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

ACCIDENT INVESTIGATION REPORT

1. OCCURRED

   DATE: **27-APR-2006** TIME: **0530** HOURS

2. OPERATOR: **Chevron U.S.A. Inc.**

   REPRESENTATIVE: **Danny LaCour**

   TELEPHONE: **(337) 989-3985**

3. LEASE: **G02323**

   AREA: **EI** LATITUDE:

   BLOCK: **360** LONGITUDE:

4. PLATFORM: **C**

   RIG NAME:

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

6. TYPE:
   - [X] FIRE
   - [ ] EXPLOSION
   - [ ] BLOWOUT
   - [ ] COLLISION
   - [ ] INJURY NO. _____
   - [ ] FATALITY NO. _____
   - [ ] POLLUTION
   - [ ] OTHER _____

7. OPERATION:
   - [X] PRODUCTION
   - [ ] DRILLING
   - [ ] WORKOVER
   - [ ] COMPLETION
   - [ ] 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: **307** FT.

10. DISTANCE FROM SHORE: **102** MI.

11. WIND DIRECTION: **SE**

    SPEED: **2** M.P.H.

12. CURRENT DIRECTION: **E**

    SPEED: **1** M.P.H.

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

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

    Lonnie Guidry

CONTRACTOR: **Chevron U.S.A. Inc.**

CONTRACTOR REPRESENTATIVE/ SUPERVISOR ON SITE AT TIME OF INCIDENT:

Danny Gautreaux

17. DESCRIBE IN SEQUENCE HOW ACCIDENT HAPPENED:

Time Line of Events:

- At approximately 05:30 am, a contract rigger exited the galley east door and proceeded around the west side of the quarters looking for co-workers.

- When rounding the corner of the quarters, he observed smoke coming from the front of the generator building.

- The contract rigger approached the area where the smoke was coming from to determine the source of the smoke. Upon determining that the fire was apparently in the generator room, he immediately returned to the galley to alert all platform personnel that there was a fire.

- The contract rigger proceeded back to where he saw the smoke next to the generator building and grabbed a 30 lb handheld chemical extinguisher.

- Two more contractors proceeded to the area of where the smoke was seen. While passing by one of the firewater reels located on the top deck above the fire, the contractors grabbed the hose and began to spray the fire.

- The contractors used a combination of dry chemical and firewater to spray on the flames coming from penetrations in the solid decking.

- The contractors quickly determined that the fire could not be extinguished from the top deck since the source was below the solid deck.

- Two of the contractors proceeded downstairs to locate and attempt to extinguish the fire, while the third contractor went back to the quarters to ensure that the remaining personnel were aware of the severity of the situation.

- The third contractor proceeded to the second deck and was followed by 2 Chevron platform operators. They observed the contractors spraying water on piping and flames. Flames were approximately 8-10 feet in length and encompassed the spacing between the overhead piping and underside of the top deck.

- Water spray from one of the main fire monitors was extinguishing burning debris but did not appear to be extinguishing the source of the fire.

- Chevron platform operators activated the platform ESD shutting in all production process equipment.

- The construction contractors heard the ESD trip and observed that the water pressure on the fire hose had dropped to zero.

- A Chevron platform operator informed members of the construction crew that the fire water pressure would return once the emergency generator was placed on-line.

- The fire water pump did not come online when the emergency generator was placed online.

- One contractor grabbed a 30 lb portable extinguisher and proceeded up the adjacent stairway landing onto the production vessel deck and sprayed dry chemical onto the fire from approximately 15 feet.

- The fire began to subside immediately and was extinguished.

- One of the contractors went back upstairs to the escape capsule muster station to announce that the fire had been extinguished.

**- A contractor was designated to maintain a fire-watch. He proceeded to the lower deck with a fully charged extinguisher to monitor the area.
Chevron operators then returned to the living quarters and began the notification process.**

- Two of the contractors remained with the fire-watch, monitoring the area for approximately one hour.

**- Chevron operators gave the all clear for all employees to leave the area.
The entire event lasted for approximately 3 to 5 minutes.**

- At the time of the incident there were 12 platform personnel onboard.

