

An ISN Publication

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# Health & Safety Performance Indicators

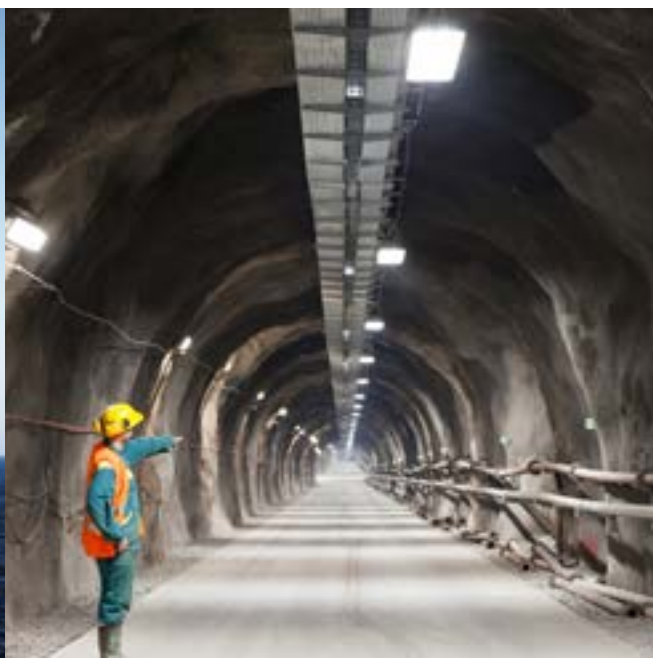
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Contractor Group Benchmarking, U.S.  
All Industries, Comprehensive

2012 Data

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# About ISN

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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](http://ISN.com), contact ISN at +1 214 303 4900 or email [ISNTeam@isn.com](mailto:ISNTeam@isn.com).

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# Preface

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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 all industries 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

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## 2012 Injury and Illness Rates, by NAICS Code

# Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code <sup>[a]</sup>	NAICS Title <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[c]</sup>		Severity <sup>[d]</sup>
				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	6,274	11,145	1.63	1.63	1.17	0	0.00	53.91
111	Crop Production	271	529	3.78	3.78	1.13	0	0.00	0.00
113	Forestry and Logging	627	1,203	2.00	2.00	2.00	0	0.00	25.42
1133	Logging	393	813	1.48	1.48	1.48	0	0.00	25.33
11331	Logging	393	813	1.48	1.48	1.48	0	0.00	25.33
115	Support Activities for Agriculture and Forestry	779	1,484	1.75	1.75	0.40	0	0.00	13.92 (0.08*)
1151	Support Activities for Crop Production	507	1,004	1.59 (1.40*)	1.59 (1.40*)	0.40	0	0.00	22.63 (0.14*)
11511	Support Activities for Crop Production	506	1,004	1.59 (1.40*)	1.59 (1.40*)	0.40	0	0.00	22.63 (0.14*)
115112	Soil Preparation, Planting, and Cultivating	465	905	1.77 (1.55*)	1.77 (1.55*)	0.44	0	0.00	22.63 (0.14*)
21	Mining, Quarrying, and Oil and Gas Extraction	429,494	1,113,918	1.67	1.66	1.03	63	11.31	15.54
211	Oil and Gas Extraction	7,653	17,660	2.12 (1.57*)	2.11 (1.56*)	1.45 (0.93*)	1	11.32	15.64
2111	Oil and Gas Extraction	6,278	14,459	2.23 (1.56*)	2.21 (1.55*)	1.54 (0.90*)	1	13.83	14.23
21111	Oil and Gas Extraction	5,401	12,487	2.40 (1.63*)	2.39 (1.62*)	1.70 (0.96*)	1	16.02	15.21
211111	Crude Petroleum and Natural Gas Extraction	4,139	9,820	2.30 (1.33*)	2.28 (1.31*)	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)	2,049	4,300	1.21	1.21	0.70	0	0.00	15.62
2121	Coal Mining	1,201	2,614 <sup>†</sup>	0.99	0.99	0.38	0	0.00	2.54
21211	Coal Mining	1,201	2,614 <sup>†</sup>	0.99	0.99	0.38	0	0.00	2.54
2123	Nonmetallic Mineral Mining and Quarrying	721	1,433	1.26	1.26	0.98	0	0.00	36.22
21231	Stone Mining and Quarrying	297	578	0.69	0.69	0.35	0	0.00	26.00
21232	Sand, Gravel, Clay, and Ceramic and Refractory Minerals Mining and Quarrying	298	600	1.67	1.67	1.33	0	0.00	54.40
212321	Construction Sand and Gravel Mining	252	497	1.21	1.21	1.21	0	0.00	57.67

