED SAFETY SYS.
- INCIDENT >\$25K
- H2S/15MIN./20PPM
- REQUIRED MUSTER
- SHUTDOWN FROM GAS RELEASE
- OTHER

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

8. OPERATION:

4. LEASE: G02280

AREA: SM LATITUDE:

BLOCK: 130 LONGITUDE:

5. PLATFORM: A

RIG NAME:

- PRODUCTION
- DRILLING
- WORKOVER
- COMPLETION
- HELICOPTER
- MOTOR VESSEL
- PIPELINE SEGMENT NO.
- OTHER

6. ACTIVITY:

- EXPLORATION(POE)
- DEVELOPMENT/PRODUCTION (DOCD/POD)

9. CAUSE:

7. TYPE:

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

- EQUIPMENT FAILURE
- HUMAN ERROR
- EXTERNAL DAMAGE
- SLIP/TRIP/FALL
- WEATHER RELATED
- LEAK
- UPSET H2O TREATING
- OVERBOARD DRILLING FLUID
- OTHER _____

POLLUTION

FIRE

EXPLOSION

LWC HISTORIC BLOWOUT

UNDERGROUND

SURFACE

DEVERTER

SURFACE EQUIPMENT FAILURE OR PROCEDURES

10. WATER DEPTH: 215 FT.

11. DISTANCE FROM SHORE: 78 MI.

12. WIND DIRECTION:
SPEED: M.P.H.

13. CURRENT DIRECTION:
SPEED: M.P.H.

14. SEA STATE: FT.

15. PICTURES TAKEN:

16. STATEMENT TAKEN:

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

On February 4, 2023, at approximately 1405 hours, a small fire occurred on Talos ERT LLC (Talos) LP's OCS-G02280 South Marsh Island (SM) 130 A Facility. During welding and cutting operations, a small fire occurred on the thief hatch located on the ABJ-310 Dry Oil Tank. The flame was extinguished with no damage to the tank or injury to personnel.

Sequence of Events:

On February 4, 2023, a Danos construction crew was in the process of installing a PAT-300 Water Injection Pump on the top deck at SM-130 A, which included welding and cutting operations. Fire-retardant blankets were hung between the PAT-300 Water Injection Pump and the ABJ-310 Dry Oil Tank which were approximately 7 feet apart. The oil level in the ABJ-310 Dry Oil Tank was dropped to approximately 200 barrels which has a 2000-barrel capacity. The ABJ-310 Dry Oil Tank was isolated by closing all inlet valves from the NBK-300 Bulk Oil Treater. As the welder began cutting the grating clips, the downstairs fire watch observed a flame coming from the thief hatch on the ABJ-310 Dry Oil Tank. The fire was extinguished utilizing a 30# dry chemical extinguisher. There was no damage to the facility or injuries to personnel due to this incident.

BSEE INVESTIGATION:

On February 4, 2023, the Bureau of Safety & Environmental Enforcement (BSEE) Lafayette District (LD) Accident Investigator (AI) received a phone call notification of a small fire that occurred on Talos's SM 130 A Facility. The AI requested additional information pertaining to the incident such as the Job Safety Analysis (JSA), statements and other relevant documents from Talos.

The BSEE LD AI conducted an onsite investigation at SM -130 A on February 6, 2023. BSEE conducted interviews with the personnel involved with the construction operation. The JSA for the operation contained checked off boxes labeled Hot Work which stated the following, "I confirm flammable material have been removed or isolated", "A gas test has been completed", and "Gas will be monitored continuously". The boxes were checked off, but according to personnel interviewed, gas readings were taken near the PAT-300 Water Injection Pump but had not been taken near the thief hatch on the ABJ-310 Dry Oil Tank prior to hot work commencing and/or during the hot work operation. The JSA included not tarping properly to catch all flying debris, which was located in the Prepping Area for the Hot Work section in the JSA.

The JSA identified Energy Isolation and Lockout/Tagout but the lessee failed to lock or tag any valves associated with the ABJ-310 Dry Oil Tank. The ABJ-310 Dry Oil Tank was isolated by closing all inlet valves from the NBK-300 Bulk Oil Treater but failed to lock and tag the valves as per the Talos Lockout / Tagout procedure - 7.3.5 Isolation of Various Systems. Also, as per the Talos Lockout / Tagout procedure, a single closed valve is not an acceptable isolation for potentially hazardous systems in the vicinity of the vessel entry and/or hot work, except when the facility/equipment is shut in and all pressures have been bled to atmospheric pressure. Insertion of blinds/skillets isolating the source is the preferred method. There were no blinds/skillets installed during the welding operation nor was the ABJ-310 Dry Oil Tank isolated properly as per the mentioned policy. The ABJ-310 Dry Oil Tank outlet valves were not locked or tagged as per the Talos Lockout / Tagout procedure - 7.3.5 Isolation of Various Systems during welding operations either

The fire-retardant blankets were not in place when BSEE arrived on location, however Talos provided BSEE with photographs showing the locations of the blankets. Based on those photographs, the blankets were not located in a way that protected the thief hatch.

