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: **20-MAR-2019** TIME: **1200** HOURS

2. OPERATOR: **Energy XXI GOM, 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:

4. LEASE: **G01083**
AREA: **WD** LATITUDE: **28.946315**
BLOCK: **73** LONGITUDE: **-89.706342**

5. PLATFORM: **A**
RIG NAME:

6. ACTIVITY:
- [ ] EXPLORATION(POE)
- [X] 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
- [ ] FATALITY
- [X] POLLUTION
- [ ] FIRE
- [ ] EXPLOSION

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

COLLISION [ ] HISTORIC [ ] >$25K [ ] <=$25K

8. OPERATION:
- [X] PRODUCTION
- [ ] DRILLING
- [ ] WORKOVER
- [ ] COMPLETION
- [ ] HELICOPTER
- [ ] MOTOR VESSEL
- [ ] PIPELINE SEGMENT NO.
- [ ] OTHER

9. CAUSE:
- [X] EQUIPMENT FAILURE
- [X] HUMAN ERROR
- [ ] EXTERNAL DAMAGE
- [ ] SLIP/TRIP/FALL
- [ ] WEATHER RELATED
- [ ] LEAK
- [ ] UPSET H2O TREATING
- [ ] OVERBOARD DRILLING FLUID
- [ ] OTHER _____

10. WATER DEPTH: **168** FT.

11. DISTANCE FROM SHORE: **17** 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:

From 20 March 2019 to 22 March 2019 several pollution events occurred at the West Delta (WD) Block 73 A Platform, Lease OCS-G 1083 operated by Cox Oil (Cox). BSEE inspectors observed the first pollution event and estimated it to be 14 barrels (bbls) of oil. BSEE and Cox independently reported the pollution to the National Response Center (NRC) #1240673 and #1240592, respectively. Although BSEE ordered the shut in of the platform on 20 March 2019, this pollution event continued until 22 March 2019 due to several valve failures in the produced overboard water discharge line. The shut in of this platform affected several platforms in the WD 73 Field: WD 73 C, WD 73 D, WD 74 B, WD 74 F, WD 91 G, WD 93 E, WD 99 B. A second separate pollution event occurred on 20 March 2019 due to two oil pump failures which contributed to the original 14 barrels of oil. A third pollution event of less than a barrel of oil occurred on 21 March 2019, when the platform's sump system overfilled during cleanup efforts: NRC #1240626. On 22 March 2019, Cox reported a final observation of less than a gallon: NRC #124073. After the final report, Cox mitigated the pollution by removing the faulty valves. No injuries occurred from these incidents.

Sequence of Events:

According to Cox's Root Cause Analysis (RCA), on 20 March 2019, at 11:37 on the WD 73 A Platform, the Solar gas compressors inadvertently shut down due to wet fuel gas, resulting in a loss of discharge pressure to the gas lift loop for the entire WD 73 Field. At 13:00, the Operators brought the Solar compressors back online returning the field to full gas lift pressure. However, this resulted in a fluid surge to the instrument gas supply and the produced water system. When the excessive fluids reached the produced water system, the Free Water Knockout (FWKO) vessel lost its interphase fluid level. As a result of the higher oil to water ratio, oil discharged through the water dump piping to the Skimmer Vessels. The Skimmer Vessels subsequently lost their interphase fluid level resulting in the abnormal amount of oil discharged to the two Flotation Units. Once the abnormal volume of oil reached the Flotation Units, the excess hydrocarbon discharged to the single produced overboard water discharge point, causing a spill in the Gulf of Mexico (GOM). The Operators observed the sheen and identified the source as the produced water outlet. The Operators then closed the produced water outlet shut-down valve. However, leaks internal to the isolation valves went undetected until 22 March 2019 causing continuous pollution.

At 15:30, one of the Skimmer's pneumatic oil pumps failed, spraying oil on the deck. The Operators removed the failed pump and began cleaning oil from the deck. Next, a second pneumatic oil pump failed, also spraying oil on the deck. As a result of the pump failures, hydrocarbon sprayed from the pumps and entered the GOM causing the second pollution event. At 15:35, BSEE Inspectors observed the sheen while flying back to New Orleans from an inspection in the Mississippi Canyon Area. BSEE Inspectors documented and recorded the sheen before landing on the platform. Both pneumatic pumps failed before BSEE Inspectors landed at 15:50. Before leaving, BSEE Inspectors ordered the shut-in of the A Platform.

