

Health & Safety Performance Indicators

Contractor Group Benchmarking, U.S.
Oil & Gas Industry, Comprehensive
2012 Data

ISN Report No. 1303
ISN.com

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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.

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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 Oil & Gas 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	1,791	3,313	1.81	1.81	0.78	0	0.00	14.87 (9.17*)
113	Forestry and Logging	287	590	1.36	1.36	1.36	0	0.00	61.75
1133	Logging	225	471	1.27	1.27	1.27	0	0.00	31.33
11331	Logging	225	471	1.27	1.27	1.27	0	0.00	31.33
115	Support Activities for Agriculture and Forestry	686	1,293	2.01	2.01	0.46	0	0.00	13.92 (0.08*)
1151	Support Activities for Crop Production	438	861	1.86 (1.63*)	1.86 (1.63*)	0.46	0	0.00	22.63 (0.14*)
11511	Support Activities for Crop Production	437	860	1.86 (1.63*)	1.86 (1.63*)	0.46	0	0.00	22.63 (0.14*)
115112	Soil Preparation, Planting, and Cultivating	422	828	1.93 (1.70*)	1.93 (1.70*)	0.48	0	0.00	22.63 (0.14*)
21	Mining, Quarrying, and Oil and Gas Extraction	427,538	1,109,730	1.67	1.66	1.03	63	11.35	15.57
211	Oil and Gas Extraction	7,653	17,660	2.12 (1.56*)	2.11 (1.55*)	1.45 (0.93*)	1	11.32	15.64
2111	Oil and Gas Extraction	6,278	14,459	2.23 (1.55*)	2.21 (1.53*)	1.54 (0.90*)	1	13.83	14.23
21111	Oil and Gas Extraction	5,401	12,487	2.40 (1.62*)	2.39 (1.60*)	1.70 (0.96*)	1	16.02	15.21
211111	Crude Petroleum and Natural Gas Extraction	4,139	9,820	2.30 (1.31*)	2.28 (1.29*)	1.73 (0.83*)	1	20.37	15.95
211112	Natural Gas Liquid Extraction	508	1,035	3.29	3.29	2.13	0	0.00	22.35
212	Mining (except Oil and Gas)	808	1,598	1.38	1.38	1.00	0	0.00	32.91
2123	Nonmetallic Mineral Mining and Quarrying	565	1,113	1.26	1.26	0.90	0	0.00	46.29
21232	Sand, Gravel, Clay, and Ceramic and Refractory Minerals Mining and Quarrying	275	547	1.83	1.83	1.46	0	0.00	54.40
212321	Construction Sand and Gravel Mining	229	445	1.35	1.35	1.35	0	0.00	57.67
213	Support Activities for Mining	417,979	1,087,585	1.66	1.65	1.02	62	11.40	15.55
2131	Support Activities for Mining	417,693	1,086,849	1.66	1.65	1.02	62	11.41	15.57
21311	Support Activities for Mining	417,693	1,086,849	1.66	1.65	1.02	62	11.41	15.57
213111	Drilling Oil and Gas Wells	82,414	182,505	2.08	2.06	1.31	14	15.34	19.02

[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)
213112	Support Activities for Oil and Gas Operations	332,638	898,074	1.58	1.57	0.96	48	10.69	14.55
22	Utilities	7,230	15,905	1.65	1.65	0.77	0	0.00	7.34
221	Utilities	7,164	15,767	1.64	1.64	0.75	0	0.00	7.30
2211	Electric Power Generation, Transmission and Distribution	5,430	11,827	1.32	1.32	0.63	0	0.00	6.79
22111	Electric Power Generation	4,579	10,056	1.31	1.31	0.60	0	0.00	6.24
221112	Fossil Fuel Electric Power Generation	2,900	6,523*	1.38	1.38	0.55	0	0.00	8.84
2212	Natural Gas Distribution	528	1,221	1.31	1.31	0.33	0	0.00	22.50
2213	Water, Sewage and Other Systems	1,206	2,719	3.16	3.16	1.47	0	0.00	5.40
22131	Water Supply and Irrigation Systems	702	1,598	1.75	1.75	1.00	0	0.00	0.57
23	Construction	756,264	1,632,805	1.38	1.37	0.70	45	5.51	11.70
236	Construction of Buildings	68,153	144,319	1.55	1.55	0.78	3	4.16	7.78
2361	Residential Building Construction	563	1,190	0.84	0.67	0.00	1	**	0.00
23611	Residential Building Construction	563	1,190	0.84	0.67	0.00	1	**	0.00
236115	New Single-Family Housing Construction (except Operative Builders)	351	665	1.20	0.90	0.00	1	**	0.00
2362	Nonresidential Building Construction	67,346	142,617	1.56	1.55	0.78	2	2.80	7.73
23621	Industrial Building Construction	36,718	80,035	0.85	0.84	0.38	1	2.50	8.51
23622	Commercial and Institutional Building Construction	29,720	60,766	2.44	2.43	1.25	1	3.29	7.37
237	Heavy and Civil Engineering Construction	275,170	615,370	1.34	1.34	0.69	20	6.50	12.56
2371	Utility System Construction	186,509	422,427	1.28	1.28	0.66	17	8.05	13.02
23711	Water and Sewer Line and Related Structures Construction	14,314	27,192	2.53	2.52	1.46	2	14.71	14.11
23712	Oil and Gas Pipeline and Related Structures Construction	144,963	332,087	1.01	1.00	0.50	14	8.43	11.86
23713	Power and Communication Line and Related Structures Construction	24,898	57,787	2.24	2.24	1.19	1	3.46	16.00
2373	Highway, Street, and Bridge Construction	15,441	30,526	3.20	3.18	1.87	3	19.66	17.52
23731	Highway, Street, and Bridge Construction	14,099	28,238	3.27	3.24	1.88	3	21.25	17.77
2379	Other Heavy and Civil Engineering Construction	61,821	138,081	1.12	1.12	0.54	0	0.00	9.48
23799	Other Heavy and Civil Engineering Construction	61,750	137,935	1.11	1.11	0.54	0	0.00	9.52
238	Specialty Trade Contractors	382,172	805,850	1.41	1.41	0.71	22	5.46	11.77
2381	Foundation, Structure, and Building Exterior Contractors	29,562	59,961	1.70	1.70	0.85	2	6.67	12.60 (10.36*)
23811	Poured Concrete Foundation and Structure Contractors	6,075	12,626	1.49	1.47	0.71	1	15.84	4.70
23812	Structural Steel and Precast Concrete Contractors	8,791	18,718	1.22	1.22	0.58	0	0.00	9.35 (7.84*)
23814	Masonry Contractors	4,143	8,107	1.21	1.21	0.59	0	0.00	16.27 (6.63*)

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				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)
23816	Roofing Contractors	6,208	11,428	2.43	2.43	1.31	0	0.00	19.99 (17.60*)
23819	Other Foundation, Structure, and Building Exterior Contractors	4,118	8,579	2.10	2.07	1.00 (0.87*)	1	23.31	13.89 (12.02*)
2382	Building Equipment Contractors	183,120	382,667	1.78	1.78	0.90	13	6.79	10.71
23821	Electrical Contractors and Other Wiring Installation Contractors	86,511	182,513	1.58	1.57	0.79	9	9.86	10.70
23822	Plumbing, Heating, and Air-Conditioning Contractors	69,507	144,061	1.91	1.91	0.85	1	1.39	9.63
23829	Other Building Equipment Contractors	26,198	54,210	2.15	2.14	1.40	3	11.07	13.48
2383	Building Finishing Contractors	18,412	39,268	1.06	1.06	0.52	0	0.00	12.64 (11.02*)
23831	Drywall and Insulation Contractors	9,444	20,607	0.97	0.97	0.43	0	0.00	5.90 (4.14*)
23832	Painting and Wall Covering Contractors	7,480	15,132	1.08	1.08	0.57	0	0.00	21.13
23839	Other Building Finishing Contractors	1,276	3,015	1.53	1.53	0.80	0	0.00	9.17
2389	Other Specialty Trade Contractors	145,302	312,001	0.95	0.95	0.50	7	4.49	13.94
23891	Site Preparation Contractors	26,217	57,144	1.94	1.94	1.13	2	7.00	17.14 (15.34*)
23899	All Other Specialty Trade Contractors	118,647	253,941	0.73	0.72	0.36	5	3.94	12.08
31-33	Manufacturing	327,251	687,298	1.48	1.48	0.83	5	1.45	9.39
324	Petroleum and Coal Products Manufacturing	2,460	5,730	1.40	1.40	0.66	0	0.00	10.53
3241	Petroleum and Coal Products Manufacturing	2,460	5,730	1.40	1.40	0.66	0	0.00	10.53
32419	Other Petroleum and Coal Products Manufacturing	1,303	2,853	2.38	2.38	1.05	0	0.00	8.74
324191	Petroleum Lubricating Oil and Grease Manufacturing	989	2,123	2.26	2.26	1.13	0	0.00	8.38
325	Chemical Manufacturing	34,826	74,126	1.31	1.30	0.86	2	5.40	12.42
3251	Basic Chemical Manufacturing	17,170	38,119	1.36	1.35	1.13	2	10.49	17.64
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	904	1,766	1.70	1.70	0.79	0	0.00	10.13
32561	Soap and Cleaning Compound Manufacturing	904	1,766	1.70	1.70	0.79	0	0.00	10.13
3259	Other Chemical Product and Preparation Manufacturing	15,545	31,991	1.08	1.08	0.46	0	0.00	5.02
32599	All Other Chemical Product and Preparation Manufacturing	15,195	31,281	1.00	1.00	0.41	0	0.00	5.33
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	15,152	31,192	1.01	1.01	0.41	0	0.00	5.33
326	Plastics and Rubber Products Manufacturing	2,378	5,232	2.94	2.94	1.95	0	0.00	7.58
3261	Plastics Product Manufacturing	1,910	4,197	2.48	2.48	1.57	0	0.00	8.54
327	Nonmetallic Mineral Product Manufacturing	1,228	2,796	3.22	3.22	2.79	0	0.00	22.29
331	Primary Metal Manufacturing	838	1,776	1.69	1.69	1.35	0	0.00	6.07
332	Fabricated Metal Product Manufacturing	59,632	121,093	1.99	1.99	1.00	0	0.00	7.53
3323	Architectural and Structural Metals Manufacturing	19,450	33,132	1.45	1.45	0.85	0	0.00	11.05

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)
33231	Plate Work and Fabricated Structural Product Manufacturing	17,366	29,163	1.36	1.36	0.79	0	0.00	9.72
332312	Fabricated Structural Metal Manufacturing	6,935	18,033	1.18	1.18	0.69	0	0.00	11.90
332313	Plate Work Manufacturing	10,090	10,414	1.65	1.65	0.96	0	0.00	6.69
33232	Ornamental and Architectural Metal Products Manufacturing	2,022	3,865	2.12	2.12	1.29	0	0.00	17.29 (13.08*)
332322	Sheet Metal Work Manufacturing	1,350	2,754	1.89	1.89	0.94	0	0.00	24.15 (17.68*)
3324	Boiler, Tank, and Shipping Container Manufacturing	9,220	20,682	3.14	3.14	1.63	0	0.00	7.26
33241	Power Boiler and Heat Exchanger Manufacturing	3,475	7,263	3.11	3.11	1.84	0	0.00	7.76
33242	Metal Tank (Heavy Gauge) Manufacturing	4,809	10,964	3.34	3.34	1.75	0	0.00	7.44
3327	Machine Shops; Turned Product; and Screw, Nut, and Bolt Manufacturing	7,079	15,358	2.44	2.44	1.21	0	0.00	7.09
33271	Machine Shops	5,769	12,721	2.12	2.12	0.99	0	0.00	6.60
3328	Coating, Engraving, Heat Treating, and Allied Activities	3,097	7,754	1.75	1.75	0.62	0	0.00	5.24
33281	Coating, Engraving, Heat Treating, and Allied Activities	3,097	7,754	1.75	1.75	0.62	0	0.00	5.24
332811	Metal Heat Treating	1,208	2,983	0.40	0.40	0.00	0	0.00	0.00
332812	Metal Coating, Engraving (except Jewelry and Silverware), and Allied Services to Manufacturers	1,564	4,056	2.96	2.96	1.08	0	0.00	5.93
3329	Other Fabricated Metal Product Manufacturing	19,470	41,472	1.62	1.62	0.77	0	0.00	6.00
33291	Metal Valve Manufacturing	17,050	35,600	1.48	1.48	0.71	0	0.00	5.95
332911	Industrial Valve Manufacturing	16,688	34,752	1.39	1.39	0.68	0	0.00	6.46
33299	All Other Fabricated Metal Product Manufacturing	2,355	5,753	2.33 (2.06*)	2.33 (2.06*)	1.11	0	0.00	6.64
332996	Fabricated Pipe and Pipe Fitting Manufacturing	1,291	3,409	2.35	2.35	1.29	0	0.00	6.90
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	879	1,922	2.71 (1.90*)	2.71 (1.90*)	0.94	0	0.00	6.23
333	Machinery Manufacturing	163,124	343,975	1.35	1.35	0.77	2	1.16	10.34
3331	Agriculture, Construction, and Mining Machinery Manufacturing	41,749	91,195	1.89	1.89	1.01	2	4.39	6.54
33312	Construction Machinery Manufacturing	2,650	5,313	2.79	2.79	1.73	0	0.00	8.69
33313	Mining and Oil and Gas Field Machinery Manufacturing	39,078	85,839	1.84	1.84	0.96	2	4.66	6.34
333132	Oil and Gas Field Machinery and Equipment Manufacturing	37,880	83,378	1.77	1.77	0.92	2	4.80	6.46
3333	Commercial and Service Industry Machinery Manufacturing	85,805	178,499*	0.76	0.76	0.52	0	0.00	16.80
33331	Commercial and Service Industry Machinery Manufacturing	85,805	178,499*	0.76	0.76	0.52	0	0.00	16.80
333319	Other Commercial and Service Industry Machinery Manufacturing	1,150	2,416	1.57	1.57	0.50	0	0.00	2.95
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	3,307	7,039	2.19	2.19	1.14	0	0.00	11.92
33341	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	3,307	7,039	2.19	2.19	1.14	0	0.00	11.92

