IADC

IADC ISP PROGRAM

2014

Summary of Occupational Incidents
(US Water Totals)

Issued 15 June 2015
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IADC 2014 US Water Totals (Table 1)

<table>
<thead>
<tr>
<th>Total</th>
<th></th>
</tr>
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<tbody>
<tr>
<td>Total Man-hours</td>
<td>41,122,966</td>
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<tr>
<td>Total Medical Treatment Incidents</td>
<td>65</td>
</tr>
<tr>
<td>Total Restricted Work Incidents</td>
<td>37</td>
</tr>
<tr>
<td>Total Lost Time Incidents</td>
<td>29</td>
</tr>
<tr>
<td>Total Fatalities</td>
<td>0</td>
</tr>
<tr>
<td>Total Recordables</td>
<td>131</td>
</tr>
</tbody>
</table>

MTO Incidence Rate = 0.32
RWC Incidence Rate = 0.18
LTI Incidence Rate = 0.14
LTI Frequency Rate = 0.71
DART Incidence Rate = 0.32
DART Frequency Rate = 1.60
Recordable Incidence Rate = 0.64
Recordable Frequency Rate = 3.19

Companies Reporting: Water – 15

Medical Treatment Incidence Rate = MTOs X 200,000
Restricted Work Incidence Rate = RWCs X 200,000
Lost Time Incidence Rate = LTIs + FTLs X 200,000
Lost Time Frequency Rate = LTIs + FTLs X 1,000,000
DART Incidence Rate = LTIs + RWC X 200,000
DART Frequency Rate = LTIs + RWC X 1,000,000
Recordable Incidence Rate = RCRD X 200,000
Recordable Frequency Rate = RCRD X 1,000,000

US Water Total LTI & Recordable Incidence Rates vs Man-hours (Figure 1)
IADC 2014 US Water Charts
US Water Total Lost Time Incidents by Month (Chart 1)
Based on 29 Incidents

- December: 10.34%
- September: 6.90%
- August: 3.45%
- July: 10.34%
- June: 24.14%
- May: 13.79%
- March: 17.24%
- February: 10.34%
- January: 3.45%
- August: 3.45%
US Water Total Recordable Incidents by Month (Chart 2)
Based on 131 Incidents

- December: 6.87%
- November: 5.34%
- October: 5.34%
- September: 9.16%
- August: 6.11%
- July: 14.50%
- June: 8.40%
- May: 10.69%
- April: 7.63%
- March: 11.45%
- February: 9.16%
- January: 5.34%
US Water Total Lost Time Incidents by Occupation (Chart 3)
Based on 29 Incidents

- Subsea Engineer: 3.45%
- Roustabout (Lease Hand): 13.79%
- Floorman: 41.38%
- Electrician: 13.79%
- Mechanic: 3.45%
- Crane / Forklift Operator: 3.45%
- Deck Supervisor (Deck Coordinator): 3.45%
- Driller (Asst. Dr.): 6.90%
- Motorman: 6.90%
- Derrickman: 3.45%
- Subsea Engineer: 3.45%
- Subsea Engineer: 3.45%
US Water Total Recordable Incidents by Occupation (Chart 4)
Based on 131 Incidents

- Roustabout (Lease Hand) 29.77%
- Floorman 33.59%
- Driller (Asst. Dr.) 3.82%
- Derrickman 2.29%
- Electrician 6.11%
- Mechanic 2.29%
- Motorman 3.05%
- Barge Engineer/Ballast Control Op. 0.76%
- Crane / Forklift Operator 0.76%
- Superintendent/other Supervisors 0.76%
- Maintenance Super 0.76%
- Deck Supervisor (Deck Coordinator) 0.76%
- Other 9.16%
- Subsea Engineer 4.58%
- Toolpusher (Asst.TP, Tourpusher) 1.53%
- Barge Engineer/Ballast Control Op. 0.76%

Based on 131 Incidents
US Water Total Lost Time Incidents by Body Part (Chart 5)
Based on 29 Incidents