Prior to the start of construction operations at SM -130 A, construction supervision had previously identified a potential for hydrocarbon accumulation near the ABJ-310-

Dry Oil Tank thief hatch. Mitigations were to include installation of a tapped blind installed on the ABJ-310 Dry Oil Tank to replace the thief hatch and installing a hose to vent the hydrocarbon accumulation to a safe area. Neither of these mitigations were completed prior to the hot work commencing.

During the BSEE investigation, it was discovered that the lessee failed to identify the potential for hydrocarbons to enter the ABJ-310 Dry Oil Tank from the ABJ-320 Wet Oil Tank through a common vent line. The ABJ-320 Wet Oil Tank was in service during welding operations.

CONCLUSION:

The Danos construction crew failed to provide adequate protection from sparks and slag when welding and cutting near the ABJ-310 Dry Oil Tank. The flame ignited due to the fire-retardant blankets failing to provide sufficient protection allowing slag to contact combustible vapors venting from the thief hatch.

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

Human Performance Error: Not following directions listed in the Hot Work Permit. The Hot Work Permit asked if, combustible and flammable materials have been removed or covered with fire-retardant blankets in good condition and sparks associated with grinding or welding have been evaluated and contained utilizing metal shields, flame resistant guards or shields. The answers are checked off yes. If adequate barriers would have been provided for the thief hatch and the sparks contained, the threat of a fire would have been mitigated to low or no risk.

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

Human Performance Error: Not follow directions of the Lockout /Tagout Procedure. No blind skillets were installed and the inlet and outlet valves were not locked and tagged on the ABJ-310 Dry Oil Tank.

The following itemized bullets include, but do not limit, additional contributing/causal factors of the incident:

- During the interview process, it was determined that gas detector readings were taken near the Water Injection Pump where welding operations were taking place but had not been taken prior to hot work commencing and/or during the hot work operation near the thief hatch on the ABJ-310 Dry Oil Tank.
- There was a fire watch assigned on the west side of the well bay and a fire watch assigned on the production deck near the sump. Both mentioned areas were not in the immediate area where the work was being performed.
- Construction supervision had previously identified a potential for hydrocarbon accumulation near the ABJ-310 Dry Oil Tank thief hatch. Mitigations were to include installation of a tapped blind installed on the ABJ-310 Dry Oil Tank to replace the thief hatch and installing a hose to vent the hydrocarbon accumulation to a safe area. Neither of these mitigations were completed prior to the hot work commencing.
- The lessee failed to identify the potential for hydrocarbons to enter the ABJ-310 Dry Oil Tank from the ABJ-320 Wet Oil Tank through a common vent line. The ABJ-320 Wet Oil Tank was in service during welding operations.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

None

NA

ESTIMATED AMOUNT (TOTAL): \$

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The BSEE Lafayette District office makes no recommendations to the Regional Office of Incident Investigations (OII).

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

On February 4, 2023, Talos ERT LLC failed to perform operations in a safe and workmanlike manner as follows: The lessee was in the process of installing a PAT-300 Water Injection Pump on the top deck at SM-130-A, which included welding and cutting operations. Fire blankets were hung between the Water Injection Pump and the ABJ-310 Dry Oil Tank which was located approximately 7 feet apart. The oil level in the Dry Oil Tank was dropped to approximately 200 barrels which has a 2000 barrel capacity. The Dry Oil Tank was partially isolated by closing all inlet valves from the NBK-300 Bulk Oil Treater. As the welder began cutting the grating clips, the downstairs fire watch observed a flame coming from the thief hatch on the Dry Oil Tank. The fire was extinguished utilizing a 30# dry chemical extinguisher. There was no damage to the facility or injuries to personnel due to this incident.

25. DATE OF ONSITE INVESTIGATION:

28. ACCIDENT CLASSIFICATION:

06-FEB-2023

26. Investigation Team Members/Panel Members:

29. ACCIDENT INVESTIGATION PANEL FORMED:

M. Gary / T. Viator / W. Guillotte /

NO

27. OPERATOR REPORT ON FILE:

OCS REPORT:

30. DISTRICT SUPERVISOR:

Mark Malbrue

APPROVED

DATE: 26-MAY-2023