

Health & Safety Performance Indicators

Contractor Group Benchmarking, U.S.
Utilities, Distribution & Power Generation Industries
2012 Data

ISN Report No. 1309
ISN.com

© 2013 ISN



About ISN

Established in 2001, ISN® is a global leader in contractor and supplier management. We support over 320 Owner Clients in capital-intensive and public sector industries to help manage over 50,000 contractors and suppliers with operations in more than 75 countries. We are headquartered in Dallas, Texas, with additional offices in Calgary, Sydney, London, Los Angeles and New York.

ISN takes pride in leading efforts to improve the efficiency and effectiveness of contractor management systems and in serving as a forum for sharing industry best practices among our members.

Our innovative online contractor management database, ISNetworld, is constantly evolving to meet ever-changing corporate and legislative requirements while reducing unnecessary duplication associated with traditional contractor procurement processes.

Our Review and Verification Services (RAVS®) group is comprised of specialized professionals with expertise in health, safety, environmental, procurement, quality and other compliance requirements. RAVS® adds a level of due diligence to the information gathered from contractors and suppliers.

ISNetworld's dynamic and configurable functionality allows Owner Clients to measure the key performance metrics relevant to them, promoting transparency, clear communication and sustainable operations. ISN provides an opportunity for Owner Clients to improve their risk management processes and to connect with safe and reliable contractors. By identifying contractors and suppliers who meet both client-specific and legislative standards, Owner Clients are able to drive tangible and sustained performance improvements while strengthening their relationships with their contractors and suppliers.

For more information, visit ISN.com, contact ISN at +1 214 303 4900 or email ISNTeam@isn.com.

Table of Contents

About ISN	1
Preface.....	3
Table 1: 2012 Injury and Illness Rates by NAICS Code.....	4
Table 2: 2012 Injury and Illness Rates by ISN Work Type.....	10
Appendix 1: Definitions.....	27
Appendix 2: Incident Rate Calculations	28
Appendix 3: Analysis Procedure Summary	31

Disclaimer

The contents of this publication represent an aggregate data compilation and are intended for informational and general guidance purposes only. This publication is not intended, and does not constitute any advice, recommendation or proposal of a particular course of action, by or on behalf of ISN Software Corporation ("ISN"), to any user hereof. While efforts have been made to ensure the accuracy of the information contained in the publication, the information is not exhaustive and may contain both material and immaterial errors. ISN does not warrant or represent the accuracy or completeness of any information herein. ISN disclaims any losses, however arising, as a result of a user's reliance on the contents of this publication. Before relying on any such material or data, users should carefully make their own assessment as to its accuracy, currency, completeness and relevance for their purposes, and should obtain any appropriate professional advice relevant to their particular circumstances. Any access or use of any information or material contained in this publication is at your own risk and constitutes agreement to the terms of this disclaimer.

Preface

ISN gathers and manages a comprehensive range of health, safety and environmental (HSE) performance data from contractors and suppliers in capital-intensive industries. In addition to HSE, procurement, quality and compliance information, annual and quarterly HSE performance statistics are collected through ISN's web-based system, ISNetworld, then reviewed and verified by ISN's Review and Verification Services (RAVS) for accuracy and completion.

The main purpose of this publication is to provide ISNetworld member contractors, suppliers and Owner Clients pertinent HSE performance information useful for benchmarking their organization's performance against industry peers.

Collectively, approximately 50,000 contractors and suppliers actively report information through ISNetworld, representing nearly 11 billion work hours of activity in 2012 alone. A rich source of data such as this provides an opportunity for developing industry-specific benchmarking statistics that are unique for their quality, insight and comprehensiveness.

Industry specific performance indicator publications are available for a number of industries, including Oil & Gas, Chemical, Utilities & Power Generation, Manufacturing*, Mining, Pharmaceuticals and Facilities Management. This publication specifically covers information pertinent to the Utilities, Distribution & Power Generation industry for the year 2012.

The health and safety Key Performance Indicators (KPIs) collected and presented in this report include:

- Total Recordable Incident Rate (TRIR)
- Total Nonfatal Recordable Incident Rate (Nonfatal TRIR)
- Days Away, Restricted or Job Transfer Rate (DART)
- Fatality Rate Per 100,000 Employees
- Total Number of Fatalities
- Incident Severity (In Days)

These KPIs are organized into two tables: **Table 1** provides detailed health and safety performance indicators aggregated by NAICS code. For added granularity, **Table 2** provides performance indicators grouped by ISN Work Type designation. All values in this publication are aggregated to preserve the anonymity of contractor and supplier companies. Appendices 1 through 3 provide definitions, calculations and analysis procedures.

It is ISN's hope that users will find the publication useful for benchmarking their HSE performance against that of their peers and for driving continuous health and safety performance improvement efforts in the workplace.

*Manufacturing includes Steel, Fertilizer Products, Wood and Paper, Food and Agriculture industries.



Table 1

2012 Injury and Illness Rates, by NAICS Code

Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code ^[a]	NAICS Title ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[c]		Severity ^[d]
				Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
11	Agriculture, Forestry, Fishing and Hunting	706	1,318	2.88	2.88	0.91	0	0.00	0.11
21	Mining, Quarrying, and Oil and Gas Extraction	136,254	369,604	1.46	1.45	0.85	13	7.03	11.77
213	Support Activities for Mining	135,956	369,050	1.46	1.45	0.85	13	7.05	11.73
2131	Support Activities for Mining	135,937	369,015	1.46	1.45	0.85	13	7.05	11.73
21311	Support Activities for Mining	135,937	369,015	1.46	1.45	0.85	13	7.05	11.73
213111	Drilling Oil and Gas Wells	9,540	26,923*	2.27	2.25	1.49	3	22.29	12.30
213112	Support Activities for Oil and Gas Operations	126,170	341,558	1.39	1.39	0.79	10	5.86	11.66
22	Utilities	8,493	19,316	1.36	1.35	0.71	1	10.35	10.64
221	Utilities	8,493	19,316	1.36	1.35	0.71	1	10.35	10.64
2211	Electric Power Generation, Transmission and Distribution	5,894	12,965	1.56	1.54	0.82	1	15.43	9.42
2212	Natural Gas Distribution	776	1,750	2.29	2.29	1.14	0	0.00	10.75
22121	Natural Gas Distribution	632	1,478	2.16	2.16	1.22	0	0.00	13.44
23	Construction	373,965	812,526	1.47	1.47	0.76	13	3.20	12.57
236	Construction of Buildings	21,413	44,619	1.43	1.42	0.64	1	4.48	7.87
2362	Nonresidential Building Construction	21,316	44,425	1.41	1.41	0.63	1	4.50	7.89
23621	Industrial Building Construction	9,041	19,529	0.79	0.79	0.33	0	0.00	5.27 (3.13*)
23622	Commercial and Institutional Building Construction	12,267	24,882	1.90	1.89	0.86	1	8.04	8.77
237	Heavy and Civil Engineering Construction	133,614	305,711	1.66	1.66	0.87	6	3.93	13.49
2371	Utility System Construction	96,564	221,879	1.91	1.91	1.01	5	4.51	13.43
23711	Water and Sewer Line and Related Structures Construction	7,271	13,008	2.84	2.84	1.72	0	0.00	16.21
23712	Oil and Gas Pipeline and Related Structures Construction	53,624	127,189	1.32	1.32	0.67	2	3.14	9.59
23713	Power and Communication Line and Related Structures Construction	32,283	74,401	2.72	2.71	1.42	3	8.06	16.14
2373	Highway, Street, and Bridge Construction	3,924	8,346	2.54	2.52	1.61	1	23.96	19.46

[a] North American Industry Classification System—United States, 2007. Totals for each NAICS code are based on all records classified at a more disaggregated level and may include data for industries not shown separately. For example, calculations presented for two-digit NAICS codes will include all records with any of the three, four, five and six-digit NAICS codes that are subsumed in the two-digit NAICS classification.

[b] The injury and illness rates represent the number of injuries and illnesses per 100 full-time workers. See Appendix 2 on Incident Rate Calculations.

[c] The fatality rate represents the number of fatalities per 100,000 full-time workers. See Appendix 2 on Fatality Rate Calculations.

[d] The incident severity (in days) represents the number of days away from work per recordable incident. See Appendix 2 on Incident Severity (In Days) Calculations.

- Indicates that the data are suppressed because there are fewer than 10 contractors reporting for the cell.

* Indicates that the difference between the rate computed using all valid records and that computed using only those records excluding the highest 0.5th percentile extreme values is greater than or equal to 10%. See sections 3 and 5 of Appendix 3 for more information.

** Indicates that the reported fatality rate is greater than or equal to 100.

† Indicates that the largest contractor in the corresponding NAICS Code contributes more than 70% of the Total Exposure Hours of all contractors in that NAICS Code.

Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code ^[a]	NAICS Title ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[d]
				Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
23731	Highway, Street, and Bridge Construction	3,924	8,346	2.54	2.52	1.61	1	23.96	19.46
2379	Other Heavy and Civil Engineering Construction	29,405	68,113	0.72	0.72	0.31	0	0.00	12.57
23799	Other Heavy and Civil Engineering Construction	29,405	68,113	0.72	0.72	0.31	0	0.00	12.57
238	Specialty Trade Contractors	198,677	418,192	1.40	1.40	0.74	6	2.87	12.36
2381	Foundation, Structure, and Building Exterior Contractors	13,040	24,351	2.02	2.02	1.10	0	0.00	15.04
23811	Poured Concrete Foundation and Structure Contractors	2,714	5,173	1.43	1.43	0.73	0	0.00	7.54
23812	Structural Steel and Precast Concrete Contractors	1,756	3,792	1.42	1.42	0.84	0	0.00	15.56
23814	Masonry Contractors	1,376	2,967	1.42	1.42	0.81	0	0.00	12.90
23816	Roofing Contractors	6,331	10,618	2.71	2.71	1.45	0	0.00	17.61
23819	Other Foundation, Structure, and Building Exterior Contractors	764	1,643	1.70 (1.47*)	1.70 (1.47*)	0.97 (0.86*)	0	0.00	8.36
2382	Building Equipment Contractors	89,845	188,474	1.96	1.96	1.06	4	4.24	12.26
23821	Electrical Contractors and Other Wiring Installation Contractors	38,926	82,292	1.61	1.61	0.84	1	2.43	15.02
23822	Plumbing, Heating, and Air-Conditioning Contractors	29,988	62,165	2.23	2.23	1.07	1	3.22	9.44
23829	Other Building Equipment Contractors	20,545	43,211	2.25	2.24	1.49	2	9.26	12.59
2383	Building Finishing Contractors	9,524	20,004	1.04	1.04	0.45	0	0.00	10.86 (9.21*)
23831	Drywall and Insulation Contractors	6,838	14,617	0.88	0.88	0.30	0	0.00	6.91 (4.16*)
23832	Painting and Wall Covering Contractors	2,575	5,176	1.28	1.28	0.70	0	0.00	18.33
2389	Other Specialty Trade Contractors	83,800	180,174	0.79	0.79	0.40	2	2.22	12.15
23891	Site Preparation Contractors	8,033	17,736	2.19	2.19	1.39	0	0.00	14.79
23899	All Other Specialty Trade Contractors	75,735	162,380	0.64	0.63	0.29	2	2.46	11.16
31-33	Manufacturing	99,621	206,743	1.68	1.68	0.88	1	0.97	9.16
325	Chemical Manufacturing	15,583	30,952	0.93	0.93	0.57	0	0.00	23.56
332	Fabricated Metal Product Manufacturing	21,177	45,250	1.52	1.52	0.75	0	0.00	7.46
3323	Architectural and Structural Metals Manufacturing	3,310	7,855 ⁺	1.37	1.37	0.99	0	0.00	24.46
33231	Plate Work and Fabricated Structural Product Manufacturing	2,966	7,347 ⁺	1.25	1.25	0.93	0	0.00	19.87
3324	Boiler, Tank, and Shipping Container Manufacturing	1,904	3,637	3.79	3.79	2.53	0	0.00	5.52
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	1,223	2,425	1.73	1.73	0.41	0	0.00	0.48
33271	Machine Shops	662	1,390	2.88	2.88	0.72	0	0.00	0.50
3329	Other Fabricated Metal Product Manufacturing	13,319	27,879	1.26	1.26	0.52	0	0.00	3.95
33291	Metal Valve Manufacturing	13,061	27,367	1.19	1.19	0.49	0	0.00	4.01
332911	Industrial Valve Manufacturing	12,735	26,594	1.07	1.07	0.44	0	0.00	4.60

Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code ^[a]	NAICS Title ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[c]		Severity ^[d]
				Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
333	Machinery Manufacturing	31,455	65,279	2.06	2.06	1.09	0	0.00	8.82
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	3,218	6,607	2.15	2.15	1.06	0	0.00	13.85
33341	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	3,218	6,607	2.15	2.15	1.06	0	0.00	13.85
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	3,807	9,293	1.10	1.10	0.30	0	0.00	7.16
33361	Engine, Turbine, and Power Transmission Equipment Manufacturing	3,807	9,293	1.10	1.10	0.30	0	0.00	7.16
3339	Other General Purpose Machinery Manufacturing	20,222	40,846	2.04	2.04	1.14	0	0.00	9.48
33391	Pump and Compressor Manufacturing	5,877	12,501	2.27	2.27	0.67	0	0.00	5.62
33392	Material Handling Equipment Manufacturing	11,427	21,716	2.10	2.10	1.52	0	0.00	10.68
333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	3,208	7,064	2.94	2.94	2.29	0	0.00	12.68
33399	All Other General Purpose Machinery Manufacturing	2,918	6,629	1.42	1.42	0.78	0	0.00	15.30
334	Computer and Electronic Product Manufacturing	13,486	26,978	1.42	1.42	0.60	0	0.00	8.20
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	13,228	26,436	1.40	1.40	0.60	0	0.00	8.41
33451	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	13,156	26,304	1.41	1.41	0.60	0	0.00	8.41
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	6,875	14,297	0.90	0.90	0.45	0	0.00	4.64
335	Electrical Equipment, Appliance, and Component Manufacturing	11,486	24,528	1.79	1.78	0.91	1	8.15	5.53
3353	Electrical Equipment Manufacturing	9,777	21,047	1.72	1.71	0.81	1	9.50	5.15
33531	Electrical Equipment Manufacturing	9,771	21,038	1.72	1.71	0.81	1	9.51	5.15
335312	Motor and Generator Manufacturing	2,964	6,405	2.69	2.69	1.56	0	0.00	3.14
339	Miscellaneous Manufacturing	2,922	6,383	1.25	1.25	0.56	0	0.00	3.08
42	Wholesale Trade	81,972	171,306	2.09	2.09	1.30	0	0.00	6.79
423	Merchant Wholesalers, Durable Goods	33,514	69,882	2.17	2.17	0.98	0	0.00	7.19
4236	Electrical and Electronic Goods Merchant Wholesalers	8,010	16,017*	0.89	0.89	0.49	0	0.00	4.54
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	20,508	43,138	2.83	2.83	1.20	0	0.00	6.57
42383	Industrial Machinery and Equipment Merchant Wholesalers	13,277	28,200	2.44	2.44	1.16	0	0.00	7.30
42384	Industrial Supplies Merchant Wholesalers	3,132	6,307	1.81	1.81	0.92	0	0.00	6.07
424	Merchant Wholesalers, Nondurable Goods	48,167	100,906	2.05	2.05	1.53	0	0.00	6.51
4246	Chemical and Allied Products Merchant Wholesalers	46,180	95,826	2.07	2.07	1.54	0	0.00	6.74
42469	Other Chemical and Allied Products Merchant Wholesalers	46,180	95,826	2.07	2.07	1.54	0	0.00	6.74

Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code ^[a]	NAICS Title ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[d]
				Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
44-45	Retail Trade	18,946	33,767	4.29	4.27	2.88	4	23.69	11.27
48-49	Transportation and Warehousing	4,897	11,709	2.15	2.15	1.30	0	0.00	22.09 (19.23*)
484	Truck Transportation	2,548	6,382	2.57	2.57	1.50	0	0.00	22.17 (17.74*)
4842	Specialized Freight Trucking	2,332	5,840	2.74	2.74	1.58	0	0.00	21.99 (17.44*)
48422	Specialized Freight (except Used Goods) Trucking, Local	1,695	4,316	3.15	3.15	1.81	0	0.00	24.19 (18.88*)
53	Real Estate and Rental and Leasing	29,148	68,795	1.76	1.75	1.18	2	5.81	14.70
532	Rental and Leasing Services	29,148	68,795	1.76	1.75	1.18	2	5.81	14.70
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	28,423	67,370	1.77	1.76	1.18	2	5.94	14.61
53241	Construction, Transportation, Mining, and Forestry Machinery and Equipment Rental and Leasing	13,352	31,311*	1.42	1.42	0.97	0	0.00	13.87
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	13,304	31,210*	1.42	1.42	0.97	0	0.00	13.87
54	Professional, Scientific, and Technical Services	158,868	328,072	0.56	0.55	0.25	3	1.83	8.79
541	Professional, Scientific, and Technical Services	158,817	327,980	0.56	0.55	0.25	3	1.83	8.79
5413	Architectural, Engineering, and Related Services	125,251	257,860	0.56	0.55	0.26	3	2.33	8.62
54133	Engineering Services	88,031	181,575	0.53	0.53	0.24	2	2.20	8.77
54137	Surveying and Mapping (except Geophysical) Services	4,248	9,641	0.68	0.68	0.25	0	0.00	12.36
54138	Testing Laboratories	18,491	38,538	0.76	0.76	0.40	0	0.00	8.55
5416	Management, Scientific, and Technical Consulting Services	20,228	40,514	0.62	0.62	0.24	0	0.00	7.39
54162	Environmental Consulting Services	18,940	37,640	0.65	0.65	0.24	0	0.00	7.57
5419	Other Professional, Scientific, and Technical Services	8,572	20,248	0.40	0.40	0.18	0	0.00	12.02
54199	All Other Professional, Scientific, and Technical Services	8,301	19,536	0.38	0.38	0.16	0	0.00	12.97
56	Administrative and Support and Waste Management and Remediation Services	215,478	448,590	3.21	3.20	2.07	7	3.12	12.61
561	Administrative and Support Services	173,044	352,354	3.46	3.46	2.25	5	2.84	11.31
5616	Investigation and Security Services	45,765	100,704*	1.30	1.30	0.73	1	1.99	8.14
5617	Services to Buildings and Dwellings	92,781	188,267	4.89	4.89	3.25	3	3.19	12.05
56173	Landscaping Services	21,871	46,630	5.03	5.02	2.85	1	4.29	5.99
56179	Other Services to Buildings and Dwellings	852	1,947	1.13	1.13	0.62	0	0.00	43.91
5619	Other Support Services	7,766	15,929	2.93	2.93	1.96	0	0.00	19.06
56199	All Other Support Services	7,766	15,929	2.93	2.93	1.96	0	0.00	19.06
562	Waste Management and Remediation Services	42,434	96,236	2.27	2.27	1.40	2	4.16	19.90

Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code ^[a]	NAICS Title ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[c]		Severity ^[d]
				Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
5621	Waste Collection	21,538	51,571	2.67	2.66	1.69	1	3.88	21.89
56211	Waste Collection	21,173	51,098	2.62	2.62	1.70	1	3.91	22.12
5629	Remediation and Other Waste Management Services	15,649	33,145	1.83	1.83	1.07	1	6.03	13.57
56291	Remediation Services	10,731	21,988	1.66	1.66	0.86	0	0.00	15.31
56299	All Other Waste Management Services	4,918	11,157	2.19	2.17	1.49	1	17.93	10.98
562998	All Other Miscellaneous Waste Management Services	3,569	7,849	1.38	1.35	0.76	1	25.48	8.09
81	Other Services (except Public Administration)	111,607	231,575	2.01	2.01	1.22	1	0.86	11.25
811	Repair and Maintenance	93,791	192,523	1.41	1.41	0.78	0	0.00	11.82
8112	Electronic and Precision Equipment Repair and Maintenance	649	1,114	2.51	2.51	2.15	0	0.00	21.93 (10.85*)
81121	Electronic and Precision Equipment Repair and Maintenance	649	1,114	2.51	2.51	2.15	0	0.00	21.93 (10.85*)
811219	Other Electronic and Precision Equipment Repair and Maintenance	636	1,092	2.38	2.38	2.01	0	0.00	23.62 (11.75*)
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	93,025	191,175	1.40	1.40	0.78	0	0.00	11.72
81131	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	92,027	188,989	1.38	1.38	0.75	0	0.00	11.64

[a] North American Industry Classification System—United States, 2007. Totals for each NAICS code are based on all records classified at a more disaggregated level and may include data for industries not shown separately. For example, calculations presented for two-digit NAICS codes will include all records with any of the three, four, five and six-digit NAICS codes that are subsumed in the two-digit NAICS classification.

[b] The injury and illness rates represent the number of injuries and illnesses per 100 full-time workers. See Appendix 2 on Incident Rate Calculations.

[c] The fatality rate represents the number of fatalities per 100,000 full-time workers. See Appendix 2 on Fatality Rate Calculations.

[d] The incident severity (in days) represents the number of days away from work per recordable incident. See Appendix 2 on Incident Severity (In Days) Calculations.

- Indicates that the data are suppressed because there are fewer than 10 contractors reporting for the cell.

* Indicates that the difference between the rate computed using all valid records and that computed using only those records excluding the highest 0.5th percentile extreme values is greater than or equal to 10%. See sections 3 and 5 of Appendix 3 for more information.

** Indicates that the reported fatality rate is greater than or equal to 100.

† Indicates that the largest contractor in the corresponding NAICS Code contributes more than 70% of the Total Exposure Hours of all contractors in that NAICS Code.