- Head: 3.45%
- Back: 10.34%
- Trunk/Torso (chest, abdomen, groin): 3.45%
- Arm(s): 17.24%
- Hand(s) / Wrist(s): 6.90%
- Finger(s): 13.79%
- Leg(s): 6.90%
- Feet/Ankles: 17.24%
- Toes: 6.90%
- Shoulder(s): 6.90%
- Other: 6.90%
- Feet/Ankles: 6.90%
- Toes: 6.90%
- Shoulder(s): 6.90%
- Other: 6.90%
US Water Total Recordable Incidents by Body Part (Chart 6)
Based on 131 Incidents

- Finger(s): 31.30%
- Hand(s)/Wrist(s): 12.98%
- Finger(s): 31.30%
- Hand(s)/Wrist(s): 12.98%
- Arm(s): 7.63%
- Leg(s): 4.58%
- Knee(s): 3.05%
- Shoulder(s): 3.82%
- Elbow(s): 1.53%
- Toes: 1.53%
- Skin: 0.76%
- Other: 4.58%
- Eyes (eyelid): 2.29%
- Back: 4.58%
- Head: 13.74%
- Trunk/Torso (chest, abdomen, groin): 2.29%
- Skin: 0.76%
US Water Total Lost Time Incidents by Incident Type (Chart 7)
Based on 29 Incidents

- Struck By: 24.14%
- Struck Against: 3.45%
- Caught Between/In: 3.45%
- Slip/Fall: Same Level: 6.90%
- Slip/Fall: Different Level: 13.79%
- Strain/Overexertion: 10.34%
- Contact With Chemicals/Fluids: 3.45%
- Electrical Shock: 3.45%
- Flame/heat/steam (contact/exposed): 3.45%
- Other: 3.45%
US Water Total Recordable Incidents by Incident Type (Chart 8)
Based on 131 Incidents

- Caught Between/In: 31.30%
- Slip/Fall: Same Level: 5.34%
- Sprain: 1.53%
- Other: 4.58%
- Struck Against: 23.66%
- Struck By: 4.58%
- Electrical Shock: 0.76%
- Flame/heat/steam (contact/exposed): 2.29%
- Contact With Chemicals/Fluids: 3.05%
- Strain/Overexertion: 7.63%
- Cut: 7.63%
- Debris: 0.76%
- Slip/Fall: Different Level: 6.87%
- Sprain: 1.53%
- Other: 4.58%
- Struck By: 23.66%
- Struck Against: 4.58%
- Sprain: 1.53%
- Other: 4.58%
- Cut: 7.63%
- Debris: 0.76%
- Slip/Fall: Different Level: 6.87%
- Sprain: 1.53%
- Other: 4.58%
- Struck By: 23.66%
- Struck Against: 4.58%
- Sprain: 1.53%
- Other: 4.58%
- Cut: 7.63%
- Debris: 0.76%
- Slip/Fall: Different Level: 6.87%
- Sprain: 1.53%
- Other: 4.58%
- Struck By: 23.66%
- Struck Against: 4.58%
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- Other: 4.58%
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- Debris: 0.76%
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- Struck Against: 4.58%
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- Other: 4.58%
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- Struck By: 23.66%
- Struck Against: 4.58%
- Sprain: 1.53%
- Other: 4.58%
- Cut: 7.63%
- Debris: 0.76%
- Slip/Fall: Different Level: 6.87%
- Sprain: 1.53%
- Other: 4.58%
- Struck By: 23.66%
- Struck Against: 4.58%
- Sprain: 1.53%
- Other: 4.58%
- Cut: 7.63%
US Water Total Lost Time Incidents by Equipment (Chart 9)
Based on 29 Incidents

- Other: 20.69%
- Boat Cargo (skids, tubulars, containers, etc.): 3.45%
- Top Drive (blocks, swivel, kelly): 6.90%
- Chemicals (sack, drum, pail, bulk hopper): 6.90%
- Decks (grating, walkway): 6.90%
- Ladders: 3.45%
- Tongs: 3.45%
- Elevators: 3.45%
- Iron Roughneck, Pipe Spinner, etc.: 3.45%
- Slings (rope, cable, chain, web): 13.79%
- Hand Tools: Manual: 3.45%
- Engines/Pumps/Machinery: 6.90%
- Pipelines (pipe, lines, tubes, collars): 6.90%
- Kelly Bushings (master bushings): 3.45%
- Pressure Hoses/Lines: 3.45%
US Water Total Recordable Incidents by Equipment (Chart 10)
Based on 131 Incidents

