

# IADC ISP PROGRAM

# 2013



# Summary of Occupational Incidents (Industry Totals)

Issued 20 May 2014



# **Table of Contents**

(Table of Contents is Hyperlinked, Just click on Topic & go)

SUMMARY OF OCCUPATIONAL INCIDENTS INTRODUCTORY BRIEFING:	1
2013 ISP PROGRAM INDUSTRY TOTALS	7
2013 Final Report (Table 1)	7
5 YEAR SUMMARY REPORT (TABLE 2)	
2013 - IADC INDUSTRY TOTALS (TABLE 3)	
Total Industry LTI & Recordable Incidence Rates vs Man-hours (Figure 1)	
Total Industry Land LTI & Recordable Incidence Rates vs Man-hours (Figure 2)	10
Total Industry Water LTI & Recordable Incidence Rates vs Man-hours (Figure 3)	10
IADC 2013 TOTAL INDUSTRY CHARTS	
Total Industry Lost Time Incidents by Month (Chart 1)	
Total Industry Recordable Incidents by Month (Chart 2)	
Total Industry Lost Time Incidents by Occupation (Chart 3)	
Total Industry Recordable Incidents by Occupation (Chart 4)	
Total Industry Lost Time Incidents by Body Part (Chart 5)	
Total Industry Recordable Incidents by Body Part (Chart 6)	
Total Industry Lost Time Incidents by Incident Type (Chart 7)	
Total Industry Recordable Incidents by Incident Type (Chart 8)	
Total Industry Lost Time Incidents by Equipment (Chart 9)	
Total Industry Recordable Incidents by Equipment (Chart 10) Total Industry Lost Time Incidents by Operation (Chart 11)	
Total Industry Lost Time inclaents by Operation (Chart 11) Total Industry Recordable Incidents by Operation (Chart 12)	
Total Industry Lost Time Incidents by Location (Chart 13)	
Total Industry Recordable Incidents by Location (Chart 13)	
Total Industry Lost Time Incidents by Time in Service (Chart 15)	
Total Industry Recordable Incidents by Time in Service (Chart 16)	
Total Industry Lost Time Incidents by Time of Day (Chart 17)	
Total Industry Recordable Incidents by Time of Day (Chart 18)	
2013 ISP PROGRAM REGIONAL TOTALS	29
IADC 2013 Africa Totals (Table 4)	20
Africa Total LTI & Recordable Incidence Rates vs Man-hours (Figure 4)	
IADC 2013 Asia Pacific Totals (Table 5)	
Asia Pacific Total LTI & Recordable Incidence Rates vs Man-hours (Figure 5)	
IADC 2013 Canada Totals (Table 6)	
Canada Total LTI & Recordable Incidence Rates vs Man-hours (Figure 6)	
IADC 2013 Central America & Caribbean Totals (Table 7)	32
Central America & Caribbean Total LTI & Recordable Incidence Rates vs Man-hours (Figure 7)	32
IADC 2013 European Totals (Table 8)	33
European Total LTI & Recordable Incidence Rates vs Man-hours (Figure 8)	
IADC 2013 Middle East Totals (Table 9)	
Middle East Total LTI & Recordable Incidence Rates vs Man-hours (Figure 9)	
IADC 2013 South American Totals (Table 10)	
South America Total LTI & Recordable Incidence Rates vs Man-hours (Figure 10)	
IADC 2013 US Totals (Table 11) US Total LTI & Recordable Incidence Rates vs Man-hours (Figure 11)	
US IOIAI LII & RECOTAUDIE INCIAENCE RAIES VS MAN-HOURS (FIGURE II)	



# **Summary of Occupational Incidents Introductory Briefing:**

Data gathered in the IADC Incident Statistics Program (ISP) data base, shows that the oil and gas well drilling industry continues work toward reducing incidents on rigs. Even though there was a slight decrease in rig demand in 2013, the incidence rates improved slightly over 2012. Although IADC ISP calculates both Incidence rates and Frequency rates, this report is based on Incidence rates which are calculated on incidents per 200,000 man-hours.

The **Summary of Occupational Incidents (SOI)** is compiled annually from data volunteered by drilling contractors worldwide to the IADC ISP Program. During 2013, 108 contractors participated in the ISP representing a total of 592,088 million man-hours worked. Contractors striving for safety improvement by participating in the ISP program reported 2386 Recordable incidents, 743 Lost Time incidents including 22 fatalities.

#### **Regional Reporting**

Safety data is compiled separately for Land and Offshore operations for eight geographic regions. This report is not designed to measure region against region, but to provide companies operating within each region tools to measure their efforts and make improvement in their safety efforts year over year.

#### Industry Improvement

2013 saw the drilling industry's worldwide Lost Time Incidence Rate remain unchanged from 2012 at 0.26. The 2013 Recordable Incident rate improved to 0.81 which is an 8% improvement over the 2012 report of 0.88. The oil and gas well drilling industry's efforts towards safety have resulted in the industry's occupational LTI Incidence rate to remain the same from more than 14.00 in 1963 to 0.26 in 2013, which is a 54 fold improvement.

#### Fatalities:

In 2013 the industry's fatalities remained the same at 22 incidents. According to the data reported in 2013, seven (7) fatalities occurred to employees who had ten or more years of service with the company. Five (5) fatalities occurred to employees who had more than one year but less than five years of service and four (4) with more than three months but less than six months of service. Two (2) of the victims had worked for the company between six months to one year and two (2) victims had worked for the company between five years and ten years. Three (3) fatalities occurred during wellcontrol (BOP) and three (3) during routine drilling operations. Seven (7) victims were struck-by while five were due to fall type incidents. Five (5) of the fatalities occurred to floormen and five fatalities occurred to motormen.



Caught

Between

18%

Electric

Shock

4%

Other

14%

Vehicle

5%

Fall Dif

Level

23%

Contact w/

Chemicals/

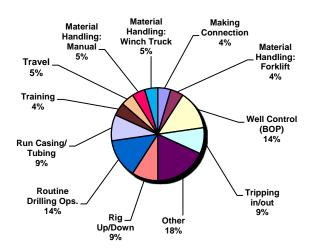
Fluids

4%

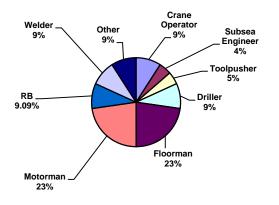
Struck By

32%

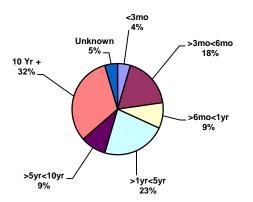
#### Fatal Incidents by activity



**Fatalities by Occupation** 



Fatalities by Time in Service



#### Regional Summaries: Man-Hours vs Fatalities

European Land and Offshore categories together worked more than 96 million man-hours in 2013 with two (2) fatalities. European offshore accounted for 38.7 million man-hours with no fatalities while European Land had 58.13 million man-hours and two (2) fatalities. US Land and Offshore contractors together worked more than 140.22 million man-hours with eight (8) fatalities. US Land had 97.01 million manhours with eight (8) fatalities while US water had 43.21 million man-hours and no fatalities. Canadian contractors accounted for 3.4 million man-hours and no fatalities. Canadian Land had 2.6 million man-hours and no fatalities while

offshore had just over 836,147 man-hours and no fatalities. Central America and Caribbean accounted for 16.84 million man-hours with no fatalities. Land operations reported 8.7 million man-hours and no fatalities while water operations reported just over 8.1 million manhours and no fatalities. Africa combined land and offshore accounted for 84.58 million manhours with three (3) fatalities. Africa Land accounted for 41.2 million man-hours with no fatalities while Africa Water had 43.38 million man-hours and three (3) fatalities. The Middle East region accounted for 127.07 million manhours with five (5) fatal incidents. The Land division had 91.6 million man-hours and four (4) fatal incidents while there were 35.47 million man-hours and one (1) fatality for the offshore



Asia Pacific accounted for 71.72 division. million man-hours and three (3) fatalities. Water had 48.55 million man-hours with no fatalities while the Land Division had 23.17 million manhours and three (3) fatalities. South America made up 51.34 million man-hours with one (1) fatality. Land had 30.36 million man-hours and no fatalities while Water had 20.98 million manhours and one (1) fatality.