A third pollution event of less than a barrel of oil occurred on 21 March 2019, when the platform's sump system overfilled during cleanup efforts: NRC # 1240626.

The original pollution event stopped on 22 March 2019, when Cox identified that three failed valves allowed continuous seepage of hydrocarbon out of the produced water discharge lines.

BSEE Investigation

BSEE Inspectors observed a sheen on 20 March 2019, and documented it to be 6 miles long, 0.7 miles wide, 65% silver, 20% rainbow, and 5% dark brown with 85% coverage calculated at 14 bbls of oil. After landing at 15:50, the BSEE Inspectors performed a walkthrough of the A Platform. BSEE observed an operator gathering information about the sheen with the intention of reporting the pollution to NRC. Cox reported the sheen at 17:47 at 8.3 bbls (NRC #1240592). The Inspectors then observed hydrocarbon on the deck, grating, facility legs, and equipment on the cellar deck below the Skimmer's pneumatic oil pumps (PBA-107 and PBA-108). This confirmed the failed pumps as a source of pollution into the GOM waters. The Inspectors requested the Job Safety Analysis (JSA) for the work on the pumps; however, the operator failed to perform a JSA before removing the pneumatic oil pumps. Next, the Inspectors noted and photographed that personnel failed to properly install the pumps with respect to the different bolt patterns and dissimilar materials (plastic to carbon steel). BSEE later discovered that the pumps were non-metallic and must be torqued to manufacturer specifications to prevent cracking or leaks.

Then, the Inspectors discovered and photographed six safety devices on the Platform Auxiliary Panel in bypass. Inspectors observed two platform personnel in the area of the bypassed Skimmer Vessels; however, these personnel were performing work other than monitoring the safety devices. Additionally, five of the devices indicated an abnormal condition but the required shut-in functions had not been executed. The Inspectors photographed the valves that would isolate the process from the Skimmer Vessels in the open position. Therefore, the Skimmer Vessels were not out of service at the time of the bypass discovery. Next, the Inspectors confirmed that the main pollution source was the produced water discharge outlet by documenting the excessive oil content in the Flotation Units (ABM-A002 and A003). Next, BSEE Inspectors verified that production was still flowing since the bypassed devices could not execute their shut-in function. As a result, the BSEE Inspectors requested that the facility be shut in. BSEE issued an E-100 (S) Enforcement INC to Cox for the oil sheen. The Inspectors further documented evidence that the facility's drain system was not functioning properly which caused a hazardous accumulation of hydrocarbons in the containment skids of the Water Skimmers and Flotation Units. The Inspectors also noted that personnel could not provide BSEE approved As-Built drawings while on the facility.

BSEE Inspectors and Accident Investigators (AI) performed a follow-up inspection on 21 March 2019. Upon arrival, the Inspectors noted and photographed a sheen emanating from the facility. Cox reported this sheen to the NRC as 0.2 gallons at 09:03 (NRC #1240626). The pollution event was reported to have occurred at 07:05. During the follow-up investigation, BSEE photographed evidence of oil overflow out of the top of the Sump Tank (ABH-A001). The Inspectors photographed the top of the sump tank which contained a hazardous accumulation of hydrocarbon. BSEE also witnessed a level measurement of the oil in the sump tank which indicated oil had entered the water discharge leg of the sump causing further pollution. Additionally, the Inspectors documented a Vacuum Pressure Safety Valve (VPSV) on top of the Sump Tank in an unlatched position. The BSEE Investigators determined the pumping down of the containment skids and vessels into the Sump caused discharge from the sump.

Next, an event unrelated to the original spill occurred; AI's witnessed liquid methanol and hydrocarbon gas blowing from the top of a sight glass vent into the atmosphere. The Investigators found that a check valve failed which allowed backflow into the methanol transporter.

The following day Investigators reviewed additional spill reports. At 10:35 on 22 March 2019, Cox reported a sheen to the NRC which occurred that day at 08:20 estimated at 1 teaspoon (NRC #1240743). National Oceanic and Atmospheric Administration (NOAA) reported to the NRC (co-located to NRC#1240743) a sheen (discovered via satellite imagery) at 16:32 on 22 March 2019 that was 5.8 nautical miles (nm) long and 0.16 nm

wide. The reason for the continued pollution was related to the original incident. The Cox Production Manager stated that three valves on the overboard water discharge lines failed to hold. When Operators identified the valve failures, they removed the valves and installed a skillet preventing further pollution. The Cox Production Manager stated that excessive sand and debris in the produced water process vessels caused the valve failures. Cox Operators later confirmed this statement when they identified sand and debris in the vessel during cleanout.