- Other: 19.85%
- Boat Cargo (skids, tubulars, containers, etc.): 0.76%
- Rig Floor Winch/Deck Winch (air/hydraulic): 3.05%
- Anchor Chains/Cables/Winches: 0.76%
- Top Drive (blocks, swivel, kelly): 2.29%
- Chemicals (sack, drum, pail, bulk hopper): 6.11%
- Decks (grating, walkway): 6.11%
- Ladders: 0.76%
- Crane: 3.82%
- Pressure Hoses/Lines: 2.29%
- Material: 3.05%
- BOP Stack (well head, tree): 5.34%
- Elevators: 1.53%
- Tongs: 1.53%
- Slips (drill collar clamp): 0.76%
- Iron Roughneck, Pipe Spinner, etc.: 1.53%
- Pipes/Collars/Tubulars/Csg.: 13.74%
- Slings (rope, cable, chain, web): 10.69%
- Hand Tools: Manual: 9.16%
- Hand Tools: Power: 2.29%
- Engines/Pumps/Machinery: 3.05%
- Kelly Bushings (master bushings): 0.76%
- Stairs: 0.76%
US Water Total Lost Time Incidents by Operation (Chart 11)

Based on 29 Incidents

- Walking: 6.90%
- Cementing: 3.45%
- Equipment Repairs or Maintenance: 27.59%
- Rigging Up/Down: 3.45%
- Tripping in/out: 13.79%
- Routine Drilling Oper.: 10.34%
- Laying Down/Picking up Tubulars: 10.34%
- Material Handling: Manual: 3.45%
- Material Handling: Crane/Cherry Picker: 10.34%
- Other: 10.34%
US Water Total Recordable Incidents by Operation (Chart 12)

Based on 131 Incidents

- Tripping in/out: 9.92%
- Equipment Repairs or Maintenance: 15.27%
- BOP Stack Install/Maintenance: 4.58%
- Well Testing: 0.76%
- Walking: 4.58%
- Material Handling: Rig Floor Winch: 0.76%
- Making Connection: 2.29%
- Material Handling: Crane/Cherry Picker: 7.63%
- Material Handling: Manual: 6.87%
- Laying Down/Picking up Tubulars: 7.63%
- Running Casing/Tubing: 3.05%
- Routine Drilling Oper.: 4.58%
- Special Operations: 3.05%
- Cementing: 1.53%
- Mud Mixing/Pumping: 0.76%
- Support: 0.76%
- Well Testing: 0.76%
- Travel/Transportation: 0.76%
- Handling Riser: 0.76%
- Other: 16.03%
US Water Total Lost Time Incidents by Location (Chart 13)
Based on 29 Incidents

- Rig Floor: 34.48%
- Mud Pump Room: 3.45%
- Machinery Spaces: 6.90%
- Crew/Work Boats: 6.90%
- Work Rooms change, storage, room: 3.45%
- Rig Pad/Rig Decks: 3.45%
- SCR/Electrical Room: 3.45%
- Engine Generator Room: 3.45%
- Shale Shaker: 3.45%
- Mud Mixing Tank/Area: 3.45%
- Derrick/Mast: 6.90%
- Pipe Rack/Pipe Deck: 13.79%

Other: 6.90%
US Water Total Recordable Incidents by Location (Chart 14)
Based on 131 Incidents