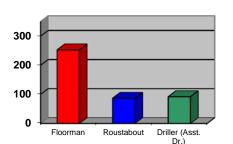
#### Lost Time and Recordable Incidents by Region

Lost time incidents among US Offshore workers was better by 21% from 0.19 in 2012 to 0.15 in 2013. The Total Recordable Incidence Rate also improved 20% from 0.93 in 2012 to 0.78 in 2013. US Land workers saw their LTI Incidence remain the same at 0.51 in 2013 and Recordable Incidence Rate improve 20% from 1.97 in 2012 to 1.58 in 2013. European Land workers saw their LTI rate worsen 31% from 0.26 for 2012 to 0.34 for 2013. The Recordable Incidence Rate also worsened 37% from 0.35 in 2012 to 0.48 in 2013. European Offshore workers LTI rate remained the same for the third year in a row in 2013 at 0.27 while the Recordable Incidence rate worsened 4% from 0.82 in 2012 to 0.85 in 2013. Canada Land had a 2012 LTI rate of 0.69 which improved 12% to 0.61 for 2013, while their Recordable Incidence also improved 26% from 2.68 in 2012 to 1.98 for Canada Offshore workers saw their 2013. 2012 LTI rate of 0.0 remain the same for 2012. The Recordable Incidence rate of 1.39 for 2012 improved 83% to 0.24 for 2013. Central America and Caribbean Land 2012 LTI rate of 0.29 improved 7% to 0.27 for 2013. Their 2012 Recordable Incidence rate of 0.51 worsen 26% to 0.64 for 2013. Central America and Caribbean Water 2012 LTI Rate of 0.21 slightly worsened 5% to 0.22 in 2013. The Recordable

rate of 0.58 for 2012 slightly improved 7% to 0.54 for 2013. Africa Land LTI rate for 2012 was 0.38 remained the same for 2013. The Recordable Incidence rate worsened 27% from 0.84 in 2012 to 1.07 in 2013. Africa Water LTI rate of 0.19 for 2012 improved 16% to 0.16 for 2013 and their Recordable Incidence rate improved 6% from 0.55 in 2012 to 0.52 in 2013. In 2012, Middle East Land had a LTI rate of 0.17 which improved 18% to 0.14 in 2013. Their 2012 Recordable Incidence rate of 0.73 improved 11% to 0.65 in 2013. Middle East Water LTI rate slightly worsened 33% from 0.06 in 2012 to 0.08 in 2013 and their Recordable Incidence rate improved 37% from 0.46 in 2012 to 0.29 in 2013. Asia Pacific Land 2012 LTI rate was 0.21 and slightly worsened 5% to 0.22 in 2013, while their Recordable Incidence rate improved 11% from 1.06 in 2012 to 0.94 in 2013. Asia Pacific Water 2012 LTI rate of 0.18 improved 17% to 0.15 for 2013 and their Recordable Incidence rate improved 15% from 0.47 in 2012 to 0.54 in 2013. In 2012. South America Land had an LTI rate of 0.17 which slightly improved 6% to 0.16 in 2013 and a 2012 Recordable rate of 0.42 which worsened 21% to 0.51 in 2013. South America Water 2012 LTI rate was 0.31 which improved 13% to 0.27 in 2012 and a 2012 Recordable rate of 0.88 that also improved 25% to 0.66 in 2012.

#### Greatest Risks:

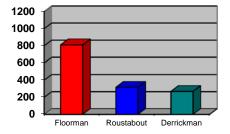
Incidents occur in many places around the rig and to all crewmembers. Many types of equipment and rig operations are involved in incidents and all parts of the body are at risk. Incident data are analyzed by occupation, body part, incident type, equipment type, operation, location time in service and time of day the incident occurred.



LTI by Occupation (Based on 730 incidents)

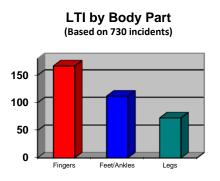


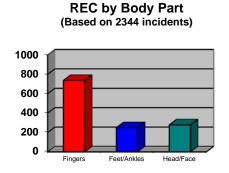
(Based on 2344 incidents)



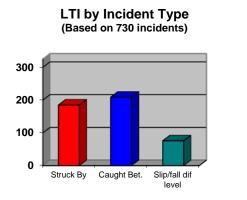


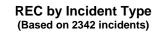
Data from the IADC ISP show that of all the categories, as with previous years, the Floorman position suffers the largest percentage of Lost Time and Recordable injuries.

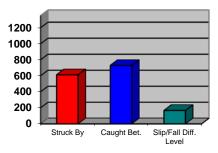




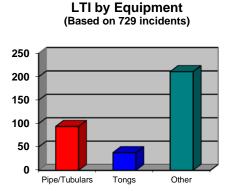
Fingers remained the most vulnerable part of the body.

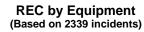


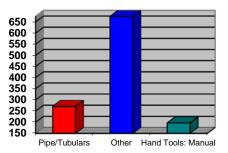




Caught Between accounted for most Lost Time and Recordable injuries and was closely followed by Struck by injuries.



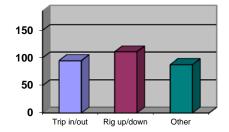


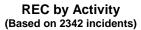


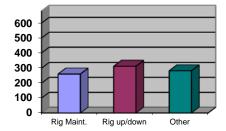
"Other" equipment is the category responsible for the most Lost Time and Recordable incidents.



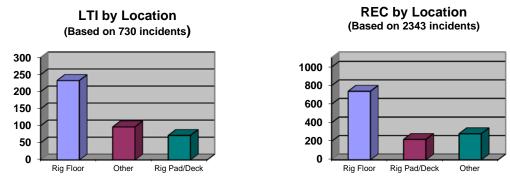
LTI by Activity (Based on 730 incidents)



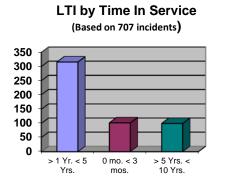




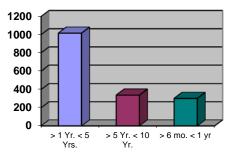
"Rig Up/Down" is the operation that involves the most Lost Time injuries and Recordable injuries.



It is no surprise that by far the most Lost Time and Recordable injuries in drilling operations occur on the rig floor.

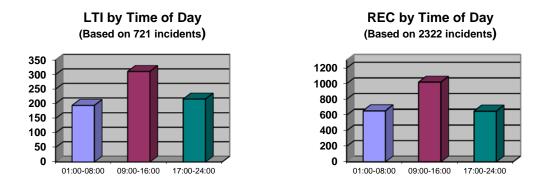


REC by Time In Service (Based on 2282 incidents)

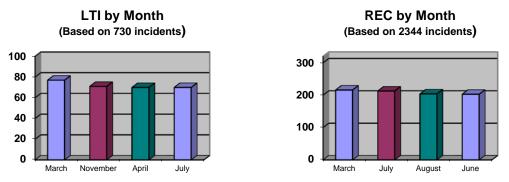


Lost Time and Recordable injuries based on Time in Service were led by employees with between one to five years of service.





The Most LTI and Recordable incidents occurred between 09:00-16:00 hours.



March accounted for the most Lost Time and Recordable incidents.

#### Conclusion:

Activity in most sectors of the industry decreased in 2013. Lost Time incidents rates in 2013 remained the same, whereas, Recordable incident rates slightly improved as compared to 2012. The industry also saw the number of fatalities remain the same at 22, but the overall incident and frequency rates are still trending downward even as man-hours continue to trend upwards.



# 2013 ISP Program Industry Totals

# IADC ISP Program 2013 Final Report (Table 1)

January – December Note: Figures are unaudited

CATEGORY	TOTAL MANHOURS	TOTAL MTOs	TOTAL RWCs	TOTAL LTIs	TOTAL FTLs	PCPD		FREQ.	INCD.	DART FREQ. RATE	INCD.	FREQ.
US - Land	97,013,290	301	221	238	8	768	0.51	2.54	0.96	4.81	1.58	7.92
US - Water	43,216,007	72	65	32	0	169	0.15					3.91
Canada - Land	2,619,882	16	2	8	0	26	0.61	3.05	0.76	3.82	1.98	9.92
Canada - Water	836,147	0		0	0	•	0.00		-		0.24	1.20
Central America & Caribbean - Land	8,760,583		8	12	0	28	0.27	1.37	0.46	2.28	0.64	3.20
Central America & Caribbean - Water	8,083,064	7	6	9	0		0.22			1.86	0.54	
European - Land	58,137,011	26			2	139						2.39
European - Water	38,707,108	79			0	164	0.27	1.34	0.44	2.20	0.85	4.24
Africa - Land	41,203,044	43			0	221	0.38	1.92	0.86	4.32	1.07	5.36
Africa - Water	43,377,982	49	29	32	3	113	0.16	0.81	0.30	1.48	0.52	2.61
Middle East - Land	91,602,952	117	113		4	296	0.14	0.72			0.65	3.23
Middle East - Water	35,468,581	13			1	52	0.08	0.39	0.22	1.10	0.29	1.47
Asia Pacific (Asia & Australia) - Land	23,172,537	42	42	22	3	109	0.22			2.89	0.94	4.70
Asia Pacific (Asia & Australia) - Water	48,554,009	48		37	0	132	0.15	0.76	0.35	1.73	0.54	2.72
South America Land	30,360,068		32	24	0	77	0.16	0.79	0.37	1.84	0.51	2.54
South America Water	20,976,133	19	22	27	1	69	0.27	1.33	0.48	2.38	0.66	3.29
US Combined	140,229,297	373	286	270	8	937	0.40	1.98	0.80	4.02	1.34	6.68
Canada Combined	3,456,029	16	3	8	0	27	0.46	2.31	0.64	3.18	1.56	7.81
Central America & Caribbean Com.	16,843,647	15	14	21	0	50	0.25	1.25	0.42	2.08	0.59	2.97
European Combined	96,844,119	105	48	148	2	303	0.31	1.55	0.41	2.04	0.63	3.13
Africa Combined	84,581,026	92	128	111	3	334	0.27	1.35	0.57	2.86	0.79	3.95
Middle East Combined	127,071,533	130	138		5	348	0.13	0.63	0.34	1.72	0.55	2.74
Asia Pacific Combined	71,726,547	90	89	59	3	241	0.17	0.86	0.42	2.11	0.67	3.36
South America Combined	51,336,201	40	54	51	1	146	0.20	1.01	0.41	2.06	0.57	2.84
INDUSTRY TOTAL	592,088,400	861	760	743	22	2,386	0.26	1.29	0.52	2.58	0.81	4.03