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)
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	1,792	3,791	1.48	1.48	1.16	0	0.00	6.18
3335	Metalworking Machinery Manufacturing	621	1,257	3.02	3.02	1.91	0	0.00	9.95
33351	Metalworking Machinery Manufacturing	587	1,189	2.86	2.86	1.85	0	0.00	7.59
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	4,300	10,196	1.43	1.43	0.49	0	0.00	6.68
33361	Engine, Turbine, and Power Transmission Equipment Manufacturing	4,300	10,196	1.43	1.43	0.49	0	0.00	6.68
333611	Turbine and Turbine Generator Set Units Manufacturing	2,162	4,914	1.22	1.22	0.41	0	0.00	2.77
3339	Other General Purpose Machinery Manufacturing	26,671	54,432	2.17	2.17	1.19	0	0.00	9.14
33391	Pump and Compressor Manufacturing	9,113	19,508	2.38	2.38	1.01	0	0.00	8.12
333911	Pump and Pumping Equipment Manufacturing	4,826	10,195	2.41	2.41	1.33	0	0.00	10.11
333912	Air and Gas Compressor Manufacturing	4,259	9,259	2.35	2.35	0.67	0	0.00	5.87
33392	Material Handling Equipment Manufacturing	12,590	24,076	2.15	2.15	1.50	0	0.00	10.08
333922	Conveyor and Conveying Equipment Manufacturing	460	905	3.54 (3.14*)	3.54 (3.14*)	0.88	0	0.00	0.81
333923	Overhead Traveling Crane, Hoist, and Monorail System Manufacturing	3,982	8,599	2.84	2.84	2.16	0	0.00	12.16
33399	All Other General Purpose Machinery Manufacturing	4,968	10,848	1.83	1.83	0.83	0	0.00	9.09
333992	Welding and Soldering Equipment Manufacturing	212	488	1.23 (0.83*)	1.23 (0.83*)	1.23 (0.83*)	0	0.00	9.00
333997	Scale and Balance Manufacturing	1,431	3,074	1.43	1.43	0.91	0	0.00	26.91
333999	All Other Miscellaneous General Purpose Machinery Manufacturing	1,699	4,035	2.58	2.58	0.89	0	0.00	3.92
334	Computer and Electronic Product Manufacturing	36,301	73,505	0.94	0.94	0.44	0	0.00	5.97
3342	Communications Equipment Manufacturing	12,046	24,141*	0.33	0.33	0.16	0	0.00	3.25
3345	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	23,997	48,778	1.20	1.20	0.57	0	0.00	6.52
33451	Navigational, Measuring, Electromedical, and Control Instruments Manufacturing	23,925	48,647	1.20	1.20	0.58	0	0.00	6.52
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	9,218	19,262	1.12	1.12	0.53	0	0.00	5.60
334516	Analytical Laboratory Instrument Manufacturing	11,577	22,662	1.19	1.19	0.54	0	0.00	8.69
334519	Other Measuring and Controlling Device Manufacturing	2,017	4,504	1.33	1.33	0.89	0	0.00	2.87
335	Electrical Equipment, Appliance, and Component Manufacturing	13,790	29,547	2.06	2.06	1.06	1	6.77	7.19
3353	Electrical Equipment Manufacturing	11,622	25,173	2.03	2.03	0.99	1	7.94	7.17
33531	Electrical Equipment Manufacturing	11,605	25,144	2.04	2.03	0.99	1	7.95	7.17
335311	Power, Distribution, and Specialty Transformer Manufacturing	1,708	3,685	3.53	3.47	1.09	1	54.28	8.17
335312	Motor and Generator Manufacturing	3,778	8,199	3.22	3.22	1.83	0	0.00	5.36 (4.17*)

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)
335313	Switchgear and Switchboard Apparatus Manufacturing	576	1,333	1.95	1.95	1.05	0	0.00	16.15
3359	Other Electrical Equipment and Component Manufacturing	2,145	4,345	2.26	2.26	1.43	0	0.00	7.29
33599	All Other Electrical Equipment and Component Manufacturing	1,220	2,528	1.34	1.34	0.71	0	0.00	4.12
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	583	1,104	1.63	1.63	0.54	0	0.00	3.56
336	Transportation Equipment Manufacturing	6,955	17,441*	1.89	1.89	1.24	0	0.00	10.79
3362	Motor Vehicle Body and Trailer Manufacturing	659	1,155*	0.87	0.87	0.52	0	0.00	13.80
33621	Motor Vehicle Body and Trailer Manufacturing	659	1,155*	0.87	0.87	0.52	0	0.00	13.80
336211	Motor Vehicle Body Manufacturing	121	163	2.45	2.45	2.45	0	0.00	34.50
339	Miscellaneous Manufacturing	4,460	9,415	1.61	1.61	1.02	0	0.00	7.74
3399	Other Miscellaneous Manufacturing	4,303	9,112	1.62	1.62	1.01	0	0.00	7.92
33999	All Other Miscellaneous Manufacturing	3,759	8,182	1.56	1.56	1.08	0	0.00	9.11
42	Wholesale Trade	174,096	366,435	2.10	2.10	1.34	3	1.64	9.07
423	Merchant Wholesalers, Durable Goods	91,059	190,936	2.19	2.19	1.25	1	1.05	8.58
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	1,181	2,772	1.44	1.44	0.79	0	0.00	4.55
4235	Metal and Mineral (except Petroleum) Merchant Wholesalers	3,569	7,510*	1.28	1.28	0.83	0	0.00	8.33
42351	Metal Service Centers and Other Metal Merchant Wholesalers	3,569	7,510*	1.28	1.28	0.83	0	0.00	8.33
4236	Electrical and Electronic Goods Merchant Wholesalers	27,070	54,160	1.30	1.30	0.88	0	0.00	6.36
42361	Electrical Apparatus and Equipment, Wiring Supplies, and Related Equipment Merchant Wholesalers	26,614	53,315	1.32	1.32	0.89	0	0.00	6.38
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	612	1,300	2.92	2.92	0.77	0	0.00	2.84
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	53,502	114,896	2.60	2.60	1.42	1	1.74	8.53
42381	Construction and Mining (except Oil Well) Machinery and Equipment Merchant Wholesalers	13,912	28,993	4.04	4.04	2.04	0	0.00	8.98
42383	Industrial Machinery and Equipment Merchant Wholesalers	29,169	61,340	2.38	2.38	1.35	0	0.00	8.24
42384	Industrial Supplies Merchant Wholesalers	7,733	15,370	1.73	1.72	0.92	1	13.01	6.60
42385	Service Establishment Equipment and Supplies Merchant Wholesalers	651	1,315	3.04	3.04	2.13	0	0.00	7.05
42386	Transportation Equipment and Supplies (except Motor Vehicle) Merchant Wholesalers	1,827	7,424	0.70	0.70	0.57	0	0.00	18.31
4239	Miscellaneous Durable Goods Merchant Wholesalers	4,619	9,305	2.94	2.94	1.81	0	0.00	15.77
42393	Recyclable Material Merchant Wholesalers	2,468	5,227	2.79	2.79	2.03	0	0.00	21.51

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				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)
42399	Other Miscellaneous Durable Goods Merchant Wholesalers	2,151	4,078	3.14	3.14	1.52	0	0.00	9.22
424	Merchant Wholesalers, Nondurable Goods	82,620	174,768	2.01	2.01	1.44	2	2.29	9.69
4246	Chemical and Allied Products Merchant Wholesalers	69,295	145,280	1.96	1.96	1.45	0	0.00	7.51
42469	Other Chemical and Allied Products Merchant Wholesalers	69,175	145,038	1.96	1.96	1.44	0	0.00	7.43
4247	Petroleum and Petroleum Products Merchant Wholesalers	12,813	28,070	2.19	2.19	1.40	0	0.00	16.03
42471	Petroleum Bulk Stations and Terminals	8,859	20,106	1.81	1.81	1.09	0	0.00	13.50
42472	Petroleum and Petroleum Products Merchant Wholesalers (except Bulk Stations and Terminals)	3,928	7,912	3.19	3.19	2.20	0	0.00	19.68
425	Wholesale Electronic Markets and Agents and Brokers	402	717	1.12 (0.00*)	1.12 (0.00*)	0.56	0	0.00	0.25
4251	Wholesale Electronic Markets and Agents and Brokers	402	717	1.12 (0.00*)	1.12 (0.00*)	0.56	0	0.00	0.25
44-45	Retail Trade	36,729	71,038	4.29	4.28	2.42	4	11.26	8.95
441	Motor Vehicle and Parts Dealers	17,216	36,496*	4.87	4.86	2.35	1	5.48	6.05
453	Miscellaneous Store Retailers	478	1,104	1.45	1.45	0.91	0	0.00	4.88
4539	Other Miscellaneous Store Retailers	478	1,104	1.45	1.45	0.91	0	0.00	4.88
45399	All Other Miscellaneous Store Retailers	449	1,048	1.53	1.53	0.95	0	0.00	4.88
453998	All Other Miscellaneous Store Retailers (except Tobacco Stores)	422	978	1.43	1.43	0.82	0	0.00	3.14
454	Nonstore Retailers	1,216	2,377	4.12	4.12	1.94	0	0.00	13.88
4543	Direct Selling Establishments	906	1,722	2.44	2.44	1.51	0	0.00	18.57
45431	Fuel Dealers	717	1,334	2.70	2.70	1.65	0	0.00	21.28
45439	Other Direct Selling Establishments	189	388	1.54	1.54	1.03	0	0.00	2.33
48-49	Transportation and Warehousing	90,812	242,629	1.95	1.94	1.37	19	15.66	20.24
481	Air Transportation	2,899	5,657	0.64	0.57	0.35	2	70.71	26.83
4812	Nonscheduled Air Transportation	2,587	5,029	0.64	0.56	0.40	2	79.54	30.19
48121	Nonscheduled Air Transportation	2,582	5,020	0.64	0.56	0.40	2	79.69	30.19
481211	Nonscheduled Chartered Passenger Air Transportation	2,534	4,961	0.65	0.56	0.40	2	80.63	30.19
483	Water Transportation	11,812	51,598	0.46	0.45	0.39	1	3.88	27.00 (22.96*)
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	6,548	29,305*	0.16	0.16	0.10	0	0.00	44.08 (32.82*)
48311	Deep Sea, Coastal, and Great Lakes Water Transportation	5,888	26,523*	0.14	0.14	0.09	0	0.00	58.78 (45.13*)
483113	Coastal and Great Lakes Freight Transportation	967	3,515	0.63	0.63	0.51	0	0.00	57.00 (32.33*)
4832	Inland Water Transportation	3,672	17,043	0.93	0.92	0.86	1	11.74	12.54
48321	Inland Water Transportation	3,552	16,709	0.95	0.93	0.87	1	11.97	12.54
483211	Inland Water Freight Transportation	3,480	16,528	0.93	0.92	0.86	1	12.10	12.01

Table 1: 2012 Injury and Illness Rates by NAICS Code

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				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)
484	Truck Transportation	60,753	146,609	2.72	2.70	1.89	15	20.46	20.02 (17.91*)
4841	General Freight Trucking	21,898	54,486	2.44	2.42	1.76	7	25.69	20.02
48411	General Freight Trucking, Local	10,979	24,444	2.24	2.21	1.68	4	32.73	22.38
48412	General Freight Trucking, Long-Distance	10,327	28,452	2.59	2.57	1.81	3	21.09	19.19
484121	General Freight Trucking, Long-Distance, Truckload	8,241	23,116	2.07	2.04	1.58	3	25.96	17.53
4842	Specialized Freight Trucking	37,768	89,659	2.87	2.86	1.98	8	17.85	19.76 (17.23*)
48422	Specialized Freight (except Used Goods) Trucking, Local	27,542	66,385	2.91	2.89	2.02	7	21.09	21.89 (18.71*)
48423	Specialized Freight (except Used Goods) Trucking, Long-Distance	7,144	17,568	2.19	2.19	1.40 (1.24*)	0	0.00	19.39
486	Pipeline Transportation	1,110	2,675	2.77	2.77	2.39	0	0.00	20.59
4869	Other Pipeline Transportation	570	1,205	3.48	3.48	3.48	0	0.00	23.48
48699	All Other Pipeline Transportation	284	552	1.45	1.45	1.45	0	0.00	30.50
488	Support Activities for Transportation	12,375	31,500	1.14	1.13	0.76	1	6.35	19.92
4882	Support Activities for Rail Transportation	3,805	8,036	1.67	1.67	0.82	0	0.00	20.52
48821	Support Activities for Rail Transportation	2,723	5,601	0.96	0.96	0.25	0	0.00	17.44
4883	Support Activities for Water Transportation	6,036	17,038	0.72	0.70	0.52	1	11.74	20.28
48832	Marine Cargo Handling	3,180	7,540	0.40 (0.35*)	0.40 (0.35*)	0.29 (0.24*)	0	0.00	23.20
48833	Navigational Services to Shipping	471	1,124	2.85	2.85	2.31	0	0.00	32.56
48839	Other Support Activities for Water Transportation	2,172	7,911	0.35	0.35	0.25	0	0.00	19.36
4884	Support Activities for Road Transportation	1,648	4,362 [†]	2.02	2.02	1.74	0	0.00	21.66
48849	Other Support Activities for Road Transportation	1,636	4,327 [†]	2.03	2.03	1.76	0	0.00	21.66
51	Information	2,795	7,071	0.79	0.79	0.45	0	0.00	16.04
517	Telecommunications	2,684	6,848	0.82	0.82	0.47	0	0.00	16.04
5174	Satellite Telecommunications	1,042	2,253	1.07	1.07	0.62	0	0.00	26.83
51741	Satellite Telecommunications	1,042	2,253	1.07	1.07	0.62	0	0.00	26.83
53	Real Estate and Rental and Leasing	45,210	107,487	1.67	1.66	1.12	4	7.44	14.99
531	Real Estate	1,305	2,698	0.67	0.67	0.37	0	0.00	4.89
5313	Activities Related to Real Estate	688	1,440	0.00	0.00	0.00	0	0.00	0.00
53139	Other Activities Related to Real Estate	655	1,375	0.00	0.00	0.00	0	0.00	0.00
532	Rental and Leasing Services	43,905	104,789	1.69	1.68	1.14	4	7.63	15.09
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	42,363	101,722	1.70	1.69	1.15	4	7.86	15.21
53241	Construction, Transportation, Mining, and Forestry Machinery and Equipment Rental and Leasing	24,707	59,406	1.49	1.48	1.04	2	6.73	14.00