Table 2

2012 Injury and Illness Rates, by ISN Work Type

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[d]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
1.0 - General Contractor	108,721	239,419	1.10	1.10	0.49	1	0.84	8.59
1.0.1 - Turnaround	96,066	210,892	0.74	0.74	0.30	1	0.95	6.60
1.0.2 - Routine Maintenance	135,277	298,038	1.06	1.06	0.53	5	3.36	8.74
1.0.3 - Compression - Maintenance	47,801	109,226	0.93	0.93	0.45	0	0.00	13.83
1.0.4 - Hydraulic Workover	29,026	79,648*	1.45	1.44	0.98	2	5.02	16.47
1.0.5 - Steel Erection and Assembly	55,064	125,687	1.11	1.11	0.53	0	0.00	11.43
1.0.6 - Dredging	9,220	22,790	1.49	1.48	0.82	1	8.78	13.31
1.0.7 - Sheet Metal	17,351	37,050	1.65	1.65	0.75	0	0.00	10.06
1.0.8 - Conveyor System Installation	17,495	37,299	1.44	1.44	0.60	0	0.00	4.51 (3.90*)
1.0.9 - Onshore Marine Construction	3,587	7,857	2.14	2.14	1.20	0	0.00	19.79
1.0.10 - Conveyor Belts - Sales	3,246	6,440	2.08	2.08	1.27	0	0.00	8.84 (6.42*)
1.0.11 - Conveyor Belts - Installation	9,988	20,013	1.79	1.79	0.91	0	0.00	5.98 (5.07*)
1.0.12 - Conveyor Belts - Service and Repair	4,606	9,375	2.20	2.20	1.39	0	0.00	9.51
1.1 - Boiler Repair	63,489	138,839	0.84	0.84	0.32	0	0.00	6.00
1.1.1 - Boiler Troubleshooting	17,505	38,109	1.46	1.46	0.66	0	0.00	8.00
1.1.2 - Boiler Cleaning	15,943	32,578	1.41	1.40	0.57	1	6.14	8.22
1.2 - Building Construction	92,945	201,878	1.07	1.07	0.46	2	1.98	9.13
1.2.1 - Floor Covering	3,155	6,389	2.00	2.00	1.19	0	0.00	10.78
1.2.2 - Carpentry - Finishing	16,586	36,700	1.21	1.21	0.56	0	0.00	14.31
1.2.3 - Interior Finishes/Design	8,228	19,044	1.47	1.47	0.80	0	0.00	8.14
1.2.4 - Joint Sealants/Caulking and Waterproofing	7,970	15,558	2.24	2.24	1.07	0	0.00	17.06
1.2.5 - Masonry	7,160	14,854	2.57	2.56	1.29	1	13.46	11.79
1.2.6 - Epoxy & Other Polymer Flooring	2,943	6,082	1.94	1.94	0.85	0	0.00	2.81

[a] ISN Work Type is a detailed list of commonly performed work classifications and activities available in the ISNWorld database for selection by contractors. ISN Work Types cover multiple industries, and contractors are required to select at least one work type that best describes their activities or specialization. A record (contractor) can be classified with more than one ISN Work Type and is counted in each Work Type breakout selected.

[b] The injury and illness rates represent the number of injuries and illnesses per 100 full-time workers. See Appendix 2 on Incident Rate Calculations.

[c] The fatality rate represents the number of fatalities per 100,000 full-time workers. See Appendix 2 on Fatality Rate Calculations.

[d] The incident severity (in days) represents the number of days away from work per recordable incident. See Appendix 2 on Incident Severity (In Days) Calculations.

- Indicates that the data are suppressed because there are fewer than 10 contractors reporting for the cell.

* Indicates that the difference between the rate computed using all valid records and that computed using only those records excluding the highest 0.5th percentile extreme values is greater than or equal to 10%. See sections 3 and 5 of Appendix 3 for more information.

** Indicates that the reported fatality rate is greater than or equal to 100.

† Indicates that the largest contractor in the corresponding ISN Work Type contributes more than 70% of the Total Exposure Hours of all contractors in that ISN Work Type.

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[e]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
1.3 - Demolition	46,263	100,058	1.14	1.13	0.54	2	4.00	11.61
1.3.1 - Explosive	59,982	175,641	1.39	1.39	0.81	2	2.28	9.86
1.4 - Dock	17,935	38,443*	0.56	0.56	0.23	0	0.00	6.68
1.5 - Diving	19,448	40,850	0.95	0.95	0.45	0	0.00	12.36
1.6 - Drilling	86,383	231,598	1.44	1.44	0.83	4	3.45	11.55
1.6.1 - Pier and Grade Beam Foundation	4,846	10,659	2.33	2.33	1.54	0	0.00	17.56
1.7 - Exchangers	53,551	117,217	0.62	0.62	0.27	0	0.00	9.42
1.7.1 - Tube repair	34,425	76,055	0.74	0.74	0.32	0	0.00	9.26
1.7.2 - Bundle Extraction	33,784	74,656	0.67	0.67	0.30	0	0.00	11.44
1.8 - Furnace	51,010	113,159	0.62	0.62	0.25	0	0.00	4.85
1.9 - Heat treating	15,952	37,644	0.80	0.80	0.33	0	0.00	9.13
1.10 - Mechanical	110,081	242,747	1.04	1.04	0.48	3	2.47	9.89
1.10.1 - Machine Installations	62,218	136,832	1.29	1.28	0.64	4	5.85	7.56
1.10.2 - Machine Troubleshooting and Repair	57,849	125,254	1.31	1.30	0.69	3	4.79	8.30
1.10.3 - Steam Systems	17,550	36,358	1.57	1.57	0.68	0	0.00	8.03
1.10.4 - Engine Repair and Maintenance	2,608	6,594	1.12	1.12	0.30	0	0.00	11.24
1.11 - Metals	51,471	116,444	0.71	0.71	0.30	0	0.00	7.83
1.11.1 - Corrosion Control	116,517	296,283	1.07	1.07	0.59	4	2.70	9.56
1.11.2 - Industrial Steel Cutting	7,772	17,336	1.72	1.72	0.93	0	0.00	7.48
1.11.4 - Linings & Coatings	30,010	67,887	0.89	0.89	0.38	1	2.95	10.20
1.12 - Painting	73,115	159,919	0.84	0.84	0.36	0	0.00	8.29
1.12.1 - Linings & coatings	61,874	139,296	1.11	1.11	0.52	2	2.87	10.50
1.12.2 - Sandblasting	119,313	262,035	0.93	0.92	0.44	4	3.05	11.03
1.12.3 - Lead Abatement	53,794	115,464	0.79	0.79	0.37	1	1.73	13.25
1.13 - Rail	4,764	10,133	1.20	1.20	0.81	0	0.00	24.30
1.13.1 - Rail Repair	21,625	46,717*	0.89	0.89	0.45	0	0.00	9.34
1.13.4 - Railroad Construction	4,837	10,121	3.02	3.02	2.07	0	0.00	22.29
1.14 - Scaffolding	108,599	235,242	0.65	0.65	0.31	0	0.00	9.79
1.14.1 - Scaffold Installation	46,886	102,811	1.07	1.07	0.54	0	0.00	10.39
1.15 - Tanks	88,181	210,965	0.89	0.89	0.43	0	0.00	8.25
1.15.1 - Cleaning	53,149	116,269	1.15	1.15	0.63	2	3.44	12.40

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[d]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
1.15.2 - Maintenance	69,330	152,980	0.63	0.63	0.28	1	1.31	9.82
1.15.3 - Linings & coatings	52,262	116,514	0.64	0.64	0.27	0	0.00	13.30
1.15.4 - Construction	40,812	90,700	0.87	0.87	0.43	1	2.21	12.72
1.16 - Tower/Vessels	54,544	122,218	0.66	0.66	0.27	0	0.00	7.24
1.17 - Welding	130,816	293,116	1.17	1.16	0.56	3	2.05	11.28
1.17.1 - Structural	25,546	55,734	1.58	1.58	0.74	0	0.00	8.07
1.18 - Hydroblast	50,397	112,273	1.07	1.07	0.52	2	3.56	11.06
1.19 - Civil	99,271	219,743	1.04	1.04	0.48	1	0.91	10.65
1.19.1 - Concrete	124,842	285,649	1.02	1.02	0.48	3	2.10	9.67
1.19.2 - Pumping/Delivery Service	76,323	209,147	1.45	1.44	0.83	4	3.83	9.75
1.19.3 - Construction	82,835	182,116	1.08	1.07	0.53	4	4.39	10.02
1.19.4 - Underground Sewer Work	59,830	132,976	1.01	1.01	0.54	2	3.01	14.01
1.19.5 - Excavation/Ditching/Dirt Work	154,891	358,481	1.29	1.29	0.68	6	3.35	11.75
1.19.6 - Hydro Vac Excavation/Trenching	48,990	110,210	1.38	1.38	0.70	1	1.81	11.22
1.19.7 - Boring	38,669	85,459	1.71	1.70	0.96	1	2.34	14.82
1.19.8 - Precast Concrete	12,340	26,060	1.84	1.84	1.01	0	0.00	12.58
1.19.9 - Air Vac Excavation/Trenching	18,214	39,891	1.74	1.74	0.99	0	0.00	11.80
1.19.10 - Concrete Cutting	2,962	6,740*	1.04	1.04	0.47	0	0.00	5.66
1.20 - Cooling Tower	21,947	47,883	1.53	1.52	0.71	1	4.18	10.17
1.21 - Flare Repairs	31,402	72,146	0.57	0.57	0.25	0	0.00	9.84
1.22 - Precipitator	12,140	27,047	1.37	1.37	0.58	0	0.00	9.23
1.23 - Industrial Cleaning	23,895	54,324	1.06	1.05	0.57	2	7.36	15.02
1.23.1 - Steam/Hydroblast Cleaning	16,764	37,624	1.26	1.25	0.66	2	10.63	14.39
1.23.3 - Overhead Cleaning	614	1,319	3.03 (1.93*)	3.03 (1.93*)	1.21	0	0.00	18.90
1.23.4 - Dust Collection System	1,992	4,366	1.74	1.74	0.69	0	0.00	3.08
1.23.6 - CO2/Dry Blast Cleaning	2,973	7,426*	1.05	1.05	0.48	0	0.00	8.79
1.24 - Pipeline Construction/Maintenance	137,691	314,314	1.29	1.29	0.63	5	3.18	12.65
1.24.1 - Coatings Repair	81,654	178,408	1.01	1.01	0.45	2	2.24	9.93
1.24.2 - Pipeline/Internal HDPE Lining (including installation)	20,807	49,593	1.70	1.69	0.74	2	8.07	11.68
1.24.3 - Case Cutting	18,190	41,409	1.49	1.49	0.73	0	0.00	13.95
1.24.4 - General Contractor - DOT Covered Tasks	67,070	158,520	1.48	1.47	0.76	6	7.57	12.80

