**Petroleum Development Oman LLC**

**2016 Q2 LTI Incident Analysis Study**

**MSE3**

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# Summary

PDO’s LTIF performance for 2016 Q2 was (0.18) which was a significant improvement compared with (0.31) rates in Q2 in 2015. The company suffered 10 LTIs in this second quarter, 8 less than in Q2 in 2015 and with more man-hours worked. The following analysis of the incidents is designed to identify trends and points of statistical interest to target future resource.

# Key Observations

Following are the key observations from the quarter 3 2016:

* The Q2 performance showed a vast improvement with 8 less LTIs, down 44% compared with Q2 last year.
* OSD and CDM saw an increase in their incidents, where as OND, GD, UID, UEOD and XD directorates have all had a successful quarter.
* Credit is due to the Well Engineering Directorate for reducing their LTIs by 48%, a sign that there strategy is beginning to bear fruit.
* The only increase in incident type relates to “Falls from Height” which would be a grave concern but for the fact that the heights involved were generally low.
* The two increases for Latent Failures related to Error Enforcing Conditions and the provision of defenses after an incident had occurred so care is needed to ensure we do not impose conditions on our staff where they are more likely to make errors.
* Interestingly the job positions who had the most incidents related equally to supervisors and technicians, who up until now did not traditionally suffer from incidents. This is a sign to ensure your HSE Supervisor Leadership Training is up to date and effectively implemented.

# Analysis

# Directorate Analysis

# Directorate Breakdown YTD

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Directorate** | **Q2** | | | **YTD** | | |
| **2016** | **2015** | **% (-/+)** | **2016** | **2015** | **% (-/+)** |
| **UWD** | **6** | **13** | **-54** | **11** | **21** | **-48** |
| **OSD** | **2** | **1** | **+100** | **3** | **1** | **+100** |
| **OND** | **0** | **0** | **0** | **0** | **0** | **0** |
| **XD** | **0** | **1** | **-100** | **0** | **1** | **-100** |
| **UID** | **0** | **3** | **-100** | **0** | **4** | **-100** |
| **GD** | **0** | **0** | **0** | **0** | **0** | **0** |
| **UEOD** | **0** | **0** | **0** | **0** | **0** | **0** |
| **CPDM** | **2** | **0** | **+100** | **2** | **2** | **0** |
| **Total** | **10** | **18** | **-44** | **16** | **29** | **-45** |

# PDO % LTI Profile by Directorate – YTD 2015/YTD 2016

# LTIs per Operational Teams YTD:-

|  |  |
| --- | --- |
| UWD | **7**- UWO, **1**-OSPTW, **1**-UWB, **1**-UWL,**1**-UWN |
| OSD | **2-**OSE, **1**-OSO |
| CPDM | **2-**CRM |

# PDO v Contractor YTD:

|  |  |
| --- | --- |
| 14 | PDO contractors |
| 2 | PDO employee |

# Contractor information YTD:

There are 11 contractors who suffered LTI incident YTD. The breakdown is as follows:

|  |  |
| --- | --- |
| 2 incidents | Abraj, Dalma, Weatherford, PDO |
| 1 incident | Ensign, Schlumberger, NDSC, Al Nahdah, GPS, WPAI, Bahwan DHL, ATE |

# LTI Incidents Descriptions YTD:

|  |
| --- |
| Crushed while loading a gas cylinder resulting in finger amputation. |
| Fall from height of 1.5 m resulting in fractured ankle. |
| Trapped by a mud pump liner resulting in tip finger amputation. |
| Fall from height of 1.5 m resulting in fractured of ankle. |
| Fall from height of 1.3 m resulting in fractured of forearm. |
| Struck by the pup joint resulting in fractured of the big toe. |
| Trapped by a wash gun machine resulting in fractured of ring finger. |
| Fall and hit the water surface resulting in fractured nose. |
| Crushed by a falling flange resulting in fractured of the 4th toe. |
| Struck by a swung sun shade resulting in fractured wrist & pelvis. |
| Struck by a jerked truck resulting in dislocation of hip, fractured pelvis & wrist. |
| **Motor Vehicle Incident resulting in fatality.** |
| Slipped inside a running machine resulting in multiple fractures for ankle & foot. |
| Slipped from last step resulting in fractured hip. |
| Slipped while loosen a nut resulting in fractured wrist & elbow. |
| Struck by a twisted sling rope resulting in fractured hand. |