The BSEE investigation reviewed documentation to determine the root cause of the pollution out of the overboard water discharge. After reviewing Cox's RCA and speaking with the Cox Production Manager, BSEE agreed that the loss of interphase level in the FWKO caused this pollution event. The Cox RCA suggests that a failure of a control valve on the discharge line from the FWKO to the scrubber vessels as the cause for the loss of the interphase level. The Cox RCA stated that condensate in the instrument gas supply line of the control valve caused the control valve's failure. However, BSEE Investigators add that sand and debris in the control valve could have exacerbated the failure. BSEE also determined that the Operators could have caused the excess of fluid in the produced water system by failing to restrict flow when they fully restored the gas lift pressure. Operators confirmed the presence of condensate in the control line when they drained the lines at the control panel. BSEE was not able to confirm any fluid in the instrument gas supply. The Cox RCA claims the excessive condensate was due to the Operators' failure to maintain a proper level in the MBF-A016 (Fuel Gas Scrubber). This vessel needs to be manually drained, especially after a compressor shut down, to prevent excessive condensate in the instrument gas supply. BSEE also agrees with Cox's assessment that the fluid in the instrument gas supply would have rendered several required safety devices inoperable. When reviewing Cox's operating procedures for WD 73, BSEE noted that the Operators should have tested the safety devices before allowing process flow to the vessel. Furthermore, the Cox Production Manager stated that the instrument gas supply had a history of excessive condensate. In fact, a permit was in work to fix this issue at the time of the incident. However, the Cox WD 73 operating procedure failed to mention draining the instrument gas supply after a compressorshutdown. This pollution event continued from 20 March 2019 to 22 March 2019 because the overboard water discharge valves failed to close. BSEE agrees with Cox's Production Manager that the cause for the valve failures may have been sand and debris preventing full closure of the valves.

The failed sump pumps discharging hydrocarbons caused the second pollution event. The Cox RCA originally stated that a failed pump (PBA-107) diaphragm caused the discharge. However, the Cox Production Manager later stated that the pollution was a result of a failed flange. BSEE believes that both causes occurred. BSEE was able to support the possibility of a failed flange on the first Skimmer Pump due to the photographs of improper flanging on other similar pumps by the same manufacturer. Photographs show mismatched flanges mated with missing bolts. Also, personnel statements indicated that as the BSEE Inspectors landed, the second Skimmer pump (PBA-108) failed contributing to this pollution incident.

Discharge from the Sump Tank overboard water discharge line and overflow out the top of the Sump Tank (ABH-A001) caused the third pollution event as evidenced by BSEE Investigators' photographs. The root cause of this pollution was the manual pumping of hydrocarbons from overflowing containment skids into the deck drains, which overwhelmed the two sump pumps capacity to effectively maintain an appropriate level. This pollution could have been prevented if the Sump was manned during this operation since the Sump Level Safety High (LSH) would not have shut in any manual pumping operations. Relief records indicated that the two sump pumps were repaired the previous hitch and again repaired/replaced immediately after this pollution incident.

Conclusion

BSEE concluded that there were three sources of pollution between 20 March 2019 and 22 March 2019. First, the produced water discharged hydrocarbon into the GOM as a result of excessive hydrocarbon in the water processing vessels, the Free Water Knockouts, Skimmers, and Flotation Units. This pollution source was not fully stopped until 22 March 2019 due to leaking valves in the overboard water system. The second source of pollution occurred on 20 March 2019, due to failed pumps discharging hydrocarbon over containment into the GOM waters. The third point of discharge was caused by discharges from the Sump Tank overboard water discharge line and overflow out the top of the Sump Tank. The investigation resulted in 14 INCs and a list of corrective actions for Cox.