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[e]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
1.24.5 - Install Liners	11,879	26,019	1.35	1.33	0.66	2	15.37	13.21
1.24.6 - Piggable Pressure Isolation	1,741	4,126	1.26	1.21	0.78	1	48.48	13.27
1.25 - Steaming/Hot Oilier	2,186	5,112	1.29	1.29	0.47	0	0.00	15.45
1.26 - Line Locating	48,048	106,549	1.62	1.61	0.79	3	5.63	12.27
1.27 - Pumping Services	76,724	214,852	1.44	1.44	0.82	5	4.65	10.25
1.27.2 - Water Transfer	3,900	9,396	1.75	1.72	0.85	1	21.29	5.98
1.27.3 - Pump Supply and Repair	5,395	12,731	1.40	1.38	0.69	1	15.71	3.96
1.28 - Nitrogen	28,264	75,245	1.36	1.36	0.74	0	0.00	11.31
1.28.2 - Nitrogen - Pipeline	7,843	16,602	1.25	1.25	0.70	0	0.00	41.16
1.28.6 - Oxygen - Pipeline	3,670	7,638	1.47 (1.27*)	1.47 (1.27*)	0.63	0	0.00	14.73
1.29 - Piling	36,894	83,829	0.86	0.85	0.43	3	7.16	13.66
1.29.1 - Deep Foundation	5,586	12,924	2.74	2.74	1.64	0	0.00	15.58
1.30 - Right-of-Way	42,431	94,715	1.32	1.32	0.64	0	0.00	9.40
1.30.1 - Acquisition & Land Rights	22,527	48,081*	0.70	0.70	0.36	0	0.00	5.71
1.32 - Rigging	122,547	315,024	1.27	1.27	0.68	4	2.54	9.46
1.33 - Electrical	70,818	155,457	1.30	1.30	0.57	6	7.72	11.45
1.33.1 - Plant Wiring	47,393	104,428	1.27	1.26	0.57	2	3.83	10.72
1.33.2 - Machine Wiring	48,213	107,036	1.03	1.02	0.46	4	7.47	9.19
1.33.3 - Electrical Trouble Shooting	46,558	102,176	1.19	1.18	0.52	4	7.83	10.97
1.33.4 - Voice Data Wiring	12,483	27,695	1.98	1.98	0.96	0	0.00	14.90
1.33.5 - Lighting Installation and Repair	42,897	96,121	1.30	1.30	0.65	2	4.16	13.22
1.33.6 - Industrial	46,641	103,694	1.08	1.08	0.51	3	5.79	10.06
1.33.7 - Energized Electrical Equipment Cleaning	7,731	17,371	2.25	2.23	0.96	1	11.51	10.33
1.33.8 - Overhead Utility Services	33,234	73,048	2.38	2.37	1.15	3	8.21	15.66
1.33.9 - Underground Utility Services	35,240	77,188	2.34	2.33	1.18	3	7.77	15.44
1.34 - Iron Work	12,292	26,857	1.55	1.55	0.68	0	0.00	4.85
1.36 - Engineering Procurement and Construction (EPC)	9,268	20,234	1.89	1.89	0.98	0	0.00	9.63
1.39 - General Contractor - Fabrication	1,551	3,482	1.49	1.49	0.80	0	0.00	2.38
2.0 - Machining	33,077	75,325	1.68	1.68	0.80	0	0.00	11.58
2.1 - Bolting	53,298	113,760	0.74	0.74	0.27	0	0.00	6.04
2.2 - Field	50,008	109,033	0.83	0.83	0.31	0	0.00	6.38

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[e]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
2.3 - Hot tap	44,834	100,852	0.81	0.81	0.35	0	0.00	8.11
2.4 - Leak repair	18,707	42,366	1.04	1.04	0.48	0	0.00	10.81
2.4.1 - Metal Stitching, Casting Repair and Thread Repair	2,787	6,040*	0.93 (0.67*)	0.93 (0.67*)	0.50	0	0.00	16.96
2.5 - Compressor/Turbine	33,012	73,509	1.17	1.17	0.47	0	0.00	12.37
2.6 - Valve repair	47,865	104,347	1.16	1.16	0.49	0	0.00	8.66
2.6.1 - Control	36,330	79,913	0.93	0.93	0.41	1	2.50	8.17
2.6.2 - Safety/relief	28,879	63,395	0.98	0.98	0.40	0	0.00	9.24 (8.29*)
2.6.3 - Inspection & Testing	14,560	32,878	1.30	1.29	0.55	1	6.08	9.44
2.7 - Cold Cutting	33,699	75,279	1.04	1.04	0.48	0	0.00	12.93
2.8 - Pumps & Blowers	24,357	54,866	1.36	1.35	0.66	2	7.29	9.41
2.9 - Inplace Boring of Machine Sideframes	3,800	8,847	1.20 (1.03*)	1.20 (1.03*)	0.61	0	0.00	19.30
2.10 - On-site Machine Shop Work	5,895	13,785	1.32	1.32	0.49	0	0.00	13.08
3.0 - Instrumentation & Electrical	113,412	250,890	1.01	1.01	0.43	3	2.39	8.97
3.1 - Analyzers	41,940	92,331	0.79	0.79	0.35	0	0.00	7.53
3.2 - Electric	96,888	214,176	1.04	1.04	0.48	3	2.80	11.49
3.2.1 - Batteries	73,981	163,124	0.84	0.83	0.39	3	3.68	10.78
3.2.2 - Generator	146,625	311,214	1.15	1.15	0.61	7	4.50	11.33
3.2.3 - Motors	77,404	171,580	1.09	1.08	0.55	2	2.33	9.20
3.2.4 - Motor Operated Valve	76,022	167,683	0.89	0.89	0.45	2	2.39	10.13
3.2.5 - Program Logic Control	78,938	174,393	0.85	0.84	0.39	1	1.15	9.34
3.2.6 - Polelines	36,984	80,710	1.45	1.44	0.72	3	7.43	13.64
3.2.7 - Precipitator	19,441	44,854	1.13	1.12	0.58	1	4.46	12.53
3.2.8 - Protective Relays	72,329	161,323	0.80	0.80	0.37	2	2.48	9.89
3.2.9 - Switchgear	103,573	226,376	1.13	1.12	0.55	5	4.42	11.50
3.2.10 - Transformers	101,542	223,439	1.12	1.12	0.55	5	4.48	12.26
3.2.11 - Uninterrupted Power Supply	48,820	106,638	1.37	1.37	0.71	3	5.63	11.20
3.2.12 - Variable Frequency/Speed Drive	49,760	109,900	1.39	1.39	0.73	2	3.64	10.82
3.2.13 - Fiber Optics	39,028	89,213	1.24	1.23	0.66	2	4.48	15.52
3.2.14 - Electrical Construction/ Repair	100,005	219,316	0.98	0.98	0.47	5	4.56	12.54
3.2.15 - Wireline	43,089	113,324	1.41	1.41	0.77	2	3.53	10.90
3.2.16 - Cathodic Protection - Installation	51,836	114,647	1.00	1.00	0.44	0	0.00	10.95

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[e]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
3.2.17 - Acknowledgement of PCB Awareness	16,359	36,450	1.78	1.78	0.80	0	0.00	13.36
3.2.18 - Lightning Arrestors	5,160	10,750	2.38	2.36	1.19	1	18.60	16.38
3.3 - Instrumentation	105,633	231,516	1.07	1.07	0.50	1	0.86	10.34
3.3.1 - Control Systems	142,308	301,295	1.09	1.09	0.57	2	1.33	11.32
3.3.2 - Control Valves	84,295	183,119	1.03	1.03	0.50	1	1.09	9.36
3.3.3 - Meter prover	26,528	59,441	0.97	0.97	0.45	0	0.00	14.26
3.3.4 - Measurement/Calibration	62,151	136,977	0.94	0.94	0.51	2	2.92	11.90
3.3.5 - Transmitters	51,192	110,438	0.94	0.93	0.43	1	1.81	11.69
3.3.6 - Vibration monitors	50,828	115,393	1.01	1.00	0.52	2	3.47	12.20
3.3.7 - Cameras	45,159	96,026	1.31	1.31	0.63	1	2.08	10.59
3.3.8 - Test Equipment	37,698	82,537	1.28	1.28	0.69	1	2.42	12.59
3.3.9 - Safety Systems	19,213	41,491	1.74	1.74	0.96	1	4.82	9.92
3.3.10 - Meter Monitoring	29,955	66,692	1.07	1.07	0.58	2	6.00	11.30
3.3.11 - Radioactive	1,780	3,568	1.40	1.40	0.45	0	0.00	9.16
3.3.12 - Meter Reader	6,208	12,445	2.59	2.59	1.14	0	0.00	12.07
3.3.13 - Petroleum Measurement Equipment	1,938	4,113	1.31	1.31	0.53	0	0.00	6.19
3.4 - Pneumatic	15,353	33,903	1.42	1.42	0.81	1	5.90	7.87
4.0 - Heating, Ventilation, & Air Conditioning	24,824	53,002	2.11	2.11	0.97	0	0.00	11.23
4.1 - Filter Medium Changeout for Safe Havens	9,157	18,660	2.13	2.12	1.19	1	10.72	6.58
4.2 - HVAC Preventative Maintenance, Installations, and Repairs	23,640	48,492	2.44	2.43	1.34	2	8.25	11.64
4.3 - Testing and Balancing of Air-HVAC	14,156	29,237	2.30	2.29	1.23	1	6.84	10.35
4.4 - Duct Cleaning	6,945	13,623	1.63	1.63	0.65	0	0.00	13.93
4.5 - Duct Inspection	6,403	13,179	2.40	2.40	1.23	0	0.00	9.84
4.6 - Duct Design	6,216	12,664	3.05	3.05	1.63	0	0.00	13.91
5.0 - Insulation	77,580	163,384	0.62	0.62	0.23	1	1.22	7.29
5.1 - Asbestos abatement	56,949	118,761	0.53	0.53	0.27	1	1.68	15.44
5.2 - Refractory	46,873	97,693	0.42	0.42	0.19	0	0.00	6.99
5.3 - Insulation - Fire Proofing	74,658	155,812	0.45	0.45	0.17	1	1.28	7.88
5.4 - Routine Insulation	75,588	158,144	0.53	0.53	0.21	1	1.26	8.37
5.5 - Furnace/fire brick	29,795	60,618	0.40	0.40	0.18	0	0.00	8.52
5.5.1 - Refractory Dryout (Bake Bricks)	3,014	7,039	0.51	0.51	0.23	0	0.00	14.78