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				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)
532411	Commercial Air, Rail, and Water Transportation Equipment Rental and Leasing	1,347	4,217	0.95	0.95	0.43	0	0.00	5.50
532412	Construction, Mining, and Forestry Machinery and Equipment Rental and Leasing	23,268	54,986	1.53	1.53	1.09	2	7.27	14.40
53249	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	17,414	41,706	1.99	1.99	1.31	2	9.59	16.30
54	Professional, Scientific, and Technical Services	328,219	684,970	0.58	0.58	0.27	6	1.75	9.82
541	Professional, Scientific, and Technical Services	327,314	683,219	0.58	0.58	0.27	6	1.76	9.79
5413	Architectural, Engineering, and Related Services	248,449	518,006	0.59	0.59	0.26	4	1.54	9.59
54133	Engineering Services	180,756	367,609	0.51	0.51	0.22	2	1.09	8.84
54136	Geophysical Surveying and Mapping Services	8,284	27,465	1.11	1.10	0.48	1	7.28	10.23
54137	Surveying and Mapping (except Geophysical) Services	8,877	19,297	0.78	0.78	0.39	0	0.00	12.61
54138	Testing Laboratories	34,407	72,212	0.79	0.79	0.44	0	0.00	12.31
5415	Computer Systems Design and Related Services	14,156	27,515*	0.39	0.39	0.34	0	0.00	27.34
54151	Computer Systems Design and Related Services	14,139	27,482*	0.39	0.39	0.34	0	0.00	27.34
541511	Custom Computer Programming Services	174	372	0.00	0.00	0.00	0	0.00	0.00
541512	Computer Systems Design Services	11,664	22,174*	0.44	0.44	0.41	0	0.00	29.37
5416	Management, Scientific, and Technical Consulting Services	42,264	85,435	0.62	0.62	0.24	1	2.34	6.42 (5.76*)
54161	Management Consulting Services	4,118	7,984	0.23	0.23	0.10	0	0.00	16.22
541611	Administrative Management and General Management Consulting Services	1,838	3,456	0.35	0.35	0.12	0	0.00	1.00
541614	Process, Physical Distribution, and Logistics Consulting Services	718	1,467	0.14	0.14	0.14	0	0.00	140.00
541618	Other Management Consulting Services	902	1,751	0.11	0.11	0.00	0	0.00	0.00
54162	Environmental Consulting Services	30,923	60,960	0.76	0.75	0.29	1	3.28	6.50 (5.74*)
54169	Other Scientific and Technical Consulting Services	6,493	15,260	0.29	0.29	0.10	0	0.00	2.41
5419	Other Professional, Scientific, and Technical Services	18,464	44,314	0.56	0.56	0.30	1	4.51	10.01
54199	All Other Professional, Scientific, and Technical Services	18,068	43,262	0.55	0.54	0.30	1	4.62	9.43
56	Administrative and Support and Waste Management and Remediation Services	306,123	616,174	2.47	2.46	1.56	9	2.92	15.12
561	Administrative and Support Services	240,306	471,245	2.58	2.58	1.64	6	2.55	14.38
5612	Facilities Support Services	978	1,950	1.74	1.74	0.72	0	0.00	0.53
56121	Facilities Support Services	978	1,950	1.74	1.74	0.72	0	0.00	0.53
5613	Employment Services	20,592	37,947	0.37	0.37	0.16	0	0.00	9.10
56132	Temporary Help Services	20,284	37,366	0.37	0.37	0.16	0	0.00	9.10

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5616	Investigation and Security Services	105,039	205,160	1.28	1.28	0.62	3	2.92	15.53
56161	Investigation, Guard, and Armored Car Services	92,620	181,071	1.24	1.24	0.57	2	2.21	16.67
561612	Security Guards and Patrol Services	92,620	181,071	1.24	1.24	0.57	2	2.21	16.67
56162	Security Systems Services	12,419	24,089*	1.62	1.61	0.93	1	8.30	8.96
561621	Security Systems Services (except Locksmiths)	12,318	23,901*	1.62	1.62	0.94	1	8.37	9.01
5617	Services to Buildings and Dwellings	102,125	200,533	4.41	4.41	3.03	3	2.99	13.99
56171	Exterminating and Pest Control Services	24,900	50,715	7.32	7.32	4.00	2	7.89	14.69
56172	Janitorial Services	56,939	108,378*	3.45	3.45	2.89	0	0.00	14.62
56173	Landscaping Services	19,098	38,973	3.50	3.49	2.35	1	5.13	9.86
56179	Other Services to Buildings and Dwellings	1,187	2,466	1.05	1.05	0.57	0	0.00	38.23
5619	Other Support Services	10,548	22,135	2.27	2.27	1.45	0	0.00	17.66
56199	All Other Support Services	10,488	21,992	2.28	2.28	1.46	0	0.00	17.66
562	Waste Management and Remediation Services	65,738	144,820	2.09	2.08	1.28	3	4.14	18.11
5621	Waste Collection	24,602	58,051	2.61	2.61	1.64	1	3.45	22.03
56211	Waste Collection	24,147	57,389	2.57	2.56	1.64	1	3.48	22.32
562111	Solid Waste Collection	15,464	37,977*	2.25	2.25	1.36	1	5.27	31.60
562112	Hazardous Waste Collection	7,505	16,537	3.22	3.22	2.19	0	0.00	8.89 (7.36*)
562119	Other Waste Collection	521	1,355	2.21	2.21	1.62	0	0.00	30.60
5622	Waste Treatment and Disposal	6,460	14,161	1.89	1.89	1.12	0	0.00	23.06
56221	Waste Treatment and Disposal	6,440	14,109	1.90	1.90	1.12	0	0.00	23.06
562211	Hazardous Waste Treatment and Disposal	4,939	10,644*	1.82	1.82	1.09	0	0.00	26.08
562219	Other Nonhazardous Waste Treatment and Disposal	502	1,168	2.23	2.23	1.54	0	0.00	25.77
5629	Remediation and Other Waste Management Services	33,202	69,455	1.73	1.72	1.04	2	5.76	12.21
56291	Remediation Services	23,241	47,036	1.62	1.62	0.97	0	0.00	11.88
56299	All Other Waste Management Services	9,683	21,893	1.95	1.94	1.18	2	18.27	13.08 (11.59*)
562991	Septic Tank and Related Services	1,972	4,863	4.11	4.07	2.80	1	41.13	12.79
562998	All Other Miscellaneous Waste Management Services	7,321	16,162	1.36	1.35	0.72	1	12.37	13.82 (10.91*)
61	Educational Services	2,352	3,890*	0.41	0.41	0.31	0	0.00	6.13
611	Educational Services	2,352	3,890*	0.41	0.41	0.31	0	0.00	6.13
62	Health Care and Social Assistance	2,664	5,898	0.54	0.54	0.14	0	0.00	2.94
621	Ambulatory Health Care Services	1,911	4,258	0.56	0.56	0.19	0	0.00	3.92

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				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)
72	Accommodation and Food Services	14,530	33,049	1.52	1.52	0.63	0	0.00	13.92
722	Food Services and Drinking Places	14,148	32,232	1.51	1.51	0.61	0	0.00	14.14
7223	Special Food Services	14,111	32,162	1.49	1.49	0.60	0	0.00	14.25
72231	Food Service Contractors	12,749	28,296	1.67	1.67	0.66	0	0.00	13.75
81	Other Services (except Public Administration)	162,723	324,753	2.19	2.19	1.29	4	2.46	11.25
811	Repair and Maintenance	126,132	260,984	1.85	1.85	1.04	3	2.30	10.99
8111	Automotive Repair and Maintenance	1,794	4,015	2.79	2.79	1.64	0	0.00	2.71
8112	Electronic and Precision Equipment Repair and Maintenance	2,597	5,050	1.82	1.82	1.11	0	0.00	15.89 (9.11*)
81121	Electronic and Precision Equipment Repair and Maintenance	2,592	5,040	1.83	1.83	1.11	0	0.00	15.89 (9.11*)
811213	Communication Equipment Repair and Maintenance	207	394	3.05	3.05	1.02	0	0.00	0.33
811219	Other Electronic and Precision Equipment Repair and Maintenance	1,332	2,501	2.16	2.16	1.44	0	0.00	19.44 (7.80*)
8113	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	120,796	250,172	1.84	1.83	1.02	3	2.40	10.99
81131	Commercial and Industrial Machinery and Equipment (except Automotive and Electronic) Repair and Maintenance	118,722	245,770	1.81	1.81	1.00	3	2.44	11.00
813	Religious, Grantmaking, Civic, Professional, and Similar Organizations	105	208	0.00	0.00	0.00	0	0.00	0.00
8139	Business, Professional, Labor, Political, and Similar Organizations	105	208	0.00	0.00	0.00	0	0.00	0.00

[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	243,540	538,959	1.05	1.05	0.48	12	4.45	9.71
1.0.1 - Turnaround	233,449	510,416	0.74	0.74	0.30	3	1.18	8.14
1.0.2 - Routine Maintenance	334,126	734,267	1.01	1.00	0.48	20	5.45	10.79
1.0.3 - Compression - Maintenance	81,988	184,021	1.04	1.04	0.50	1	1.09	11.17
1.0.4 - Hydraulic Workover	43,868	111,373	1.44	1.44	0.85	4	7.18	14.83
1.0.5 - Steel Erection and Assembly	140,831	316,887	1.10	1.09	0.49	7	4.42	9.85
1.0.6 - Dredging	21,942	52,203	1.84	1.84	1.02	2	7.66	10.62
1.0.7 - Sheet Metal	59,918	127,944	1.49	1.49	0.63	0	0.00	8.38
1.0.8 - Conveyor System Installation	55,366	120,703	1.43	1.43	0.58	1	1.66	6.54
1.0.9 - Onshore Marine Construction	16,930	38,309	1.23	1.22	0.57	2	10.44	10.02 (8.50*)
1.0.10 - Conveyor Belts - Sales	7,526	15,626	1.64	1.64	0.95	0	0.00	13.49
1.0.11 - Conveyor Belts - Installation	21,356	45,615	1.80	1.80	0.80	1	4.38	7.54
1.0.12 - Conveyor Belts - Service and Repair	11,568	25,144	2.22	2.21	1.03	1	7.95	9.91
1.1 - Boiler Repair	127,958	267,768	0.87	0.87	0.36	2	1.49	7.32
1.1.1 - Boiler Troubleshooting	41,112	86,698	1.43	1.42	0.61	1	2.31	8.70
1.1.2 - Boiler Cleaning	28,658	58,742	1.45	1.44	0.58	1	3.40	7.60
1.2 - Building Construction	181,308	397,640	1.29	1.28	0.63	7	3.52	8.49
1.2.1 - Floor Covering	21,188	47,090	1.14	1.13	0.50	1	4.25	9.31
1.2.2 - Carpentry - Finishing	43,291	95,308	1.66	1.66	0.84	1	2.10	7.76
1.2.3 - Interior Finishes/Design	29,117	64,877	1.44	1.43	0.64	1	3.08	9.34
1.2.4 - Joint Sealants/Caulking and Waterproofing	19,975	43,701	1.53	1.53	0.64	1	4.58	8.30
1.2.5 - Masonry	20,945	45,470	1.76	1.75	0.76	1	4.40	10.94
1.2.6 - Epoxy & Other Polymer Flooring	7,397	15,375	1.70	1.70	0.72	0	0.00	6.44

[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 ^[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)
1.3 - Demolition	120,898	262,960	1.16	1.16	0.59	7	5.32	12.53
1.3.1 - Explosive	61,234	178,908	1.41	1.40	0.82	3	3.35	10.37
1.4 - Dock	36,910	82,194	0.79	0.78	0.35	3	7.30	10.30 (9.20*)
1.4.1 - Marine hose testing	1,580	3,811	1.57	1.57	1.05	0	0.00	24.83 (19.48*)
1.4.2 - Dock Services (Tying boats, etc)	4,460	11,902	1.06	1.03	0.71	2	33.61	22.29 (19.90*)
1.4.3 - Stevedoring (Loading/Unloading Ship Cargo)	6,958	15,484	1.23	1.21	0.62	1	12.92	19.53
1.5 - Diving	27,664	60,809	0.91	0.91	0.46	0	0.00	10.91
1.6 - Drilling	111,175	290,889	1.63	1.63	0.94	8	5.50	13.27
1.6.1 - Pier and Grade Beam Foundation	12,162	26,429	1.95	1.94	1.09	1	7.57	13.23
1.7 - Exchangers	121,824	253,009	0.72	0.72	0.29	1	0.79	9.39
1.7.1 - Tube repair	87,662	195,110	0.80	0.80	0.32	1	1.03	9.20
1.7.2 - Bundle Extraction	89,829	197,540	0.74	0.73	0.31	1	1.01	10.26
1.8 - Furnace	98,895	215,869	0.67	0.67	0.26	1	0.93	7.66
1.9 - Heat treating	45,923	102,610	0.81	0.81	0.32	0	0.00	9.88 (8.64*)
1.10 - Mechanical	264,669	567,387	0.94	0.94	0.42	7	2.47	9.92
1.10.1 - Machine Installations	113,466	247,526	1.33	1.33	0.60	5	4.04	7.72
1.10.2 - Machine Troubleshooting and Repair	91,553	195,932	1.38	1.38	0.64	5	5.10	7.95
1.10.3 - Steam Systems	51,413	108,721	1.27	1.26	0.48	1	1.84	6.04
1.10.4 - Engine Repair and Maintenance	11,206	24,424	1.09	1.09	0.46	0	0.00	9.38
1.11 - Metals	86,568	195,583	0.72	0.72	0.28	1	1.02	9.39
1.11.1 - Corrosion Control	163,634	396,788	0.99	0.98	0.50	6	3.02	9.16
1.11.2 - Industrial Steel Cutting	22,362	50,199	1.31	1.30	0.59	1	3.98	9.19 (8.12*)
1.11.3 - Electrochemical Cleaning	7,589	16,946	0.83	0.81	0.33	1	11.80	5.24
1.11.4 - Linings & Coatings	47,717	106,967	0.99	0.99	0.40	1	1.87	6.57
1.11.5 - Flame Spray (HVOF, Plasma, Electric Wire Arc)	2,352	5,061	1.70	1.70	0.51	0	0.00	3.44
1.12 - Painting	163,320	358,859	0.83	0.83	0.38	8	4.46	10.82
1.12.1 - Linings & coatings	151,941	326,159	0.96	0.96	0.44	4	2.45	9.89
1.12.2 - Sandblasting	206,648	456,217	0.92	0.92	0.44	14	6.14	11.53
1.12.3 - Lead Abatement	94,057	198,070	0.76	0.75	0.32	2	2.02	11.25
1.13 - Rail	23,671	47,586	1.80	1.80	1.02	0	0.00	14.15
1.13.1 - Rail Repair	28,150	61,011	1.14	1.14	0.55	0	0.00	7.86