# Incident classification YTD:

|  |  |  |  |
| --- | --- | --- | --- |
| **Type of Incident causing LTI** | **No of LTIs**  **YTD 2016** | **No of LTIs**  **YTD 2015** | **% change from**  **2015** |
| **Crush/Trapped** | **4** | **13** | **-69** |
| **Slip, Trip, Fall** | **3** | **6** | **-50** |
| **Fall from height** | **3** | **1** | **+300** |
| **Struck by object** | **5** | **5** | **0** |
| **MVI** | **1** | **3** | **-67** |
| **Electrical burns** | **0** | **1** | **-100** |
| **Total** | **16** | **29** | **-45** |

# Actual Severity YTD:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | YTD  2015 | YTD  2016 |
| a. | Severity 2 (minor injury) | 0 | 0 |
| b. | Severity 3 (major injury) | 28 | 15 |
| c. | Severity 4 (fatality) | 1 | 1 |

# Potential Severity YTD:

|  |  |  |  |
| --- | --- | --- | --- |
|  | | YTD 2015 | YTD 2016 |
| B3 | Major injury, heard of in the industry | 0 | 1 |
| C3 | Major injury, has happened in the company | 28 | 14 |
| C4 | Fatal injury, has happened in the company | 1 | 1 |
| D2 | Minor injury, has happened more than once a year in the company | 0 | 0 |
| D3 | Major injury, has happened more than once a year in the company | 0 | 0 |
| D4 | PTD or up to 3 fatality, has happened more than once in the industry | 0 | 0 |

# BASIC RISK FACTORS (BRF's) YTD:

# Comparison table of the BRF Q2 2015 – Q2 2016:

|  |  |  |  |
| --- | --- | --- | --- |
| **BRF** | **YTD 2015** | **YTD 2016** | **% Change** |
| Design | 4 | 5 | 1 |
| Hardware | 3 | 5 | 2 |
| Maintenance | 3 | 0 | -3 |
| Error enforcing conditions | 5 | 12 | 7 |
| Procedure | 24 | 20 | -4 |
| Training | 15 | 10 | -5 |
| Communication | 12 | 15 | 3 |
| Incompatible goals | 18 | 13 | -5 |
| Organization | 15 | 10 | -5 |
| Defences | 0 | 10 | 10 |
| Total | 100 | 100 |  |

# Comparison graph of the BRF:

# Job positions YTD:-

|  |  |
| --- | --- |
| Roustabout | 2 |
| Floorman | 1 |
| Derrickman | 1 |
| Supervisor | 4 |
| Technician | 4 |
| Grinder | 1 |
| Driver | 1 |
| Helper | 1 |
| Fabricator | 1 |

# Parts of body injured YTD:-

|  |  |
| --- | --- |
| Hands/fingers | 5 |
| ankle/foot/toe | 5 |
| Elbow/arm | 3 |
| Pelvis | 3 |
| Wrist | 1 |
| Eyes/Face/Nose | 1 |
| Body | 1 |

# Time of incidents YTD:

|  |  |
| --- | --- |
| 00:00-04:00 | 2 |
| 04:00 -08:00 | 5 |
| 08:00 -12:00 | 3 |
| 12:00 - 16:00 | 1 |
| 16:00 - 20:00 | 4 |
| 20:00 - 00:00 | 1 |

# Age of IP YTD:

|  |  |
| --- | --- |
| 20-25 | 2 |
| 26-30 | 4 |
| 31-35 | 3 |
| 36-40 | 2 |
| 41-45 | 1 |
| 46-50 | 2 |
| 51-60 | 2 |

**End of Analysis**