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[d]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
5.6 - Acid brick	25,546	50,806	0.27	0.27	0.12	0	0.00	10.49
5.7 - Industrial	51,787	106,553	0.59	0.59	0.27	1	1.88	9.13
6.0 - Buildings, Grounds & Right-of-Way Maintenance	85,475	175,154	2.48	2.48	1.93	1	1.14	14.27
6.2 - Janitorial	98,801	194,291	2.48	2.48	1.92	0	0.00	12.79
6.3 - Chem spraying	21,336	44,502	1.03	1.02	0.54	2	8.99	6.12 (5.36*)
6.4 - Pest Control	24,160	48,541	6.77	6.76	3.64	2	8.24	12.39
6.5 - Plumbing	16,424	33,818	2.32	2.31	1.25	2	11.83	8.85
6.5.1 - Drain Cleaning	2,139	4,374	2.65	2.65	0.96	0	0.00	2.40
6.5.2 - Backflow Preventer Install/Service/Testing	1,893	3,733	3.21	3.21	1.18	0	0.00	3.62
6.6 - Road	21,738	47,335	0.89	0.89	0.42	0	0.00	8.82
6.6.1 - Dust Control	2,557	5,923	2.09 (1.85*)	2.09 (1.85*)	0.78	0	0.00	8.84
6.7 - Roofing	30,062	60,299	1.28	1.28	0.73	1	3.32	11.84
6.8 - Scales	-	-	-	-	-	-	-	-
6.8.1 - Weighing and Instrument Repairs and Calibration	656	1,351	2.52	2.52	1.48	0	0.00	31.35 (22.94*)
6.9 - Signs	4,595	10,530	0.89	0.89	0.38	0	0.00	26.83 (23.50*)
6.9.1 - Installation	14,014	29,770*	0.46	0.46	0.17	0	0.00	25.78
6.9.2 - Repair	17,674	36,949	0.41	0.41	0.16	0	0.00	15.11 (12.91*)
6.11 - Mowing and Groundcare	92,881	191,839	3.23	3.23	2.32	2	2.09	11.03
6.11.1 - Tree Trimming/Clearing and Wood Grinding	49,008	106,060	1.36	1.35	0.63	2	3.77	11.00
6.12 - Fence Installation and Repair	36,491	79,450	0.91	0.91	0.37	1	2.52	9.43
6.13 - Locks	18,625	38,210	1.47	1.47	0.85	1	5.23	5.22
6.14 - Door Repair	10,112	20,521	1.62	1.61	1.09	1	9.75	5.45
6.14.1 - Overhead Door Installation/Repair	1,313	3,092	2.33	2.33	1.42	0	0.00	17.22
6.15 - Surveying	73,379	148,565	0.78	0.78	0.32	0	0.00	11.77
6.15.1 - Leak Surveying	6,258	13,614	1.65	1.65	0.78	0	0.00	20.48
6.15.2 - Topographic	26,161	55,204	0.72	0.72	0.30	0	0.00	8.07
6.15.3 - Boundary	11,818	25,031	0.90	0.90	0.39	0	0.00	8.01
6.16 - Dock Plate and Dock Lock Preventative Maintenance/Repair	976	2,224	1.71	1.71	0.81	0	0.00	4.84
6.17 - Snow Plowing/Removal	12,199	26,208*	7.51	7.51	4.37	0	0.00	4.21
6.20 - Structural Repair	3,746	8,724	1.28	1.28	0.50	0	0.00	8.66
7.0 - Drilling	68,710	196,836	1.58	1.57	0.88	4	4.06	10.37

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[d]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
7.1 - Directional	98,877	272,441	1.72	1.71	1.00	8	5.87	10.96
8.0 - Original Equipment Manufacturer	31,283	67,627	1.58	1.58	0.72	0	0.00	7.09
8.5 - Pressure vessels	3,199	7,335	1.99	1.99	0.71	0	0.00	7.41
9.0 - Inspection	80,808	194,970	1.23	1.23	0.63	1	1.03	9.26
9.1 - Cathodic Protection	53,564	117,060	1.04	1.04	0.50	0	0.00	10.20
9.1.1 - Rectifier	4,641	9,982	1.10	1.10	0.60	0	0.00	9.11 (5.94*)
9.2 - Aerial Patrol	2,602	6,177*	0.42	0.42	0.19	0	0.00	0.00
9.2.1 - Charter Helicopter Service	2,394	5,785*	0.48	0.48	0.24	0	0.00	3.43
9.2.2 - Aerial Photography/Surveying	3,324	8,100	0.62	0.62	0.22	0	0.00	1.96
9.2.5 - Remote Stack Emission Testing	35,117	69,903	0.73	0.73	0.33	0	0.00	13.05
9.3 - Tanks	51,102	109,781	0.52	0.52	0.21	0	0.00	9.70
9.3.1 - Gauging	8,183	17,705	0.59	0.58	0.28	1	11.30	4.02
9.4 - Non-Destructive Testing	93,284	219,864	0.88	0.88	0.44	2	1.82	7.69
9.4.1 - Thermographic Testing	4,798	9,882	1.80	1.80	1.05	0	0.00	11.83
9.4.3 - Inspection Service, Visual (Other than Const/Fabrication)	10,941	23,554	0.92	0.91	0.37	1	8.49	8.51
9.5 - Infrared	13,750	30,271	1.29	1.28	0.68	1	6.61	10.57
9.6 - Eddy Current	14,209	30,384	0.61	0.61	0.29	0	0.00	12.55
9.7 - Civil	58,566	131,244	0.58	0.57	0.24	1	1.52	7.93
9.8 - Electrical	74,736	166,667	0.78	0.78	0.33	4	4.80	10.11
9.9 - Hydrotesting	62,062	139,809	0.94	0.94	0.45	2	2.86	9.97
9.10 - Line Pigging	59,192	147,526	1.22	1.21	0.60	2	2.71	7.81
9.11 - X-ray	62,737	155,579	1.01	1.01	0.51	0	0.00	7.07
9.12 - Crane	28,584	63,052	0.95	0.95	0.56	0	0.00	7.80
9.13 - Tower	6,298	13,429	1.47	1.47	0.70	0	0.00	5.78
9.14 - Safety Equipment	50,706	109,769	0.86	0.86	0.36	0	0.00	4.85
9.15 - Project Inspection	45,954	106,911	0.62	0.62	0.29	1	1.87	11.90
9.16 - Coating Inspection	76,959	170,163	0.86	0.86	0.34	1	1.18	7.46
9.17 - Welding Inspection	78,415	175,988	0.65	0.65	0.28	1	1.14	8.92
9.18 - Hydrostatic Testing	39,826	84,710	1.29	1.29	0.55	2	4.72	6.82
9.21 - Sling and Lift	3,526	7,934	0.93	0.93	0.60	0	0.00	3.62
9.22 - Dismantling	7,748	17,444	1.12	1.11	0.66	1	11.47	12.34

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[e]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
9.23 - Pipeline	67,129	167,697	1.27	1.26	0.61	2	2.39	7.64
9.24 - Concrete Testing	1,835	3,864	1.19	1.19	0.62	0	0.00	5.78
10.0 - Consultant	119,371	266,171	0.93	0.93	0.47	2	1.50	10.91
10.1 - Training	46,290	95,555	0.76	0.76	0.33	0	0.00	11.33
10.2 - Engineering	126,074	276,320	0.82	0.82	0.39	1	0.72	8.65
10.2.1 - Drafting	75,797	158,590	0.79	0.79	0.35	3	3.78	9.59
10.2.2 - Survey	75,472	156,474	0.75	0.75	0.34	2	2.56	9.44
10.2.3 - Electrical	87,801	184,675	0.91	0.91	0.41	4	4.33	10.32
10.2.4 - Chemical	38,821	77,944	0.53	0.52	0.17	1	2.57	8.24
10.2.5 - Metallurgical	17,031	34,928	0.58	0.58	0.25	0	0.00	4.74
10.2.6 - Control	51,020	107,311	0.59	0.59	0.26	1	1.86	6.53
10.2.7 - Civil	68,021	139,058	0.75	0.75	0.32	1	1.44	8.99
10.2.8 - Mechanical	70,837	147,195	0.77	0.77	0.32	1	1.36	8.70
10.2.9 - Environment	105,237	215,028	0.69	0.69	0.34	0	0.00	10.19
10.2.10 - Rotating Equipment	42,371	89,867	0.69	0.69	0.27	0	0.00	7.05
10.2.11 - Cathodic Protection	24,249	51,777	1.17	1.17	0.44	0	0.00	7.65
10.2.12 - Drilling	60,057	154,773	1.16	1.16	0.58	0	0.00	7.29
10.2.14 - Flow Calibration	4,985	11,131	0.32	0.32	0.20	0	0.00	15.94
10.2.15 - Geosciences	38,918	77,173	0.90	0.90	0.42	0	0.00	12.12
10.2.16 - Architecture and Drafting	20,529	43,677	0.56	0.56	0.23	0	0.00	10.64
10.2.17 - Architectural Design	21,550	45,806	0.60	0.60	0.25	0	0.00	9.42
10.2.21 - Material Handling	6,633	13,650	1.08	1.08	0.51	0	0.00	8.80
10.2.22 - Electrical Analysis	8,748	17,512	1.19	1.19	0.55	0	0.00	4.55
10.3 - Project Management	136,222	287,217	0.81	0.81	0.35	2	1.39	8.51
10.3.1 - Construction Management	76,478	161,592	0.82	0.82	0.34	0	0.00	7.90
10.4 - Site Consultant	62,278	131,752	0.77	0.77	0.30	0	0.00	7.16
10.4.1 - Drilling	27,007	61,984	1.29	1.28	0.74	3	9.68	11.22
10.4.2 - Construction	41,658	86,931	0.88	0.88	0.39	1	2.30	8.07
10.4.3 - Diving	4,539	9,668	0.74	0.74	0.43	0	0.00	17.67
10.4.4 - Safety & Environmental	112,231	236,738	0.88	0.88	0.43	3	2.53	10.41
10.4.5 - Construction Safety	22,485	47,455	0.57	0.57	0.27	0	0.00	4.60

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[d]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
10.4.6 - Regulatory Consultant	35,485	73,640	0.59	0.59	0.25	0	0.00	7.31
10.6 - Industrial Hygiene	12,634	26,228	0.82	0.82	0.31	0	0.00	10.10
10.7 - IT	3,819	7,809	1.05	1.05	0.51	0	0.00	12.49
11.0 - Rentals	59,288	175,597	1.53	1.53	0.93	3	3.42	10.59
11.1 - Equipment	78,707	220,080	1.62	1.62	0.95	4	3.64	10.57
11.1.1 - A/C	13,499	31,264*	1.43	1.43	0.90	1	6.40	14.46
11.1.2 - Generators	40,541	98,488	2.21	2.20	1.31	3	6.09	12.91
11.1.3 - Compressors	34,715	83,644	1.94	1.94	1.22	2	4.78	15.36
11.1.6 - Oilfield Equipment	59,768	177,262	1.54	1.54	0.92	3	3.38	11.08
11.1.7 - Safety Equipment	4,365	9,907*	0.95	0.95	0.42	0	0.00	11.11
11.2 - Office trailers	7,068	19,339*	1.76	1.75	0.89	1	10.34	18.16
11.4 - Tools	72,750	209,563	1.44	1.44	0.90	3	2.86	11.02
11.5 - Welding Equip.	5,271	13,018	0.95	0.95	0.51	0	0.00	7.47
12.0 - Environmental	110,808	234,242	1.05	1.05	0.52	0	0.00	11.51
12.1 - Laboratory	44,467	94,209	0.82	0.82	0.41	0	0.00	13.35
12.2 - Vac Trucks	109,579	261,664	1.43	1.42	0.83	8	6.11	14.42
12.3 - Well Services	33,074	83,091	1.03	1.03	0.51	1	2.41	6.77
12.4 - Waste - Hazardous	98,727	227,610	1.03	1.03	0.57	1	0.88	10.94
12.4.1 - Transportation	54,691	121,420	1.33	1.33	0.76	2	3.29	10.10
12.4.2 - Disposal	45,122	100,444	1.34	1.34	0.78	2	3.98	9.92
12.5 - Spill Cleanup	69,324	152,922	1.13	1.13	0.62	2	2.62	10.54
12.5.1 - Microbial Treatment	10,039	20,692	1.04	1.04	0.65	0	0.00	16.76
12.6 - Soils	89,484	186,062	0.95	0.95	0.47	1	1.07	11.56
12.7 - Drilling	56,046	128,609	0.94	0.94	0.47	0	0.00	8.77
12.8 - Consulting	105,350	212,960	0.69	0.69	0.34	1	0.94	11.26
12.8.1 - Permitting	77,728	157,280	0.65	0.65	0.28	0	0.00	10.66
12.8.2 - Asbestos Survey	3,653	7,129	1.18	1.18	0.90	0	0.00	37.31
12.9 - Environmental Remediation	109,248	230,328	1.03	1.03	0.52	3	2.60	12.08
12.10 - Environmental Site Assessment	104,122	215,612	0.81	0.81	0.36	1	0.93	10.93
12.11 - Laboratory Analysis/Mobile	22,467	45,345	0.63	0.63	0.26	0	0.00	13.83
12.12 - Waste Services-Treatment (including water)	47,298	103,389	1.17	1.17	0.69	0	0.00	11.28