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 ^[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)
1.13.2 - Switch Engine	7,746	15,780	1.81	1.81	0.95	0	0.00	22.43
1.13.3 - Re-railing	5,499	12,224	1.82	1.82	1.06	0	0.00	17.24
1.13.4 - Railroad Construction	15,085	32,156	2.23	2.23	1.29	1	6.22	13.82
1.13.5 - Industrial Rail Plant Switching	8,345	17,268	1.36	1.36	0.69	0	0.00	17.38
1.13.6 - Railcar Repair, Maintenance and Repair	6,550	16,990*	1.82	1.82	1.12	0	0.00	10.14
1.14 - Scaffolding	201,273	437,463	0.64	0.63	0.28	6	2.74	9.00
1.14.1 - Scaffold Installation	90,612	196,430	0.93	0.93	0.42	2	2.04	9.83
1.15 - Tanks	150,140	351,567	0.96	0.96	0.46	7	3.98	9.75
1.15.1 - Cleaning	104,736	233,259	1.22	1.20	0.69	13	11.15	13.19
1.15.2 - Maintenance	150,549	331,258	0.85	0.84	0.40	8	4.83	13.06
1.15.3 - Linings & coatings	110,476	244,325	0.74	0.74	0.32	1	0.82	11.30
1.15.4 - Construction	127,188	267,175	1.04	1.03	0.49	3	2.25	10.38
1.16 - Tower/Vessels	142,306	318,378	0.71	0.71	0.29	1	0.63	9.60
1.17 - Welding	325,413	728,762	1.06	1.06	0.50	17	4.67	11.45
1.17.1 - Structural	82,920	186,136	1.22	1.22	0.55	2	2.15	9.40
1.17.2 - Calibration/Testing Smoke, Heat & Gas Detector	2,632	5,881	2.31	2.28	1.22	1	34.01	8.40
1.18 - Hydroblast	75,827	166,577	1.04	1.03	0.50	4	4.80	11.67
1.19 - Civil	215,764	470,130	0.99	0.98	0.45	8	3.40	10.71
1.19.1 - Concrete	248,360	553,432	1.04	1.04	0.50	9	3.25	10.65
1.19.2 - Pumping/Delivery Service	97,104	253,017	1.39	1.38	0.77	4	3.16	9.44
1.19.3 - Construction	189,409	412,478	1.15	1.14	0.56	10	4.85	11.32
1.19.4 - Underground Sewer Work	114,546	246,439	1.14	1.13	0.60	6	4.87	11.66
1.19.5 - Excavation/Ditching/Dirt Work	319,323	718,035	1.28	1.28	0.67	15	4.18	13.24
1.19.6 - Hydro Vac Excavation/Trenching	86,869	190,144	1.23	1.23	0.63	3	3.16	13.17
1.19.7 - Boring	66,628	147,923	1.54	1.54	0.86	5	6.76	13.77
1.19.8 - Precast Concrete	36,440	75,693	1.79	1.79	1.00	0	0.00	13.94
1.19.9 - Air Vac Excavation/Trenching	25,040	54,467	1.55	1.54	0.89	2	7.34	10.58
1.19.10 - Concrete Cutting	10,659	22,438	1.03	1.03	0.44	0	0.00	11.26
1.19.11 - Concrete Core Drilling/Boring	1,031	2,165	1.48	1.48	1.02 (0.84*)	0	0.00	39.94
1.20 - Cooling Tower	88,874	193,393	1.10	1.10	0.48	2	2.07	9.40
1.21 - Flare Repairs	73,380	164,795	0.63	0.63	0.27	1	1.21	9.10

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)
1.22 - Precipitator	49,440	107,235	0.97	0.97	0.37	1	1.87	8.36
1.23 - Industrial Cleaning	41,082	89,751	1.11	1.10	0.59	3	6.69	13.48
1.23.1 - Steam/Hydroblast Cleaning	35,239	76,583	1.54	1.53	0.88	4	10.45	11.72
1.23.3 - Overhead Cleaning	2,960	5,755	1.91	1.91	0.83	0	0.00	10.93 (7.80*)
1.23.4 - Dust Collection System	8,082	18,582	1.72	1.72	0.58	0	0.00	5.45
1.23.5 - Industrial Oven Cleaning	2,958	6,509	1.66	1.63	0.65	1	30.73	3.15
1.23.6 - CO2/Dry Blast Cleaning	5,865	12,852	1.32	1.32	0.70	0	0.00	5.16
1.24 - Pipeline Construction/Maintenance	265,748	599,552	1.11	1.10	0.55	18	6.00	13.31
1.24.1 - Coatings Repair	137,364	299,554	0.96	0.96	0.43	6	4.01	10.39
1.24.2 - Pipeline/Internal HDPE Lining (including installation)	35,194	80,592	1.78	1.77	0.87	4	9.93	11.15
1.24.3 - Case Cutting	34,187	74,916	1.43	1.42	0.71	2	5.34	13.35
1.24.4 - General Contractor - DOT Covered Tasks	139,616	318,969	1.32	1.31	0.65	14	8.78	12.34
1.24.5 - Install Liners	17,479	37,507	1.75	1.74	0.94	2	10.66	12.06
1.24.6 - Piggable Pressure Isolation	2,660	6,002	1.70	1.67	1.07	1	33.32	18.69
1.24.7 - Dewatering Service	1,541	2,935	2.59	2.59	1.64	0	0.00	11.45
1.24.8 - Meter Skids	8,977	19,814	1.16	1.16	0.41	0	0.00	1.91
1.24.9 - Pipe Thread Inspection	1,211	2,309	1.56	1.56	1.13	0	0.00	9.28
1.25 - Steaming/Hot Oiler	11,751	25,533	1.08	1.08	0.56	0	0.00	14.64
1.26 - Line Locating	78,082	173,987	1.35	1.35	0.65	4	4.60	11.42
1.27 - Pumping Services	85,439	239,161	1.57	1.57	0.91	7	5.85	10.19
1.27.1 - Lease Operator/Pumper	22,726	69,572*	1.56	1.56	0.89	1	2.87	8.08
1.27.2 - Water Transfer	10,406	24,377	2.02	2.00	1.26	2	16.41	11.11
1.27.3 - Pump Supply and Repair	14,731	31,461	1.70	1.70	0.85	1	6.36	4.95
1.28 - Nitrogen	33,134	88,051	1.51	1.51	0.81	0	0.00	9.70
1.28.1 - Nitrogen - Industrial	8,128	17,022	1.19	1.19	0.51	0	0.00	25.76
1.28.2 - Nitrogen - Pipeline	11,016	23,517	1.68	1.68	1.00	0	0.00	23.49
1.28.3 - Nitrogen - Oilfield	17,747	36,726	1.49	1.48	0.83	1	5.45	20.15
1.28.4 - Oxygen	1,834	4,047	1.14	1.14	0.35	0	0.00	0.61
1.28.5 - Oxygen - Industrial	2,489	5,261	1.41	1.41	0.30	0	0.00	0.32
1.28.6 - Oxygen - Pipeline	5,422	11,426	1.42	1.42	0.53	0	0.00	10.40
1.28.7 - Oxygen - Oilfield	961	2,002	2.80	2.80	0.80	0	0.00	13.93

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)
1.29 - Piling	90,579	194,783	1.15	1.14	0.55	7	7.19	10.94
1.29.1 - Deep Foundation	21,929	45,390	1.99	1.99	1.05	1	4.41	10.77
1.30 - Right-of-Way	61,066	135,358	1.14	1.13	0.54	2	2.96	9.94
1.30.1 - Acquisition & Land Rights	32,573	69,076	0.63	0.63	0.29	0	0.00	6.06
1.31 - Degassing & Vapor Control	10,065	22,717	1.08	1.08	0.38	0	0.00	8.99
1.32 - Rigging	184,426	450,458	1.17	1.17	0.60	4	1.78	9.26
1.33 - Electrical	134,205	293,564	1.14	1.13	0.50	8	5.45	10.42
1.33.1 - Plant Wiring	98,269	215,228	1.10	1.10	0.49	5	4.65	10.96
1.33.2 - Machine Wiring	97,189	209,755	1.05	1.04	0.46	6	5.72	9.45
1.33.3 - Electrical Trouble Shooting	96,940	210,473	1.06	1.06	0.48	5	4.75	10.85
1.33.4 - Voice Data Wiring	29,179	62,895	1.55	1.54	0.72	2	6.36	14.65
1.33.5 - Lighting Installation and Repair	78,912	173,203	1.11	1.10	0.51	4	4.62	11.64
1.33.6 - Industrial	96,000	212,133	1.01	1.00	0.43	6	5.66	10.41
1.33.7 - Energized Electrical Equipment Cleaning	14,826	33,023	1.83	1.82	0.78	1	6.06	11.44
1.33.8 - Overhead Utility Services	36,322	79,891	1.70	1.70	0.79	2	5.01	13.46
1.33.9 - Underground Utility Services	41,141	90,520	1.71	1.70	0.80	2	4.42	12.41
1.34 - Iron Work	34,819	78,933	1.48	1.48	0.61	0	0.00	6.42
1.35 - Water Well Services	9,818	21,350	1.38	1.37	0.72	1	9.37	14.93 (12.36*)
1.35.1 - Water Well Drilling	5,293	11,797	2.32	2.31	1.44	1	16.95	20.34
1.35.2 - Water Well Pumps	4,269	10,507	2.65	2.63	1.77	1	19.03	14.39 (11.95*)
1.36 - Engineering Procurement and Construction (EPC)	27,923	57,360	0.94	0.94	0.43	1	3.49	10.78
1.39 - General Contractor - Fabrication	4,182	9,501	2.34	2.34	1.33	0	0.00	9.81
1.41 - General Contractor - Specialized Rigging and Lifting (Without Use of Cranes)	1,548	3,274	3.05	3.05	1.65	0	0.00	6.68
2.0 - Machining	66,686	148,148	1.48	1.48	0.68	2	2.70	9.57
2.1 - Bolting	95,904	205,828	0.80	0.79	0.30	1	0.97	6.86
2.2 - Field	67,963	148,148	0.93	0.92	0.36	1	1.35	7.30
2.3 - Hot tap	75,218	169,634	0.88	0.88	0.37	3	3.54	8.45 (6.88*)
2.4 - Leak repair	45,280	101,997	1.31	1.30	0.58	3	5.88	9.84 (8.54*)
2.4.1 - Metal Stitching, Casting Repair and Thread Repair	4,993	10,708	1.81	1.81	1.01	0	0.00	8.94
2.5 - Compressor/Turbine	51,121	114,398	1.18	1.18	0.48	0	0.00	10.26
2.6 - Valve repair	77,812	172,268	1.34	1.34	0.58	0	0.00	7.56

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)
2.6.1 - Control	53,048	115,754	1.16	1.16	0.53	1	1.73	7.89
2.6.2 - Safety/relief	43,410	94,745	1.26	1.26	0.55	0	0.00	8.13
2.6.3 - Inspection & Testing	20,713	45,670	1.57	1.56	0.71	1	4.38	8.72 (7.56*)
2.7 - Cold Cutting	63,959	142,561	0.97	0.97	0.45	1	1.40	10.99
2.8 - Pumps & Blowers	48,341	105,190	1.51	1.50	0.68	2	3.80	8.20
2.9 - Inplace Boring of Machine Sideframes	4,360	9,133	2.28	2.28	1.09	0	0.00	11.66
2.10 - On-site Machine Shop Work	17,583	39,634	1.76	1.75	0.88	2	10.09	8.60
3.0 - Instrumentation & Electrical	198,931	435,540	0.98	0.98	0.43	5	2.30	9.31
3.1 - Analyzers	87,124	186,814	0.94	0.93	0.42	3	3.21	10.10
3.2 - Electric	174,822	380,279	1.09	1.09	0.50	9	4.73	11.24
3.2.1 - Batteries	133,134	287,094	0.96	0.96	0.45	7	4.88	10.19
3.2.2 - Generator	216,723	460,451	1.19	1.18	0.60	15	6.52	10.46
3.2.3 - Motors	147,329	320,571	1.12	1.11	0.53	7	4.37	10.29
3.2.4 - Motor Operated Valve	142,208	309,471	0.94	0.93	0.43	5	3.23	10.48
3.2.5 - Program Logic Control	146,262	318,612	1.00	1.00	0.48	5	3.14	9.98
3.2.6 - Polelines	76,752	162,784	1.09	1.09	0.53	6	7.37	11.35
3.2.7 - Precipitator	52,623	113,728	0.98	0.98	0.49	2	3.52	11.74
3.2.8 - Protective Relays	128,991	281,855	0.87	0.86	0.41	7	4.97	11.20
3.2.9 - Switchgear	179,888	387,800	1.04	1.03	0.49	9	4.64	10.15
3.2.10 - Transformers	174,334	377,362	1.01	1.00	0.47	9	4.77	11.16
3.2.11 - Uninterrupted Power Supply	114,038	245,651	1.28	1.27	0.63	10	8.14	11.31
3.2.12 - Variable Frequency/Speed Drive	111,187	241,748	1.21	1.20	0.58	5	4.14	11.55
3.2.13 - Fiber Optics	97,794	213,407	1.13	1.12	0.55	3	2.81	12.99
3.2.14 - Electrical Construction/ Repair	191,488	415,238	1.02	1.01	0.48	8	3.85	10.75
3.2.15 - Wireline	71,256	170,826	1.29	1.29	0.68	5	5.85	10.93
3.2.16 - Cathodic Protection - Installation	86,024	185,907	1.07	1.07	0.49	3	3.23	12.30
3.2.17 - Acknowledgement of PCB Awareness	29,656	63,983	1.60	1.60	0.74	0	0.00	12.43
3.2.18 - Lightning Arrestors	12,121	24,904	1.96	1.94	0.88	2	16.06	16.26
3.2.19 - Remote Racking	1,073	2,095	2.39	2.39	1.24	0	0.00	8.48
3.3 - Instrumentation	190,956	416,620	1.02	1.01	0.46	5	2.40	10.34
3.3.1 - Control Systems	222,836	477,072	1.07	1.07	0.53	2	0.84	11.21

