

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: 13-JUL-2020 TIME: 1055 HOURS

2. OPERATOR: BP Exploration & Production Inc.

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:

AREA: MC LATITUDE:
BLOCK: 778 LONGITUDE:

5. PLATFORM: A(Thunder Horse)
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
 - REQUIRED EVACUATION
 - LTA (1-3 days)
 - LTA (>3 days)
 - RW/JT (1-3 days)
 - RW/JT (>3 days)
 - FATALITY
 - Other Injury
- OPERATOR CONTRACTOR

- 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

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

- 10. WATER DEPTH: 6200 FT.
- 11. DISTANCE FROM SHORE: 66 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 13 July 2020 at 1055 hours, a pollution event occurred at BP Exploration & Production Inc's (BP) OCS-G 09868, Mississippi Canyon (MC) 778-A Thunder Horse platform.

SEQUENCE OF KEY EVENTS:

On 11 July 2020, BP completed pigging operations on P1 (PSN 14504) and P2 (PSN 14505) infield flowlines.

On 12 July 2020, BP completed flowback operations on MC 822 TD003 S45 subsea well. BP production operators also documented the Crude Oil Treater #1 having dirty water.

Once the flowback and pigging operations were completed, the production operators started ramping up production.

While ramping up to final production target rates on 13 July 2020, at approximately 1055 hours, the production operators observed a sheen which covered 90% of a 100-yard area. The sheen was continuous and rainbow/silver colored. The sheen was reported to BP's management but was not reported to the National Response Center (NRC) or Bureau of Safety and Environmental Enforcement (BSEE) on 13 July 2020.

BP's production operators pulled samples of the overboard water to send in for analysis. Oil & grease samples were received by the lab on 17 July 2020 to be analyzed.

After receiving the results of the oil and grease concentration analyses for the produced water sample, BP determined a discharge of 3 barrels (bbls) occurred. The 3 bbls estimation was based on the amount of oil in the produced water discharge to have been 1.38 bbls/hour. The event occurred over a two-hour period and the total amount of oil released estimated at 1.38 bbls x 2 hours, approximately 3 bbls.

On 23 July 2020, BSEE New Orleans District (NOD) office was notified by BP of a pollution event that occurred on 13 July 2020.

BSEE INVESTIGATION:

The BSEE investigator requested the National Pollutant Discharge Elimination System (NPDES) Environmental Compliance Report (ECR), Overboard Water Lab Results, and Alarm Summary Trends.

The BP sample collection and chain of custody record form shows the NPDES water discharge samples were taken on 13 July 2020 at 1030 hours, 1630 hours and 2230 hours. An independent company's lab analysis for the oil and grease sample (C-2425-20) results were 624 mg, indicating they were above the daily maximum of 42 mg/l and monthly average of 29 mg/l for oil and grease.

BSEE found that BP did not notify the BSEE NOD office per the requirements of their EPA permit. BP's corrective action is to conduct additional training of personnel regarding proper communication of pollution events.

According to the MC 778-A ECR, the Thunder Horse platform experienced intermittent foaming throughout July 2020.

The Thunder Horse Incident Summary Record notes that on 3 July 2020 at 0840 hours, personnel observed a sheen which covered 80% of a 3-yard area and was silver. There

was no foam associated with the produced water sheen. On 4 July 2020, the sheen was again observed at 60% coverage over a 10-yard area and was silver and continuous.

The BSEE NOD Investigator identified several reports from the National Oceanic and Atmospheric Administration satellite imagery of sheens around Thunder Horse before and on 13 July 2020. The BSEE investigator found that BP placed the MC 822 TD003 S45 subsea well into production before verifying that the workover fluids were cleaned up. The mixture of process and workover fluids may have caused abnormal emulsion and foaming in several vessels such as the Crude Oil Treater and Intermediate Pressure separator. The emulsion and foaming may have crossed the vessel's oil weir into the water dump line.

CONCLUSION:

BSEE concludes that BP's failure to adequately flush workover fluids in MC 822 TD003 S45 subsea well contributed to produce water quality issues causing pollution totaling 3 bbls of oil.

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

- Human Performance Error - Inattention to task: BP decided to place the well into production before verifying that the workover fluids were cleaned up.

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

N/A

20. LIST THE ADDITIONAL INFORMATION:

In the event of a spill of 1 barrel or more from your facility, you must orally notify the Regional Supervisor without delay. You must notify the (NRC) if you observe an oil spill from your facility. BP Thunder Horse has documented for the month of July 2020 a pollution event throughout the entire month. In which, the 13 July 2020, 3 barrel spill was the only spill that was reported to BSEE. Section 8 of the BP Oil Spill Response Permit reads, "Contact EPA within 24 hours if any of the following conditions occur: Any unanticipated bypass exceeding limitation in permit; Any upset condition which exceeds any effluent limitation in permit." It appears that aside from one internal BP notification, the only notifications listed in the reports were to BSEE. There were no other notifications made to other government agencies in this pollution event.

21. PROPERTY DAMAGED:

NATURE OF DAMAGE:

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRENCE NARRATIVE:

- The NOD office recommends OII coordinate with BSEE Office of Environmental Compliance /Environmental Monitoring Unit and Oil Spill Preparedness Division to determine the agency response to the ongoing sheen events and oil and grease limit exceedances for the Thunder Horse facility.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **YES**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

- **G-132 (W) Failure to report a pollution event over 1 barrel of oil.**
- **E-100 (W) Failure to conduct production operation in a safe manner resulting in a pollution event of 3 barrels of oil through the overboard produced water handling system into the Gulf of Mexico waters.**

25. DATE OF ONSITE INVESTIGATION:

28. ACCIDENT CLASSIFICATION:

26. INVESTIGATION TEAM MEMBERS:

29. ACCIDENT INVESTIGATION

Pierre Lanoix AI Specialist /

PANEL FORMED: **NO**

OCS REPORT:

27. OPERATOR REPORT ON FILE:

30. DISTRICT SUPERVISOR:

David Trocquet

APPROVED

DATE:

31-DEC-2020