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: **10-AUG-2012** TIME: **1000** HOURS

2. OPERATOR: **Energy Resource Technology GOM, I**
   REPRESENTATIVE:
   TELEPHONE:
   CONTRACTOR: **Fluid Crane and Construction**
   REPRESENTATIVE:
   TELEPHONE:

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

4. LEASE: **G15161**
   AREA: **EC** LATITUDE:
   BLOCK: **381** LONGITUDE:

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)
     - [x] LTA (>3 days 1
     - [ ] RW/JT (1-3 days)
     - [ ] RW/JT (>3 days)
     - [ ] Other Injury
   - [ ] FATALITY
   - [ ] POLLUTION
   - [ ] FIRE
   - [ ] EXPLOSION
   - LWC
     - [ ] HISTORIC BLOWOUT
     - [ ] UNDERGROUND
     - [ ] SURFACE
     - [ ] DEVERTER
     - [ ] SURFACE EQUIPMENT FAILURE OR PROCEDURES
   - COLLISION [ ] HISTORIC [ ] >$25K [ ] <=$25K
   - [ ] STRUCTURAL DAMAGE
   - [x] CRANE
   - [ ] OTHER LIFTING DEVICE
   - [ ] DAMAGED/DISABLED SAFETY SYS.
   - [ ] INCIDENT >$25K
   - [ ] H2S/15MIN./20PPM
   - [ ] REQUIRED MUSTER
   - [ ] SHUTDOWN FROM GAS RELEASE
   - [x] OTHER **Arm Injury due to Fall**

6. OPERATION:
   - [x] PRODUCTION
   - [ ] DRILLING
   - [ ] WORKOVER
   - [ ] COMPLETION
   - [ ] HELICOPTER
   - [ ] MOTOR VESSEL
   - [ ] PIPELINE SEGMENT NO.
   - [x] OTHER **Construction Rental Crane Rig-Up**

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

9. WATER DEPTH: **446** FT.

10. DISTANCE FROM SHORE: **115** MI.

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

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

13. SEA STATE: FT.

17. INVESTIGATION FINDINGS:

On August 10, 2012, an accident occurred on ERT's EC-381-A platform while a third party "rig-up" crew was assembling a FC-150 ton "Bullfrog" crane (i.e. rental crane). The rental crane was needed for the purpose of making several large and extremely heavy lifts, incapable of being lifted by the platform crane. Due to the size and weight of the rental crane components as well as the limited lifting capacity of the platform crane; the rental crane which is typically sent to the job site in five individual sections was mobilized in six sections. In some cases the rental crane's boom is mobilized to the job site in one section, but for this job it was sent out in two sections (i.e. the tip and mid-section were adjoined and the heel section was separate); resulting in a change to step 8 of the "Rig-up Procedure for FC-150". The rig-up procedure stipulated to lift the boom in (one piece) with the platform crane and pin the butt section to the crane base.

At the time of the incident, the heel section had already been attached to the base of the crane and the rig-up crew was in the process of aligning the tip/mid-section with the heel section in order to pin the two sections together. During this process, the crew experienced problems aligning the two sections, so the decision was made to utilize a chain hoisting/lifting device (i.e. Come-Along) to assist with the alignment. The ratcheting portion of the Come-Along was secured to the heel section and the hoist chain was haphazardly attached to a pad eye on the mid-section. As tension was applied to the hoist chain the chain slipped off of the pad eye causing the tip/mid-section to unexpectedly move approximately three feet, resulting in the Injured Person (IP) losing his balance and falling between the mid-section and the heel section. As the IP fell, his right arm became wedged between the boom lacing members, resulting in a compound fracture. The IP was assisted down from the elevated work area, given first aid for bleeding and evacuated to Terrebonne General Hospital in Houma, Louisiana shortly thereafter.

According to statements presented to BSEE representatives, the IPs safety harness lanyard was initially attached to the stationary heel section then IP relocated his lanyard to the mid-section which was suspended by the platform crane. Furthermore, it was reported that two witnesses asked the IP to relocate his lanyard to the heel section, but the IP did not adhere to the warning and no one utilized their Stop Work Authority (SWA) to avert the unsafe act. The investigation also revealed that the IP received Fall Protection User/Rescue training on July 23, 2012 and Qualified Offshore Crane Operator/Rigger training on November 18, 2011.