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)
3.3.2 - Control Valves	156,993	340,830	0.99	0.99	0.45	1	0.59	10.20
3.3.3 - Meter prover	76,057	164,630	0.91	0.91	0.44	1	1.21	11.66
3.3.4 - Measurement/Calibration	127,194	278,380	0.89	0.89	0.43	2	1.44	12.17
3.3.5 - Transmitters	111,853	240,919	0.92	0.92	0.42	3	2.49	11.47
3.3.6 - Vibration monitors	103,423	228,712	0.93	0.93	0.44	2	1.75	11.48
3.3.7 - Cameras	95,667	202,162	1.14	1.13	0.54	1	0.99	10.79
3.3.8 - Test Equipment	94,761	206,151	1.03	1.03	0.49	1	0.97	12.86
3.3.9 - Safety Systems	37,864	82,829	1.36	1.36	0.65	0	0.00	11.70
3.3.10 - Meter Monitoring	44,024	99,251	0.96	0.96	0.46	1	2.02	14.66
3.3.11 - Radioactive	6,015	12,498	1.26	1.26	0.46	0	0.00	8.75
3.3.12 - Meter Reader	10,194	21,385	1.56	1.56	0.80	0	0.00	14.64
3.3.13 - Petroleum Measurement Equipment	3,074	6,771	1.06	1.06	0.47	0	0.00	14.89
3.4 - Pneumatic	41,845	90,698	0.99	0.99	0.44	0	0.00	11.48
4.0 - Heating, Ventilation, & Air Conditioning	70,833	148,837	1.58	1.58	0.69	0	0.00	8.98
4.1 - Filter Medium Changeout for Safe Havens	27,797	58,246	1.12	1.12	0.43	0	0.00	7.82
4.1.1 - HEPA Certification and Testing	8,969	18,086	1.44	1.44	0.64	0	0.00	10.15
4.2 - HVAC Preventative Maintenance, Installations, and Repairs	49,130	101,215	1.90	1.89	0.96	1	1.98	11.38
4.3 - Testing and Balancing of Air-HVAC	28,935	59,560	1.71	1.71	0.73	0	0.00	10.94
4.4 - Duct Cleaning	13,128	27,035	1.21	1.21	0.46	0	0.00	12.80 (11.37*)
4.5 - Duct Inspection	13,836	28,422	1.82	1.82	0.89	0	0.00	10.40
4.6 - Duct Design	18,221	37,259	2.29	2.29	1.07	0	0.00	11.09
5.0 - Insulation	122,665	258,726	0.61	0.61	0.23	2	1.55	7.64
5.1 - Asbestos abatement	93,121	195,401	0.54	0.54	0.26	1	1.02	11.52
5.2 - Refractory	88,285	183,049	0.52	0.52	0.19	1	1.09	8.56 (7.58*)
5.3 - Insulation - Fire Proofing	119,596	249,882	0.45	0.45	0.16	1	0.80	8.04
5.4 - Routine Insulation	133,709	282,795	0.59	0.59	0.23	1	0.71	8.35
5.5 - Furnace/fire brick	43,751	88,956	0.60	0.60	0.23	1	2.25	10.87 (9.14*)
5.5.1 - Refractory Dryout (Bake Bricks)	6,018	12,349	1.38	1.38	0.37	0	0.00	9.21 (3.55*)
5.6 - Acid brick	32,392	64,730	0.41	0.41	0.17	0	0.00	12.38 (8.88*)
5.7 - Industrial	101,178	211,944	0.62	0.62	0.27	2	1.89	9.58
6.0 - Buildings, Grounds & Right-of-Way Maintenance	138,871	287,926	1.82	1.82	1.31	1	0.69	14.08

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)
6.1 - Elevator	24,396	47,111	1.87	1.87	1.29	1	4.25	15.09
6.2 - Janitorial	115,882	233,916	1.87	1.87	1.44	1	0.86	13.34
6.2.1 - Kitchen Hood Cleaning	1,524	3,155	2.73	2.73	0.89	0	0.00	5.28
6.3 - Chem spraying	55,878	118,337	1.33	1.33	0.80	2	3.38	14.05
6.4 - Pest Control	30,992	63,368	5.99	5.98	3.27	2	6.31	14.43
6.5 - Plumbing	40,198	84,631	1.48	1.48	0.67	1	2.36	8.48
6.5.1 - Drain Cleaning	4,836	10,002	2.60	2.56	1.28	2	39.99	5.61
6.5.2 - Backflow Preventer Install/Service/Testing	3,368	6,952	3.31	3.28	1.67	1	28.77	6.04
6.6 - Road	71,431	154,329	1.23	1.22	0.63	8	10.37	11.88
6.6.1 - Dust Control	8,917	20,495	2.12	2.12	1.09	0	0.00	11.73
6.7 - Roofing	62,369	131,610	0.84	0.84	0.37	0	0.00	12.00
6.8 - Scales	4,093	9,619	1.14	1.14	0.35	0	0.00	15.44 (12.65*)
6.8.1 - Weighing and Instrument Repairs and Calibration	3,038	6,566	1.68	1.68	0.82	0	0.00	12.82 (9.98*)
6.9 - Signs	17,944	40,398	1.13	1.12	0.57	2	9.90	16.28
6.9.1 - Installation	34,145	75,367	0.83	0.83	0.40	2	5.31	14.55
6.9.2 - Repair	31,486	68,419	0.71	0.71	0.33	2	5.85	13.20
6.9.3 - Digital	2,361	4,864	1.69	1.64	0.78	1	41.12	9.98
6.10 - Appliances	5,836	12,155	0.69	0.69	0.38	0	0.00	15.64
6.11 - Mowing and Groundcare	147,714	311,860	2.08	2.07	1.49	9	5.77	14.04
6.11.1 - Tree Trimming/Clearing and Wood Grinding	72,072	154,373	1.37	1.36	0.71	6	7.77	12.93
6.12 - Fence Installation and Repair	84,184	185,636	1.20	1.19	0.59	7	7.54	12.87
6.13 - Locks	22,284	46,430	1.02	1.02	0.45	1	4.31	5.36
6.14 - Door Repair	19,226	40,256	0.99	0.99	0.49	0	0.00	8.00
6.14.1 - Overhead Door Installation/Repair	5,407	11,669	2.30	2.30	1.20	0	0.00	9.50
6.15 - Surveying	95,718	197,390	0.77	0.77	0.31	0	0.00	10.81
6.15.1 - Leak Surveying	8,741	18,813	1.42	1.42	0.73	0	0.00	18.32
6.15.2 - Topographic	42,272	92,594	0.73	0.73	0.27	1	2.16	6.15
6.15.3 - Boundary	26,590	55,780	0.75	0.75	0.31	0	0.00	6.09
6.16 - Dock Plate and Dock Lock Preventative Maintenance/Repair	3,114	6,422	2.40	2.40	1.37	0	0.00	10.00
6.17 - Snow Plowing/Removal	20,423	43,400	2.91	2.90	1.92	2	9.22	10.21
6.18 - Glass Repair	1,156	2,238	2.15	2.15	1.52	0	0.00	6.13

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			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)
6.19 - Medical Gas Piping-Repair	3,132	6,784	2.83	2.83	1.33	0	0.00	15.20
6.20 - Structural Repair	12,060	27,392	1.71	1.71	0.72	0	0.00	9.90
6.21 - Irrigation Sprinkler Installation/Repair	14,964	32,252	1.17	1.17	0.47	0	0.00	5.16
6.23 - Refrigeration Equipment Repair & Maintenance	4,221	8,988	3.00	3.00	1.62	0	0.00	9.90
6.24 - Interior Landscaping	710	1,410	2.84	2.84	1.13	0	0.00	5.40
6.25 - Logging	1,495	3,557	1.63	1.57	0.56	1	56.23	3.45
7.0 - Drilling	110,599	268,940	1.67	1.66	0.96	8	5.95	13.62
7.1 - Directional	130,394	348,756	1.71	1.70	1.01	13	7.46	13.12
7.2 - Tongs - Power Drill Pipe	32,820	97,994	1.75	1.73	1.03	6	12.25	9.77
7.3 - Tongs - Casing	73,548	215,482	1.63	1.62	0.98	10	9.28	11.85
7.4 - Hot Oil Services	61,040	180,068	1.56	1.55	0.93	4	4.44	11.69
7.5 - Fluids	73,978	217,156	1.47	1.47	0.90	5	4.60	10.43
7.6 - Rat and Mouse Hole	33,843	101,955	1.64	1.63	0.98	5	9.81	8.06
7.7 - Reverse Circulation and Rotary Drilling	28,067	70,263	1.97	1.96	1.18	4	11.39	13.72
7.8 - Coalbed Methane Drilling	675	1,470	3.27	3.27	2.04	0	0.00	36.33
7.9 - Control of Solids in Drilling Fluids	26,442	80,751	1.49	1.49	0.82	1	2.48	8.00
7.10 - Rig Up Service	22,702	64,336*	1.49	1.48	1.04	2	6.22	15.69
8.0 - Original Equipment Manufacturer	76,141	168,914	1.86	1.85	0.89	3	3.55	6.80
8.1 - Design & Manufacturer Lubrication Systems	1,567	3,671	2.12	2.12	1.36	0	0.00	11.62
8.2 - Manufacturing Electronic Controls and/or Pilots	4,266	9,109	3.60	3.60	1.84	0	0.00	7.90
8.3 - Fiberglass Products	899	1,733	1.50	1.50	1.27	0	0.00	20.00
8.4 - Heat Exchangers	7,824	17,003	3.48	3.48	1.80	0	0.00	10.95
8.5 - Pressure vessels	10,247	23,242	3.32	3.32	1.60	0	0.00	9.69
8.7 - Power Transmission Products	3,139	6,702	2.33	2.33	1.10	0	0.00	8.35
8.8 - Overhead Crane Manufacturing	2,635	5,845	2.98	2.98	2.22	0	0.00	10.57
8.9 - Wellhead Equipment	5,027	11,358	3.79	3.79	1.88	0	0.00	6.39
8.10 - Above Ground Storage Tanks	8,421	18,534	1.01	1.01	0.41	0	0.00	3.80
9.0 - Inspection	133,171	309,201	1.11	1.10	0.54	1	0.65	8.83
9.1 - Cathodic Protection	78,572	170,626	0.87	0.87	0.42	1	1.17	9.67
9.1.1 - Rectifier	6,417	13,721	1.02	1.02	0.57	0	0.00	7.39 (4.88*)
9.2 - Aerial Patrol	4,537	9,907	0.42	0.42	0.20	0	0.00	0.24

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			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)
9.2.1 - Charter Helicopter Service	3,147	7,255	0.52	0.52	0.41	0	0.00	15.95
9.2.2 - Aerial Photography/Surveying	6,329	15,121	0.53	0.53	0.22	0	0.00	5.48
9.2.5 - Remote Stack Emission Testing	41,884	83,507	0.68	0.68	0.30	0	0.00	12.60
9.3 - Tanks	80,329	173,120	0.58	0.58	0.24	0	0.00	8.93
9.3.1 - Gauging	33,627	73,740	0.86	0.85	0.42	2	5.42	9.74
9.3.2 - Sampling	30,059	65,350	0.77	0.77	0.39	1	3.06	10.34
9.3.3 - Strapping	17,082	37,280	0.61	0.61	0.31	0	0.00	6.26
9.4 - Non-Destructive Testing	157,192	357,302	0.88	0.87	0.45	3	1.68	9.32
9.4.1 - Thermographic Testing	8,015	16,666	1.46	1.46	0.82	0	0.00	11.53
9.4.2 - Ground Penetrating Radar	2,397	5,063	0.59	0.59	0.24	0	0.00	11.07
9.4.3 - Inspection Service, Visual (Other than Const/Fabrication)	19,698	41,506	1.01	1.00	0.40	1	4.82	9.30
9.5 - Infrared	36,164	77,360	0.94	0.94	0.49	1	2.59	13.31 (11.93*)
9.6 - Eddy Current	36,950	78,301	0.58	0.58	0.30	0	0.00	16.30 (14.12*)
9.7 - Civil	107,257	235,131	0.55	0.55	0.23	1	0.85	8.19
9.8 - Electrical	135,322	296,189	0.75	0.75	0.31	3	2.03	9.30
9.9 - Hydrotesting	117,813	264,066	0.88	0.88	0.43	3	2.27	12.34
9.10 - Line Pigging	82,887	200,319	1.10	1.10	0.54	2	2.00	8.37
9.11 - X-ray	90,531	216,136	0.94	0.94	0.47	0	0.00	8.41
9.12 - Crane	53,291	119,639	0.93	0.93	0.47	2	3.34	7.53
9.13 - Tower	18,920	39,889	0.79	0.79	0.33	0	0.00	10.25
9.14 - Safety Equipment	95,864	207,171	0.77	0.77	0.32	0	0.00	8.26
9.15 - Project Inspection	95,949	212,526	0.55	0.55	0.23	1	0.94	10.56
9.16 - Coating Inspection	124,740	272,069	0.75	0.75	0.31	2	1.47	7.72
9.17 - Welding Inspection	136,055	301,368	0.65	0.65	0.27	1	0.66	8.81
9.18 - Hydrostatic Testing	85,574	183,481	0.98	0.98	0.43	3	3.27	9.43
9.19 - General Contractor - Rope Access	4,441	9,473	0.65	0.65	0.17	0	0.00	4.65
9.20 - Mine Hoist Rope Inspection & Service	849	1,582	2.15	2.15	1.14	0	0.00	0.35
9.21 - Sling and Lift	9,039	20,953	0.98	0.97	0.52	1	9.55	7.24
9.22 - Dismantling	16,508	35,924	0.96	0.95	0.46	1	5.57	7.24
9.23 - Pipeline	114,776	269,754	1.02	1.02	0.48	2	1.48	8.46
9.24 - Concrete Testing	5,589	11,428	1.00	1.00	0.47	0	0.00	4.93