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

- **Failure to maintain equipment: Excessive sand and debris in the process system**
- **Failure to maintain equipment: Excessive condensate in the instrument gas system**
- **Failure to write operating procedures to mitigate design flaws in the instrument gas system**
- **Failure to install pumps to manufacturer specifications.**
- **Failure to monitor sump tank while performing manual pumping operations.**
- **Failure to reduce or minimize production rates from the WD 73 Field after returning to full gas-lift pressure.**

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

- **Failure to follow operating procedures which stated to test safety devices before start up.**
- **Failure to follow 30 CFR 250.869: operator bypassed safety devices for reasons other than start up, maintenance or testing. Operator failed to properly monitor bypass devices. Operator failed to manually perform shut in action the safety devices would have performed during an abnormal condition.**
- **Failure to maintain deck drains, skid pans, and containment as to prevent the hazardous accumulation of hydrocarbons.**
- **Failure to follow operating procedures: a JSA was not created for the removal of the failed pump.**
- **Failure to use stop work authority. Cox personnel continued to keep production online while pollution continued to occur for several hours.**
- **Failure to have up to date drawings on the facility. The inspectors noted that personnel could not provide BSEE approved As-Built drawings while on the facility.**
- **Facility may not have had adequate POB to deal with numerous production issues in the field.**

20. LIST THE ADDITIONAL INFORMATION:

- **Failure to maintain a flow safety valve (FSV) on the Methanol chemical tank caused an uncontrolled backflow/release of chemical and gas onto the platform.**
- **BSEE noted during the investigation that the ARO pumps were not grounded per manufacturer recommendations and ordered the pumps to be grounded properly to prevent electrical static build up from igniting hydrocarbon concentrations in a class 1 div 1 or div 2 area.**
- **BSEE noted during the investigation that several diaphragm pumps were not properly grounded and ordered the pumps to be grounded properly to prevent electrical static build up from igniting hydrocarbon concentrations in a class 1 div 1 or div 2 area.**

Cox took the following corrective action as a result of the incident:

- **Cox management reviewed operating procedures with platform personnel**

• Cox replaced Fuel Gas Scrubber with a new Fuel Scrubber and Filter with automatic fluid dumps.
• Cox replaced 2 ARO pneumatic pumps with 2 electric motor driven pumps.
• Cox properly installed the appropriate sized flanges on remaining ARO pumps
• Cox drained instrument gas lines of condensate
• Cox replaced 3 failed valves on the overboard water discharge line
• Cox cleaned out several produced water processing vessels to free the vessels of sand and debris
• Cox cleaned out the deck drain system to reduce hydrocarbon build up in skid pans
• Cox cleaned oil off deck and tanks.
• Cox cleaned out produced water vessels VPSV's
• Cox tested all safety devices on the Produced water handling system.

OFFSITE/ ONSITE INVESTIGATOR:
1. 3-20-2019 and 3-21-2019 - Eric Neal – Lead Inspector – Onsite
2. 3-20-2019 and 3-21-2019 – Jacob Tullos – Inspector – Onsite
3. 3-20-2019 and 3-21-2019 – Nesbit Kelly – Inspector – Onsite
4. 3-20-2019, 3-21-2019, 4-12-2019 – Gerald Taylor – Accident Investigator – Offsite and Onsite
5. 3-21-2019 – Charles Arnold – OII chief – Onsite

ENFORCEMENT ACTIONS:

1. G-110 DOES THE LESSEE PERFORM ALL OPERATIONS IN A SAFE AND WORKMANLIKEMANNER AND PROVIDE FOR THE PRESERVATION AND CONSERVATION OF PROPERTY AND THE ENVIRONMENT? Authority: 30 CFR 250.107(a) Enforcement Action: S 30 CFR 250.401(e) INSPECTION
a. On March 20, 2019, personnel failed to exercise Stop Work Authority (SWA) at WD 73 AD during extended abnormal operating conditions resulting in the loss of control of the production process resulting in a loss of containment from 2 discharge points. Production continued until BSEE Inspectors requested that the platform be shut in.
b. Personnel failed to properly install pumps PBA-A107 and PBA-A108 which lead to a release of hydrocarbons into the GOM.
c. Personnel failed to re-latch the VPSV on ABH-A001.

2. G-111 DOES THE LESSEE MAINTAIN ALL EQUIPMENT IN A SAFE CONDITION TO PROVIDE FOR THE PROTECTION OF THE LEASE AND ASSOCIATED FACILITIES? Authority: 30 CFR 250.107 Enforcement Action: S 30 CFR 250.401(e)
a. Lessee failed to maintain the MAM-A001 (Free Water Knockout), ABM-001 (Wemco Flotation Cell), MBD-A204 (LP Separator), and MBJ-A002 (Surge Tank). These vessels contained levels of sand and debris that affected the flow of fluids through oil and water legs to downstream components. The sand and debris cut out valves, trims and seats which caused a failure to isolate the discharge of hydrocarbon fluids into the GOM.
b. On March 21, 2019, a BSEE Investigator observed on the WD 73 A Platform, liquid methanol and hydrocarbon gas blowing from the top of the sight glass vent into the atmosphere. The Lessee failed to maintain the FSV (check valve) which allowed backflow into the methanol transporter tank.
c. During the BSEE Inspectors walk through on March 21, 2019, several ARO (Non-Metallic) pneumatic pumps used for pumping hydrocarbons were found not to be grounded per manufacture's requirements.
d. During the BSEE Inspectors walk through on March 21, 2019, BSEE inspectors identified pumps PBA-D001, PBA-D002, PBH-A014, and PBH-A015 to not be grounded. The bonding cables were installed but not connected on each end.