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[e]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
12.12.1 - Water Treatment	16,014	33,585	1.17	1.17	0.66	0	0.00	13.61
12.13 - Waste Services - Disposal Non-Hazardous	65,020	147,637	1.60	1.60	0.96	3	4.06	17.94
12.14 - Emergency Response	49,777	108,373	1.30	1.30	0.79	1	1.85	11.07
12.15 - Emissions Testing	59,264	121,939	0.58	0.58	0.23	0	0.00	10.42
12.16 - Pit Lining	12,199	25,174	0.86	0.85	0.48	1	7.94	13.44
12.17 - Source/Air Pollution Testing	58,105	117,674	0.65	0.65	0.26	0	0.00	11.10
12.18 - Erosion Control	62,688	128,886	0.70	0.70	0.29	0	0.00	8.38
12.19 - Recontouring	16,576	34,340	0.81	0.81	0.30	0	0.00	6.74
12.20 - Site Reclamation	96,330	202,573	0.92	0.92	0.43	1	0.99	11.22
12.20.1 - Restorative Planting Services	8,354	16,927	0.90	0.90	0.34	0	0.00	14.37
12.21 - Supply & Installation of Secondary Containment	16,344	34,056	1.07	1.06	0.55	1	5.87	15.08
12.22 - Supply & Installation of Liner & Geotextile	8,985	18,330	1.10	1.09	0.61	1	10.91	14.98
12.24 - Recycling	20,570	49,082	2.38	2.38	1.53	1	4.07	24.65
12.24.2 - Scrap Metal	1,700	3,232	1.42	1.42	1.05	0	0.00	26.70
12.24.3 - Material Management	1,585	3,352	0.95	0.95	0.72	0	0.00	32.00
12.25 - Natural Resources Sciences	29,244	58,252	0.62	0.62	0.22	0	0.00	12.60
12.25.1 - Wetland Delineation	34,407	67,088	0.58	0.58	0.21	1	2.98	10.22
12.27 - Environmental Quality Assurance (EQA)	67,915	138,500	0.70	0.70	0.27	0	0.00	10.56
13.0 - Chemicals	24,238	72,023 [*]	1.37	1.37	0.74	1	2.78	7.60
13.3 - Water Treatment	35,251	88,616	1.16	1.16	0.62	1	2.26	8.09
13.4 - Gas Processing	23,855	64,488	1.13	1.12	0.55	1	3.10	5.20
13.6 - Oil Processing	23,403	62,997	1.12	1.12	0.56	1	3.17	5.32
14.0 - Manpower	23,571	51,710	0.95	0.95	0.36	0	0.00	4.85
14.2 - Clerical	22,076	47,417 [*]	0.56	0.56	0.21	0	0.00	6.66
14.3 - Labor	101,220	240,247	1.28	1.28	0.61	1	0.83	9.32
14.3.4 - Forklift Operator	20,389	47,648	1.05	1.05	0.44	1	4.20	14.50
14.7 - Contract Operators	12,079	31,031	1.79	1.79	0.81	1	6.45	12.91
14.8 - Mechanic - Equipment - Repair	34,495	75,106	1.12	1.12	0.49	0	0.00	6.31
14.8.2 - Belt Splicing	1,827	3,614	1.72	1.72	0.77	0	0.00	5.71
14.8.3 - Maintenance of Rotating Equipment	16,602	34,339	1.67	1.67	0.69	0	0.00	6.85
14.10 - Service/Maintenance Technician	25,116	53,471	1.61	1.60	0.72	2	7.48	7.35

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[d]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
14.10.2 - Millwright Service	21,897	46,491	1.49	1.49	0.64	0	0.00	6.67
14.10.3 - Pressure/Temperature Service	24,397	70,217*	1.43	1.43	0.73	0	0.00	6.20
14.10.4 - Water Line Maintenance	3,133	6,759	1.89	1.89	1.07	0	0.00	14.44
14.10.5 - Lubrication System Maintenance	3,204	6,809	1.67	1.67	0.68	0	0.00	3.07
14.10.6 - Automation Service	5,618	11,628	1.38	1.38	0.46	0	0.00	3.04
14.10.7 - Pipe Fitting	51,445	117,104	1.05	1.05	0.46	1	1.71	9.59
14.10.8 - Dust Collectors/Baghouses	6,279	13,821	1.65	1.65	0.68	0	0.00	7.44
15.0 - Mobile Equipment	140,448	321,391	1.39	1.38	0.74	7	4.36	13.95
15.1 - Repair on-site	6,277	14,409	2.64	2.64	1.61	0	0.00	10.66
15.1.1 - Forklift Maintenance and Repair	5,627	11,974	3.11	3.11	1.75	0	0.00	12.90
15.3 - Tractor	4,038	8,549	2.76	2.76	1.50	0	0.00	10.12
15.3.1 - Mechanical/Maintenance Service	2,784	5,626	3.84	3.84	1.56	0	0.00	8.77
16.0 - IT	5,869	12,339	0.89	0.89	0.49	0	0.00	6.76
16.1 - Computers	22,065	47,092*	0.69	0.69	0.31	1	4.25	8.85
16.2 - Towers/Antennas (Communication)	3,027	6,643	2.41	2.41	1.26	0	0.00	25.18
16.4 - Telephones	13,687	28,584	1.59	1.59	0.73	0	0.00	11.77
16.5 - Distributive Control Systems	8,161	17,593	0.66	0.66	0.32	0	0.00	14.95
16.6 - Radios	20,199	43,209*	0.79	0.79	0.33	0	0.00	13.37
16.7 - Msc. Technical Services	2,406	4,564	2.02	2.02	0.83	0	0.00	14.37
16.9 - Software	1,745	3,578	0.84	0.84	0.28	0	0.00	3.33
16.9.1 - Software Installation & Repair	1,429	2,916	0.89	0.89	0.27	0	0.00	0.15
16.10 - Telecommunication	3,560	7,186	2.42	2.42	1.17	0	0.00	8.03
16.11 - Hardware Installation & Repair	4,493	9,056	1.30	1.30	0.51	0	0.00	6.80
17.0 - Safety	27,549	61,122	1.04	1.04	0.54	0	0.00	15.69
17.1 - Fire Protection	42,335	90,538	0.88	0.88	0.40	0	0.00	8.23
17.1.1 - Fire Sprinkler Service	16,463	34,795	1.30	1.30	0.66	0	0.00	7.96
17.1.2 - Fire Sprinkler Installation, Inspection & Testing	15,455	32,521	1.31	1.31	0.67	0	0.00	7.60
17.2 - Emergency Response	29,773	78,099	1.21	1.21	0.63	0	0.00	8.75
17.3 - Security	59,163	128,423	1.24	1.24	0.66	1	1.56	7.41
17.3.2 - Security System Installations	24,813	49,658	1.45	1.44	0.66	1	4.03	7.05
17.3.3 - Cameras/Closed Circuit Television	23,328	46,683	1.44	1.44	0.67	1	4.28	6.95

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[e]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
17.3.4 - Outdoor Warning/Sirens	25,734	52,448	1.28	1.27	0.58	1	3.81	6.63
17.6 - Confined Space Attendant (fire watch/hole watch)	21,922	47,387	1.28	1.28	0.62	0	0.00	12.02
17.7 - Confined Space Rescue	10,339	22,880	0.90	0.90	0.38	0	0.00	6.53
17.8 - Fall Protection	8,481	18,185	1.07	1.07	0.46	0	0.00	5.71
17.9 - Access Platforms	1,549	2,944	2.65	2.65	0.88	0	0.00	2.15
18.0 - Trucking/Transportation	173,921	440,515	1.42	1.41	0.82	11	4.99	13.92
18.1 - Hauling	78,137	194,664	1.91	1.90	1.14	10	10.27	18.58
18.1.1 - Water Trucks/Hauling	31,503	75,923	1.97	1.95	1.16	5	13.17	15.71
18.1.2 - Fresh Water Hauling	33,533	81,175	2.03	2.02	1.16	7	17.25	16.10
18.1.3 - Heavy Truck Hauling (dump or larger)	89,204	210,929	1.36	1.35	0.75	9	8.53	17.99
18.1.4 - Oversized/Heavy Materials	63,575	153,326	1.13	1.12	0.59	5	6.52	14.42
18.2 - Freight	4,462	10,188	0.96	0.96	0.63	0	0.00	18.53 (15.10*)
18.3 - Tank Truck	79,490	199,976	1.66	1.65	0.91	6	6.00	15.57
18.3.1 - Waste - Non Hazardous	74,483	188,036	1.83	1.82	1.06	5	5.32	16.49
18.5 - Logistics	2,130	4,793	0.58	0.58	0.46	0	0.00	12.00
18.6 - Weigh Scale Service	606	1,756	1.48	1.48	1.37	0	0.00	31.08 (-*)
18.7 - Pick-up and Delivery Driver	20,382	46,644	1.92	1.92	1.30	0	0.00	9.07
19.0 - Down Hole Services	69,126	202,573	1.63	1.62	0.99	7	6.91	10.88
19.1 - Fishing (Down Hole Recovery)	100,609	278,294	1.39	1.39	0.80	6	4.31	9.71
19.2 - Pumper Svc.	97,990	272,779	1.38	1.38	0.81	6	4.40	9.46
19.4 - Well Drilling (Workover/Completion)	102,607	286,288	1.43	1.42	0.82	8	5.59	9.77
19.5 - Wireline Service	108,689	299,738	1.44	1.44	0.83	8	5.34	10.13
19.6 - Consultant - Well Service	70,433	200,453	1.50	1.49	0.89	6	5.99	9.92
19.8 - Well - Stimulation	41,477	112,141	1.73	1.72	0.99	5	8.92	9.73
19.9 - Stimulation - Acidizing	41,728	112,902	1.73	1.72	0.98	5	8.86	9.72
19.11 - Well - Services	83,041	229,902	1.59	1.59	0.93	8	6.96	10.98
19.12 - Well - Production Testing	26,675	83,044	1.65	1.64	1.01	3	7.23	9.18
19.14 - Plug and Abandonment	69,719	198,407	1.51	1.51	0.91	5	5.04	9.99
20.0 - Offshore Operations	21,809	66,790*	1.32	1.32	0.74	0	0.00	7.67
20.3 - Inland Marine Service	4,949	12,693	1.40	1.40	0.61	0	0.00	3.66
20.5 - Offshore Construction	4,219	8,926	0.81	0.81	0.49	0	0.00	17.86