MTO=Medical Treatment Only	INCD = Incidence Rate (200,000	LTI INCD Rate = (LTI s+ FTLs) * 200000 / Total Man-hours DART INCD Rate = (RWC + LTI + FTL) * 200000 / Total Man-hours					
RWC =Restricted Work Case	man-hours) :	RCRD INCD Rate = (MTOs + RWCs + LTIs + FTLs) * 200000 / Total Man-hours					
LTI =Lost Time Incident	FREQ = Frequency Rate (1,000,000 man-hours):	LTI FREQ Rate = (LTI s+ FTLs) * 1000000 / Total Man-hours DART FREQ Rate = (RWC + LTI + FTL) * 1000000 / Total Man-hours RCRD FREQ Rate = (MTOs + RWCs + LTIs + FTLs) * 1000000 / Total Man-hours					
FTL =Fatalities							
RCRD =Total Recordables							

Г



# IADC ISP Program 5 Year Summary Report (Table 2) Lost Time and Total Recordable Incidence/Frequency Rate

		20	13	20	12	20	11	201	0	20	09
CATEGORIES	TYPE	INCD Rate	FREQ Rate	INCD Rate	FREQ Rate	INCD Rate	FREQ Rate	INCD Rate	FRE Q Rate	INCD Rate	FREQ Rate
	LTI:	0.51	2.54	0.51	2.55	0.87	4.34	1.02	5.12	0.95	4.73
US Land	DART:	0.96	4.81	1.16	5.79	1.75	8.73	1.99	9.96	1.93	9.64
	RCRD:	1.58	7.92	1.97	9.87	3.09	15.43	3.44	17.19	3.11	15.54
	LTI:	0.15	0.74	0.19	0.93	0.18	0.91	0.24	1.18	0.20	1.01
US Water	DART:	0.45	2.24	0.44	2.21	0.39	1.93	0.57	2.86	0.44	2.21
	RCRD:	0.78	3.91	0.93	4.64	0.82	4.11	0.86	4.31	0.87	4.36
	LTI:	0.61	3.05	0.69	3.44	1.16	5.78	0.36	1.78	0.27	1.33
Canada Land	DART:	0.76	3.82	1.31	6.53	1.54	7.71	1.07	5.34	0.53	2.66
	RCRD:	1.98	9.92	2.68	13.41	3.57	17.83	2.4	12.02	0.8	3.99
	LTI:	0.00	0.00	0.00	0.00	0.31	1.53	0.19	0.95	0.00	0.00
Canada Water	DART:	0.24	1.20	0.56	2.78	0.3	1.53	0.76	3.79	0.54	2.71
	RCRD:	0.24	1.20	1.39	6.95	0.61	3.06	1.14	5.69	0.81	4.06
	LTI:	0.27	1.37	0.29	1.45	0.44	2.19	0.48	2.41	For prior	r Central
Central America & Caribbean Land	DART:	0.46	2.28	0.45	2.25	1.15	5.74	0.67	3.35	Americ	
Campbean Land	RCRD:	0.64	3.20	0.51	2.57	1.42	7.10	0.88	4.42	contac	t IADC
	LTI:	0.22	1.11	0.21	1.03	0.00	0.00	0.05	0.23	For prio	r Central
Central America &	DART:	0.37	1.86	0.29	1.44	0.07	0.36	0.23	1.16		a data
Caribbean Water	RCRD:	0.54	2.72	0.58	2.89	0.39	1.97	0.42	2.09	contac	
	LTI:	0.16	0.79	0.17	0.84	0.18	0.52	0.23	1.13	For pric	or South
South America	DART:	0.37	1.84	0.33	1.67	0.52	2.61	0.61	3.05		ca data
Land	RCRD:	0.51	2.54	0.42	2.11	0.75	3.77	0.94	4.69		t IADC
	LTI:	0.27	1.33	0.31	1.57	0.29	1.47	0.40	2.01	For pric	or South
South America	DART:	0.48	2.38	0.50	2.49	0.46	2.31	0.40	2.83		ca data
Water	RCRD:	0.66	3.29	0.88	4.38	0.92	4.62	1.04	5.21	contac	
	LTI:	0.34	1.69	0.26	1.29	0.28	1.41	0.22	1.12	0.29	1.46
European Land	DART:	0.39	1.94	0.31	1.55	0.31	1.56	0.22	1.35	0.36	1.80
European Lana	RCRD:	0.33	2.39	0.35	1.76	0.38	1.89	0.27	1.57	0.30	2.05
	LTI:	0.48	1.34	0.33	1.37	0.30	1.55	0.31	1.11	0.41	1.64
European Water	DART:	0.27	2.20	0.27	2.55	0.31	2.44	0.22	1.85	0.35	2.30
	RCRD:	0.44	4.24	0.82	4.11	0.49	3.99	0.37	3.66	0.40	3.55
	LTI:	0.38	1.92	0.38	1.88	0.34	1.72	0.73	2.03	0.46	2.30
Africa Land	DART:	0.38	4.32	0.50	2.50	0.34	2.47	0.41	2.03	0.40	3.91
Antica Lanu	RCRD:										
		1.07	5.36	0.84	4.19	1.00	5.00	1.18	5.92	1.64	8.20
Africa Water	LTI: DART:	0.16	0.81	0.19	0.95	0.28	1.39	0.27	1.37 2.61	0.23	1.13
Africa Water	RCRD:	0.30	1.48 2.61	0.36	1.78 2.73	0.47	2.34	0.52	4.80	0.51	2.56 4.16
						0.81				0.83	4.16
Middle East Land	LTI:	0.14	0.72	0.17	0.86	-	1.12	0.18	0.89	-	
whome East Land	DART:	0.39	1.95	0.39	1.96	0.46	2.30	0.46	2.28	0.45	2.25
	RCRD:	0.65	3.23	0.73	3.65	0.83	4.16	0.86	4.31	0.89	4.46
	LTI:	0.08	0.39	0.06	0.31	0.12	0.60	0.23	1.15	0.15	0.73
Middle East Water	DART:	0.22	1.10	0.28	1.39	0.28	1.38	0.43	2.14	0.33	1.64
	RCRD:	0.29	1.47	0.46	2.28	0.53	2.67	0.78	3.89	0.68	3.40
Asia Pacific Land	LTI:	0.22	1.08	0.21	1.05	0.31	1.56	0.20	1.00	0.27	1.34
(Asia / Australia)	DART:	0.58	2.89	0.66	3.28	0.59	2.97	0.51	2.55	0.64	3.20
、 · · · · · · · · · · · · · · · · · · ·	RCRD:	0.94	4.70	1.06	5.32	1.02	5.08	0.93	4.67	1.03	5.16
Asia Pacific Water	LTI:	0.15	0.76	0.18	0.89	0.14	0.69	0.17	0.87	0.30	1.52
(Asia / Australia)	DART:	0.35	1.73	0.31	1.53	0.30	1.51	0.40	1.99	0.46	2.28
(	RCRD:	0.54	2.72	0.47	2.33	0.63	3.17	0.75	3.76	0.85	4.25
INDUSTRY	LTI:	0.26	1.29	0.26	1.31	0.36	1.79	0.39	1.95	0.37	1.88
TOTALS	DART:	0.52	2.576	0.53	2.645	0.69	3.453	0.76	3.809	0.71	3.568
	RCRD:	0.81	4.03	0.88	4.41	1.23	6.13	1.33	6.66	1.23	6.17
								Total Man			

L	LTI INCD Rate = (LTI s+ FTLs) * 200000 / Total Man-hours
INCD = Incidence Rate (200,000 man-hours) :	DART INCD Rate = (RWC + LTI + FTL) * 200000 / Total Man-hours
· · · · · · · · · · · · · · · · · · ·	RCRD INCD Rate = (MTOs + RWCs + LTIs + FTLs) * 200000 / Total Man-hours
	LTI FREQ Rate = (LTI s+ FTLs) * 1000000 / Total Man-hours
	DART FREQ Rate = (RWC + LTI + FTL) * 1000000 / Total Man-hours
	RCRD FREQ Rate = (MTOs + RWCs + LTIs + FTLs) * 1000000 / Total Man-hours

