

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: 05-JUN-2019 TIME: 0915 HOURS

2. OPERATOR: Fieldwood Energy Offshore LLC

REPRESENTATIVE:
TELEPHONE:

CONTRACTOR:
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: G01608

AREA: SP LATITUDE:
BLOCK: 60 LONGITUDE:

5. PLATFORM: D
RIG NAME:

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

6. ACTIVITY: EXPLORATION(POE)
 DEVELOPMENT/PRODUCTION (DOCD/POD)

7. TYPE:

HISTORIC INJURY

- REQUIRED EVACUATION
- LTA (1-3 days)
- LTA (>3 days)
- RW/JT (1-3 days)
- RW/JT (>3 days)
- Other Injury 1 First Aid

- FATALITY
- POLLUTION
- FIRE
- EXPLOSION

- LWC HISTORIC BLOWOUT
 UNDERGROUND
 SURFACE
 DEVERTER
 SURFACE EQUIPMENT FAILURE OR PROCEDURES

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

9. CAUSE:

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

10. WATER DEPTH: 185 FT.
11. DISTANCE FROM SHORE: 5 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:

On 5 June 2019 at 0915 hours, an injury occurred to a construction employee. The Injured Person (IP) partially fell through a section of corroded deck grating on the Fieldwood Energy Offshore LLC, South Pass (SP) 60-D, OCS-G 01608 Platform.

Sequence of Events:

On the morning of the incident, the Fluid Crane construction crew conducted a safety meeting with Fieldwood Operators. During the safety meeting, the crew discussed erecting three independent scaffolding systems on SP 60-D platform. The crew assessed the jobsite deeming it sufficient to set up scaffolding. After assessing the jobsite, the crew reviewed and signed a Job Safety Analysis (JSA). The crew gathered materials and transported them to the sub cellar deck for prestaging.

The IP assisted the crew by bringing scaffold materials from connecting platforms, SP 60-G to SP 60-D. The IP walked over to pick up a wrench for the scaffold builder. The IP partially fell through a corroded section of grating, catching himself with his arms and elbows. The IP held himself up until help arrived less than a minute later. The crew pulled the IP out. The IP sustained minor scratches to his arms. The crew immediately stopped and reported to Fieldwood Energy personnel onboard. The crew had crossed directly over the corroded grating several times that morning without noticing a potential open hole. The distance from the sump deck to the waterline is approximately 30-40 feet.

BSEE Investigation:

On 10 June 2019, a team consisting of one Bureau of Safety and Environmental Enforcement (BSEE) Inspector and one Production Engineer performed an investigation. The BSEE team interviewed multiple personnel, took photographs, and collected documents. The team conducted a hazard assessment inspection of the area. The hole created by stepping through the grating, measured at 16 inches long by 20 inches wide. The team observed active corrosion on the failed grating of varying severity. Where the grating failed, the surrounding bearing bars width measured 9/16 to 3/4 inches. The designed width was 1-1/2 inches.

The team reviewed the Fieldwood safety checklist dated May 17, May 24, and May 31, 2019. The team noted that the corroded grating and handrails on the checklist were marked in "good condition". The platform weekly safety checklist states, "any deficiencies shall be reported to the Fieldwood Energy Production Foreman immediately". The Fieldwood Operators did not have any documented corrosion deficiencies on handrails and decking. BSEE also found that Fieldwood did not consistently use the latest revision of the checklist.

The BSEE team reviewed Fieldwood Energy's 2018 API RP 2A Level 1 survey. The survey stated, "heavy active scaling and blistering to 70% of the underside of main deck and 90% of affected areas suffering metal loss. The coating on the mezzanine deck plating is in bad condition with heavy surface corrosion and scale covering approximately 20% of the surface. Heavy active scaling and blistering to 40% of the cellar deck walking surface and 90% of affected areas suffering metal loss. Heavy active scaling and blistering to angle iron supporting grating access walkway on West side of platform, metal loss visible." BSEE found that Fieldwood failed to address the areas of concern from this survey or barricade the areas of decking with metal loss.

During the interviews, Fieldwood Energy Operators stated, although contractors performed Level 1 surveys and Ultrasonic Testing (UT) inspections, the Area Foreman does not receive copies of the surveys. The Area Foreman stated he only receives

information on platform repairs and timing of construction crews. ~~The Public Release~~ stated he was not aware of anyone under his supervision offshore, aside from third party surveyors, who have corrosion assessment training. Despite providing no corrosion assessment training, Fieldwood's JSA requires operators to identify and mitigate every hazard, including corroded decking.

The BSEE investigation team identified the flowline for Well D-3 located directly over the portion of grating which failed on June 5th. The D-3 well is primarily a gas producing well with the characteristics to produce condensation on the exterior of the flowline. Given the proximity of the hole to the flowline, BSEE concludes the flowline may create an accelerated corrosion rate over this specific section of grating.

Conclusion:

In conclusion, severe grating corrosion caused the IP to step through the deck. BSEE concluded that Fieldwood did not provide the operators on the platform with proper training on the identification of imminent safety hazards regarding corrosion assessment of production vessels, piping, handrails, decking, and fasteners. BSEE also found that the condensation of a nearby flowline might have contributed to the accelerated corrosion of the grating.

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

- **Equipment Failure - Inadequate preventive maintenance:** Fieldwood Energy failed to correct the corrosion areas of concern documented in the 2018 API RP 2A Level 1 survey inspection report.
- **Personnel Training - Personnel not trained:** Fieldwood Energy failed to train operators on identification of imminent safety hazards regarding to the production vessels, piping, handrails, decking, and the deterioration of fasteners on the platform.

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

- **Management Systems- Inadequate documentation:** Fieldwood used three different versions of the platform safety checklist over the course of the 4 weeks of checklists provided. Fieldwood used versions 0, 2, and 4 indicating there is inconsistency in the use of the most recent version.

20. LIST THE ADDITIONAL INFORMATION:

- **In response to this incident, Fieldwood Energy issued a Safe & Sound stand down topic- Open Holes.** Due to the severe consequential nature of open hole incidents, Fieldwood Energy decided to conduct a stand down across their organization to raise awareness.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

22. RECOMMENDATIONS TO PREVENT RECCURANCE NARRATIVE:

BSEE New Orleans District recommends that OII coordinate with OSM to address the following concerns:

- Management and facility supervisors should ensure their operators are provided training to identify imminent safety hazards, critical areas of concern, and corrosion protection system grades.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: YES

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

G-111 DOES THE LESSEE MAINTAIN ALL EQUIPMENT IN A SAFE CONDITION TO PROVIDE FOR THE PROTECTION OF THE LEASE AND ASSOCIATED FACILITIES?

- During the BSEE investigation, On June 5, 2019, a construction worker fell through a section of grating while retrieving tools to install scaffolding. The hole measured 16 inches long by 20 inches wide with active corrosion.

25. DATE OF ONSITE INVESTIGATION:

10-JUN-2019

28. ACCIDENT CLASSIFICATION:

26. INVESTIGATION TEAM MEMBERS:

Pierre Lanoix (AI Specialist) / Allie Champagne (Petroleum Engineer) / Jonathan Fraser (Production Inspector) / Nathan Bradley (Production Inspector) /

29. ACCIDENT INVESTIGATION PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

David Trocquet

27. OPERATOR REPORT ON FILE:

APPROVED

DATE: 26-AUG-2019