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			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)
9.25 - Drill Collar Inspection	1,236	2,708	1.40	1.40	0.66	0	0.00	11.26
9.26 - Ultrasonic Thickness Testing/Inspection	3,171	7,385	1.33	1.30	0.81	1	27.08	7.96
10.0 - Consultant	191,366	416,582	0.81	0.81	0.38	3	1.44	10.07
10.1 - Training	93,979	197,225	0.74	0.74	0.31	1	1.01	10.99
10.1.1 - Training - Confined Space Training (on site)	1,562	3,093	1.10	1.10	0.39	0	0.00	0.71
10.1.2 - Training - HAZMAT Training (on site)	1,052	2,292	1.75	1.75	0.70	0	0.00	3.30
10.2 - Engineering	228,905	490,199	0.75	0.75	0.33	4	1.63	7.95
10.2.1 - Drafting	147,935	308,183	0.72	0.72	0.31	4	2.60	9.04
10.2.2 - Survey	136,524	281,246	0.69	0.69	0.31	2	1.42	9.35
10.2.3 - Electrical	163,183	341,089	0.80	0.80	0.35	6	3.52	8.72
10.2.4 - Chemical	73,792	149,838	0.45	0.45	0.16	1	1.33	8.90
10.2.5 - Metallurgical	38,421	78,864	0.47	0.47	0.19	0	0.00	9.10
10.2.6 - Control	98,726	205,258	0.54	0.53	0.23	1	0.97	7.69
10.2.7 - Civil	144,722	296,243	0.67	0.67	0.27	3	2.03	8.99
10.2.8 - Mechanical	144,074	299,269	0.68	0.68	0.27	2	1.34	8.98
10.2.9 - Environment	169,758	344,330	0.69	0.69	0.30	1	0.58	9.45
10.2.10 - Rotating Equipment	72,828	154,305	0.59	0.59	0.22	0	0.00	8.79
10.2.11 - Cathodic Protection	46,205	97,694	0.86	0.86	0.34	1	2.05	8.67
10.2.12 - Drilling	76,306	189,213	1.09	1.09	0.54	0	0.00	7.58
10.2.13 - Acoustical	10,797	22,961	0.39	0.39	0.17	0	0.00	16.02
10.2.14 - Flow Calibration	19,059	40,913	0.42	0.42	0.19	0	0.00	14.44
10.2.15 - Geosciences	60,679	124,554	0.81	0.81	0.35	0	0.00	10.08
10.2.16 - Architecture and Drafting	38,498	81,108	0.56	0.56	0.23	0	0.00	10.39
10.2.17 - Architectural Design	38,009	79,917	0.56	0.56	0.22	0	0.00	8.29
10.2.18 - Deepwater	1,963	4,156	0.82	0.82	0.34	0	0.00	13.24
10.2.19 - Floating Production	4,315	9,388*	0.38	0.38	0.11	0	0.00	0.00
10.2.20 - Agricultural	5,591	10,800	0.72	0.72	0.28	0	0.00	11.74
10.2.21 - Material Handling	12,271	26,386	0.97	0.97	0.36	0	0.00	7.73
10.2.22 - Electrical Analysis	26,847	55,451	0.70	0.70	0.28	0	0.00	4.15
10.2.23 - Roof	7,018	15,605	0.70	0.70	0.32	0	0.00	9.71
10.2.24 - Arc Flash Analysis	2,565	5,411	1.04	1.04	0.37	0	0.00	6.57

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)
10.3 - Project Management	235,187	495,323	0.74	0.74	0.32	3	1.21	8.58
10.3.1 - Construction Management	155,058	327,573	0.79	0.79	0.33	1	0.61	8.49
10.4 - Site Consultant	100,282	210,827	0.74	0.74	0.28	0	0.00	6.82
10.4.1 - Drilling	36,052	82,059	1.21	1.20	0.69	3	7.31	11.24
10.4.2 - Construction	94,502	198,053	0.79	0.79	0.34	1	1.01	9.46
10.4.3 - Diving	10,765	22,183	0.51	0.51	0.23	0	0.00	11.58
10.4.4 - Safety & Environmental	167,435	351,836	0.83	0.82	0.38	3	1.71	9.82
10.4.5 - Construction Safety	42,418	89,470	0.70	0.70	0.29	0	0.00	4.39
10.4.6 - Regulatory Consultant	61,131	125,506	0.62	0.62	0.22	0	0.00	5.08
10.4.7 - Logistics Management	4,375	9,641	0.48	0.48	0.17	0	0.00	11.57
10.5 - Ergonomic Assessments	4,951	10,217	0.86	0.86	0.22	0	0.00	6.43
10.5.1 - Ergonomic Industrial	7,356	14,782	0.99	0.99	0.32	0	0.00	11.12
10.5.2 - Ergonomic Office	8,060	15,900	0.93	0.93	0.30	0	0.00	10.97
10.6 - Industrial Hygiene	19,643	40,510	0.92	0.92	0.36	0	0.00	8.53
10.7 - IT	6,457	12,978	0.96	0.96	0.45	0	0.00	8.45
11.0 - Rentals	85,442	234,191	1.59	1.59	0.96	4	3.42	10.70
11.1 - Equipment	132,780	347,314	1.66	1.66	0.97	8	4.61	11.08
11.1.1 - A/C	25,532	58,898	1.20	1.19	0.64	1	3.40	12.37
11.1.2 - Generators	80,847	190,660	2.15	2.14	1.29	9	9.44	12.01
11.1.3 - Compressors	61,471	143,127	1.83	1.82	1.11	7	9.78	13.41
11.1.4 - Elevators	2,580	6,126	2.51	2.51	1.37	0	0.00	23.19
11.1.5 - Well Drilling Equipment	71,361	204,522	1.51	1.51	0.91	2	1.96	11.41
11.1.6 - Oilfield Equipment	106,368	294,101	1.68	1.67	1.05	9	6.12	13.44
11.1.7 - Safety Equipment	14,566	34,718	1.02	1.02	0.46	0	0.00	9.80
11.1.8 - Intercom/Communication Equipment	2,094	5,694	1.23	1.23	0.39	0	0.00	7.77
11.1.9 - Audio Visual Equipment	2,779	6,390	1.75	1.75	0.85	0	0.00	9.05
11.1.10 - Portable, Flameless Heating	3,478	6,846	1.46	1.46	0.70	0	0.00	11.20
11.2 - Office trailers	27,096	66,056	1.39	1.38	0.71	3	9.08	15.47
11.3 - Furniture	6,358	14,529	0.76	0.76	0.23	0	0.00	6.73
11.4 - Tools	107,178	296,031	1.41	1.41	0.86	5	3.38	11.24
11.5 - Welding Equip.	24,019	56,999	1.09	1.09	0.53	0	0.00	10.63

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

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			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)
11.6 - Gas Cylinders	23,821	52,502	1.66	1.66	1.13	0	0.00	6.55
11.7 - Portable Toilets	9,922	26,707	2.40	2.39	1.31	2	14.98	16.13
12.0 - Environmental	169,789	358,228	1.05	1.04	0.52	4	2.23	11.49
12.1 - Laboratory	55,318	117,095	0.88	0.88	0.45	0	0.00	12.00
12.2 - Vac Trucks	156,723	368,204	1.48	1.48	0.87	17	9.23	14.77
12.3 - Well Services	52,533	131,362	1.22	1.21	0.67	4	6.09	12.61
12.4 - Waste - Hazardous	136,443	305,636	1.06	1.06	0.60	2	1.31	10.98
12.4.1 - Transportation	88,140	193,642	1.32	1.31	0.77	6	6.20	11.30
12.4.2 - Disposal	68,050	149,699	1.40	1.39	0.83	5	6.68	11.29
12.5 - Spill Cleanup	107,039	233,540	1.27	1.26	0.72	6	5.14	11.19
12.5.1 - Microbial Treatment	18,579	39,488	1.54	1.54	0.92	1	5.06	10.98
12.6 - Soils	133,198	278,111	1.05	1.04	0.55	4	2.88	11.45
12.7 - Drilling	70,134	157,007	0.98	0.98	0.51	0	0.00	9.28
12.8 - Consulting	168,978	341,501	0.75	0.75	0.34	1	0.59	10.42
12.8.1 - Permitting	104,041	210,789	0.70	0.70	0.30	0	0.00	8.97
12.8.2 - Asbestos Survey	9,422	19,324	1.30	1.30	0.77	0	0.00	14.60
12.9 - Environmental Remediation	168,540	351,700	1.15	1.14	0.61	5	2.84	11.80
12.10 - Environmental Site Assessment	146,254	302,650	0.84	0.84	0.38	0	0.00	10.49
12.11 - Laboratory Analysis/Mobile	28,071	56,991	0.70	0.70	0.29	0	0.00	11.30
12.12 - Waste Services-Treatment (including water)	69,829	151,028	1.24	1.23	0.73	1	1.32	11.56
12.12.1 - Water Treatment	24,619	52,026	1.39	1.39	0.78	0	0.00	12.31
12.13 - Waste Services - Disposal Non-Hazardous	97,378	220,848	1.56	1.55	0.94	5	4.53	16.94
12.14 - Emergency Response	74,192	157,637	1.36	1.36	0.83	2	2.54	11.15
12.14.1 - Radiation	2,710	5,770	1.80	1.80	0.94	0	0.00	11.90
12.15 - Emissions Testing	73,541	150,341	0.57	0.57	0.22	0	0.00	10.00
12.16 - Pit Lining	28,877	64,081	1.24	1.23	0.71	3	9.36	12.04
12.17 - Source/Air Pollution Testing	74,150	149,587	0.64	0.64	0.25	0	0.00	9.86
12.18 - Erosion Control	92,959	191,644	1.01	1.01	0.51	1	1.04	10.21
12.19 - Recontouring	28,656	59,436	0.97	0.97	0.46	1	3.36	10.24
12.20 - Site Reclamation	131,813	277,634	1.03	1.03	0.50	4	2.88	11.44
12.20.1 - Restorative Planting Services	13,086	26,753	1.20	1.20	0.59	0	0.00	16.06

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

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			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)
12.20.2 - Mold Abatement/Remediation	934	1,832	1.42	1.42	0.76	0	0.00	18.38
12.20.3 - Water/Flood Damage Remediation	1,064	2,140	1.59	1.59	1.22	0	0.00	47.00
12.21 - Supply & Installation of Secondary Containment	32,373	69,305	1.19	1.18	0.61	2	5.77	14.41
12.22 - Supply & Installation of Liner & Geotextile	19,964	41,829	1.21	1.20	0.62	2	9.56	12.54
12.23 - Acoustical	11,480	23,286	0.52	0.52	0.17	0	0.00	3.44
12.23.1 - Design	4,901	10,364	1.06	1.06	0.37	0	0.00	6.60
12.23.2 - Construction	7,348	14,919	1.21	1.21	0.62	0	0.00	5.02
12.24 - Recycling	23,460	55,198	2.37	2.37	1.53	1	3.62	22.91
12.24.1 - Computer Components/Lighting Components	2,399	5,463	1.83	1.83	1.21	0	0.00	16.08
12.24.2 - Scrap Metal	5,424	11,141	1.78	1.78	1.24	0	0.00	17.90
12.24.3 - Material Management	2,435	5,139	1.48	1.48	0.90	0	0.00	18.32
12.25 - Natural Resources Sciences	35,087	69,829	0.70	0.70	0.25	1	2.86	10.50
12.25.1 - Wetland Delineation	42,819	83,629	0.68	0.68	0.24	1	2.39	8.17
12.25.2 - Corridor (Railways)	3,670	7,419	1.24	1.24	0.65	0	0.00	12.20
12.25.3 - Corridor Clearing Limits	4,762	9,443	1.12	1.12	0.64	0	0.00	24.06
12.27 - Environmental Quality Assurance (EQA)	84,610	172,503	0.67	0.67	0.26	0	0.00	9.82
13.0 - Chemicals	39,697	107,623	1.21	1.20	0.64	1	1.86	8.63
13.1 - Catalyst	10,471	23,362	0.71	0.71	0.28	0	0.00	12.11
13.1.1 - Inert Catalyst	6,664	15,441	0.65	0.65	0.30	0	0.00	19.16
13.2 - Nitrogen	35,478	95,009	1.57	1.57	0.99	1	2.11	9.01
13.3 - Water Treatment	52,224	125,488	1.16	1.16	0.59	1	1.59	8.64
13.4 - Gas Processing	41,430	102,500	1.21	1.21	0.68	1	1.95	7.47 (6.68*)
13.5 - Passivation	5,826	11,644	0.62	0.62	0.22	0	0.00	14.42
13.6 - Oil Processing	31,439	80,544	1.06	1.06	0.52	1	2.48	7.06 (6.32*)
14.0 - Manpower	54,577	117,319	0.91	0.90	0.42	3	5.11	8.99
14.1 - Catering and Food Services	21,537	49,232	1.30	1.30	0.51	1	4.06	12.65
14.2 - Clerical	50,471	109,423	0.55	0.54	0.22	2	3.66	8.44
14.3 - Labor	194,086	447,305	1.29	1.29	0.65	14	6.26	11.12
14.3.1 - Vendor Stocking of Inventory	1,730	3,892	1.54	1.54	0.72	0	0.00	0.43
14.3.2 - Storeroom Management/Warehousing	4,378	10,638	1.02	1.02	0.45	0	0.00	3.56
14.3.4 - Forklift Operator	61,740	139,594	0.98	0.97	0.48	4	5.73	12.89