- Upon initial notification of the fire, the galley crew activated the platform alarm system, cleared quarters, and began mustering personnel at the escape capsule.

- The construction foreman grabbed 2 portable radios, and contacted the field boat informing them of the platform fire. The boat arrived on location within 7-8 minutes.

- Prior to the fire all personnel on the platform had received orientation on the location of all firefighting equipment, life saving equipment, and emergency procedures. This contributed to the orderly response for extinguishing the fire and preparation to evacuating the platform.

Additional Findings

Hurricane Rita destroyed the firewater pump on this platform. During hurricane repairs, a temporary fire water pump was installed. Unknown to the Chevron operator, the temporary fire water pump was not hooked up to the emergency power bus. The pump was hooked directly to the platform main bus which was lost when the turbine generators were shut down by activating the ESD.

Once the insulation had been removed, the fuel gas piping tube was visually determined to be extremely deteriorated by corrosion and the 90 degree turns which had originally been insulated with cotton fiber were in the advanced stages of deterioration due to corrosion.

A tripped breaker indicated that the ignition source was from a faulty junction box located next to the fuel gas piping where a heat trace tape was connected.

A combination of platform lighting and heat trace tape had been improperly installed on the same circuit.

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

A gas leak that had developed in the 2 inch fuel gas piping that supplies fuel to the turbine generator was ignited by an apparent faulty junction box located next to the fuel gas piping where a heat trace tape was connected.

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

The gas source leak originated from under the original permanent fitted piping

insulation. The leak in the fuel gas piping apparently developed due to excessive deterioration of the piping and 90 degree ells. Excessive corrosion and deterioration of the fuel gas piping is credited primarily to the original permanent insulation.

The existing breaker did not provide the required protection for the heat trace tape as per NEC article 427 Fixed Electrical Heating Equipment for Pipelines and Vessels.

21. PROPERTY DAMAGED:

Two (2) inch fuel gas piping, insulation, and structural paint.

NATURE OF DAMAGE:

Corroded and burned

ESTIMATED AMOUNT (TOTAL): **$50,000**

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

Chevron recommends the following:
Develop a standard setup for temporary generators and identify issues associated with temporary generator hook-ups to include TSE/ESD, 30 minute firewater run time and shunt trip capability for gas detectors in generator and MCC building. Ensure that insulated piping is identified and inspected during topside erosion/corrosion surveys.
Place insulated piping accompanied by heat trace tape up in the priority for baseline inspections on erosion/corrosion program.
Do not combine heat trace tape and lighting circuit without proper breaker protection and identify similar hook-ups GOM wide and correct.
MMS recommends that a Safety Alert identifying the potential problems associated with excessive corrosion of piping and ells due to insulation be issued. The Safety Alert should address that insulated piping accompanied by heat trace tape should be installed in accordance with the requirements outlined in NEC article 427-Fixed Electrical Heating Equipment for Pipelines and Vessels. Also, the Safety Alert should advise the operators that testing of catalytic heating devices over the past several years by the Factory Mutual System, which is a test laboratory similar to Underwriters Laboratory has verified that catalytic heating devices are approved for use only in Class 1, Division 2, Group D areas.

23. POSSIBLE OCS VIOLATIONS RELATED TO ACCIDENT: **NO**

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

25. DATE OF ONSITE INVESTIGATION:

05-MAY-2006

26. ONSITE TEAM MEMBERS:

Doug Frerich / Leo Dartez /

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

OCS REPORT:

30. DISTRICT SUPERVISOR:

Elliott Smith

APPROVED

DATE: **26-JUN-2006**

FIRE/EXPLOSION ATTACHMENT

1. SOURCE OF IGNITION: **Heat trace tape junction box**

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

3. FUEL SOURCE: **Two (2) inch fuel gas piping feeding the turbine generator**

4. WERE PRECAUTIONS OR ACTIONS TAKEN TO ISOLATE KNOWN SOURCES OF IGNITION PRIOR TO THE ACCIDENT ? **YES**

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