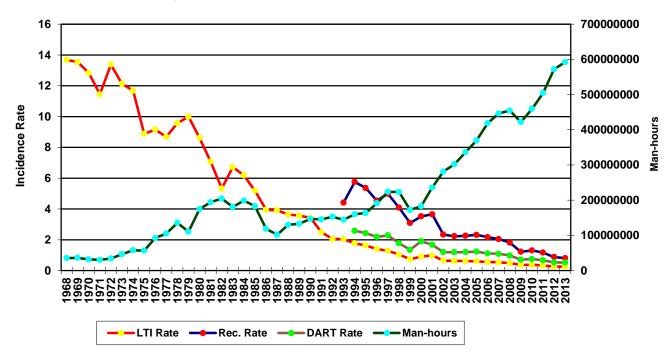


# 2013 - IADC INDUSTRY TOTALS (Table 3)

	LAND	WATER	COMBINED
TOTAL MANHOURS	352,869,368	239,219,032	592,088,400
TOTAL MEDICAL TREATMENT INCIDENTS	574	287	861
TOTAL RESTRICTED WORK INCIDENTS	532	228	760
TOTAL LOST TIME INCIDENTS	541	202	743
TOTAL FATALITIES	17	5	22
TOTAL RECORDABLES	1,664	722	2,386
MTO INCIDENCE RATE	0.33	0.24	0.29
RWC INCIDENCE RATE	0.30	0.19	0.26
LTI INCIDENCE RATE	0.32	0.17	0.26
LTI FREQUENCY RATE	1.58	0.87	1.29
DART INCIDENCE RATE	0.62	0.36	0.52
DART FREQUENCY RATE	3.09	1.82	2.58
RECORDABLE INCIDENCE RATE	0.94	0.60	0.81
RECORDABLE FREQUENCY RATE	4.72	3.02	4.03

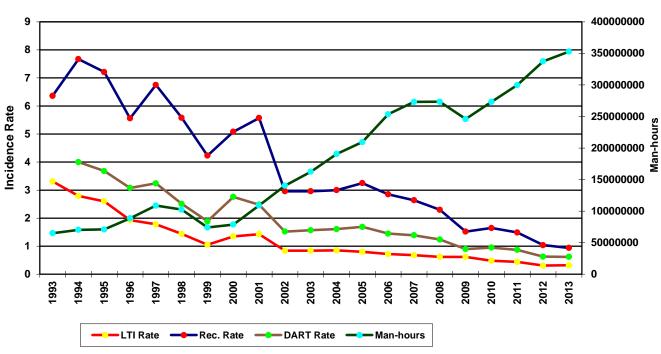
MEDICAL TREATMENT INCIDENCE RATE = MTOS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) RESTRICTED WORK INCIDENCE RATE = RWCS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) LOST TIME INCIDENCE RATE -( LTIS+FTLS) X 200,000 / MAN-HOURS LOST TIME FREQUENCY RATE =( LTIS+FTLS) X 1,000,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 200,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 1,000,000 / MAN-HOURS RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MAN-HOURS RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MAN-HOURS

#### Total Industry LTI & Recordable Incidence Rates vs Man-hours (Figure 1)



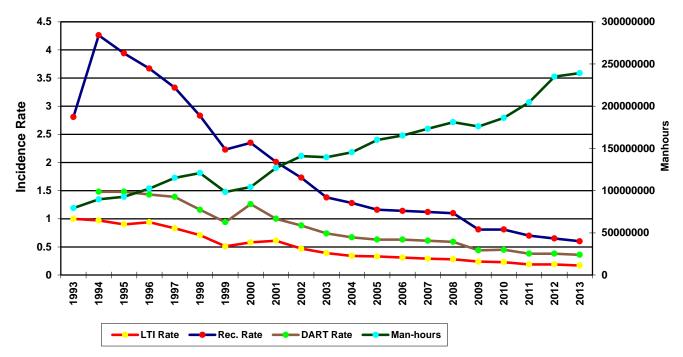
Number of participating companies: 108 - Total; 73 - Land; 52 - Water





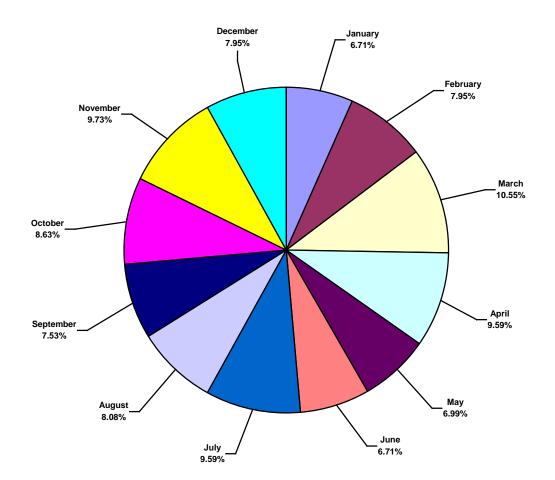
Total Industry Land LTI & Recordable Incidence Rates vs Man-hours (Figure 2)

#### Total Industry Water LTI & Recordable Incidence Rates vs Man-hours (Figure 3)



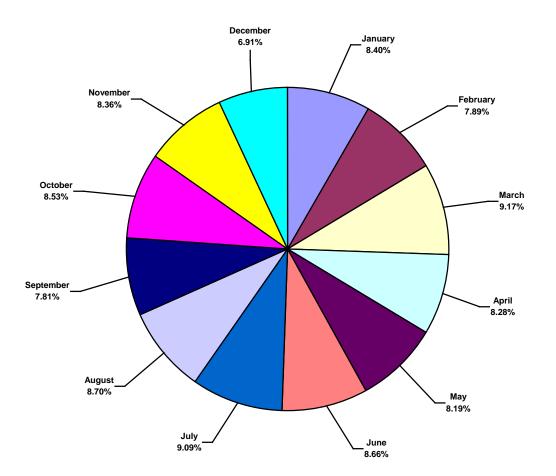


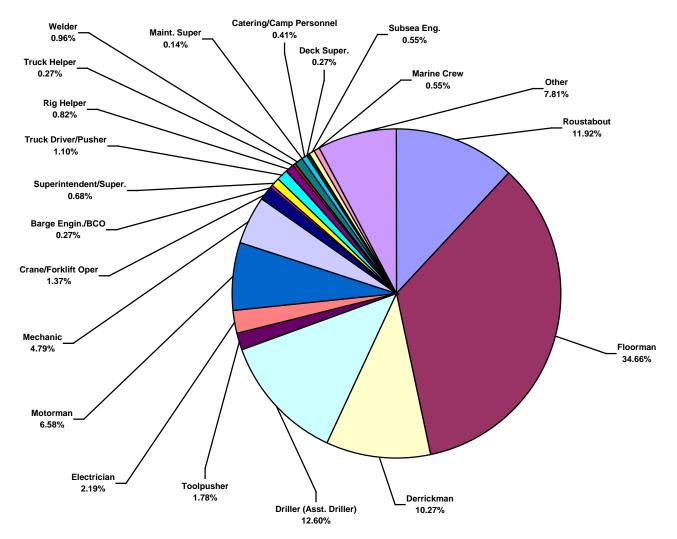
#### IADC 2013 Total Industry Charts Total Industry Lost Time Incidents by Month (Chart 1) Based on 730 Incidents





Total Industry Recordable Incidents by Month (Chart 2) Based on 2344 Incidents Note: Some pie charts may not appear to show all the slices due to the small percentage the slice represents.

