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: 21-SEP-2015  TIME: 1747 HOURS

2. OPERATOR: Anadarko Petroleum Corporation
   REPRESENTATIVE:  
   TELEPHONE:  
   CONTRACTOR:  
   REPRESENTATIVE:  
   TELEPHONE:  
   DAMAGED/DISABLED SAFETY SYS.
   TELEPHONE:
   INCIDENT >$25K
   TELEPHONE:
   H2S/15MIN./20PPM
   TELEPHONE:
   CONTRACTOR:
   REQUIRED MUSTER
   TELEPHONE:
   SHUTDOWN FROM GAS RELEASE
   TELEPHONE:
   CRANE
   OTHER LIFTING DEVICE winch

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

4. LEASE: G09184
   AREA: EB  LATITUDE: 27.353556
   BLOCK: 643  LONGITUDE: -94.625306

5. PLATFORM: A-Boomvang Spar
   RIG NAME:  
   PRODUCTION
   DRILLING
   WORKOVER
   COMPLETION
   HELICOPTER
   MOTOR VESSEL
   PIPELINE SEGMENT NO.  
   construction

6. ACTIVITY:
   EXPLORATION(POE)
   DEVELOPMENT/PRODUCTION
   EXTERNAL DAMAGE
   EQUIPMENT FAILURE
   HUMAN ERROR
   SLIP/TRIP/FALL
   WEATHER RELATED
   LEAK
   OVERBOARD DRILLING FLUID
   OVERHEAD DRILLING FLUID
   OTHER

7. TYPE:
   HISTORIC INJURY
   REQUIRED EVACUATION
   LTA (1-3 days)
   LTA (>3 days)
   RW/JT (1-3 days)
   RW/JT (>3 days)
   Other Injury
   HISTORIC BLOWOUT
   UNDERGROUND
   SURFACE
   DEVERTER
   SURFACE EQUIPMENT FAILURE OR PROCEDURES
   COLLISION HISTORIC >$25K <=$25K

8. CAUSE:
   EQUIPMENT FAILURE
   HUMAN ERROR
   EXTERNAL DAMAGE
   SLIP/TRIP/FALL
   WEATHER RELATED
   LEAK
   OVERBOARD DRILLING FLUID
   OTHER
   umbilical damage-Abandonment

9. WATER DEPTH: 3650 FT.

10. DISTANCE FROM SHORE: 113 MI.

11. WIND DIRECTION: ENE
   SPEED: 14 M.P.H.

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

13. SEA STATE:  FT.

MMS - FORM 2010
EV2010R
24-NOV-2015
17. INVESTIGATION FINDINGS:

On 21-Sept-2015 at approximately 1745 hours, a chemical release occurred at Anadarko Petroleum's East Breaks 643 Boomvang SPAR; Lease OCS-G-09184. While lowering an umbilical to the sea floor during abandonment operations, the umbilical hung on the hard tank umbilical guide. This resulted in a breach of the umbilical and release of approximately 41 barrels of methanol and ethylene glycol. Methanol and ethylene glycol protect against freezing, corrosion, microbiological degradation and is water soluble.

The umbilical was being lowered through a guide in the hard tank section of the Boomvang SPAR to the sea floor utilizing a Versabuild VB50-50 winch. The Versabuild VB50-50 winch was located on the SPAR topside. The lowering operation was being monitored by a Remotely Operated Vehicle (ROV), which was positioned at the bottom of the hard tank section of the SPAR at a depth of approximately 500'. During the lowering operation, the umbilical was observed via the ROV to quickly drop 10' to 15'. An "All Stop" was called to inspect the winch for damage. The winch was found to be operable and in safe condition. When the lowering operation resumed, a 10' to 15' breach in the umbilical was observed by the ROV below the umbilical pull head. The ROV observed three of eleven inner umbilical tubes had sustained damage and were leaking methanol and ethylene glycol.

The Lessee believes the umbilical became hung on the hard tank guide while being lowered with the Versabuild VB50-50 winch. The umbilical was equipped with centralizers to help guide it through the hard tank segmented tubes. Some of the centralizers are believed to have become stuck as a result of biological marine growth. It is also believed when the centralizers became stuck on the hard tank guide, it caused the pull head to lie over at an angle. The pull head then became stuck in the hard tank over the edge of a guide. This impact is thought to have cut the umbilical and three inner tubes.

The winch operator was unable to determine the umbilical (load) had become hung on the hard tank umbilical guides because the Versabuild VB50-50 winch was not equipped with a load indicator or tension monitoring system. The umbilical guides are subsurface and located within the hard tank of the SPAR, therefore visual confirmation was not possible with the ROV or by the winch operator. The ROV inspected the damaged umbilical when the pull head was laid on the seafloor and no fluid was observed to be leaking from the three parted tubes. Methanol and ethylene glycol are water soluble therefore no cleanup or recovery was possible. The umbilical was placed on the seafloor at 00:17 on 22-Sep-2015.

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

Biological marine growth caused the umbilical centralizers to become stuck on the hard tank umbilical guide. This caused the pull head to lie over at an angle. The impact is thought to have cut the umbilical and three inner tubes.

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

The umbilical guides are subsurface and located within the hard tank of the SPAR, therefore visual confirmation was not possible by the ROV or the winch operator. The Versabuild VB50-50 winch was not equipped with a weight indicator or tension monitoring system to alert the winch operator the umbilical (load) was not descending.

20. LIST THE ADDITIONAL INFORMATION:

Approximately 41 barrels of methanol and ethylene glycol were released. Methanol and ethylene glycol are water soluble therefore no cleanup or recovery was possible.

NATURE OF DAMAGE: Umbilical breach and chemical release occurred during abandonment operations.

ESTIMATED AMOUNT (TOTAL):

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Lake Jackson District has no recommendations to the region for this incident.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: NO

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION:

29-SEP-2015

26. ONSITE TEAM MEMBERS: Jacob Trevino / Mike Hankamer /

29. ACCIDENT INVESTIGATION PANEL FORMED: NO

OCS REPORT:

30. DISTRICT SUPERVISOR:

John McCarroll

APPROVED DATE: 21-NOV-2015
1. VOLUME: GAL 41 BBL
   YARDS LONG X YARDS WIDE
   APPEARANCE:

2. TYPE OF HYDROCARBON RELEASED:
   [ ] OIL
   [ ] DIESEL
   [ ] CONDENSATE
   [ ] HYDRAULIC
   [ ] NATURAL GAS
   [x] OTHER Methanol/HW525

3. SOURCE OF HYDROCARBON RELEASED: Umbilical damaged during abandonment operations.

4. WERE SAMPLES TAKEN? NO

5. WAS CLEANUP EQUIPMENT ACTIVATED? NO
   IF SO, TYPE:
   [ ] SKIMMER
   [ ] CONTAINMENT BOOM
   [ ] ABSORPTION EQUIPMENT
   [ ] DISPERSANTS
   [ ] OTHER

6. ESTIMATED RECOVERY: GAL BBL

7. RESPONSE TIME: 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