3. G-112 DOES THE LESSEE PROVIDE FOR THE SAFETY OF ALL PERSONNEL AND TAKE ALL NECESSARY PRECAUTIONS TO CORRECT AND REMOVE ANY HAZARDOUS OIL AND GAS ACCUMULATION OR OTHER HEALTH, SAFETY, OR FIRE HAZARDS? Authority: 30 CFR 250.107 Enforcement Action:

S 30 CFR 250.401(e)
a. On March 20, 2019, BSEE inspectors observed a hazardous accumulation of hydrocarbons in MBM-A111 and A112's (Skimmer) containment skid and ABM-002's and ABM-003's (Flotation Units) respective containment skids.
b. On March 21, 2019, BSEE inspectors observed a hazardous accumulation of hydrocarbons on top of the sump tank ABH-A001.
c. On March 21, 2019, Investigators on WD 73 D platform found the containment under the helicopter fuel holding tank full of water and fuel. The operators were immediately notified and a portable pump was used to remove the fluids from the containment.

4. E-102 IS THE FACILITY EQUIPPED WITH CURBS, GUTTERS, DRIP PANS, AND DRAINS NECESSARY TO COLLECT ALL CONTAMINANTS NOT AUTHORIZED FOR DISCHARGE? Authority: 30 CFR 250.300(b)(4) Enforcement Action: C
a. The BSEE investigation of WD 73 AD revealed that containment drains on WD 73 A did not prevent fluids from spilling onto the deck areas or into the offshore waters. On March 20, 2019, the containment under the MBM-6000 (Water Skimmer) was full of oil. There were indications of spillage onto the grating. Inspectors observed a portable pump with the suction hose inside the containment while the discharge hose was routed to a lower cellar deck drain that flows to the ABH-A002 (overboard water Deck Drain Sump).

5. E-103 - DOES THE SUMP SYSTEM AUTOMATICALLY MAINTAIN THE OIL AT A LEVEL SUFFICIENT TO PREVENT DISCHARGE OF OIL INTO OFFSHORE WATERS? (C)
a. On March 21st 2019, BSEE inspectors observed discharges from the Sump Tank overboard water discharge line and overflow out the top of the Sump Tank (ABH-A001).

6. G115 - ARE OPERATIONS CONDUCTED IN ACCORDANCE WITH APPROVED APPLICATIONS? (W)
a. Lessee did not have approved As-Built drawings for WD-73 available on the platform per 30CFR 250.842.

7. P104 – IS THE PLATFORM PROTECTED WITH A BASIC AND ANCILLARY SURFACE SAFETY SYSTEM DESIGNED, ANALYZED, INSTALLED, TESTED, AND MAINTAINED IN OPERATING CONDITION IN ACCORDANCE WITH API RP 14C? (S)
a. On March 20, 2019, operators failed to maintain the MBF-A016 (Gas Scrubber), in such a way to prevent excessive fluids in the instrumentation supply which caused erratic function of essential safety devices, resulting in failure to detect abnormal operating conditions.

8. P103 (S) - On 3/20/19, three BSEE inspectors witnessed the PSHL on the Water Skimmer (MBM-A112) was bypassed. BSEE inspectors discovered that the PSHL device had sensed an abnormal condition at the panel however, SAFE Chart required shut in functions had not been executed. The failure to perform the actions that the safety devices would have performed had they not been in bypass, may have prevented further pollution. Additionally, BSEE inspectors witnessed there were personnel near the component, however, they were not monitoring the bypassed devices, but performing work related to adjusting backpressure and oil cleanup. Therefore, these operators were not able to view all relevant essential operating conditions as necessary to take shut in actions.