[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 0.5<sup>th</sup> 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 <sup>[a]</sup>	NAICS Title <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[c]</sup>		Severity <sup>[d]</sup>
				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)
213	Support Activities for Mining	418,674	1,089,043	1.67	1.65	1.02	62	11.39	15.54
2131	Support Activities for Mining	418,388	1,088,307	1.66	1.65	1.02	62	11.39	15.56
21311	Support Activities for Mining	418,388	1,088,307	1.66	1.65	1.02	62	11.39	15.56
213111	Drilling Oil and Gas Wells	82,543	182,879	2.09	2.07	1.31	14	15.31	18.96
213112	Support Activities for Oil and Gas Operations	332,820	898,423	1.58	1.57	0.96	48	10.69	14.55
22	Utilities	11,370	24,469	1.73	1.72	0.90	1	8.17	10.81
221	Utilities	10,096	22,832	1.53	1.52	0.80	1	8.76	10.13
2211	Electric Power Generation, Transmission and Distribution	6,111	13,390	1.52	1.51	0.81	1	14.94	9.32
22111	Electric Power Generation	4,596	10,072	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
22112	Electric Power Transmission, Control, and Distribution	1,174	2,469	1.70	1.62	1.05	1	81.01	6.86
2212	Natural Gas Distribution	860	1,918	2.09	2.09	1.04	0	0.00	10.75
22121	Natural Gas Distribution	716	1,647	1.94	1.94	1.09	0	0.00	13.44
2213	Water, Sewage and Other Systems	3,120	7,513	1.41	1.41	0.72	0	0.00	11.45
22131	Water Supply and Irrigation Systems	2,488	6,129*	0.72	0.72	0.42	0	0.00	10.73
23	Construction	960,130	2,049,797	1.59	1.58	0.81	58	5.66	11.79
236	Construction of Buildings	107,599	224,889	1.66	1.66	0.83	6	5.34	9.22
2361	Residential Building Construction	1,239	2,551	3.92	3.84	2.90	1	78.39	9.34
23611	Residential Building Construction	1,229	2,532	3.95	3.87	2.92	1	78.99	9.34
236115	New Single-Family Housing Construction (Except Operative Builders)	601	1,129	2.48	2.30	1.24	1	**	10.00
236118	Residential Remodelers	407	898	7.80	7.80	6.46	0	0.00	9.31
2362	Nonresidential Building Construction	105,910	221,407	1.63	1.63	0.80	5	4.52	9.13
23621	Industrial Building Construction	47,357	102,575	0.95	0.94	0.45	3	5.85	9.42
23622	Commercial and Institutional Building Construction	54,915	111,519	2.24	2.24	1.10	2	3.59	9.29
237	Heavy and Civil Engineering Construction	308,546	689,200	1.47	1.47	0.76	25	7.25	12.90
2371	Utility System Construction	210,411	476,515	1.43	1.42	0.74	20	8.39	13.57
23711	Water and Sewer Line and Related Structures Construction	16,816	32,658	2.66	2.65	1.51	2	12.25	13.50
23712	Oil and Gas Pipeline and Related Structures Construction	148,187	339,312	1.03	1.02	0.51	14	8.25	11.98
23713	Power and Communication Line and Related Structures Construction	41,636	96,455	2.36	2.35	1.21	4	8.29	16.06
2373	Highway, Street, and Bridge Construction	21,551	42,947	3.08	3.05	1.79	5	23.28	15.56
23731	Highway, Street, and Bridge Construction	20,209	40,659	3.11	3.09	1.80	5	24.59	15.66

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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)
2379	Other Heavy and Civil Engineering Construction	64,112	143,039	1.14	1.14	0.55	0	0.00	9.44
23799	Other Heavy and Civil Engineering Construction	63,842	142,509	1.13	1.13	0.55	0	0.00	9.52
238	Specialty Trade Contractors	507,882	1,057,413	1.69	1.68	0.85	27	5.11	11.49
2381	Foundation, Structure, and Building Exterior Contractors	47,704	94,491	2.17	2.16	1.15	2	4.23	12.33 (11.06*)
23811	Poured Concrete Foundation and Structure Contractors	8,410	17,364	1.87	1.85	1.01	1	11.52	5.25
23812	Structural Steel and Precast Concrete Contractors	10,674	22,804	1.64	1.64	0.75	0	0.00	9.33
23814	Masonry Contractors	6,085	11,654	1.32	1.32	0.67	0	0.00	18.36 (10.29*)
23815	Glass and Glazing Contractors	474	889	2.47	2.47	1.80 (1.58*)	0	0.00	4.73
23816	Roofing Contractors	16,070	29,656	2.96	2.96	1.67	0	0.00	15.56
23819	Other Foundation, Structure and Building Exterior Contractors	5,246	10,690	2.04	2.02	1.03 (0.92*)	1	18.71	12.90 (11.35*)
2382	Building Equipment Contractors	265,771	549,884	2.04	2.03	1.01	17	6.18	10.50
23821	Electrical Contractors and Other Wiring Installation Contractors	118,657	246,109	1.74	1.73	0.86	10	8.13	11.24
23822	Plumbing, Heating, and Air-Conditioning Contractors	111,659	229,368	2.31	2.31	1.08	4	3.49	9.56
23829	Other Building Equipment Contractors	34,114	71,708	2.20	2.19	1.29	3	8.37	11.70
2383	Building Finishing Contractors	29,071	58,679	1.45	1.45	0.72	0	0.00	14.21
23831	Drywall and Insulation Contractors	13,118	27,304	1.25	1.25	0.58	0	0.00	9.53 (8.52*)
23832	Painting and Wall Covering Contractors	10,463	20,111	1.20	1.20	0.66	0	0.00	20.70
23833	Flooring Contractors	1,930	3,713	1.56	1.56	0.97	0	0.00	25.76 (20.25*)
23834	Tile and Terrazzo Contractors	302	551	3.27	3.27	2.18	0	0.00	8.44
23835	Finish Carpentry Contractors	424	913	4.82	4.82	1.75 (1.55*)	0	0.00	13.50
23839	Other Building Finishing Contractors	2,823	6,064	2.37	2.37	1.12	0	0.00	10.72
2389	Other Specialty Trade Contractors	157,863	338,500	1.04	1.04	0.55	8	4.73	13.60
23891	Site Preparation Contractors	30,759	66,785	1.97	1.96	1.15	3	8.98	17.06
23899	All Other Specialty Trade Contractors	126,261	269,858	0.81	0.80	0.40	5	3.71	11.69
31-33	Manufacturing	392,972	819,517	1.76	1.76	0.98	7	1.71	8.91
321	Wood Product Manufacturing	1,986	4,175	2.30	2.30	1.01	0	0.00	3.69
324	Petroleum and Coal Products Manufacturing	2,865	6,558	1.49	1.46	0.76	1	30.50	9.06
3241	Petroleum and Coal Products Manufacturing	2,865	6,558	1.49	1.46	0.76	1	30.50	9.06
32419	Other Petroleum and Coal Products Manufacturing	1,593	3,459	2.43	2.37	1.16	1	57.82	7.60
324191	Petroleum Lubricating Oil and Grease Manufacturing	1,279	2,730	2.34	2.27	1.25	1	73.27	6.97
325	Chemical Manufacturing	36,998	78,719	1.32	1.31	0.85	3	7.62	11.83



# Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code <sup>[a]</sup>	NAICS Title <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[d]</sup>
				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)
3251	Basic Chemical Manufacturing	17,979	39,816	1.35	1.34	1.11	2	10.05	17.32
3255	Paint, Coating, and Adhesive Manufacturing	1,503	2,929	2.53	2.53	1.71	0	0.00	12.09
32551	Paint and Coating Manufacturing	1,436	2,800	2.43	2.43	1.64	0	0.00	12.96
3256	Soap, Cleaning Compound, and Toilet Preparation Manufacturing	1,136	2,273	1.94	1.94	0.97	0	0.00	7.18
32561	Soap and Cleaning Compound Manufacturing	1,115	2,224	1.98	1.98	0.99	0	0.00	7.18
325611	Soap and Other Detergent Manufacturing	695	1,374	2.47	2.47	1.16	0	0.00	5.41
3259	Other Chemical Product and Preparation Manufacturing	15,972	32,885	1.11	1.11	0.48	1	6.08	4.72
32599	All Other Chemical Product and Preparation Manufacturing	15,503	31,931	1.05	1.04	0.43	1	6.26	5.01
325998	All Other Miscellaneous Chemical Product and Preparation Manufacturing	15,431	31,781	1.04	1.04	0.43	1	6.29	5.04
326	Plastics and Rubber Products Manufacturing	5,034	11,037	2.34	2.34	1.45	0	0.00	12.65 (10.83*)
3261	Plastics Product Manufacturing	3,605	8,047	1.62	1.62	1.04	0	0.00	11.34 (7.67*)
32612	Plastics Pipe, Pipe Fitting, and Unlaminated Profile Shape Manufacturing	950	1,987	2.01	2.01	1.41	0	0.00	0.35
32619	Other Plastics Product Manufacturing	1,483	3,275	2.32	2.32	1.53	0	0.00	19.05 (12.92*)
326199	All Other Plastics Product Manufacturing	1,364	3,034	2.24	2.24	1.45	0	0.00	20.09 (13.24*)
3262	Rubber Product Manufacturing	1,401	2,923	3.69	3.69	2.12	0	0.00	14.63
32622	Rubber and Plastics Hoses and Belting Manufacturing	903	1,867	4.50	4.50	2.79	0	0.00	17.29
327	Nonmetallic Mineral Product Manufacturing	4,913	9,741	3.35	3.35	2.07	0	0.00	10.10
3271	Clay Product and Refractory Manufacturing	1,809	3,157	4.31	4.31	2.28	0	0.00	4.56
32712	Clay Building Material and Refractories Manufacturing	1,809	3,157	4.31	4.31	2.28	0	0.00	4.56
3273	Cement and Concrete Product Manufacturing	1,287	2,964	3.44	3.44	2.70	0	0.00	19.53
3279	Other Nonmetallic Mineral Product Manufacturing	1,794	3,579*	2.40	2.40	1.34	0	0.00	5.81
32799	All Other Nonmetallic Mineral Product Manufacturing	1,790	3,571*	2.41	2.41	1.34	0	0.00	5.81
331	Primary Metal Manufacturing	3,702	8,913	2.63	2.63	1.68	0	0.00	16.61
3312	Steel Product Manufacturing from Purchased Steel	932	2,012	1.49	1.49	1.19	0	0.00	6.20
332	Fabricated Metal Product Manufacturing	69,973	142,082	2.31	2.31	1.11	0	0.00	7.75
3323	Architectural and Structural Metals Manufacturing	24,284	43,024	2.00	2.00	1.06	0	0.00	10.90
33231	Plate Work and Fabricated Structural Product Manufacturing	19,828	34,309	1.73	1.73	0.92	0	0.00	10.43
332311	Prefabricated Metal Building and Component Manufacturing	319	641	4.06	4.06	1.87	0	0.00	7.00
332312	Fabricated Structural Metal Manufacturing	8,503	21,347	1.56	1.56	0.84	0	0.00	12.19
332313	Plate Work Manufacturing	10,884	12,053	1.94	1.94	1.01	0	0.00	8.40
33232	Ornamental and Architectural Metal Products Manufacturing	4,394	8,612	3.07	3.07	1.60	0	0.00	11.92 (10.59*)

# Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code <sup>[a]</sup>	NAICS Title <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[d]</sup>
				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)
332321	Metal Window and Door Manufacturing	672	1,168	4.11 (-*)	4.11 (-*)	3.42 (-*)	0	0.00	2.50
332322	Sheet Metal Work Manufacturing	3,388	6,824	2.84	2.84	1.32	0	0.00	14.89 (13.10*)
3324	Boiler, Tank, and Shipping Container Manufacturing	10,461	23,394	3.21	3.21	1.55	0	0.00	6.80
33241	Power Boiler and Heat Exchanger Manufacturing	3,861	8,021	3.04	3.04	1.72	0	0.00	7.23
33242	Metal Tank (Heavy Gauge) Manufacturing	5,193	11,781	3.48	3.48	1.66	0	0.00	6.69
3326	Spring and Wire Product Manufacturing	996	1,924	4.26	4.26	1.66	0	0.00	4.46
33261	Spring and Wire Product Manufacturing	996	1,924	4.26	4.26	1.66	0	0.00	4.46
332618	Other Fabricated Wire Product Manufacturing	996	1,924	4.26	4.26	1.66	0	0.00	4.46
3327	Machine Shops, Turned Product and Screw, Nut & Bolt Manufacturing	8,436	18,001	2.73	2.73	1.32	0	0.00	7.39
33271	Machine Shops	7,103	15,337	2.53	2.53	1.16	0	0.00	7.14
3328	Coating, Engraving, Heat Treating, and Allied Activities	3,451	8,455	1.85	1.85	0.69	0	0.00	7.01
33281	Coating, Engraving, Heat Treating, and Allied Activities	3,451	8,455	1.85	1.85	0.69	0	0.00	7.01
332811	Metal Heat Treating	1,210	2,990	0.40	0.40	0.00	0	0.00	0.00
332812	Metal Coating, Engraving (Except Jewelry and Silverware), and Allied Services to Manufacturers	1,819	4,551	3.08	3.08	1.19	0	0.00	7.81
332813	Electroplating, Plating, Polishing, Anodizing, and Coloring	408	885	0.45	0.45	0.45	0	0.00	0.00
3329	Other Fabricated Metal Product Manufacturing	21,273	44,999	1.92	1.92	0.87	0	0.00	5.72
33291	Metal Valve Manufacturing	17,743	36,979	1.60	1.60	0.76	0	0.00	6.01
332911	Industrial Valve Manufacturing	17,204	35,752	1.52	1.52	0.73	0	0.00	6.54
33299	All Other Fabricated Metal Product Manufacturing	3,394	7,754	3.12 (2.71*)	3.12 (2.71*)	1.21	0	0.00	5.36
332996	Fabricated Pipe and Pipe Fitting Manufacturing	1,470	3,766	2.97 (2.52*)	2.97 (2.52*)	1.38	0	0.00	5.36
332999	All Other Miscellaneous Fabricated Metal Product Manufacturing	1,674	3,447	3.71 (3.28*)	3.71 (3.28*)	1.16	0	0.00	5.34
333	Machinery Manufacturing	178,763	375,306	1.55	1.55	0.86	2	1.07	9.81
3331	Agriculture, Construction, and Mining Machinery Manufacturing	42,381	91,855	1.98	1.97	1.03	2	4.35	6.69
33312	Construction Machinery Manufacturing	2,671	5,356	2.76	2.76	1.72	0	0.00	8.69
33313	Mining and Oil and Gas Field Machinery Manufacturing	39,554	86,256	1.92	1.91	0.99	2	4.64	6.33
333132	Oil and Gas Field Machinery and Equipment Manufacturing	37,889	83,386	1.77	1.77	0.92	2	4.80	6.46
3332	Industrial Machinery Manufacturing	5,548	11,146	3.91	3.91	1.78	0	0.00	7.02
33321	Sawmill and Woodworking Machinery Manufacturing	463	1,011	4.55	4.55	1.19 (1.00*)	0	0.00	4.17
33329	Other Industrial Machinery Manufacturing	4,844	9,613	3.93	3.93	1.89	0	0.00	7.26
333291	Paper Industry Machinery Manufacturing	2,622	4,810	3.74	3.74	1.87	0	0.00	7.08
333298	All Other Industrial Machinery Manufacturing	1,128	2,373	4.30	4.30	1.60	0	0.00	6.08

# Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code <sup>[a]</sup>	NAICS Title <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[c]</sup>		Severity <sup>[d]</sup>
				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)
3333	Commercial and Service Industry Machinery Manufacturing	86,204	179,353*	0.76	0.76	0.52	0	0.00	17.11
33331	Commercial and Service Industry Machinery Manufacturing	86,204	179,353*	0.76	0.76	0.52	0	0.00	17.11
333319	Other Commercial and Service Industry Machinery Manufacturing	1,512	3,208	1.62	1.62	0.62	0	0.00	14.96 (8.36*)
3334	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	6,265	12,985	2.25	2.25	1.28	0	0.00	9.22
33341	Ventilation, Heating, Air-Conditioning, and Commercial Refrigeration Equipment Manufacturing	6,265	12,985	2.25	2.25	1.28	0	0.00	9.22
333411	Air Purification Equipment Manufacturing	1,784	3,573	3.13	3.13	1.85	0	0.00	9.21
333415	Air-Conditioning and Warm Air Heating Equipment and Commercial and Industrial Refrigeration Equipment Manufacturing	2,627	5,503	1.42	1.42	1.02	0	0.00	4.58
3335	Metalworking Machinery Manufacturing	877	1,759	2.73	2.73	1.59	0	0.00	8.04
33351	Metalworking Machinery Manufacturing	843	1,690	2.60	2.60	1.54	0	0.00	6.05
333512	Machine Tool (Metal Cutting Types) Manufacturing	585	1,188	1.35	1.35	0.67	0	0.00	5.13
3336	Engine, Turbine, and Power Transmission Equipment Manufacturing	4,829	11,268	1.47	1.47	0.48	0	0.00	5.88
33361	Engine, Turbine, and Power Transmission Equipment Manufacturing	4,829	11,268	1.47	1.47	0.48	0	0.00	5.88
333611	Turbine and Turbine Generator Set Units Manufacturing	2,566	5,872	1.26	1.26	0.41	0	0.00	2.24
3339	Other General Purpose Machinery Manufacturing	32,515	66,597	2.52	2.52	1.35	0	0.00	8.55
33391	Pump and Compressor Manufacturing	9,497	20,274	2.39	2.39	1.04	0	0.00	8.56
333911	Pump and Pumping Equipment Manufacturing	5,129	10,809	2.44	2.44	1.35	0	0.00	10.81
333912	Air and Gas Compressor Manufacturing	4,332	9,396	2.34	2.34	0.68	0	0.00	5.85
33392	Material Handling Equipment Manufacturing	15,244	29,865	2.53	2.53	1.54	0	0.00	9.13
333922	Conveyor and Conveying Equipment Manufacturing	2,355	4,968	3.90	3.90	1.65	0	0.00	5.85 (4.03*)
333923	Overhead Traveling Crane, Hoist and Monorail System Manufacturing	4,275	9,239	3.03	3.03	2.21	0	0.00	11.41
33399	All Other General Purpose Machinery Manufacturing	7,774	16,459	2.65	2.65	1.40	0	0.00	7.55
333992	Welding and Soldering Equipment Manufacturing	242	543	2.21 (1.87*)	2.21 (1.87*)	1.47 (1.12*)	0	0.00	7.67
333993	Packaging Machinery Manufacturing	2,052	4,090	4.16	4.16	2.79	0	0.00	3.52
333997	Scale and Balance Manufacturing	1,527	3,254	1.41	1.41	0.86	0	0.00	25.74
333999	All Other Miscellaneous General Purpose Machinery Manufacturing	2,116	4,871	2.92	2.92	1.03	0	0.00	6.45
334	Computer and Electronic Product Manufacturing	46,428	93,329	1.07	1.07	0.50	0	0.00	7.49
3342	Communications Equipment Manufacturing	12,330	24,644*	0.33	0.33	0.15	0	0.00	3.17
33422	Radio and Television Broadcasting and Wireless Communications Equipment Manufacturing	11,688	23,302*	0.32	0.32	0.14	0	0.00	3.00
3345	Navigational, Measuring, Electromedical and Control Instruments Manufacturing	33,257	66,885	1.33	1.33	0.63	0	0.00	8.09

# 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)
33451	Navigational, Measuring, Electromedical and Control Instruments Manufacturing	33,185	66,753	1.33	1.33	0.63	0	0.00	8.09
334513	Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables	10,303	21,455	1.04	1.04	0.49	0	0.00	5.43
334515	Instrument Manufacturing for Measuring and Testing Electricity and Electrical Signals	3,110	6,110*	2.68	2.68	1.05	0	0.00	5.51
334516	Analytical Laboratory Instrument Manufacturing	16,587	32,360	1.25	1.25	0.62	0	0.00	11.17
334519	Other Measuring and Controlling Device Manufacturing	2,237	4,936	1.30	1.30	0.85	0	0.00	8.00
335	Electrical Equipment, Appliance, and Component Manufacturing	15,651	33,421	2.06	2.06	1.07	1	5.98	7.03
3353	Electrical Equipment Manufacturing	12,902	27,884	2.02	2.01	0.99	1	7.17	7.32
33531	Electrical Equipment Manufacturing	12,879	27,847	2.02	2.01	0.99	1	7.18	7.32
335311	Power, Distribution, and Specialty Transformer Manufacturing	1,875	4,075	3.29	3.24	0.98	1	49.08	7.93
335312	Motor and Generator Manufacturing	4,304	9,330	3.02	3.02	1.67	0	0.00	5.01 (3.90*)
335313	Switchgear and Switchboard Apparatus Manufacturing	882	1,986	2.52	2.52	1.61	0	0.00	10.12
335314	Relay and Industrial Control Manufacturing	5,622	12,085	0.73	0.73	0.36	0	0.00	12.25
3359	Other Electrical Equipment and Component Manufacturing	2,620	5,275	2.31	2.31	1.40	0	0.00	5.85
33599	All Other Electrical Equipment and Component Manufacturing	1,227	2,535	1.34	1.34	0.71	0	0.00	4.12
335999	All Other Miscellaneous Electrical Equipment and Component Manufacturing	590	1,111	1.62	1.62	0.54	0	0.00	3.56
336	Transportation Equipment Manufacturing	7,584	18,740*	2.28	2.28	1.46	0	0.00	10.52
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
3365	Railroad Rolling Stock Manufacturing	5,667	14,853*	2.07	2.07	1.32	0	0.00	11.65
33651	Railroad Rolling Stock Manufacturing	5,636	14,782*	2.08	2.08	1.33	0	0.00	11.65
339	Miscellaneous Manufacturing	5,566	11,667	1.75	1.75	0.94	0	0.00	7.77
3399	Other Miscellaneous Manufacturing	5,255	11,014	1.78	1.78	0.94	0	0.00	7.96
33999	All Other Miscellaneous Manufacturing	4,170	8,948	1.70	1.70	1.05	0	0.00	7.75
339991	Gasket, Packing, and Sealing Device Manufacturing	3,555	7,725	1.68	1.68	1.17	0	0.00	9.02
339999	All Other Miscellaneous Manufacturing	615	1,223	1.80	1.80	0.33 (0.16*)	0	0.00	0.27
42	Wholesale Trade	206,069	431,749	2.16	2.16	1.38	6	2.78	8.90
423	Merchant Wholesalers, Durable Goods	106,633	222,448	2.29	2.29	1.29	3	2.70	8.67
4233	Lumber and Other Construction Materials Merchant Wholesalers	787	1,608	3.36 (-*)	3.36 (-*)	1.49 (-*)	0	0.00	6.07