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			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)
14.4 - Tools & Stores	37,566	86,183	0.92	0.92	0.41	1	2.32	11.52
14.5 - Product Loading	17,296	39,485	0.88	0.88	0.37	1	5.07	11.48 (8.27*)
14.6 - Personnel Transportation	12,444	28,867	0.99	0.98	0.42	1	6.93	5.35
14.7 - Contract Operators	37,916	91,567	1.36	1.35	0.63	2	4.37	11.37
14.8 - Mechanic - Equipment - Repair	67,855	148,330	1.38	1.37	0.66	2	2.70	8.68
14.8.1 - Tool Repair	27,476	60,341	0.82	0.82	0.33	1	3.31	5.93
14.8.2 - Belt Splicing	9,298	21,093	1.61	1.61	0.64	0	0.00	6.65
14.8.3 - Maintenance of Rotating Equipment	29,045	60,208	1.65	1.64	0.70	1	3.32	7.82
14.9 - Emergency Medical Responder/Medical Technician	22,108	59,630	1.12	1.12	0.56	0	0.00	7.16
14.10 - Service/Maintenance Technician	57,570	122,014	1.50	1.49	0.70	3	4.92	7.23
14.10.2 - Millwright Service	49,656	104,359	1.42	1.42	0.58	0	0.00	6.78
14.10.3 - Pressure/Temperature Service	32,584	88,423	1.35	1.35	0.65	0	0.00	5.95
14.10.4 - Water Line Maintenance	13,451	29,094	1.78	1.77	0.83	1	6.87	12.31
14.10.5 - Lubrication System Maintenance	12,546	27,973	1.48	1.48	0.61	0	0.00	6.01
14.10.6 - Automation Service	15,211	31,961	0.91	0.91	0.34	0	0.00	5.91
14.10.7 - Pipe Fitting	98,346	222,236	1.11	1.10	0.49	2	1.80	9.41
14.10.8 - Dust Collectors/Baghouses	14,559	31,697	1.75	1.75	0.69	0	0.00	7.79
14.10.9 - Refrigerated Equipment	7,436	16,353	1.83	1.83	0.88	0	0.00	5.85
14.11 - Liquid Product Transfer Service	11,412	30,715	1.06	1.06	0.66	0	0.00	5.07
14.14 - Window Cleaning	2,629	5,302	1.77	1.77	0.91	0	0.00	6.98
14.16 - Person In Charge (PIC)	7,011	17,320	1.25	1.24	0.74	1	11.55	15.03 (11.51*)
14.17 - Recruiting and Staffing Service	18,312	35,960	0.36	0.36	0.14	0	0.00	8.17
15.0 - Mobile Equipment	203,524	458,445	1.37	1.37	0.72	7	3.05	13.18
15.1 - Repair on-site	34,977	76,402	2.47	2.47	1.30	2	5.24	9.37
15.1.1 - Forklift Maintenance and Repair	19,600	40,702	3.66	3.66	1.83	1	4.91	10.12
15.1.2 - Vehicle Maintenance	12,997	30,316	2.92	2.91	1.02	1	6.60	6.21
15.2 - Tire repair	28,708	61,965	3.40	3.40	1.63	1	3.23	7.79
15.3 - Tractor	13,681	29,562	2.90	2.89	1.15	1	6.77	10.89
15.3.1 - Mechanical/Maintenance Service	16,922	35,858	3.15	3.15	1.27	0	0.00	7.92
16.0 - IT	16,314	34,033	0.67	0.67	0.35	0	0.00	10.62 (9.12*)
16.1 - Computers	50,501	105,596	0.60	0.60	0.32	1	1.89	14.04

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			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)
16.2 - Towers/Antennas (Communication)	12,790	27,299	1.03	1.03	0.51	0	0.00	19.67
16.3 - Pagers	9,333	19,472	0.67	0.67	0.28	0	0.00	15.06
16.4 - Telephones	29,207	61,646	1.08	1.08	0.51	0	0.00	12.02
16.5 - Distributive Control Systems	20,273	43,694	0.60	0.60	0.27	0	0.00	11.49
16.6 - Radios	46,345	97,444	0.62	0.62	0.27	0	0.00	11.41
16.7 - Msc. Technical Services	14,871	30,566	0.74	0.74	0.36	0	0.00	15.88
16.8 - Audio Visual	29,429	62,648	0.69	0.69	0.31	0	0.00	8.35
16.9 - Software	5,714	12,180	0.71	0.71	0.25	0	0.00	0.28
16.9.1 - Software Installation & Repair	5,424	11,431	0.73	0.73	0.21	0	0.00	0.10
16.10 - Telecommunication	9,753	20,817	1.48	1.47	0.78	1	9.61	7.75 (6.63*)
16.11 - Hardware Installation & Repair	8,687	17,886	1.06	1.06	0.42	0	0.00	7.54 (5.70*)
17.0 - Safety	70,266	152,484	0.77	0.77	0.38	0	0.00	15.75
17.1 - Fire Protection	67,205	145,377	0.95	0.95	0.43	2	2.75	8.32
17.1.1 - Fire Sprinkler Service	28,782	61,294	1.54	1.54	0.74	0	0.00	7.31
17.1.2 - Fire Sprinkler Installation, Inspection & Testing	22,172	46,702	1.45	1.45	0.73	0	0.00	6.56
17.1.3 - Fire Extinguisher Service	3,114	6,429	1.56	1.56	1.06	0	0.00	6.58
17.1.4 - Heavy Equipment Fire Suppression System	1,577	3,266	1.65	1.65	0.98	0	0.00	9.48
17.2 - Emergency Response	45,077	112,521	1.07	1.06	0.56	1	1.78	8.58
17.2.2 - Emergency Transport Vehicles (Ground)	1,360	4,165	0.53	0.53	0.43	0	0.00	6.64
17.2.4 - EMS Services	5,696	12,366	0.37	0.37	0.15	0	0.00	10.39
17.3 - Security	141,534	271,004	1.24	1.24	0.59	3	2.21	14.41
17.3.1 - Trafficking/Gate Guarding	96,623	180,011	1.24	1.24	0.49	3	3.33	16.62
17.3.2 - Security System Installations	29,529	59,389	1.47	1.47	0.69	1	3.37	6.52
17.3.3 - Cameras/Closed Circuit Television	27,284	54,623	1.44	1.43	0.67	1	3.66	7.13
17.3.4 - Outdoor Warning/Sirens	28,074	57,479	1.26	1.26	0.58	1	3.48	6.57
17.4 - FRC on-site delivery	9,905	22,971	0.73	0.73	0.37	0	0.00	6.05
17.5 - Medical Services	34,046	74,985	0.52	0.52	0.22	1	2.67	5.82
17.6 - Confined Space Attendant (fire watch/hole watch)	77,501	173,379	0.92	0.92	0.46	1	1.15	11.85
17.7 - Confined Space Rescue	33,357	76,074	0.92	0.91	0.44	2	5.26	9.39
17.8 - Fall Protection	34,417	76,860	0.85	0.85	0.42	3	7.81	10.21
17.9 - Access Platforms	12,961	27,514	0.70	0.70	0.27	0	0.00	10.38

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18.0 - Trucking/Transportation	247,581	612,476	1.53	1.52	0.90	17	5.55	14.65
18.1 - Hauling	193,109	474,021	1.88	1.87	1.13	37	15.61	18.53
18.1.1 - Water Trucks/Hauling	87,650	209,932	2.15	2.12	1.38	29	27.63	19.03
18.1.2 - Fresh Water Hauling	78,468	187,103	2.15	2.13	1.36	24	25.65	18.97
18.1.3 - Heavy Truck Hauling (dump or larger)	162,084	375,381	1.57	1.56	0.89	23	12.25	18.35
18.1.4 - Oversized/Heavy Materials	118,263	281,735	1.54	1.53	0.85	16	11.36	16.30
18.1.5 - Coke	4,563	10,325	1.39	1.39	0.83	0	0.00	12.06 (9.69*)
18.2 - Freight	32,322	77,945	1.84	1.84	1.15	0	0.00	22.14
18.3 - Tank Truck	131,868	326,082	1.85	1.84	1.11	20	12.27	17.63
18.3.1 - Waste - Non Hazardous	115,472	285,955	1.87	1.85	1.12	19	13.29	17.68
18.4 - Navigation and Positioning	2,214	5,685	2.39	2.32	1.65	2	70.36	26.81
18.5 - Logistics	21,605	49,519	1.54	1.52	1.05	4	16.16	21.25
18.6 - Weigh Scale Service	1,730	4,221	2.08	2.08	1.52	0	0.00	23.18 (16.43*)
18.7 - Pick-up and Delivery Driver	55,331	122,988	2.06	2.05	1.42	3	4.88	15.16
18.8 - Tarping	6,081	15,282	2.97	2.97	1.92	0	0.00	23.41
19.0 - Down Hole Services	92,633	269,119	1.68	1.67	1.03	12	8.92	11.69
19.1 - Fishing (Down Hole Recovery)	123,901	343,191	1.47	1.46	0.86	8	4.66	10.53
19.2 - Pumper Svc.	123,113	349,441	1.50	1.49	0.89	7	4.01	10.03
19.3 - Seismic Operations	52,381	151,255	1.12	1.12	0.54	2	2.64	6.47
19.4 - Well Drilling (Workover/Completion)	143,145	393,283	1.62	1.62	0.98	12	6.10	12.09
19.5 - Wireline Service	140,243	391,640	1.47	1.47	0.86	9	4.60	10.33
19.6 - Consultant - Well Service	81,870	229,491	1.48	1.47	0.89	6	5.23	10.34
19.7 - Core Analysis	10,747	28,457*	2.04	2.02	1.36	3	21.08	10.84
19.8 - Well - Stimulation	60,263	167,760	1.85	1.84	1.06	7	8.35	10.76
19.9 - Stimulation - Acidizing	59,930	167,466	1.82	1.81	1.03	7	8.36	10.12
19.10 - Well - Control	71,619	204,668	1.54	1.53	0.94	6	5.86	11.02
19.11 - Well - Services	122,823	334,962	1.78	1.77	1.10	16	9.55	12.74
19.11.1 - Snubbing Coil Tubing	87,382	249,478	1.60	1.59	0.96	8	6.41	10.31
19.11.2 - Flowback Services	1,660	4,405	2.04	2.04	1.68	0	0.00	3.11
19.12 - Well - Production Testing	41,702	127,736	1.64	1.63	1.02	4	6.26	10.66
19.13 - Casing	68,374	204,721	1.69	1.68	1.07	8	7.82	11.43

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			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)
19.14 - Plug and Abandonment	91,747	266,324	1.61	1.60	0.96	11	8.26	11.54
19.15 - Mudlogging	60,250	179,856	1.36	1.36	0.81	2	2.22	10.41
19.16 - Well Blowout Control	62,776	188,840	1.52	1.51	0.94	5	5.30	10.55
19.17 - Surface and Subsurface Safety System	64,639	192,431	1.52	1.51	0.93	7	7.28	10.49
19.18 - String Up Service	30,734	86,590	1.67	1.66	0.97	3	6.93	8.02
19.19 - Wellhead Service	64,280	191,286	1.57	1.56	0.97	7	7.32	10.36
19.20 - Logging Services	153	387	2.07	2.07	1.03	0	0.00	48.50
20.0 - Offshore Operations	66,698	182,294	1.02	1.02	0.59	0	0.00	10.87
20.1 - Catering	4,469	11,736	0.41	0.39	0.15	1	17.04	8.29
20.3 - Inland Marine Service	11,140	29,603	1.11	1.11	0.58	0	0.00	12.56
20.4 - Marine Service	11,144	32,497	0.67	0.67	0.46	0	0.00	22.37
20.4.1 - Marine Vessels - Repairs	1,639	4,101	1.85	1.76	1.27	2	97.55	13.29
20.4.2 - Marine Aids to Navigation	487	987	3.04	3.04	1.82	0	0.00	13.07
20.5 - Offshore Construction	30,420	79,140	0.67	0.66	0.34	5	12.64	13.29
20.5.1 - Marine Construction	8,568	20,850	1.29	1.29	0.75	0	0.00	11.88
20.5.2 - Offshore Construction - Underwater	8,042	17,849	0.52	0.52	0.29	0	0.00	15.30
20.5.3 - Offshore Construction - Above water	10,970	27,705	0.74	0.71	0.36	4	28.88	15.50
20.6 - Diving	9,479	23,762	0.82	0.82	0.49	0	0.00	15.07
20.7 - Offshore Transportation	6,579	20,214	0.68	0.68	0.41	0	0.00	16.94
20.7.1 - Marine	21,866	72,210	0.43	0.43	0.23	0	0.00	16.26 (14.29*)
20.8 - Contract Operators	12,832	31,728	0.69	0.69	0.27	0	0.00	25.06
20.8.1 - Crane Operator	21,434	53,372	0.98	0.98	0.51	0	0.00	10.38
20.9 - Drilling	6,833	17,677	0.97	0.97	0.51	0	0.00	13.12
20.10 - Workover	24,140	77,865	1.29	1.29	0.72	0	0.00	7.16
20.11 - Snubbing/Coil Tubing	7,210	19,587	0.72	0.72	0.37	0	0.00	8.14
20.12 - Wireline	25,688	79,802	1.48	1.48	0.84	0	0.00	6.02
20.13 - Blasting & Painting	41,108	90,036	0.43	0.43	0.18	1	2.22	13.26
20.14 - Instrumentation	19,784	42,890	0.65	0.65	0.24	0	0.00	8.15
20.14.1 - Pneumatic	18,778	41,074	0.63	0.63	0.21	0	0.00	12.12
20.14.2 - Electrical	18,308	39,587	0.69	0.69	0.22	0	0.00	9.95
20.15 - Site Consultants	12,928	28,976	0.55	0.55	0.28	0	0.00	15.78

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			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)
20.15.1 - Drilling	1,034	3,211	0.50 (0.37*)	0.50 (0.37*)	0.37 (0.25*)	0	0.00	19.38
20.15.2 - Construction	11,075	23,737	0.68	0.68	0.19	0	0.00	0.88
20.15.3 - Diving	4,657	10,484	0.82	0.82	0.46	0	0.00	16.07
20.15.4 - Safety & Environmental	7,268	18,558	0.54	0.54	0.25	0	0.00	19.14
20.16 - Manufacturing	3,256	9,292	0.82	0.82	0.50	0	0.00	14.97
20.16.4 - Subsea Equipment	3,034	7,465	0.94	0.94	0.51	0	0.00	21.09
20.17 - Rigging	57,525	145,036	0.82	0.81	0.44	4	5.52	8.99
20.18 - Underwater Acoustics	2,326	6,777	0.80	0.80	0.47	0	0.00	2.26
20.19 - Remote Operated Vehicles	3,474	9,759	0.70	0.70	0.35	0	0.00	5.41
20.21 - Rentals - Living Quarters	1,083	2,895	1.59	1.52	1.17	1	69.08	26.04
21.0 - Retail (Petroleum Products Distribution)	16,531	41,398	2.15	2.13	1.36	3	14.49	11.21
21.1 - General Contracting	21,363	46,768	1.26	1.25	0.58	2	8.55	11.45
21.2 - Tank & Piping (UST)	18,448	44,132	1.73	1.72	0.90	2	9.06	10.79
21.3 - Tank & Piping (UST) Maintenance	12,533	31,506	1.72	1.71	0.93	2	12.70	16.06
21.4 - Service Station Maintenance	1,781	3,609	1.94	1.94	1.44	0	0.00	3.94
21.5 - Canopies/Awnings & Installation	2,243	4,947	1.62	1.54	1.09	2	80.86	6.00
21.6 - Materials/Geotechnical Testing	13,008	23,511	1.06	1.06	0.46	0	0.00	12.48
21.7 - Signage	1,110	2,299	1.91	1.91	1.30	0	0.00	5.59
21.8 - Tank Tightness Testing (UST)	2,796	6,101	0.95	0.95	0.72	0	0.00	15.00
21.9 - Car Wash (Install, Maint/Repair)	1,002	2,079	3.08	3.08	2.60	0	0.00	7.06
21.10 - Electrical Construction	16,732	35,332	1.71	1.71	0.80	0	0.00	8.80
21.11 - Consulting Engineer	23,109	46,633	0.68	0.68	0.28	0	0.00	6.65
21.12 - Asphalt Paving	15,034	30,353	2.22	2.19	1.27	4	26.36	9.86
21.13 - Engineering Design	12,977	28,534	0.64	0.64	0.34	0	0.00	14.27
21.14 - Stage II Vapor Recovery	2,269	4,814	0.83	0.83	0.58	0	0.00	17.25
21.15 - Inspector Services	5,670	12,109	1.27	1.27	0.58	0	0.00	4.60
21.16 - HVAC	6,451	13,947	1.72	1.72	0.80	0	0.00	4.79
21.17 - Dispensers and Related Accessories	1,165	2,371	2.02	2.02	1.43	0	0.00	5.54
21.18 - Tank & Vessel Cleaning	14,139	30,789	1.34	1.33	0.71	1	6.50	16.05
21.19 - Soil Boring/Load Analysis	4,620	9,769	0.78	0.78	0.47	0	0.00	20.34
21.20 - Septic System Pump Out	1,598	3,594	2.34	2.34	1.45	0	0.00	15.12