9. P103 (S) - On 3/20/19, three BSEE inspectors witnessed the PSHL on the Water skimmer (MBM-A111) was bypassed for the purpose of troubleshooting abnormal operating conditions. BSEE inspectors witnessed the PSHL device had sensed an abnormal condition at the panel however, SAFE Chart required shut in functions had not been executed. The failure to perform the actions that the safety devices would have performed had they not been in bypass, may have prevented further pollution. Additionally, BSEE inspectors witnessed there were personnel near the component, however, they were not

monitoring the bypassed devices, but performing work related to adjusting backpressure and oil cleanup. Therefore, these operators were not able to view all relevant essential operating conditions as necessary to take shut in actions.

10. P103 (S) - On 3/20/19, three BSEE inspectors witnessed the LSH on the Water skimmer (MBM-A112) was bypassed for the purpose of troubleshooting abnormal operating conditions. BSEE inspectors witnessed the LSH device had sensed an abnormal condition at the panel however, SAFE Chart required shut in functions had not been executed. The failure to perform the actions that the safety devices would have performed had they not been in bypass, may have prevented further pollution. Additionally, BSEE inspectors witnessed there were personnel near the component, however, they were not monitoring the bypassed devices, but performing work related to adjusting backpressure and oil cleanup. Therefore, these operators were not able to view all relevant essential operating conditions as necessary to take shut in actions.

11. P103 (S) - On 3/20/19, three BSEE inspectors witnessed the LSH on the Water skimmer (MBM-A111) was bypassed for the purpose of troubleshooting abnormal operating conditions. BSEE inspectors witnessed the LSH device had sensed an abnormal condition at the panel however, SAFE Chart required shut in functions had not been executed. The failure to perform the actions that the safety devices would have performed had they not been in bypass, may have prevented further pollution. Additionally, BSEE inspectors witnessed there were personnel near the component, however, they were not monitoring the bypassed devices, but performing work related to adjusting backpressure and oil cleanup. Therefore, these operators were not able to view all relevant essential operating conditions as necessary to take shut in actions.

12. P103 (S) - On 3/20/19, three BSEE inspectors witnessed the LSL1 on the Water skimmer (MBM-A112) was bypassed for the purpose of troubleshooting abnormal operating conditions. Additionally, BSEE inspectors witnessed there were personnel near the component, however, they were not monitoring the bypassed devices, but performing work related to adjusting backpressure and oil cleanup. Therefore, these operators were not able to view all relevant essential operating conditions as necessary to take shut in actions.

13. P103 (S) - On 3/20/19, three BSEE inspectors witnessed the LSL2 on the Water skimmer (MBM-A112) was bypassed for the purpose of troubleshooting abnormal operating conditions. BSEE inspectors witnessed the LSL2 device had sensed an abnormal condition at the panel however, SAFE Chart required shut in functions had not been executed. The failure to perform the actions that the safety devices would have performed had they not been in bypass, may have prevented further pollution. Additionally, BSEE inspectors witnessed there were personnel near the component, however, they were not monitoring the bypassed devices, but performing work related to adjusting backpressure and oil cleanup Therefore, these operators were not able to view all relevant essential operating conditions as necessary to take shut in actions.

14. E100 (S) - While flying by WD 73-A/D unauthorized discharged of pollutants into offshore waters was observed emanating from the facility. The sheen was 6 miles long and 0.7 miles wide.

21. PROPERTY DAMAGED: NATURE OF DAMAGE:

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

BSEE New Orleans District recommends that OSM review Cox's operations related to the following items:

1. On 20 March 2019, personnel isolated and repaired/ replaced pumps on the AMB-001 (Flotation Cell); Isolated valves on the MAM-A001 (Free Water Knockout), MBD-A201 (LP Separator). Personnel could not provide a Lock Out/Tag Out (LOTO) document when requested by the BSEE Inspector.
2. On 20 March 2019, personnel failed to perform a Job Safety Analysis (JSA) before replacing a skimmer pump. Personnel were unable to provide a JSA referencing the specific task while the inspectors were on the platform.

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

See Section 20: Additional Information/Enforcement Actions

25. DATE OF ONSITE INVESTIGATION:

20-MAR-2019

26. INVESTIGATION TEAM MEMBERS:

Eric Neal / Gerald Taylor / Nesbit Kelley / Jacob Tullos / Charles Arnold /

28. ACCIDENT CLASSIFICATION:

29. ACCIDENT INVESTIGATION PANEL FORMED: **NO**

OCS REPORT:

30. DISTRICT SUPERVISOR:

David Trocquet

27. OPERATOR REPORT ON FILE:

APPROVED DATE: **05-JUN-2019**