**Petroleum Development Oman LLC**

**YTD Q3 2015 Incident analysis LTI study**

**Summary**

PDO’s LTIF performance YTD 2015 Q3 was (0.28) which was an improvement compared with the rates in Q3 2014 (0.33). By the end of Q3 PDO had suffered 38 LTIs which was 7 less than in 2014 but with less man-hour worked. The following analysis of the incidents is designed to identify trends and points of statistical interest to target future resource.

**Analysis**

1. **Directorate:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Directorate** | **Q3** | | | **YTD** | | |
| **2015** | **2014** | **% Change** | **2015** | **2014** | **% Change** |
| **UWD** | **5** | **9** | **(44)** | **26** | **26** | **0** |
| **OSD** | **1** | **4** | **(75)** | **2** | **7** | **(71)** |
| **OND** | **0** | **1** | **(100)** | **0** | **2** | **(100)** |
| **XD** | **0** | **1** | **(100)** | **1** | **1** | **0** |
| **UID** | **3** | **2** | **25** | **7** | **8** | **(13)** |
| **GD** | **0** | **0** | **0** | **0** | **1** | **(100)** |
| **UEOD** | **0** | **0** | **0** | **0** | **0** | **0** |
| **CPDM** | **0** | **0** | **0** | **2** | **0** | **100** |
| **Total** | **9** | **17** | **(47)** | **38** | **45** | **(16)** |

**1.1 % Change between 2014 and 2015 YTD:**

**1.2 LTIs by quarters:**

1. **LTIs per Operational Teams YTD:-**

|  |  |  |
| --- | --- | --- |
| Sr. No | Directorate | No of LTIs -Team |
| 1 | UWD | **1**- UWX, **15**- UWO, **2**-UWL, **2**-UWB, **1**-UWS, **1**-UWI, **4**-UWC |
| 2 | CPDM | **2-**CRC |
| 3 | UID | **1-**UIR, **4**-UIB, **2**-UIE |
| 4 | XD | **1-**XGO |
| 5 | OSD | **2-**OSC |

1. **PDO v Contractor** 
   1. 38 - PDO contractors
   2. 0 - PDO employee
2. **Contractor information**

There are 24 contractors who suffered LTI incidents YTD  
The breakdown is as follows:-

* 3 incidents – Ba Omar, Ensign, Midwesco, Carillion.
* 2 incidents – WG-CCC, Bahwan Exel, Baker Hughes, Weatherford, Medco.
* 1 incident – MBPS, NDSC, Al Hajiry, Al Turki, Shivani, KCA Deutag, Sahara, Powertech, Desert Byrne, Ardiseis, SOFS, Warly Parsons, SPC, Schlumberger, ADS, Thomssen.

1. **Incident description – Action and Injury:-**
   1. Slipped while descending staircase resulting in an injured knee.
   2. Trapped between hose and hand tools board resulting in a fractured finger.
   3. Fell 1.5m from the top of shovel wheel resulting in a fractured wrist.
   4. Fell 1.8m from the top of a trailer resulting in a fractured wrist.
   5. Crushed by a concrete block resulting in a fractured leg.
   6. Trapped between corrosive ring and the tubing hanger resulting in amputated & fractured finger.
   7. Trapped finger between flow line and shale shaker pipe fracturing it.
   8. Prime mover rolled over resulting in a fractured pelvis.
   9. Fell over on moving vehicle (HDU – Hose Deployment Unit) causing fatal head injury.
   10. Struck by a co-flex hose end causing fractures to two toes.
   11. Fell from an engine skid resulting in fractured wrist.
   12. Trapped finger in the radiator fan causing a deep cut.
   13. Trapped finger between the slip handle and his boot causing amputation.
   14. Slipped while walking across the roadway resulting in fractured leg.
   15. Crushed by a metal pipe unloading metal barriers fracturing thumb.
   16. Struck by a chain binder under tension resulting in eye and cheek injury.
   17. Struck by a hose due to residual pressure resulting in fractured jaw.
   18. Trapped finger between the elevator and the tong resulting in fractured finger.
   19. Crushed between supporting leg and catwalk resulting in fractured finger.
   20. Slipped and fell on the x-mas tree fracturing his arm.
   21. Fell from height filling a diesel tank injuring his knee.
   22. Vehicle incident resulted in a fractured forearm.
   23. Struck by top drives lifting loop resulting in fracture arm.
   24. Electrical flash over resulting in burns to the face, neck and hands.
   25. Trapped finger between the mast and the BOP fracturing finger.
   26. Motor vehicle incident between a pickup & a canter resulting in multiple fractures.
   27. Crushed by a falling pipe resulting in an ankle fracture.
   28. Trapped between a cable and a clamp resulting in finger amputation.
   29. Crushed fingers between substructure and the THS fracturing them.
   30. Trapped between the junk cover and junk box resulting in finger tip amputation.
   31. Trapped between the bolt and the flange resulting in finger amputation.
   32. Trapped between the gate and the valve body resulting in finger tip amputation.
   33. Struck by a tubing joint jumped out of V groove resulting in fractured thumb.
   34. Slipped while ascending the staircase & carrying load resulting in crashed finger.
   35. Trapped his hand while testing a hydraulic valve resulting in fractured finger.
   36. Crashed by blow out preventer and its fixing resulting in fractured finger.
   37. Burned by acid while was cleaning a drain resulting in upper part body burns.
   38. Burned by acid while was cleaning a blocking pipe resulting in fingers burn.
2. **Parts of body injured YTD:-**

