UNITED STATES DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE
GULF OF MEXICO REGION

ACCIDENT INVESTIGATION REPORT

1. OCCURRED
   DATE: **16-JAN-2010** TIME: **1300** HOURS

2. OPERATOR: **Apache Corporation**
   REPRESENTATIVE: **Brian Sinclair**
   TELEPHONE: **(337) 210-8524**
   CONTRACTOR: **Wood Group Production Services**
   REPRESENTATIVE: **Jim Strauss**
   TELEPHONE: **(985) 868-4116**

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

4. LEASE: **G02193**
   AREA: **MP** LATITUDE: **29.293869**
   BLOCK: **140** LONGITUDE: **-88.861681**

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

6. ACTIVITY:
- [ ] EXPLORATION(POE)
- [X] DEVELOPMENT/PRODUCTION (DOCD/POD)

7. TYPE:
- [ ] HISTORIC INJURY
- [X] REQUIRED EVACUATION **1**
- [ ] LTA (1-3 days)
- [ ] LTA (>3 days
- [ ] RW/JT (1-3 days)
- [ ] RW/JT (>3 days)
- [ ] Other Injury
- [ ] FATALITY
- [ ] POLLUTION
- [X] 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
- [ ] OTHER

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

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

9. WATER DEPTH: **165** FT.

10. DISTANCE FROM SHORE: **13** MI.

11. WIND DIRECTION: **S**
    SPEED: **20** M.P.H.

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

13. SEA STATE: FT.

17. INVESTIGATION FINDINGS:

While performing Air Arc Gouging (AAG) to remove an old crane gearbox, third party Crane Mechanics inadvertently rigged up a gas line instead of an air line to the AAG. The fuel gas line was not marked, properly isolated and rendered inert before performing the hot work operation. As a result, sparks ignited the fuel gas causing a flash fire that burned one Crane Mechanic's face and neck. The fire was extinguished by the Fire Watch utilizing a 30 lb fire extinguisher. Improper Job Safety Analysis (JSA) and Hot Work planning contributed to the incident. The Injured Person (IP) was evacuated for medical treatment and released.

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

The Crane Mechanics used fuel gas instead of air for AAG, resulting in the fuel gas being ignited from sparks during the hot work operation.

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

1) The Operator did not properly walk out the job with the Crane Mechanics.
2) The JSA was not properly planned, since it did not identify the proper air connections, the fuel gas line was not marked, properly isolated and rendered inert before performing the hot work operation.
3) The JSA and Hot Work Permit stated that fire tarps were to be used on the top level, but there was no designated monitor should any hot slag, sparks or flammable debris land on the flowing wells in the well bay below.

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED: NATURE OF DAMAGE:

N/A **N/A**

ESTIMATED AMOUNT (TOTAL): **$**

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The MMS New Orleans District makes no recommendations to the MMS Regional Office of Safety Management (OSM).

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

Notification of Incident of Noncompliance G-110 - The JSA was not properly planned. The Operator did not properly walk-thru the job specifics with the crane mechanics to ensure the job would be performed safely. The JSA did not identify the proper air connections and the isolation of the fuel gas supply line.

Notification of Incident of Noncompliance G-112 - The Operator did not provide for the safety of all personnel and facilities. Third party contractors performed connections for AAG to a welding machine and an unmarked 1-inch platform fuel gas supply line, causing a flash fire that injured the Crane Mechanic. Before initiating hot work operations, the Operator should have properly isolated and rendered inert the fuel gas line containing flammable gas. The Operator did not designate a second Fire Watch for the hot work operation being performed approximately 8 feet from open grating above the well bay. Although the JSA & Hot Work Permit stated there were fire tarps on the top level, no one was designated to monitor should any hot slag, sparks or flammable debris landed on the flowing wells in the well bay below.

All of these violations posed an immediate danger to the entire facility and personnel, that resulting in the fire and injury to the Crane Mechanic.

25. DATE OF ONSITE INVESTIGATION:

22-JAN-2010

26. ONSITE TEAM MEMBERS:

Kevin Sterling / . /

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

OCS REPORT:

30. DISTRICT SUPERVISOR:

David J. Trocquet

APPROVED

DATE: **06-APR-2010**

FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **Sparks during hot work operation.**

2. TYPE OF FUEL:
- [X] GAS
- [ ] OIL
- [ ] DIESEL
- [ ] CONDENSATE
- [ ] HYDRAULIC
- [ ] OTHER

3. FUEL SOURCE: **Fuel gas supply line.**

4. WERE PRECAUTIONS OR ACTIONS TAKEN TO ISOLATE KNOWN SOURCES OF IGNITION PRIOR TO THE ACCIDENT ? **NO**

5. TYPE OF FIREFIGHTING EQUIPMENT UTILIZED:
- [X] HANDHELD
- [ ] WHEELED UNIT
- [ ] FIXED CHEMICAL
- [ ] FIXED WATER
- [ ] NONE
- [ ] OTHER