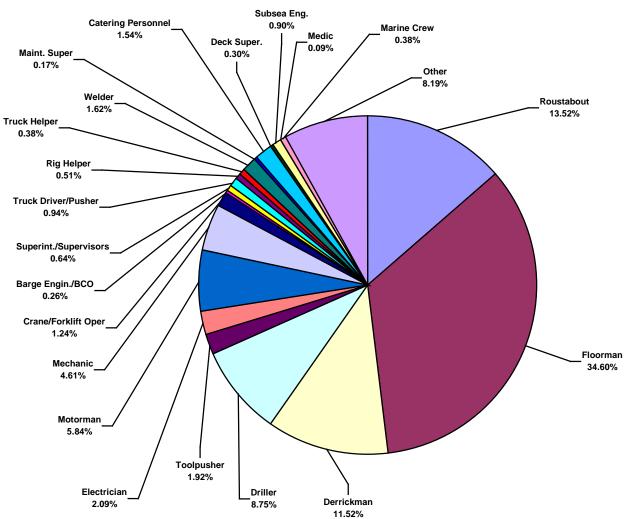




#### Total Industry Lost Time Incidents by Occupation (Chart 3) Based on 730 Incidents

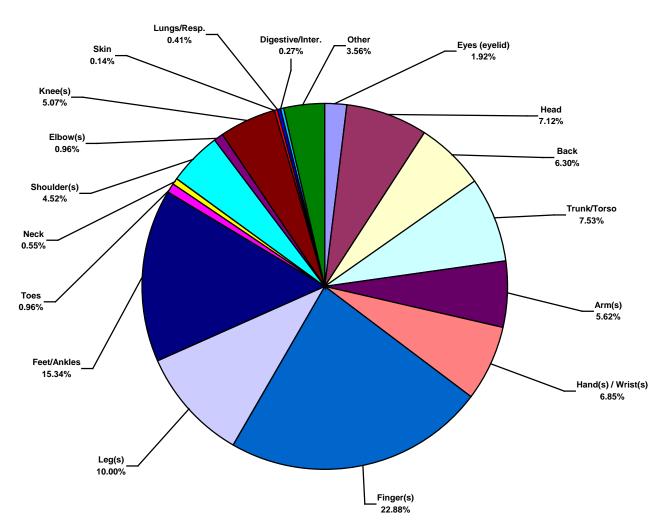
IADC





#### Total Industry Recordable Incidents by Occupation (Chart 4) Based on 2344 Incidents





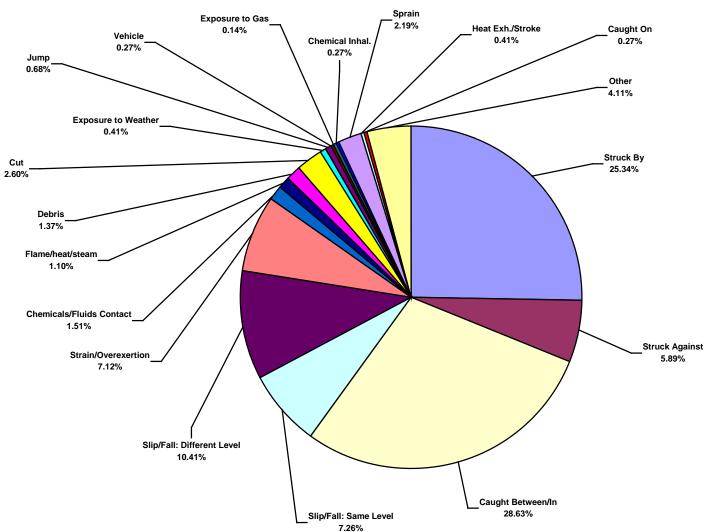
#### Total Industry Lost Time Incidents by Body Part (Chart 5) Based on 730 Incidents



#### Digestive/Inter. 0.30% Lungs/Resp. Skin Other 0.26% 0.13% 3.03% Eyes (eyelid) 2.90% Knee(s) 2.86% Head 11.90% Elbow(s) 0.77% Shoulder(s) 3.84% Back 4.95% Neck 0.73% Trunk/Torso 4.56% Toes 1.02% Arm(s) 4.31% Feet/Ankles 10.67% Hand(s) / Wrist(s) Leg(s) 10.03% 6.31% Finger(s) 31.44%

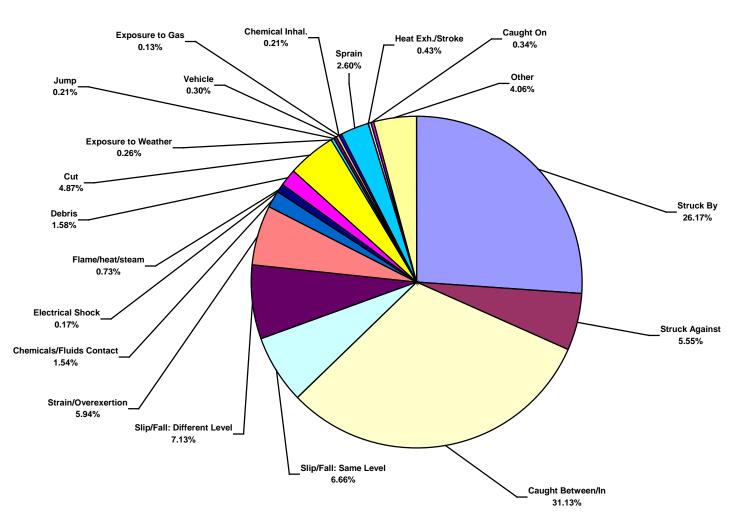
#### Total Industry Recordable Incidents by Body Part (Chart 6) Based on 2344 Incidents





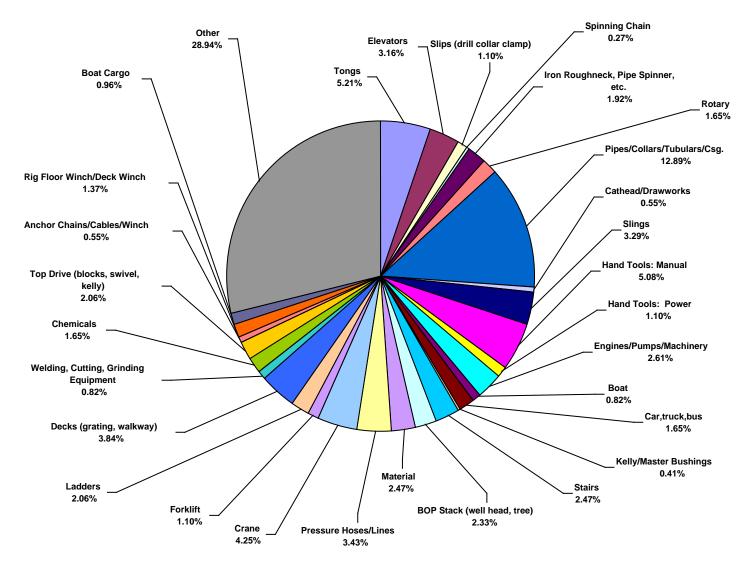
# Total Industry Lost Time Incidents by Incident Type (Chart 7) Based on 730 Incidents





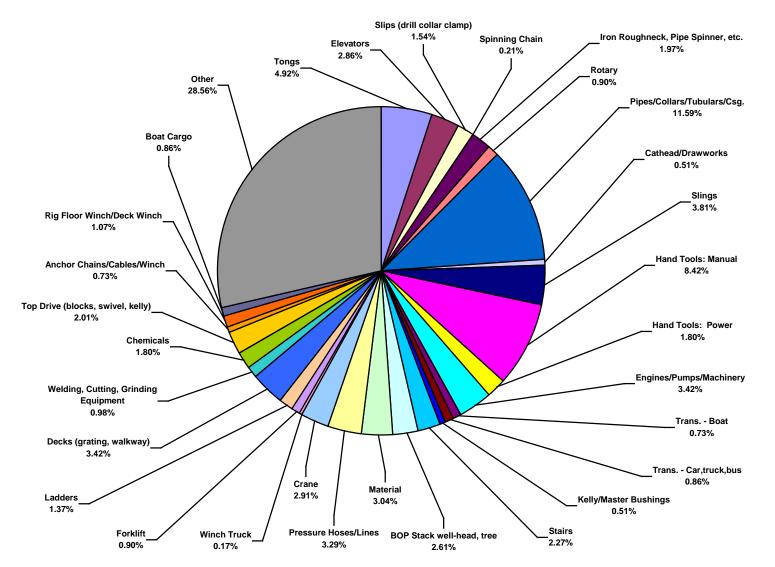
#### Total Industry Recordable Incidents by Incident Type (Chart 8) Based on 2342 Incidents





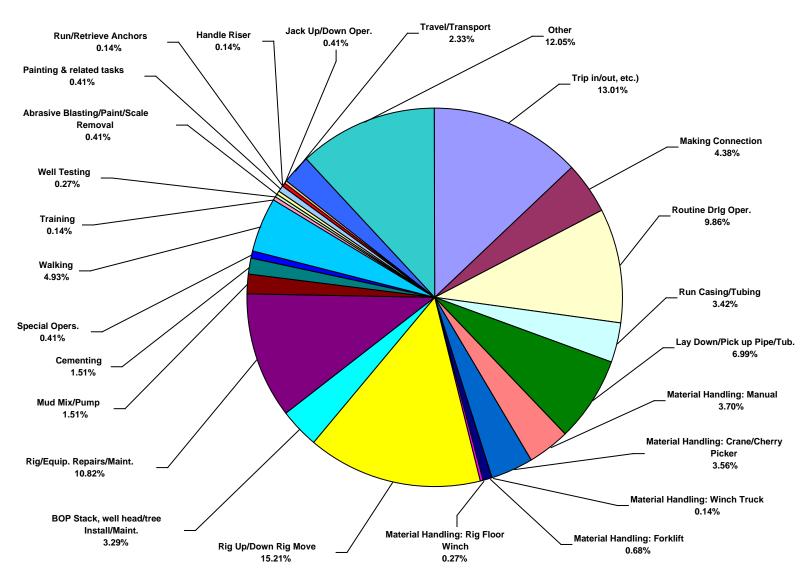
#### Total Industry Lost Time Incidents by Equipment (Chart 9) Based on 729 Incidents