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[e]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
20.6 - Diving	4,723	9,858	0.93	0.93	0.59	0	0.00	18.26
20.13 - Blasting & Painting	26,392	54,988	0.28	0.28	0.14	0	0.00	14.96
20.17 - Rigging	43,845	110,333	0.87	0.87	0.49	0	0.00	7.84
21.0 - Retail (Petroleum Products Distribution)	-	-	-	-	-	-	-	-
21.1 - General Contracting	5,252	11,318	1.61	1.61	0.64	0	0.00	15.68
21.2 - Tank & Piping (UST)	10,669	26,880	1.54	1.53	0.70	1	7.44	14.21
21.3 - Tank & Piping (UST) Maintenance	7,557	20,611*	1.86	1.85	0.89	1	9.70	18.95
21.10 - Electrical Construction	5,968	12,523	1.72	1.72	0.72	0	0.00	9.55
21.11 - Consulting Engineer	13,627	27,329	0.86	0.86	0.34	0	0.00	7.62
21.12 - Asphalt Paving	3,901	8,902	2.70	2.67	1.48	1	22.47	11.82
21.13 - Engineering Design	4,637	10,387	0.50	0.50	0.21	0	0.00	18.54
21.18 - Tank & Vessel Cleaning	5,573	11,419	1.21	1.19	0.63	1	17.51	15.90
21.21 - Landscaping & Mowing	2,534	4,712	1.70	1.70	0.85	0	0.00	21.00
21.22 - Security Fire Protection	19,972	40,150	1.52	1.52	0.72	1	4.98	6.41
21.23 - Water / Sewer Piping Construction	4,558	10,465	1.89	1.89	0.94	0	0.00	14.79
21.24 - Underground Storage Tank Removal	2,988	6,774	1.03	1.03	0.74	0	0.00	10.31
21.25 - Cathodic Protection - Materials	4,509	10,312	0.78	0.78	0.37	0	0.00	13.93 (9.67*)
21.27 - Civil Construction for Concrete Paving	5,986	12,376	2.50	2.49	1.24	1	16.16	6.99
22.0 - Supplier	11,016	23,478	1.81	1.80	1.07	2	17.04	7.18
22.1 - Gasses	-	-	-	-	-	-	-	-
22.1.1 - Industrial Purposes	47,642	97,784	1.92	1.92	1.46	0	0.00	9.02
22.4 - Industrial Pipe, Fittings and Valves	11,617	24,343	2.05	2.04	0.61	2	16.43	4.80 (4.09*)
22.5 - Chemicals	9,693	19,309	1.81	1.81	1.21	0	0.00	9.43
23.0 - Sales	1,670	3,573	2.01	2.01	0.73	0	0.00	4.69
23.1 - Bits & Tools	18,971	33,628	3.57	3.55	2.45	3	17.84	12.49
23.2 - Safety Equipment	49,110	96,838	2.28	2.28	1.55	3	6.20	9.89
23.3 - Lube & Fuels	18,001	31,912*	3.64	3.62	2.50	3	18.80	12.96
24.0 - Pharmaceutical	-	-	-	-	-	-	-	-
24.1 - Validation	-	-	-	-	-	-	-	-
24.1.3 - Electrical	7,890	17,077	1.30	1.30	0.61	0	0.00	12.06
24.2 - Commissioning Quality	-	-	-	-	-	-	-	-

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[e]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
24.2.3 - Electrical	11,814	24,793	0.77	0.77	0.36	0	0.00	11.34
25.0 - Labs/Cleanrooms	-	-	-	-	-	-	-	-
25.2 - Testing and Balancing	3,588	8,314	0.67	0.67	0.51	0	0.00	25.29 (20.07*)
25.6 - Sampling Services	33,610	69,008	0.64	0.64	0.29	0	0.00	11.54
26.0 - Energy	9,398	22,233	1.39	1.39	0.74	0	0.00	11.55
26.1 - Electrical Generation	19,981	42,024	0.93	0.93	0.49	0	0.00	11.46
26.2 - Steam Generation	10,041	19,932*	0.65	0.65	0.40	0	0.00	16.14
27.0 - Heavy Equipment	83,451	197,446	1.54	1.54	0.74	2	2.03	14.60
27.1 - Sales	3,160	7,039	5.23	5.23	1.88	0	0.00	6.21
27.2 - Service/Repair	13,246	28,877	2.67	2.67	1.23	0	0.00	7.87
27.3 - Operation	67,638	165,484	1.40	1.40	0.72	3	3.63	18.09
27.4 - Rentals	4,225	9,623	4.43	4.43	1.68	0	0.00	5.86 (5.04*)
27.5 - Inspection	5,335	12,095	3.41	3.41	1.59	0	0.00	7.69
28.0 - Fixed Cranes	17,982	38,652	2.29	2.29	1.25	0	0.00	14.12
28.2 - Operator/Rigger	6,716	13,899	1.81	1.81	1.22	0	0.00	11.72
28.3 - Service / Repair	4,680	10,418	1.77	1.77	1.32	0	0.00	11.38
28.3.1 - Service / Repair Overhead and Gantry	4,145	9,289	2.17	2.17	1.59	0	0.00	9.79
28.4 - Inspection	-	-	-	-	-	-	-	-
28.4.1 - Inspection - Overhead & Gantry	5,791	13,508	1.67	1.67	1.21	0	0.00	10.79
29.0 - Mobile Crane	155,805	389,401	1.23	1.22	0.66	6	3.08	10.50
29.1 - Rental	62,079	181,086	1.48	1.48	0.91	2	2.21	10.70
29.1.1 - Rental - Crawler	2,302	5,950	1.08	1.08	0.54	0	0.00	13.41
29.1.2 - Rental - Rough Terrain	2,648	6,771	1.27	1.27	0.74	0	0.00	10.21
29.1.3 - Rental - Telescopic	7,412	16,649	1.43	1.43	0.90	0	0.00	10.95
29.1.4 - Rental - Truck Mounted	6,543	13,989	1.76	1.76	1.09	0	0.00	9.99
29.1.5 - Rental - Wheel Mounted	5,888	12,444	1.80	1.80	1.21	0	0.00	10.90
29.2 - Operator / Rigger	137,104	351,978	1.18	1.17	0.65	7	3.98	10.47
29.2.1 - Operator / Rigger - Crawler	3,115	8,016	1.65	1.65	0.92	0	0.00	14.56
29.2.2 - Operator / Rigger - Rough Terrain	3,639	8,959	1.65	1.65	0.92	0	0.00	13.08
29.2.3 - Operator / Rigger - Telescopic	8,464	18,979	1.67	1.67	1.03	0	0.00	11.66
29.2.4 - Operator / Rigger - Truck Mounted	6,966	14,962	1.58	1.58	0.96	0	0.00	10.75

Table 2: 2012 Injury and Illness Rates by ISN Work Type

ISN Work Type ^[a]	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses ^[b]			Fatalities ^[d]		Severity ^[d]
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
29.2.5 - Operator / Rigger - Wheel Mounted	6,244	13,089	1.67	1.67	1.08	0	0.00	11.61
29.3 - Service / Repair	18,551	40,827	1.32	1.32	0.77	1	4.90	10.87
30.0 - Mining	-	-	-	-	-	-	-	-
30.3 - Environmental Services	12,883	26,482	0.60	0.60	0.26	0	0.00	11.23
30.6 - Haulage	-	-	-	-	-	-	-	-
30.6.2 - Ready Mix Concrete	23,504	59,204	1.37	1.37	0.66	0	0.00	6.20
30.7 - Major Construction	5,628	12,893	1.74	1.74	0.98	0	0.00	14.62
30.7.1 - Bridge Construction	6,137	12,581	1.96	1.96	1.26	0	0.00	22.76
30.7.6 - Pond & Dam Construction	4,068	8,007	2.45	2.45	1.45	0	0.00	21.84

[a] ISN Work Type is a detailed list of commonly performed work classifications and activities available in the ISNetworld database for selection by contractors. ISN Work Types cover multiple industries, and contractors are required to select at least one work type that best describes their activities or specialization. A record (contractor) can be classified with more than one ISN Work Type and is counted in each Work Type breakout selected.

[b] The injury and illness rates represent the number of injuries and illnesses per 100 full-time workers. See Appendix 2 on Incident Rate Calculations.

[c] The fatality rate represents the number of fatalities per 100,000 full-time workers. See Appendix 2 on Fatality Rate Calculations.

[d] The incident severity (in days) represents the number of days away from work per recordable incident. See Appendix 2 on Incident Severity (In Days) Calculations.

- Indicates that the data are suppressed because there are fewer than 10 contractors reporting for the cell.

* Indicates that the difference between the rate computed using all valid records and that computed using only those records excluding the highest 0.5th percentile extreme values is greater than or equal to 10%. See sections 3 and 5 of Appendix 3 for more information.

** Indicates that the reported fatality rate is greater than or equal to 100.

† Indicates that the largest contractor in the corresponding ISN Work Type contributes more than 70% of the Total Exposure Hours of all contractors in that ISN Work Type.

Appendix 1: Definitions

- 1. North American Industry Classification System (NAICS) Code:** The standard statistical classification codes underlying all establishment-based Federal economic statistics, classified by industry for the United States, Mexico and Canada. Under NAICS, a specific industry is represented by a two, three, four, five or six-digit numeric code. See the U.S. Census Bureau's [NAICS Web site](http://www.census.gov/naics)¹ for more information.
- 2. ISN Work Type:** A detailed list of commonly performed work classifications and activities available in the [ISNetworld](http://www.isnworld.com)² database for selection by contractors. ISN Work Types cover multiple industries, and contractors are required to select at least one work type that best describes their activities or specialization.
- 3. Recordable Injury and Illness:** An occupational injury or illness that requires medical treatment more than simple first aid and must be recorded and reported under the U.S. Occupational Safety and Health Administration (OSHA) recordkeeping requirements. See [29 CFR Part 1904](http://www.osha-slc.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1904)³ for OSHA recordkeeping requirements and definitions.
- 4. Days Away Injury and Illness:** A recordable injury or illness resulting in one or more days away from work.
- 5. Restricted Activity Injury and Illness:** A recordable injury or illness resulting in restrictions or limitations on an injured worker's work activities.
- 6. Job Transfer Injury and Illness:** A recordable injury or illness necessitating the transfer of an injured worker to a different job.
- 7. Incident Severity (In Days):** Average number of days away from work as a result of each recordable injury or illness.

¹ <http://www.census.gov/naics>

² [ISNetworld.com](http://www.isnworld.com)

³ http://www.osha.gov/pls/oshaweb/owastand.display_standard_group?p_toc_level=1&p_part_number=1904

Appendix 2: Incident Rate Calculations

All data used in this report is obtained directly from contractor companies' OSHA 300 and 300A forms and are reviewed and verified by ISN Review and Verification Services (RAVS).

