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

ACCIDENT INVESTIGATION REPORT

1. OCCURRED
   DATE: **08-JUL-2012** TIME: **0600** HOURS

2. OPERATOR: **ANKOR Energy LLC**
   REPRESENTATIVE:
   TELEPHONE:
   CONTRACTOR:
   REPRESENTATIVE:
   TELEPHONE:

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

4. LEASE: **00830**
   AREA: **SS** LATITUDE:
   BLOCK: **229** LONGITUDE:

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

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

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

9. WATER DEPTH: **130** FT.

10. DISTANCE FROM SHORE: **62** MI.

11. WIND DIRECTION: **SW**
    SPEED: **5** M.P.H.

12. CURRENT DIRECTION: **NE**
    SPEED: **2** M.P.H.

13. SEA STATE: **2** FT.

17. INVESTIGATION FINDINGS:

At 0600 hours on 8 July 2012, the facility operator, Ankor Energy LLC (Ankor), began experiencing a production system upset that resulted in pollution of the Gulf of Mexico waters. 16 barrels of oil was observed being discharged from the Floatation Cell's (ABM 1000) overboard water discharge line. Ankor operators immediately shut the overboard water valve on ABM 1000 and started recirculating the overboard fluid back into the production system. A third party investigation determined that the Fisher 1051 Actuator on Heater Treater (NBK 1000) produced water dump line was not operating correctly. This caused oil to be discharged through the 4 inch produced water dump line to ABM 1000. At the time of the incident, the platform was not operating normally. Maintenance was being performed on departing pipeline KAH 4000 and the platform was only producing 400 barrels of oil and 670 barrels of water per day (normal operations are 1,945 barrels of oil and 1,754 barrels of water per day). With the platform operating below normal parameters, the field operators isolated all inlet and outlet valves on ABM 1000 to perform preventive maintenance. Once the preventive maintenance was completed, field operators filled the vessel with salt water to prepare it for normal operation. With all isolation valves and safety devices placed in service, the field operators shut down operations for the evening. At some point during the evening, the produced water dump valve on NBK 1000 failed in the open position sending oil to ABM 1000. ABM 1000 could not handle the volumes being sent and discharged oil out of the produced water dump line into the Gulf of Mexico. A third party investigation found two contributing causes of the pollution incident. The first being poor installation and system design of the KTEK Level Controller to the Fisher 1051 actuator. The second cause involves poor operating practices. The equipment was not monitored throughout the startup process. Furthermore, poorcommunication was exercised in reference to the design.

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

A third party investigation determined that the Fisher 1051 Actuator on the produced water dump was not operating correctly. The actuator was not fully closing when receiving the pneumatic signal from the KTEC Level Controller.

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

A third party investigation found two contributing causes of the pollution incident. The first being poor installation and system design of the KTEK Level Controller to the Fisher 1051 actuator. The second cause involves poor operating practices. The equipment was not monitored throughout the startup process. Furthermore, poor communication was exercised in reference to the design.

20. LIST THE ADDITIONAL INFORMATION:

n/a

21. PROPERTY DAMAGED: NATURE OF DAMAGE:

None **N/A**

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Houma District has no recommendations for the Regional Office.

After the third party investigation, Ankor's recommendations are "proper consideration should be observed in installation of all control devices. The pneumatic output of the KTEK Level Controller should send a signal to a relay (such as a Versa B-valve or 4150 type controller or similar controller). This would provide a "block-and-bleed" type configuration to signal the Fisher 1051 actuator to shift (open / close). Furthermore, operators must be re-trained in proper operating procedures concerning system start-up and communication of potential issues".

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 this lease and associated facilities? At time of inspection, it was pointed out that the water dump valve on Heater Treater NBK 1000 hung open and dumped water and oil to the Floatation Cell ABM 1000, which caused pollutants of offshore waters.

Corrective action:

A third party investigation was conducted on July 10, 2012. The findings of the investigation indicated that there was a poor design and installation of the KTEK Level Controller to the Fisher 1051 Actuator which prevented the valve from operating properly. The level control system was modified and tested repeatedly to ensure proper operation on July 8 prior to placing the facility back on production. In Addition, Ankor has installed a second P35 Level Controller which will be used as a redundant safety alarm.

G-116: Are operations conducted in accordance with approved plans? At time of inspection, it was identified that the lessee was not operating according to approved plans. The bypass valve from the Heater Treater NBK 1000 water outlet to the Floatation Cell ABM 1000 was open, which bypassed the Gun Barrel Tank ABJ 3501.

Corrective Action:

During normal operations, the Gun Barrel Tank is not utilized and the vessel is bypassed as necessary. During abnormal operating conditions, such as production upsets, the Gun Barrel Tank is utilized to return to normal conditions.

25. DATE OF ONSITE INVESTIGATION:

11-JUL-2012

26. ONSITE TEAM MEMBERS:

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

OCS REPORT:

Tim McGraw / Doug Sevin /

30. DISTRICT SUPERVISOR:

Bryan A. Domangue

APPROVED DATE: **04-OCT-2012**

POLLUTION ATTACHMENT

1. VOLUME: GAL **16.45** BBL

8800 YARDS LONG X **880** YARDS WIDE

APPEARANCE: **SILVERY SHEEN**

2. TYPE OF HYDROCARBON RELEASED:
- [X] OIL
- [ ] DIESEL
- [ ] CONDENSATE
- [ ] HYDRAULIC
- [ ] NATURAL GAS
- [ ] OTHER _____

3. SOURCE OF HYDROCARBON RELEASED: **Floatation Cell ABM 1000**

4. WERE SAMPLES TAKEN? **NO**

5. WAS CLEANUP EQUIPMENT ACTIVATED? **NO**

IF SO, TYPE:
- [ ] SKIMMER
- [ ] CONTAINMENT BOOM
- [ ] ABSORPTION EQUIPMENT
- [ ] DISPERSANTS
- [ ] OTHER _____

6. ESTIMATED RECOVERY: **0** GAL BBL

7. RESPONSE TIME: **0** HOURS

8. IS THE POLLUTION IN THE PROXIMITY OF AN ENVIRONMENTALLY SENSITIVE AREA (CLASS I)? **NO**

9. HAS REGION OIL SPILL TASK FORCE BEEN NOTIFIED? **NO**

10. CONTACTED SHORE: **NO** IF YES, WHERE:

11. WERE ANY LIVE ANIMALS OBSERVED NEAR: **NO**

12. WERE ANY OILED OR DEAD ANIMALS OBSERVED NEAR SPILL: **NO**