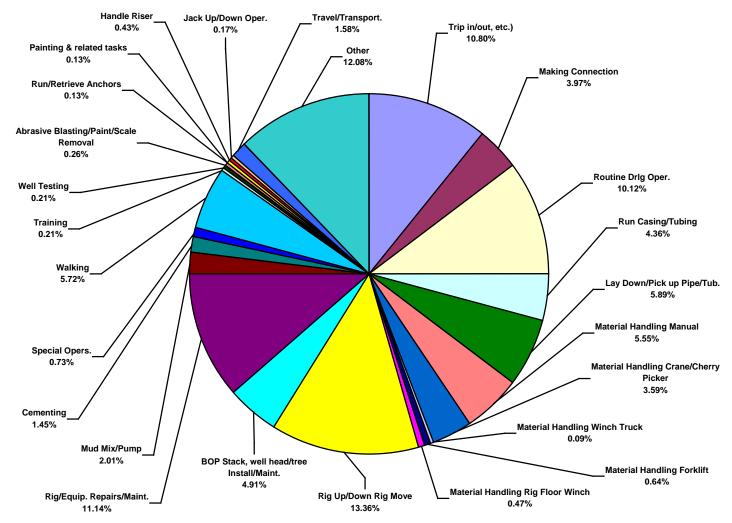
#### Total Industry Recordable Incidents by Equipment (Chart 10) Based on 2339 Incidents





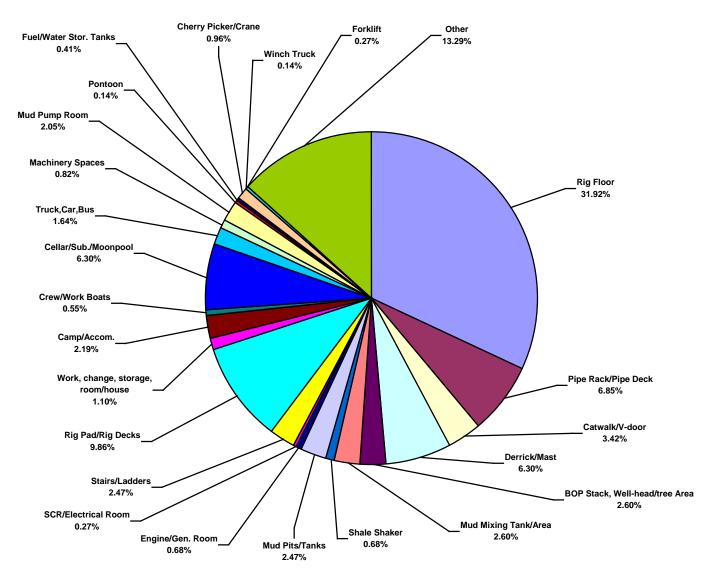
#### Total Industry Lost Time Incidents by Operation (Chart 11) Based on 730 Incidents





#### Total Industry Recordable Incidents by Operation (Chart 12) Based on 2342 Incidents





#### Total Industry Lost Time Incidents by Location (Chart 13) Based on 730 Incidents

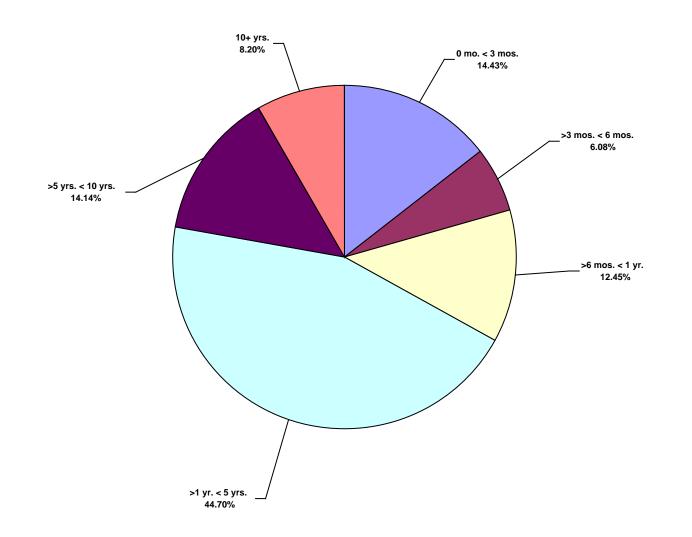


#### Forklift Winch Truck Jack. House 0.34% 0.13% Other 0.13% Cherry Picker/Crane 12.04% 0.68% Fuel/Water Stor. Tanks 0.34% Rig Floor 31.46% Pontoon 0.90% Mud Pump Room 2.94% Machinery Spaces 1.02% Truck,Car,Bus 1.24% Cellar/Sub./Moonpool 6.32% Pipe Rack/Pipe Deck Crew/Work Boats 6.06% 0.55% Catwalk/V-door Camp/Accom. 2.90% 3.33% Derrick/Mast Work, change, storage, room/house 4.78% 1.32% BOP Stack, Well-head/tree Area 3.93% **Rig Pad/Rig Decks** 9.43% Stairs/Ladders Shale Shaker 1.58% Mud Mixing Tank/Area 1.07% 2.69% SCR/Electrical Room 0.55% Mud Pits/Tanks Engine/Gen. Room 2.86% 1.41%

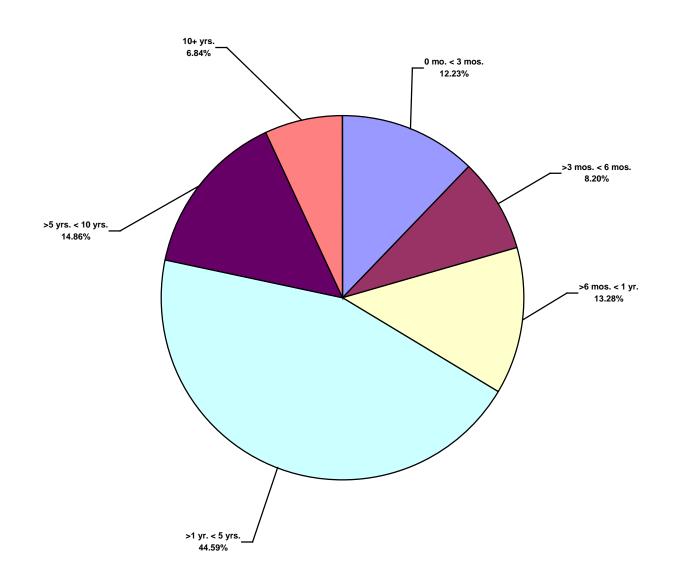
#### Total Industry Recordable Incidents by Location (Chart 14) Based on 2343 Incidents



#### Total Industry Lost Time Incidents by Time in Service (Chart 15) Based on 707 Incidents







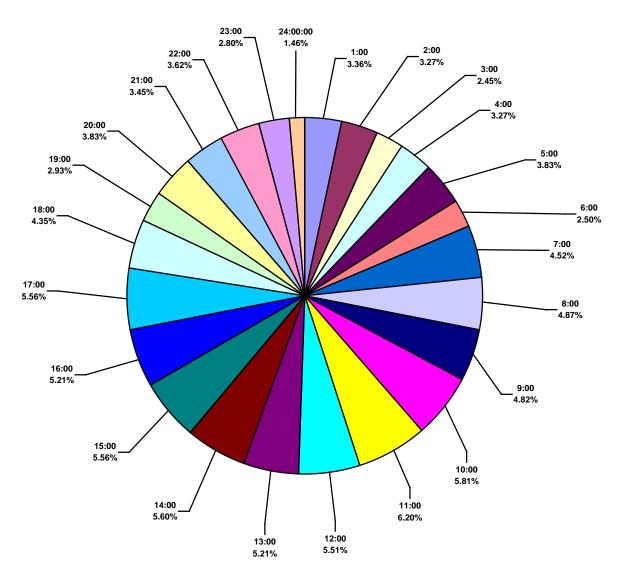
#### Total Industry Recordable Incidents by Time in Service (Chart 16) Based on 2282 Incidents



#### 24:00:00 23:00 1:00 1.25% 2.36% 2.64% 2:00 2.91% 3:00 22:00 2.36% 4.85% 4:00 3.05% 21:00 5:00 3.33% 4.30% 20:00 6:00 4.58% 2.91% 19:00 2.50% 7:00 3.74% 18:00 5.41% 8:00 4.99% 9:00 17:00 4.58% 5.69% 10:00 4.99% 16:00 5.55% 15:00 11:00 5.13% 5.55% 12:00 14:00 13:00 5.55% 7.35% 4.44%