# 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)
4234	Professional and Commercial Equipment and Supplies Merchant Wholesalers	1,851	4,121	1.26	1.26	0.73	0	0.00	9.73
42349	Other Professional Equipment and Supplies Merchant Wholesalers	1,091	2,561	1.72	1.72	1.02	0	0.00	11.00
4235	Metal and Mineral (Except Petroleum) Merchant Wholesalers	3,710	7,800*	1.38	1.38	0.85	0	0.00	7.50
42351	Metal Service Centers and Other Metal Merchant Wholesalers	3,710	7,800*	1.38	1.38	0.85	0	0.00	7.50
4236	Electrical and Electronic Goods Merchant Wholesalers	28,654	57,583	1.30	1.30	0.86	0	0.00	6.52
42361	Electrical Apparatus and Equipment, Wiring Supplies and Related Equipment Merchant Wholesalers	28,018	56,203	1.32	1.32	0.88	0	0.00	6.56
4237	Hardware, and Plumbing and Heating Equipment and Supplies Merchant Wholesalers	1,387	3,011	2.46	2.46	0.86	0	0.00	1.57
42372	Plumbing and Heating Equipment and Supplies (Hydronics) Merchant Wholesalers	447	931	3.01	3.01	1.07	0	0.00	3.86
4238	Machinery, Equipment, and Supplies Merchant Wholesalers	63,317	133,920	2.73	2.72	1.48	3	4.48	8.26
42381	Construction and Mining (Except Oil Well) Machinery and Equipment Merchant Wholesalers	16,313	33,249	4.17	4.17	2.14	0	0.00	9.12
42383	Industrial Machinery and Equipment Merchant Wholesalers	34,696	72,334	2.52	2.51	1.42	2	5.53	7.62
42384	Industrial Supplies Merchant Wholesalers	9,370	18,629	1.84	1.83	0.92	1	10.74	5.80
42385	Service Establishment Equipment and Supplies Merchant Wholesalers	841	1,701	2.70	2.70	2.00	0	0.00	15.39
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	6,336	13,214	2.74	2.74	1.65	0	0.00	17.39 (14.91*)
42393	Recyclable Material Merchant Wholesalers	3,059	6,571	3.14	3.14	2.10	0	0.00	18.17
42399	Other Miscellaneous Durable Goods Merchant Wholesalers	3,254	6,595	2.37	2.37	1.21	0	0.00	16.36 (10.47*)
424	Merchant Wholesalers, Nondurable Goods	98,942	208,400	2.03	2.03	1.48	3	2.88	9.12
4246	Chemical and Allied Products Merchant Wholesalers	85,026	177,840	2.00	2.00	1.48	0	0.00	7.27
42469	Other Chemical and Allied Products Merchant Wholesalers	84,875	177,520	2.00	2.00	1.48	0	0.00	7.20
4247	Petroleum and Petroleum Products Merchant Wholesalers	13,346	29,012	2.21	2.21	1.43	1	6.89	15.70
42471	Petroleum Bulk Stations and Terminals	8,883	20,166	1.81	1.81	1.09	0	0.00	13.50
42472	Petroleum and Petroleum Products Merchant Wholesalers (Except Bulk Stations and Terminals)	4,437	8,793	3.16	3.14	2.21	1	22.74	18.59
4249	Miscellaneous Nondurable Goods Merchant Wholesalers	142	309	1.29	1.29	1.29	0	0.00	15.50
425	Wholesale Electronic Markets and Agents and Brokers	414	742	1.08 (0.00*)	1.08 (0.00*)	0.54	0	0.00	0.25
4251	Wholesale Electronic Markets and Agents and Brokers	414	742	1.08 (0.00*)	1.08 (0.00*)	0.54	0	0.00	0.25
44-45	Retail Trade	37,894	73,382	4.28	4.27	2.41	4	10.90	8.91