- Other: 10.69%
- Rig Floor: 26.72%
- Pipe Rack/ Pipe Deck: 12.21%
- Derrick/Mast: 6.11%
- BOP Stack / well head / tree Area: 4.58%
- Mud Mixing Tank/Area: 1.53%
- Mud Pump Room: 2.29%
- Stairs / Ladders: 1.53%
- SCR / Electrical Room: 1.53%
- Engine Generator Room: 2.29%
- Mud Pits / Tanks: 1.53%
- Shale Shaker: 3.82%
- Crew / Work Boats: 3.05%
- Living / Camp Areas / Accommodations: 1.53%
- Work Rooms change, storage, room: 2.29%
- Catwalk / V-door: 2.29%
- Derric / Mast: 6.11%
- BOP Stack / well head / tree Area: 4.58%
- Mud Mixing Tank/Area: 1.53%
- Mud Pump Room: 2.29%
- Stairs / Ladders: 1.53%
- SCR / Electrical Room: 1.53%
- Engine Generator Room: 2.29%
- Mud Pits / Tanks: 1.53%
- Shale Shaker: 3.82%
- Crew / Work Boats: 3.05%
US Water Total Lost Time Incidents by Time in Service (Chart 15)
Based on 28 Incidents

- 10+ yrs. 21.43%
- >5 yrs. < 10 yrs. 14.29%
- >1 yr. < 5 yrs. 39.29%
- >6 mos. < 1 yr. 14.29%
- >3 mos. < 6 mos. 3.57%
- 0 mo. < 3 mos. 7.14%
US Water Total Recordable Incidents by Time in Service (Chart 16)
Based on 122 Incidents

- 10+ yrs.: 10.66%
- 0 mo. < 3 mos.: 8.20%
- >5 yrs. < 10 yrs.: 9.02%
- >3 mos. < 6 mos.: 9.84%
- >6 mos. < 1 yr.: 18.85%
- >1 yr. < 5 yrs.: 43.44%
- 10 yrs. < 10 yrs.: 10.66%
US Water Total Lost Time Incidents by Time of Day (Chart 17)
Based on 29 Incidents

- 1:00: 3.45%
- 2:00: 10.34%
- 23:00: 6.90%
- 22:00: 3.45%
- 21:00: 10.34%
- 20:00: 6.90%
- 19:00: 10.34%
- 17:00: 3.45%
- 16:00: 3.45%
- 15:00: 3.45%
- 14:00: 3.45%
- 13:00: 3.45%
- 12:00: 6.90%
- 11:00: 6.90%
- 10:00: 6.90%
- 9:00: 6.90%
- 8:00: 3.45%
- 7:00: 3.45%
- 6:00: 3.45%
- 5:00: 3.45%
- 4:00: 6.90%
- 3:00: 6.90%
- 2:00: 10.34%
- 1:00: 3.45%
- 0:00: 6.90%
- 11:00: 6.90%
- 12:00: 6.90%
- 13:00: 3.45%
- 14:00: 3.45%
- 15:00: 3.45%
- 16:00: 3.45%
- 17:00: 3.45%
- 18:00: 3.45%
- 19:00: 10.34%
- 20:00: 6.90%
US Water Total Recordable Incidents by Time of Day (Chart 18)
Based on 130 Incidents

- 1:00: 3.85%
- 2:00: 6.92%
- 3:00: 2.31%
- 4:00: 3.85%
- 5:00: 3.85%
- 6:00: 3.85%
- 7:00: 3.85%
- 8:00: 5.38%
- 9:00: 3.85%
- 10:00: 6.92%
- 11:00: 4.62%
- 12:00: 4.62%
- 13:00: 7.69%
- 14:00: 3.08%
- 15:00: 5.38%
- 16:00: 3.85%
- 17:00: 3.08%
- 18:00: 3.08%
- 19:00: 4.62%
- 20:00: 6.15%
- 21:00: 4.62%
- 22:00: 6.15%
- 23:00: 2.31%
US Water Total Lost Time Incidents by Age (Chart 19)
Based on 22 Incidents

- 18 - 25: 13.64%
- 26 - 35: 50.00%
- 36 - 45: 13.64%
- 46 - 55: 13.64%
- 56 - 65: 9.09%
- 26 - 35: 50.00%
US Water Total Recordable Incidents by Age (Chart 20)
Based on 83 Incidents

- 18 - 25: 22.89%
- 26 - 35: 48.19%
- 36 - 45: 12.05%
- 46 - 55: 12.05%
- 56 - 65: 4.82%