### Total Industry Lost Time Incidents by Time of Day (Chart 17) Based on 721 Incidents





### Total Industry Recordable Incidents by Time of Day (Chart 18) Based on 2322 Incidents

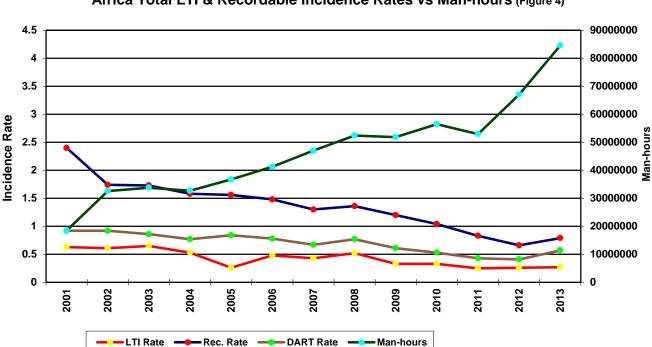


### 2013 ISP Program Regional Totals Combined Land & Water IADC 2013 Africa Totals (Table 4)

	LAND	WATER	COMBINED
TOTAL MANHOURS	41,203,044	43,377,983	84,581,027
TOTAL MEDICAL TREATMENT INCIDENTS	43	49	92
TOTAL RESTRICTED WORK INCIDENTS	99	29	128
TOTAL LOST TIME INCIDENTS	79	32	111
TOTAL FATALITIES	0	3	3
TOTAL RECORDABLES	221	113	334
MTO INCIDENCE RATE	0.21	0.23	0.22
RWC INCIDENCE RATE	0.48	0.13	0.30
LTI INCIDENCE RATE	0.38	0.16	0.27
LTI FREQUENCY RATE	1.92	0.81	1.35
DART INCIDENCE RATE	0.86	0.30	0.57
DART FREQUENCY RATE	4.32	1.48	2.86
RECORDABLE INCIDENCE RATE	1.07	0.52	0.79
RECORDABLE FREQUENCY RATE	5.36	2.61	3.95

MEDICAL TREATMENT INCIDENCE RATE = MTOS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) RESTRICTED WORK INCIDENCE RATE = RWCS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) LOST TIME INCIDENCE RATE -( LTIS+FTLS) X 200,000 / MAN-HOURS LOST TIME FREQUENCY RATE =( LTIS+FTLS) X 1,000,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 200,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 1,000,000 / MAN-HOURS RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MAN-HOURS RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MAN-HOURS

Companies Reporting: Land – 15 Water – 23



Africa Total LTI & Recordable Incidence Rates vs Man-hours (Figure 4)

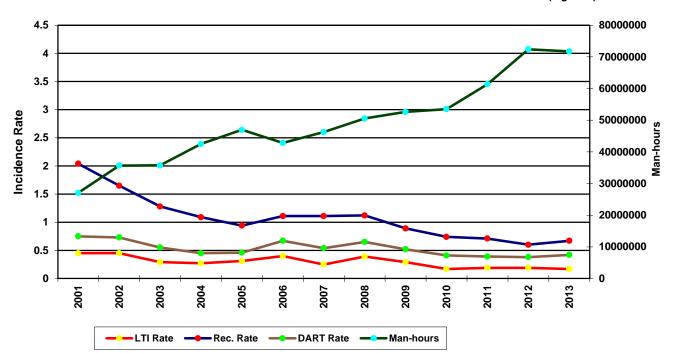


## IADC 2013 Asia Pacific Totals (Table 5)

	LAND	WATER	COMBINED
TOTAL MANHOURS	23,172,538	48,554,010	71,726,547
TOTAL MEDICAL TREATMENT INCIDENTS	42	48	90
TOTAL RESTRICTED WORK INCIDENTS	42	47	89
TOTAL LOST TIME INCIDENTS	22	37	59
TOTAL FATALITIES	3	0	3
TOTAL RECORDABLES	109	132	241
MTO INCIDENCE RATE	0.36	0.20	0.25
RWC INCIDENCE RATE	0.36	0.19	0.25
LTI INCIDENCE RATE	0.22	0.15	0.17
LTI FREQUENCY RATE	1.08	0.76	0.86
DART INCIDENCE RATE	0.58	0.35	0.42
DART FREQUENCY RATE	2.89	1.73	2.11
RECORDABLE INCIDENCE RATE	0.94	0.54	0.67
RECORDABLE FREQUENCY RATE	4.70	2.72	3.36

MEDICAL TREATMENT INCIDENCE RATE = MTOS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) RESTRICTED WORK INCIDENCE RATE = RWCS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) LOST TIME INCIDENCE RATE -( LTIS+FTLS) X 200,000 / MAN-HOURS LOST TIME FREQUENCY RATE =( LTIS+FTLS) X 1,000,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 200,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 1,000,000 / MAN-HOURS RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MAN-HOURS RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MAN-HOURS

Companies Reporting: Land – 16 Water – 30



Asia Pacific Total LTI & Recordable Incidence Rates vs Man-hours (Figure 5)

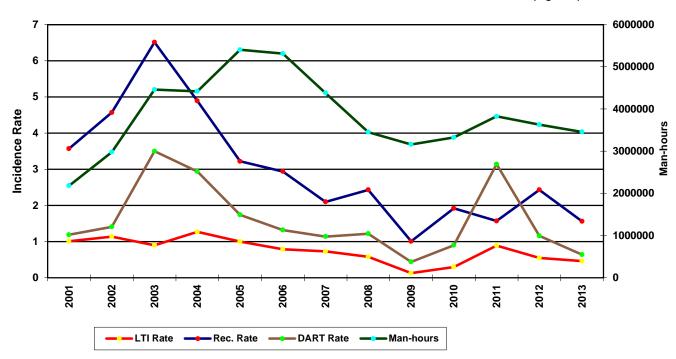


### IADC 2013 Canada Totals (Table 6)

	LAND	WATER	COMBINED
TOTAL MANHOURS	2,619,882	836,147	3,456,029
TOTAL MEDICAL TREATMENT INCIDENTS	16	0	16
TOTAL RESTRICTED WORK INCIDENTS	2	1	3
TOTAL LOST TIME INCIDENTS	8	0	8
TOTAL FATALITIES	0	0	0
TOTAL RECORDABLES	26	1	27
MTO INCIDENCE RATE	1.22	0.00	0.93
RWC INCIDENCE RATE	0.15	0.24	0.17
LTI INCIDENCE RATE	0.61	0.00	0.46
LTI FREQUENCY RATE	3.05	0.00	2.31
DART INCIDENCE RATE	0.76	0.24	0.64
DART FREQUENCY RATE	3.82	1.20	3.18
RECORDABLE INCIDENCE RATE	1.98	0.24	1.56
RECORDABLE FREQUENCY RATE	9.92	1.20	7.81

MEDICAL TREATMENT INCIDENCE RATE = MTOS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) RESTRICTED WORK INCIDENCE RATE = RWCS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) LOST TIME INCIDENCE RATE -( LTIS+FTLS) X 200,000 / MAN-HOURS LOST TIME FREQUENCY RATE =( LTIS+FTLS) X 1,000,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 200,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 1,000,000 / MAN-HOURS RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MAN-HOURS RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MAN-HOURS

Companies Reporting: Land – 4 Water – 2



#### Canada Total LTI & Recordable Incidence Rates vs Man-hours (Figure 6)



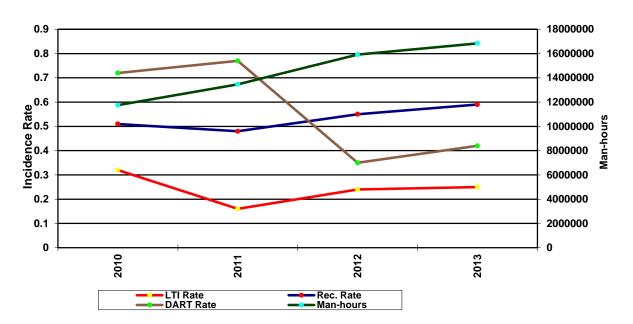
# IADC 2013 Central America & Caribbean Totals (Table 7)

	LAND	WATER	COMBINED
TOTAL MANHOURS	8,760,583	8,083,064	16,843,647
TOTAL MEDICAL TREATMENT INCIDENTS	8	7	15
TOTAL RESTRICTED WORK INCIDENTS	8	6	14
TOTAL LOST TIME INCIDENTS	12	9	21
TOTAL FATALITIES	0	0	0
TOTAL RECORDABLES	28	22	50
MTO INCIDENCE RATE	0.18	0.17	0.18
RWC INCIDENCE RATE	0.18	0.15	0.17
LTI INCIDENCE RATE	0.27	0.22	0.25
LTI FREQUENCY RATE	1.37	1.11	1.25
DART INCIDENCE RATE	0.46	0.37	0.42
DART FREQUENCY RATE	2.28	1.86	2.08
RECORDABLE INCIDENCE RATE	0.64	0.54	0.59
RECORDABLE FREQUENCY RATE	3.20	2.72	2.97

MEDICAL TREATMENT INCIDENCE RATE = MTOS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) RESTRICTED WORK INCIDENCE RATE = RWCS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) LOST TIME INCIDENCE RATE -( LTIS+FTLS) X 200,000 / MAN-HOURS LOST TIME FREQUENCY RATE =( LTIS+FTLS) X 1,000,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 200,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 1,000,000 / MAN-HOURS RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MAN-HOURS RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MAN-HOURS