The Job Safety Analysis (JSA) presented to BSEE was generic in nature. Although the JSA mentioned some of the typical potential hazards (e.g. pinch points, slips, trips, falls, tag lines and communications) associated with the task of "Pinning the boom and Bridle", it did not cover a very critical hazard, specifically, working with heavy equipment at elevated heights above 10 feet which required personnel to utilize safety harness. Therefore, the mitigation controls (e.g. proper anchor points and safe rigging practices, etc.) were not covered on the JSA. In addition, since the boom was sent to the job site in two sections, this constituted a change in the rig-up procedure, but this change was not captured on the JSA. Furthermore, when the boom sections would not align and the crew decided to utilize a Come-Along; the JSA was not revised to incorporate important task specific potential hazards and associated mitigation controls.

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

The IPs personnel safety harness lanyard was attached to the non-stationary crane boom

which moved unexpectedly when the Come-Along's chain slipped from its anchor point during the alignment process, resulting in the IP losing his balance and falling between the boom sections, injuring his right arm.

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

*** Human error by the IP.**
*** Personnel had to position themselves in harm's way to align the boom sections. No safe alternate plan was in place to mitigate the risk of injury to personnel.**
*** The JSA presented to the BSEE representative was deficient in terms of detail. Although the JSA mentioned some of the typical potential hazards (e.g. pinch points, slips, trip falls, tag lines and communications) associated with the task of "Pinning the boom and Bridle", it did not cover a very critical hazard, specifically, working with heavy equipment at elevated heights above 10 feet which required personnel to utilize safety harness. Therefore, the mitigation controls (e.g. proper anchor points and safe rigging practices, etc.) were not covered on the JSA.**
*** Personnel deviated from step 8 of the FC-150 rig up procedure and also utilized a Come-Along to aid in the boom alignment process, but the crew did not acknowledge such changes in the section titled "Risk Assessment" on the JSA, therefore important task specific potential hazards and associated mitigation controls were not covered on the JSA.**
*** Failure to exercise Stop Work Authority (SWA) procedures when the crew experienced problems aligning the two boom sections and then decided to utilize a Come-Along to assist with alignment and when two crew members recognized that the IPs safety harness lanyard was attached to a non-stationary anchor point, allowed unsafe actions to continue and critical warning signs leading up to the accident to be overlooked.**

20. LIST THE ADDITIONAL INFORMATION:

21. PROPERTY DAMAGED:

N/A

NATURE OF DAMAGE:

N/A

ESTIMATED AMOUNT (TOTAL): **$**

22. RECOMMENDATIONS TO PREVENT RECURRANCE NARRATIVE:

The Lake Charles District recommends that the Regional Office of Safety Management (OSM) issue a Safety Alert to heighten industries awareness regarding the importance of utilizing proper anchor points for personnel safety harness, proper rigging practices, adequate job planning, and exercising Stop Work Authority to avert hazards associated with contributing causes of this incident.

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

24. SPECIFY VIOLATIONS DIRECTLY OR INDIRECTLY CONTRIBUTING. NARRATIVE:

G-110 - The failure to perform operations in a safe and workmanlike manner resulted in a personnel injury. At the time of the incident, the Injured Person's (IP) personnel safety harness lanyard was attached to the non-stationary crane boom

(suspended by the platform crane) which moved unexpectedly when the Come-Along's chain slipped from its anchor point during the alignment process. The IP sustained a compound fracture to his right arm after losing his balance and falling between the crane boom's mid-section and the heel section when the boom moved. Although two crew members recognized that the IPs safety harness lanyard was attached to a non-stationary anchor point, no one utilized their Stop Work Authority (SWA) to avert the unsafe act.

25. DATE OF ONSITE INVESTIGATION:

13-AUG-2012

26. ONSITE TEAM MEMBERS:

Scott Mouton / Willard Smith / Cody Leblanc / John Portie /

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

OCS REPORT:

30. DISTRICT SUPERVISOR:

Larry Williamson

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APPROVED DATE: **27-SEP-2012**

INJURY/FATALITY/WITNESS ATTACHMENT

☐ OPERATOR REPRESENTATIVE ☐ INJURY
☒ CONTRACTOR REPRESENTATIVE ☐ FATALITY
☐ OTHER ________________ ☒ WITNESS

NAME:

HOME ADDRESS:

CITY: STATE:

WORK PHONE: TOTAL OFFSHORE EXPERIENCE: YEARS

EMPLOYED BY:

BUSINESS ADDRESS:

CITY: STATE:

ZIP CODE:

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