|  |  |  |  |
| --- | --- | --- | --- |
| Hands/fingers | 17 | Knee/Leg | 4 |
| wrist | 3 | pelvis | 1 |
| ankle/foot/toe | 2 | head/neck | 1 |
| eyes/face/nose | 1 | jaw/teeth | 1 |
| thumb | 2 | Elbow/arm | 3 |
| Body | 3 |  |  |

1. **Incident classification YTD:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Incident causing LTI** | **No of LTIs**  **YTD 2015** | **No of LTIs**  **YTD 2014** | **% change from**  **2014** |
| **Crush/Trapped** | **18** | **18** | **0** |
| **Slip, Trip, Fall** | **7** | **8** | **-13** |
| **MVI** | **3** | **9** | **-75** |
| **Struck by object** | **6** | **5** | **20** |
| **Fall from height** | **1** | **2** | **-50** |
| **chemical/heat burns** | **2** | **2** | **0** |
| **Electrical Burns** | **1** | **0** | **100** |
| **Rotating Equipment** | **0** | **1** | **-100** |
| **Total** | **38** | **45** | **-16** |

1. **Actual Severity YTD:**
2. Severity 2 (minor injury) **0**
3. Severity 3 (major injury) **37**
4. Severity 4 (fatality) **1**

1. **Potential Severity YTD:**

B3 - major injury, Heard of in the industry **0**

C3 - major injury, has happened in the company **37**

C4 - fatal injury, has happened in the company **1**

D2 - minor injury, has happened in the company **0**

D3 - major injury, has happened more than once a year in the company **0**

D4 - PTD or up to 3 fatality, has happened more than once in the industry **0**

1. **Types of underlying causes:**
   1. **Comparison table for the underlying causes:**

|  |  |  |  |
| --- | --- | --- | --- |
| **Underlying Cause** | **Q3 2015** | **Q3 2014** | **Description of Underlying Cause - Tripod Beta - (Casual review)** |
| Training | 7 | 12 | Deficiencies in systems providing knowledge and skills |
| Incompatible goals | 6 | 24 | Failure to manage conflict: between formal rules & informal rules of a work group or between demand of a task and personal preoccupations or distractions. |
| Communication | 6 | 12 | Failure in effectively transmitting information |
| Procedures | 8 | 18 | Unavailable, incorrect, outdated or otherwise unusable |
| Design | 3 | 12 | Deficiencies in layout or design of facilities, plant or equipment |
| Organisation | 4 | 6 | Deficiencies in company structure or way tasks/responsibilities are assigned |
| Error enforcing conditions | 6 | 18 | Time pressure, macho behavior, physical working conditions (hot, noisy etc) promoting errors or violations |
| Hardware | 4 | 0 | Inadequate quality or non availability of materials or equipment |
| Maintenance | 2 | 0 | Failures in the system for ensuring technical integrity of facilities, plant, equip tools. |

* 1. **Comparison graph in % for the underlying causes:**

1. **Time of incidents YTD:**

|  |  |
| --- | --- |
| 00:00-04:00 | 3 |
| 04:00 -08:00 | 4 |
| 08:00 -12:00 | 17 |
| 12:00 - 16:00 | 6 |
| 16:00 - 20:00 | 5 |
| 20:00 - 00:00 | 3 |

1. **Age of IP YTD:**

|  |  |
| --- | --- |
| 20-25 | 5 |
| 26-30 | 12 |
| 31-35 | 8 |
| 36-40 | 5 |
| 41-45 | 4 |
| 46-50 | 1 |
| 51-60 | 3 |

**Summary**

After a bad Q2 the performance for Q3 stabilized and is far better than our performance last year with almost all directorates recording an improvement. Our overall performance remains on course for an improvement. Four contractors have suffered three LTIs which is of concern and our hands and finger injuries remain the main body part which is injured, mainly from being crushed or trapped. Our underlying causes have also evened out, with a flat distribution between the key causations.

**End of Analysis**