1. Incident Rate Calculations for Individual Contractors

- 1.1. Total Recordable Incident Rate [TRIR]** represents the number of recordable injuries and illnesses per 100 full-time workers and is calculated as:

$$\text{TRIR} = (N/EH) \times 200,000$$

Where:

N = Total number of recordable injuries and illnesses

EH = Total exposure hours, i.e., total hours worked by all employees during the calendar year

200,000 = Base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year)

- 1.2. Nonfatal Total Recordable Incident Rate [Nonfatal TRIR]** represents the number of nonfatal recordable injuries and illnesses per 100 full-time workers and is calculated as:

$$\text{Nonfatal TRIR} = (N_{\text{NONFATAL}}/EH) \times 200,000$$

Where:

N_{NONFATAL} = Total number of nonfatal recordable injuries and illnesses

EH = Total exposure hours, i.e., total hours worked by all employees during the calendar year

200,000 = Base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year)

- 1.3. Days Away, Restricted Activity or Job Transfer Incident Rate [DART]** represents the number of recordable nonfatal injuries and illnesses resulting in days away from work, restricted activity or job transfer per 100 full-time workers and is calculated as:

$$\text{DART} = [(N_{\text{DAFW}} + N_{\text{DRAJT}})/EH] \times 200,000$$

Where:

N_{DAFW} = Total number of nonfatal recordable injuries and illnesses resulting in days away from work

N_{DRAJT} = Total number of nonfatal recordable injuries and illnesses resulting in restricted activity or job transfer

EH = Total exposure hours, i.e., total hours worked by all employees during the calendar year

200,000 = Base for 100 equivalent full-time workers (working 40 hours per week, 50 weeks per year)

- 1.4. Fatality Rate** represents the number of fatal work injuries per 100,000 full-time workers and is calculated as:

$$\text{Fatality Rate} = (N_{\text{FATAL}} / \text{EH}) \times 200,000,000$$

Where:

N_{FATAL} = Total number of fatal work injuries

EH = Total exposure hours, i.e., total hours worked by all employees during the calendar year

200,000,000 = Base for 100,000 equivalent full-time workers (working 40 hours per week, 50 weeks per year)

- 1.5. Incident Severity (In Days)** represents the number of days away from work per recordable incident and is calculated as:

$$\text{Incident Severity (In Days)} = (N_{\text{DAYS}} / N)$$

Where:

N_{DAYS} = Total number of days away from work

N = Total number of recordable injuries and illnesses

2. Incident Rate Calculations for Groups of Contractors (for a NAICS code or ISN Work Type Group)

- 2.1.** TRIR, Nonfatal TRIR, DART, and Fatality Rate are calculated by summing the exposure hours and numbers of injuries and illnesses across all contractors in the group before computing the rate. The calculation for a group of contractors will be:

$$\text{RATE} = (\sum N / \sum_i \text{EH}) \times \text{BASE INTEGER}$$

Where:

RATE = one of the four rates presented above: TRIR, Nonfatal TRIR, DART, or Fatality Rate. Represents an exposure hour weighted rate.

$\sum_i N = N_1 + N_2 + \dots + N_n$, where N^4 is equal to the total number of recordable injuries and illnesses for a contractor, and the summation formula is the sum of the values of the n contractors in the group (i.e., the sum of the total number of recordable injuries and illnesses across all contractors in the group).

⁴ Includes only the injuries and illnesses used to calculate the specified rate: for TRIR, N is the total number of injuries and illnesses; for Nonfatal TRIR, N is the total number of nonfatal injuries and illnesses; for DART, N is the total number of nonfatal injuries and illnesses resulting in days away from work plus the total number of nonfatal injuries and illnesses resulting in restricted activity or job transfer; for Fatality Rate, N is the total number of fatal work injuries.

$\sum_i EH = EH_1 + EH_2 + \dots + EH_n$, where EH is equal to the total exposure hours for a contractor, and the summation formula is the sum of the values of the n contractors in the group (i.e., the sum of the total exposure hours across all contractors in the group).

BASE INTEGER = 200,000 for TRIR, Nonfatal TRIR and DART calculations and 200,000,000 for the Fatality Rate calculation.

2.2. Incident Severity (In Days) is calculated by summing the number of days away from work and number of total injuries and illnesses across all contractors in the group before computing the rate. The rate calculation for a group of contractors will be:

$$\text{Incident Severity (In Days)} = (\sum_i N_{\text{DAYS}}) / (\sum_i N)$$

Where:

$\sum_i N_{\text{DAYS}}$ = The sum of the total number of days away from work across all contractors in the group.

$\sum_i N$ = The sum of the total number of recordable injuries and illnesses across all contractors in the group.

Appendix 3: Analysis Procedure Summary

The procedures used in preparing and analyzing the data presented in Tables 1 and 2 are summarized below.

1. Data Cleaning and Preparation

- 1.1. Remove records where the total number of exposure hours is missing or equal to zero. Only records from U.S. contractors who belong to the relevant industry this report is developed for are utilized.
- 1.2. Identify invalid records due to missing data (such as missing Total Number of Recordable Injuries and Illnesses) for each incident rate calculation.
- 1.3. Remove records where Exposure Hours (EH) per Employee is less than 250 or more than 5,000 except for Upstream-Offshore contractors where 8,000 is used.
- 1.4. For each valid record, calculate TRIR, Nonfatal TRIR, DART, Fatality Rate, and Incident Severity (In Days) according to the formulas for individual contractors in Appendix 2.

2. Injury and Illness Rates, Fatalities and Incident Severity (In Days) by NAICS Code

The injury and illness rates, fatalities and incident severity (In Days) calculations by NAICS code for the cleaned data set include the following steps:

- 2.1. Calculate Total Number of Contractors ($\sum_i N_{\text{CONTRACTOR}}$) for each two, three, four, five and six-digit NAICS code, *i*. For instance, calculations presented for two-digit NAICS codes will include all records with any of the three, four, five and six-digit NAICS codes that are subsumed in the two-digit industry classification.
- 2.2. Remove the whole row for the NAICS code if the total number of contractors calculated in Step 2.1 above is less than 10.
- 2.3. For each two, three, four, five and six-digit NAICS code, calculate exposure hour weighted injury and illness rates, fatalities and incident severity (In Days) using formulas for groups of contractors in Appendix 2.
- 2.4. For each rate and fatality count computed in Step 2.3 above, if there are fewer than 10 contractors used in the calculation, suppress the reported rate or fatality count by replacing it with a dash ("-").
- 2.5. If the largest contractor contributes more than 70% of the total exposure hours for a given NAICS code, flag the total number of exposure hours with a symbol ("†") for that NAICS code.
- 2.6. If the fatality rate is greater than or equal to 100 for a given two, three, four, five and six-digit NAICS code, suppress the reported fatality rate by replacing it with a double-asterisk ("**").

3. Injury and Illness Rates, Fatality Rates and Fatality Counts by NAICS Code without Those Records with Rates in the Highest 0.5th Percentile

When the number of records for a given NAICS code is small, extreme observations may unduly influence the reported rates and counts. Thus, Tables 1 and 2 also include the results of a sensitivity analysis conducted to evaluate the effect of those records with rates in the highest 0.5th percentile. The analysis steps include the following:

- 3.1. For each rate computed previously in Step 1, calculate rates for each NAICS Code by excluding contractors that are in the highest 0.5th percentile of the entire dataset using the steps outlined in Step 2.
- 3.2. Calculate the percentage difference between the injury and illness rate from Step 2.3 and 3.1 for each two, three, four, five and six-digit NAICS code.
- 3.3. Identify those rates that show a 10 percent or greater difference with an asterisk ("*"). For example, a table entry of 2.3 (1.8*) implies that 2.3 is the rate calculated with the entire dataset considered; 1.8 is the rate calculated with the highest 0.5th percentile extreme values removed; the difference between 2.3 and 1.8 is greater than or equal to 10 percent.

4. Injury and Illness Rates, Fatalities and Incident Severity (In Days) by ISN Work Type

The injury and illness rates, fatalities and incident severity (In Days) calculations by ISN Work Type for the cleaned data set include the following steps:

- 4.1. Calculate Total Number of Contractors ($\sum_j N_{\text{CONTRACTOR}}$) for each ISN Work Type, j. This is simply a count of the number of contractors that fall into the work type designation. A contractor can be categorized as more than one work type and thus may be included in the counts for numerous work types. However, unlike the calculations for NAICS codes, higher level work types do not include contractors at a more disaggregated level. For example, calculations presented for work type 1.0 – General Contractor do not include records in any of the work types at a lower level (e.g. 1.0.1 – Turnaround or 1.0.2 – Routine Maintenance).
- 4.2. Remove the whole row for the work type if the total number of contractors calculated in Step 4.1 above is fewer than 10, unless the work type has sub-work types with greater than or equal to 10 contractors.
- 4.3. For each ISN work type, calculate exposure hour weighted injury and illness rates, fatalities and incident severity (In Days) using formulas for groups of contractors in Appendix 2.
- 4.4. For each rate and fatality count computed in Step 4.3, if there are fewer than 10 contractors used in the calculation, suppress the reported rate or fatality count by replacing it with a dash ("-").

-
- 4.5. If the largest contractor contributes more than 70% of the total exposure hours for a given ISN work type, flag the total number of exposure hours with a symbol ("†") for that ISN work type.
 - 4.6. If the fatality rate is greater than or equal to 100 for a given ISN work type, suppress the reported fatality rate by replacing it with a double-asterisk ("**").

5. Injury and Illness Rates, Fatality Rates and Fatality Counts by ISN Work Type without Those Records with Rates in the Highest 0.5th Percentile

When the number of records for a given ISN work type is small, extreme observations may unduly influence the reported rates and counts. Thus, Tables 1 and 2 also include the results of a sensitivity analysis conducted to evaluate the effect of those records with rates in the highest 0.5th percentile. The analysis steps include the following:

- 5.1. For each rate computed previously in Step 1, calculate rates for each ISN Work Type by excluding contractors that are in the highest 0.5th percentile of the entire dataset using the steps outlined in Step 4.
- 5.2. Calculate the percentage difference between the injury and illness rate from Step 4.3 and 5.1 for each ISN Work Type.
- 5.3. Identify those rates that show a 10 percent or greater difference with an asterisk ("*"). For example, a table entry of 2.3 (1.8*) implies that 2.3 is the rate calculated with the entire dataset considered; 1.8 is the rate calculated with the highest 0.5th percentile extreme values removed; the difference between 2.3 and 1.8 is greater than or equal to 10 percent.

 COLLECT

 VERIFY

 CONNECT

Copyright © 2013 ISN Software Corporation. All rights reserved.

Health & Safety Performance Indicators
Contractor Group Benchmarking, U.S.
Utilities, Distribution & Power Generation Industries

2012 Data

An ISN Publication: No. 1309
September 2013

ISN®, ISNworld®, RAVS® and the ISN hexagon logo® are registered trademarks of ISN Software Corporation (ISN).

The contents of this publication and analysis methods are exclusively owned by ISN Software Corporation and are protected by United States and international copyright law. This publication is intended solely for access and internal use by actively subscribed ISNworld subscribing organizations and their active employees unless otherwise stipulated. No part of this publication may be (i) reproduced, distributed, displayed, stored in a retrieval system, or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, or otherwise, (ii) sold or distributed for financial or other gain, or (iii) used for any other purpose than expressly set forth above without the prior written permission of ISN Software Corporation. Any trademark, copyright or other notice included in this publication may not be altered or removed.

For questions, suggestions or additional information about this publication or ISN in general, contact ISN at 1-800-976-1303 or email ISNTeam@isn.com.

ISN
ISNetworld.com

© 2013 ISN Software Corporation

Collect. Verify. Connect.