#### Companies Reporting: Land – 6 Water – 8

Central America & Caribbean Total LTI & Recordable Incidence Rates vs Man-hours (Figure 7)



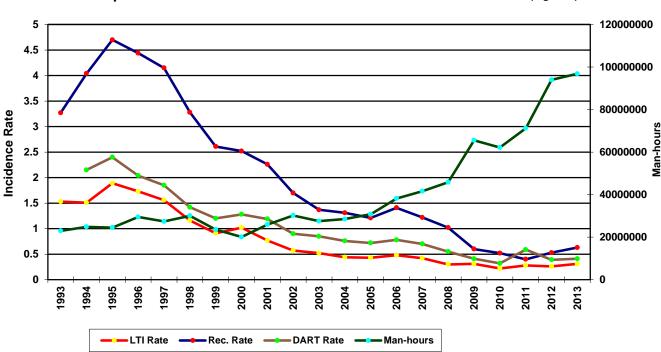


## IADC 2013 European Totals (Table 8)

	LAND	WATER	COMBINED
TOTAL MANHOURS	58,137,011	38,707,108	96,844,119
TOTAL MEDICAL TREATMENT INCIDENTS	26	79	105
TOTAL RESTRICTED WORK INCIDENTS	15	33	48
TOTAL LOST TIME INCIDENTS	96	52	148
TOTAL FATALITIES	2	0	2
TOTAL RECORDABLES	139	164	303
MTO INCIDENCE RATE	0.09	0.41	0.22
RWC INCIDENCE RATE	0.05	0.17	0.10
LTI INCIDENCE RATE	0.34	0.27	0.31
LTI FREQUENCY RATE	1.69	1.34	1.55
DART INCIDENCE RATE	0.39	0.44	0.41
DART FREQUENCY RATE	1.94	2.20	2.04
RECORDABLE INCIDENCE RATE	0.48	0.85	0.63
RECORDABLE FREQUENCY RATE	2.39	4.24	3.13

MEDICAL TREATMENT INCIDENCE RATE = MTOS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) RESTRICTED WORK INCIDENCE RATE = RWCS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) LOST TIME INCIDENCE RATE -( LTIS+FTLS) X 200,000 / MAN-HOURS LOST TIME FREQUENCY RATE =( LTIS+FTLS) X 1,000,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 200,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 1,000,000 / MAN-HOURS RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MAN-HOURS RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MAN-HOURS

Companies Reporting: Land – 14 Water – 20



#### European Total LTI & Recordable Incidence Rates vs Man-hours (Figure 8)

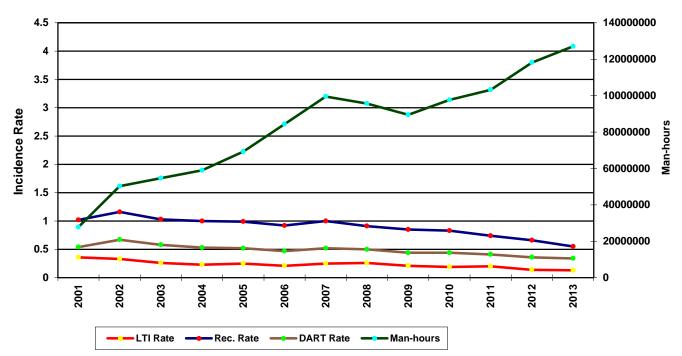


# IADC 2013 Middle East Totals (Table 9)

	LAND	WATER	COMBINED
TOTAL MANHOURS	91,602,953	35,468,581	127,071,534
TOTAL MEDICAL TREATMENT INCIDENTS	117	13	130
TOTAL RESTRICTED WORK INCIDENTS	113	25	138
TOTAL LOST TIME INCIDENTS	62	13	75
TOTAL FATALITIES	4	1	5
TOTAL RECORDABLES	296	52	348
MTO INCIDENCE RATE	0.26	0.07	0.20
RWC INCIDENCE RATE	0.25	0.14	0.22
LTI INCIDENCE RATE	0.14	0.08	0.13
LTI FREQUENCY RATE	0.72	0.39	0.63
DART INCIDENCE RATE	0.39	0.22	0.34
DART FREQUENCY RATE	1.95	1.10	1.72
RECORDABLE INCIDENCE RATE	0.65	0.29	0.55
RECORDABLE FREQUENCY RATE	3.23	1.47	2.74

MEDICAL TREATMENT INCIDENCE RATE = MTOS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) RESTRICTED WORK INCIDENCE RATE = RWCS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) LOST TIME INCIDENCE RATE - (LTIS+FTLS) X 200,000 / MAN-HOURS LOST TIME FREQUENCY RATE = (LTIS+FTLS) X 1,000,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 200,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 1,000,000 / MAN-HOURS RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MAN-HOURS RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MAN-HOURS

#### Middle East Total LTI & Recordable Incidence Rates vs Man-hours (Figure 9)



Companies Reporting: Land – 23 Water – 17



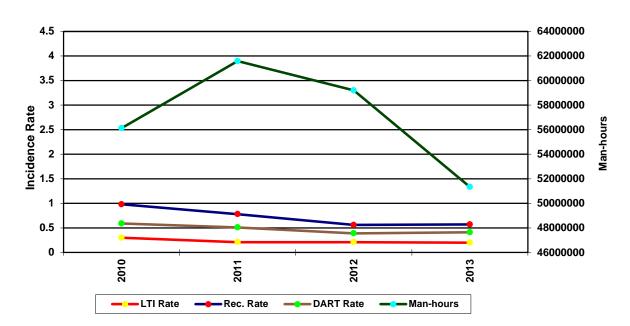
# IADC 2013 South American Totals (Table 10)

	LAND	WATER	COMBINED
TOTAL MANHOURS	30,360,068	20,976,133	51,336,201
TOTAL MEDICAL TREATMENT INCIDENTS	21	19	40
TOTAL RESTRICTED WORK INCIDENTS	32	22	54
TOTAL LOST TIME INCIDENTS	24	27	51
TOTAL FATALITIES	0	1	1
TOTAL RECORDABLES	77	69	146
MTO INCIDENCE RATE	0.14	0.18	0.16
RWC INCIDENCE RATE	0.21	0.21	0.21
LTI INCIDENCE RATE	0.16	0.27	0.20
LTI FREQUENCY RATE	0.79	1.33	1.01
DART INCIDENCE RATE	0.37	0.48	0.41
DART FREQUENCY RATE	1.84	2.38	2.06
RECORDABLE INCIDENCE RATE	0.51	0.66	0.57
RECORDABLE FREQUENCY RATE	2.54	3.29	2.84

MEDICAL TREATMENT INCIDENCE RATE = MTOS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) RESTRICTED WORK INCIDENCE RATE = RWCS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) LOST TIME INCIDENCE RATE -( LTIS+FTLS) X 200,000 / MAN-HOURS LOST TIME FREQUENCY RATE =( LTIS+FTLS) X 1,000,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 200,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 1,000,000 / MAN-HOURS RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MAN-HOURS RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MAN-HOURS

Companies Reporting: Land – 8 Water – 13

### South America Total LTI & Recordable Incidence Rates vs Man-hours (Figure 10)





# IADC 2013 US Totals (Table 11)

	LAND	WATER	COMBINED
TOTAL MANHOURS	97,013,290	43,216,007	140,229,297
TOTAL MEDICAL TREATMENT INCIDENTS	301	72	373
TOTAL RESTRICTED WORK INCIDENTS	221	65	286
TOTAL LOST TIME INCIDENTS	238	32	270
TOTAL FATALITIES	8	0	8
TOTAL RECORDABLES	768	169	937
MTO INCIDENCE RATE	0.62	0.33	0.53
RWC INCIDENCE RATE	0.46	0.30	0.41
LTI INCIDENCE RATE	0.51	0.15	0.40
LTI FREQUENCY RATE	2.54	0.74	1.98
DART INCIDENCE RATE	0.96	0.45	0.80
DART FREQUENCY RATE	4.81	2.24	4.02
RECORDABLE INCIDENCE RATE	1.58	0.78	1.34
RECORDABLE FREQUENCY RATE	7.92	3.91	6.68

MEDICAL TREATMENT INCIDENCE RATE = MTOS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) RESTRICTED WORK INCIDENCE RATE = RWCS X 200,000 / MAN-HOURS (LTIS NOT INCLUDED) LOST TIME INCIDENCE RATE -( LTIS+FTLS) X 200,000 / MAN-HOURS LOST TIME FREQUENCY RATE =( LTIS+FTLS) X 1,000,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 200,000 / MAN-HOURS DART INCIDENCE RATE - (LTIS+FTLS+RWCS) X 1,000,000 / MAN-HOURS RECORDABLE INCIDENCE RATE = RECORDABLES X 200,000 / MAN-HOURS RECORDABLE FREQUENCY RATE = RECORDABLES X 1,000,000 / MAN-HOURS

#### Companies Reporting: Land – 37; Water – 15

# US Total LTI & Recordable Incidence Rates vs Man-hours (Figure 11)