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			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)
21.21 - Landscaping & Mowing	6,197	12,044	2.39	2.37	1.49	1	16.61	11.53
21.22 - Security Fire Protection	20,978	42,312	1.56	1.56	0.74	1	4.73	5.78
21.23 - Water / Sewer Piping Construction	15,760	31,540	2.02	2.01	1.11	2	12.68	7.84
21.24 - Underground Storage Tank Removal	8,087	17,654	1.54	1.52	1.01	2	22.66	8.31
21.25 - Cathodic Protection - Materials	9,664	21,020	1.19	1.18	0.58	1	9.51	11.51 (10.15*)
21.26 - Drilling - Tubular Goods & Accessories	7,114	18,439	2.45	2.43	1.38	2	21.69	7.80
21.27 - Civil Construction for Concrete Paving	18,641	38,033	1.97	1.96	0.99	2	10.52	7.61
22.0 - Supplier	41,057	85,466	1.55	1.54	0.98	3	7.02	7.26
22.1 - Gasses	30,332	63,099	1.98	1.97	1.47	1	3.17	6.45
22.1.1 - Industrial Purposes	68,112	144,093	1.82	1.82	1.38	2	2.78	8.72
22.3 - Furniture Supplier	-	-	-	-	-	-	-	-
22.3.1 - Selling	9,087	18,269	2.28	2.27	1.58	1	10.95	7.96
22.3.2 - Delivery/Installation	9,234	17,916	3.00	3.00	2.10	0	0.00	6.46
22.3.4 - Moving Services	2,989	5,767	3.71	3.71	2.60	0	0.00	4.18
22.4 - Industrial Pipe, Fittings and Valves	23,676	49,511	2.08	2.07	0.91	3	12.12	7.42
22.4.1 - Tower/Vessels/Pipe Assemblies Manufacturer	3,209	6,980	3.07	3.07	1.52	0	0.00	11.06
22.5 - Chemicals	21,939	46,212	1.67	1.67	1.05	1	4.33	12.18
22.6 - Packaging Suppliers, Equipment and Services	13,093	26,540	2.43	2.41	1.51	3	22.61	6.91
22.7 - Doors/Frames/Hardware	3,120	6,794*	3.06	3.00	1.53	2	58.88	7.41
22.11 - Electrical Supplies	22,362	39,550	2.85	2.85	2.03	1	5.06	13.08
23.0 - Sales	25,495	51,889	1.79	1.79	1.14	0	0.00	8.30
23.1 - Bits & Tools	52,846	106,706	2.16	2.15	1.37	3	5.62	9.68
23.2 - Safety Equipment	80,567	162,639	1.88	1.88	1.25	4	4.92	9.27
23.3 - Lube & Fuels	48,753	95,645	2.42	2.42	1.60	3	6.27	12.16
23.4 - Seawater Pumps	2,026	4,292	3.73	3.73	2.14	0	0.00	16.39 (12.15*)
24.0 - Pharmaceutical	2,465	5,751	0.38	0.38	0.24	0	0.00	7.64
24.1 - Validation	10,832	21,803	0.25	0.25	0.13	0	0.00	0.52
24.1.2 - Mechanical	21,343	45,657	0.79	0.79	0.24	0	0.00	3.88
24.1.3 - Electrical	16,511	34,746	1.00	1.00	0.43	0	0.00	7.37
24.1.4 - Process	8,287	17,781	0.37	0.37	0.13	0	0.00	10.52
24.2 - Commissioning Quality	5,516	12,738	0.52	0.52	0.14	0	0.00	10.30

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			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)
24.2.2 - Mechanical	13,697	30,549	0.71	0.71	0.24	0	0.00	4.83
24.2.3 - Electrical	26,439	54,544	0.83	0.83	0.30	0	0.00	5.07
24.2.4 - Process	8,358	18,060	0.40	0.40	0.14	0	0.00	6.78
24.4 - Msc. Technical Services	5,532	11,004*	0.20	0.20	0.09	0	0.00	3.64
25.0 - Labs/Cleanrooms	5,529	11,773	1.44	1.44	0.70	0	0.00	9.12
25.2 - Testing and Balancing	5,774	13,128	1.10	1.10	0.49	0	0.00	11.81 (9.63*)
25.6 - Sampling Services	38,084	78,092	0.69	0.69	0.35	0	0.00	11.11
25.8 - Lab Instruments	10,593	21,151	0.92	0.92	0.46	0	0.00	5.35
26.0 - Energy	9,116	19,176	1.44	1.44	0.72	0	0.00	14.93
26.1 - Electrical Generation	32,689	66,383	0.87	0.87	0.39	1	3.01	8.55
26.2 - Steam Generation	12,167	24,430	1.00	1.00	0.42	0	0.00	10.68
27.0 - Heavy Equipment	111,394	257,464	1.50	1.50	0.71	2	1.55	13.29
27.1 - Sales	13,681	27,890	5.18	5.18	1.99	1	7.17	6.33
27.2 - Service/Repair	28,647	60,573	3.29	3.29	1.41	0	0.00	7.13
27.3 - Operation	93,557	221,479	1.50	1.50	0.79	3	2.71	16.73
27.4 - Rentals	19,004	42,217	4.12	4.12	1.77	0	0.00	7.31
27.5 - Inspection	12,769	28,416	2.88	2.88	1.23	0	0.00	8.29
28.0 - Fixed Cranes	31,017	66,569	1.63	1.63	0.87	1	3.00	12.41
28.1 - Rentals	2,745	6,060	3.10	3.10	2.11	0	0.00	14.03
28.1.1 - Overhead and Gantry	2,902	6,581	3.62	3.62	2.16	0	0.00	10.72
28.2 - Operator/Rigger	16,160	34,921	1.55	1.54	0.84	2	11.45	10.51
28.2.1 - Operator/Rigger - Overhead and Gantry	8,024	16,802	2.18	2.18	1.23	0	0.00	9.90
28.2.2 - Operator/Rigger - Tower	5,221	12,285*	0.98	0.98	0.36	0	0.00	3.78
28.2.3 - Operator/Rigger - Derrick	8,600	19,097	0.99	0.98	0.45	1	10.47	7.88 (-*)
28.3 - Service / Repair	6,583	14,518	1.97	1.96	1.43	1	13.78	12.78
28.3.1 - Service / Repair Overhead and Gantry	6,271	14,308	2.57	2.57	1.50	0	0.00	6.92
28.3.2 - Service / Repair - Tower	502	1,083	2.40	2.40	1.29 (-*)	0	0.00	2.54
28.3.3 - Service / Repair - Derrick	735	1,706	1.76	1.76	0.94 (-*)	0	0.00	0.40
28.4 - Inspection	12,240	28,358	1.20	1.19	0.71	1	7.05	10.15
28.4.1 - Inspection - Overhead & Gantry	8,216	19,172	2.00	2.00	1.15	0	0.00	7.83
28.4.2 - Inspection - Tower	6,658	16,035	0.77	0.77	0.31	0	0.00	4.97

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28.4.3 - Inspection - Derrick	6,808	16,402	0.76	0.76	0.28	0	0.00	4.44
29.0 - Mobile Crane	227,323	553,594	1.16	1.16	0.61	12	4.34	10.43
29.1 - Rental	94,585	257,617	1.45	1.45	0.86	5	3.88	10.56
29.1.1 - Rental - Crawler	4,361	10,352	1.37	1.33	0.62	2	38.64	7.28
29.1.2 - Rental - Rough Terrain	5,680	13,153	1.54	1.51	0.71	2	30.41	7.62
29.1.3 - Rental - Telescopic	12,191	29,285	1.82	1.82	1.08	0	0.00	6.36
29.1.4 - Rental - Truck Mounted	12,466	29,242	2.03	2.03	1.16	0	0.00	5.92
29.1.5 - Rental - Wheel Mounted	8,591	18,114	1.89	1.89	1.06	0	0.00	7.74
29.2 - Operator / Rigger	219,784	544,428	1.16	1.16	0.62	14	5.14	10.35
29.2.1 - Operator / Rigger - Crawler	12,428	28,966	1.04	1.02	0.48	2	13.81	6.02
29.2.2 - Operator / Rigger - Rough Terrain	15,502	36,412	1.23	1.22	0.56	2	10.99	8.13
29.2.3 - Operator / Rigger - Telescopic	16,747	39,086	1.64	1.64	0.95	0	0.00	6.53
29.2.4 - Operator / Rigger - Truck Mounted	22,815	53,131	1.58	1.57	0.84	1	3.76	6.40
29.2.5 - Operator / Rigger - Wheel Mounted	16,815	36,812	1.34	1.34	0.70	0	0.00	8.01
29.2.6 - Operator / Rigger - Straddle	1,412	3,105	2.00	2.00	0.71	0	0.00	10.10
29.3 - Service / Repair	57,459	130,021	1.26	1.26	0.64	5	7.69	10.50
29.3.1 - Service / Repair - Crawler	4,036	7,862	4.43	4.43	1.02	0	0.00	3.95
29.3.2 - Service / Repair - Rough Terrain	2,431	5,213	2.84	2.84	1.04	0	0.00	6.88
29.3.3 - Service / Repair - Telescopic	3,538	7,632	2.78	2.78	1.83	0	0.00	12.43
29.3.4 - Service / Repair - Truck Mounted	4,756	10,279	2.94	2.94	1.67	0	0.00	10.86 (9.73*)
29.3.5 - Service / Repair - Wheel Mounted	3,904	8,601	2.19	2.19	1.44	0	0.00	14.44 (12.66*)
29.4 - Inspection	8,245	18,080	1.79	1.79	1.01	0	0.00	8.94
29.4.1 - Inspection - Crawler	1,856	4,029	2.53	2.53	1.09	0	0.00	9.14
29.4.2 - Inspection - Rough Terrain	2,227	4,843	2.35	2.35	0.99	0	0.00	8.21
29.4.3 - Inspection - Telescopic	3,587	7,768	2.86	2.86	1.80	0	0.00	11.89
29.4.4 - Inspection - Truck Mounted	4,209	9,162	2.71	2.71	1.59	0	0.00	10.66
29.4.5 - Inspection - Wheel Mounted	3,446	7,584	2.56	2.56	1.61	0	0.00	12.15
29.4.6 - Inspection - Straddle	630	1,364	2.93	2.93	1.17	0	0.00	15.80
30.0 - Mining	2,788	6,446	1.80	1.77	0.99	1	31.03	18.60
30.1 - Demolition/Salvage	2,706	5,551	1.55	1.55	0.86	0	0.00	23.65
30.1.1 - Equipment	2,054	4,613	2.51	2.51	1.43	0	0.00	10.60

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			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)
30.1.2 - Scrap Bin Removal	1,582	3,344	1.62	1.62	0.90	0	0.00	18.44
30.2 - Drilling	1,070	2,351	2.38	2.38	1.70	0	0.00	18.21
30.2.1 - Blast Holes	1,450	3,468	2.83	2.83	1.67	0	0.00	23.31
30.3 - Environmental Services	16,062	32,876	0.74	0.74	0.35	0	0.00	8.27
30.3.1 - Agricultural Activities	873	1,963	1.63	1.63	0.61	0	0.00	9.19
30.3.2 - Hydrology Studies / Monitor	7,765	14,541	0.73	0.73	0.23	0	0.00	5.83
30.3.3 - Hydro seeding	2,183	4,575	2.71	2.71	1.27 (1.10*)	0	0.00	6.52
30.4 - Equipment Maintenance	2,396	5,359	2.72	2.72	1.01	0	0.00	7.29
30.5 - General Services	11,072	20,170	1.64	1.64	0.85	0	0.00	5.87
30.5.1 - Fan Balancing	1,602	3,354	1.85	1.85	0.78	0	0.00	6.19
30.5.3 - Roadway Maintenance	4,904	9,857	2.33	2.33	1.40	0	0.00	10.29
30.6 - Haulage	1,937	3,555	2.31	2.31	0.90	0	0.00	7.22
30.6.2 - Ready Mix Concrete	23,975	60,031	1.34	1.34	0.62	1	3.33	6.80
30.7 - Major Construction	7,848	17,385	1.85	1.84	1.02	1	11.50	13.54
30.7.1 - Bridge Construction	18,242	35,076	2.50	2.49	1.28	2	11.40	10.33
30.7.6 - Pond & Dam Construction	18,210	35,370	2.45	2.44	1.29	1	5.65	11.26
30.7.7 - River Facility Construction	9,274	18,786	2.30	2.29	1.04	1	10.65	11.55
30.7.8 - Underground Concrete Work	2,005	4,008	2.99	2.99	2.10	0	0.00	21.72
30.7.9 - Underground Excavation	2,237	4,522	2.43	2.43	1.73	0	0.00	24.62
30.8 - Miscellaneous	586	1,109	1.26	1.26	1.08	0	0.00	79.43
30.9 - Prep Plant Repair	1,429	2,846	1.55	1.55	0.42	0	0.00	1.91
30.9.1 - Chute Work	1,168	2,453	1.79	1.79	0.49	0	0.00	1.91
31.0 - Archaeology	5,721	11,605*	0.31	0.31	0.05	0	0.00	3.50
31.1 - Cultural Resource Management	5,983	12,043*	0.35	0.35	0.07	0	0.00	3.95

[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.

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.

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Health & Safety Performance Indicators
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2012 Data

An ISN Publication: No. 1303
September 2013

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