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441	Motor Vehicle and Parts Dealers	17,741	37,522*	4.86	4.86	2.35	1	5.33	6.07
4413	Automotive Parts, Accessories, and Tire Stores	17,321	36,649*	4.93	4.92	2.39	1	5.46	6.09
44132	Tire Dealers	17,182	36,405*	4.95	4.94	2.41	1	5.49	6.11
444	Building Material and Garden Equipment and Supplies Dealers	14,571	24,011*	4.14	4.13	3.04	1	8.33	14.21
4441	Building Material and Supplies Dealers	14,255	23,376*	4.12	4.12	3.05	1	8.56	14.51
453	Miscellaneous Store Retailers	522	1,192	1.51	1.51	1.01	0	0.00	4.33
4539	Other Miscellaneous Store Retailers	520	1,188	1.52	1.52	1.01	0	0.00	4.33
45399	All Other Miscellaneous Store Retailers	491	1,132	1.59	1.59	1.06	0	0.00	4.33
453998	All Other Miscellaneous Store Retailers (Except Tobacco Stores)	464	1,062	1.51	1.51	0.94	0	0.00	2.75
454	Nonstore Retailers	1,406	2,798	4.15	4.15	2.07	0	0.00	14.21
4543	Direct Selling Establishments	984	1,873	3.10	3.10	1.92	0	0.00	18.17
45431	Fuel Dealers	767	1,436	3.48	3.48	2.09	0	0.00	16.52
45439	Other Direct Selling Establishments	217	436	1.83	1.83	1.38	0	0.00	28.50
48-49	Transportation and Warehousing	100,054	263,355	2.10	2.08	1.46	20	15.19	20.36
481	Air Transportation	2,901	5,658	0.64	0.57	0.35	2	70.70	26.83
4812	Nonscheduled Air Transportation	2,589	5,030	0.64	0.56	0.40	2	79.52	30.19
48121	Nonscheduled Air Transportation	2,584	5,021	0.64	0.56	0.40	2	79.67	30.19
481211	Nonscheduled Chartered Passenger Air Transportation	2,536	4,962	0.64	0.56	0.40	2	80.62	30.19
483	Water Transportation	11,827	51,636	0.46	0.45	0.39	1	3.87	27.00 (22.96*)
4831	Deep Sea, Coastal, and Great Lakes Water Transportation	6,563	29,343*	0.16	0.16	0.10	0	0.00	44.08 (32.82*)
48311	Deep Sea, Coastal, and Great Lakes Water Transportation	5,903	26,561*	0.14	0.14	0.09	0	0.00	58.78 (45.13*)
483113	Coastal and Great Lakes Freight Transportation	982	3,552	0.62	0.62	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
484	Truck Transportation	68,160	163,826	2.84	2.82	1.98	16	19.53	20.30
4841	General Freight Trucking	24,216	60,429	2.52	2.50	1.85	7	23.17	20.96
48411	General Freight Trucking, Local	13,049	29,750	2.39	2.37	1.84	4	26.89	21.91
48412	General Freight Trucking, Long-Distance	10,575	29,089	2.63	2.61	1.84	3	20.63	21.02
484121	General Freight Trucking, Long-Distance, Truckload	8,390	23,496	2.12	2.09	1.61	3	25.54	18.48
4842	Specialized Freight Trucking	42,800	100,832	3.03	3.01	2.06	9	17.85	19.73 (17.40*)
48421	Used Household and Office Goods Moving	3,332	6,017	5.52	5.52	3.72	0	0.00	4.70

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48422	Specialized Freight (Except Used Goods) Trucking, Local	30,497	73,567	2.99	2.97	2.04	8	21.75	22.16 (19.26*)
48423	Specialized Freight (Except Used Goods) Trucking, Long-Distance	8,041	19,464	2.27	2.27	1.54	0	0.00	20.19
486	Pipeline Transportation	1,326	3,169	2.90	2.90	2.27	0	0.00	20.46
4869	Other Pipeline Transportation	738	1,599	3.63	3.63	3.13	0	0.00	23.17
48699	All Other Pipeline Transportation	284	552	1.45	1.45	1.45	0	0.00	30.50
488	Support Activities for Transportation	12,923	32,533	1.20	1.20	0.77	1	6.15	18.34
4882	Support Activities for Rail Transportation	4,078	8,582	1.84	1.84	0.86	0	0.00	17.61
48821	Support Activities for Rail Transportation	2,996	6,147	1.27	1.27	0.36	0	0.00	12.49
4883	Support Activities for Water Transportation	6,091	17,083	0.71	0.70	0.52	1	11.71	20.28
48832	Marine Cargo Handling	3,227	7,571	0.40	0.40	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	2,180	7,924	0.35	0.35	0.25	0	0.00	19.36
4884	Support Activities for Road Transportation	1,672	4,408*	2.13	2.13	1.77	0	0.00	20.28
48849	Other Support Activities for Road Transportation	1,657	4,370*	2.15	2.15	1.79	0	0.00	20.28
4885	Freight Transportation Arrangement	569	1,139	1.23	1.23	0.70	0	0.00	0.00
493	Warehousing and Storage	1,950	4,384	0.87	0.87	0.59	0	0.00	20.21
4931	Warehousing and Storage	1,950	4,384	0.87	0.87	0.59	0	0.00	20.21
51	Information	12,899	28,372*	0.52	0.52	0.13	0	0.00	6.07
517	Telecommunications	2,783	7,039	0.85	0.85	0.45	0	0.00	14.97
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
5179	Other Telecommunications	332	691	1.16	1.16	0.29	0	0.00	0.25
51791	Other Telecommunications	332	691	1.16	1.16	0.29	0	0.00	0.25
53	Real Estate and Rental and Leasing	47,287	111,445	1.71	1.70	1.14	4	7.18	14.79
531	Real Estate	1,654	3,194	1.44	1.44	0.63	0	0.00	10.17
5313	Activities Related to Real Estate	943	1,827	1.53	1.53	0.55	0	0.00	13.57
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	45,633	108,251	1.72	1.71	1.16	4	7.39	14.90
5323	General Rental Centers	266	570	3.86	3.86	2.80	0	0.00	0.00
5324	Commercial and Industrial Machinery and Equipment Rental and Leasing	44,046	105,077	1.72	1.71	1.16	4	7.61	15.11
53241	Construction, Transportation, Mining, and Forestry Machinery and Equipment Rental and Leasing	25,827	61,695	1.53	1.52	1.06	2	6.48	13.76

# Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code <sup>[a]</sup>	NAICS Title <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[c]</sup>		Severity <sup>[d]</sup>
				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	24,385	57,272	1.57	1.57	1.11	2	6.98	14.12
53249	Other Commercial and Industrial Machinery and Equipment Rental and Leasing	17,919	42,651	2.00	1.99	1.32	2	9.38	16.41
54	Professional, Scientific and Technical Services	352,362	731,754	0.60	0.59	0.27	6	1.64	9.63
541	Professional, Scientific and Technical Services	350,899	728,785	0.60	0.59	0.27	6	1.65	9.65
5413	Architectural, Engineering, and Related Services	266,936	553,904	0.59	0.59	0.27	4	1.44	9.65
54131	Architectural Services	586	1,165	0.86	0.86	0.34	0	0.00	9.20
54133	Engineering Services	194,672	394,570	0.52	0.52	0.23	2	1.01	9.14
54134	Drafting Services	274	484	0.41	0.00	0.00	1	**	0.00
54135	Building Inspection Services	252	474	0.00	0.00	0.00	0	0.00	0.00
54136	Geophysical Surveying and Mapping Services	8,397	27,720	1.10	1.09	0.48	1	7.21	10.23
54137	Surveying and Mapping (Except Geophysical) Services	9,128	19,804	0.78	0.78	0.38	0	0.00	12.29
54138	Testing Laboratories	35,900	75,048	0.79	0.79	0.44	0	0.00	11.87
5414	Specialized Design Services	283	655	0.31	0.31	0.00	0	0.00	0.00
5415	Computer Systems Design and Related Services	14,795	28,804	0.41	0.41	0.35	0	0.00	24.97
54151	Computer Systems Design and Related Services	14,778	28,771	0.41	0.41	0.35	0	0.00	24.97
541511	Custom Computer Programming Services	266	541	0.00	0.00	0.00	0	0.00	0.00
541512	Computer Systems Design Services	12,087	23,049*	0.43	0.43	0.40	0	0.00	29.37
5416	Management, Scientific and Technical Consulting Services	45,390	91,173	0.66	0.66	0.25	1	2.19	5.92
54161	Management Consulting Services	4,603	8,885	0.41	0.41	0.20	0	0.00	9.28
541611	Administrative Management and General Management Consulting Services	1,861	3,504	0.34	0.34	0.11	0	0.00	1.00
541614	Process, Physical Distribution, and Logistics Consulting Services	1,120	2,244	0.89	0.89	0.53	0	0.00	16.10
541618	Other Management Consulting Services	958	1,823	0.11	0.11	0.00	0	0.00	0.00
54162	Environmental Consulting Services	32,884	64,540	0.79	0.79	0.30	1	3.10	6.02 (5.33*)
54169	Other Scientific and Technical Consulting Services	7,162	16,505	0.32	0.32	0.12	0	0.00	3.31
5417	Scientific Research and Development Services	474	847	2.13	2.13	1.18	0	0.00	12.78
5419	Other Professional, Scientific and Technical Services	19,488	46,347	0.58	0.58	0.31	1	4.32	9.47
54199	All Other Professional, Scientific, and Technical Services	19,070	45,244	0.57	0.57	0.31	1	4.42	8.91
56	Administrative and Support and Waste Management and Remediation Services	419,560	820,116	2.72	2.71	1.72	11	2.68	13.92



# Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code <sup>[a]</sup>	NAICS Title <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[c]</sup>		Severity <sup>[d]</sup>
				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)
561	Administrative and Support Services	347,974	663,930	2.85	2.85	1.81	8	2.41	13.23
5612	Facilities Support Services	29,367	50,376	3.22	3.22	2.09	1	3.97	9.16
56121	Facilities Support Services	29,366	50,375	3.22	3.22	2.09	1	3.97	9.16
5613	Employment Services	24,720	46,239	0.67	0.67	0.34	0	0.00	18.34
56132	Temporary Help Services	24,275	45,370	0.68	0.68	0.35	0	0.00	18.34
5616	Investigation and Security Services	110,438	214,398	1.30	1.30	0.64	3	2.80	15.06
56161	Investigation, Guard, and Armored Car Services	96,434	186,885	1.26	1.25	0.60	2	2.14	16.24
561612	Security Guards and Patrol Services	96,427	186,869	1.26	1.25	0.60	2	2.14	16.24
56162	Security Systems Services	14,004	27,513	1.64	1.63	0.94	1	7.27	8.92
561621	Security Systems Services (Except Locksmiths)	13,757	27,022	1.62	1.61	0.95	1	7.40	8.91
561622	Locksmiths	149	298	1.34	1.34	0.67	0	0.00	12.00
5617	Services to Buildings and Dwellings	171,004	325,571	4.18	4.17	2.79	4	2.46	13.05
56171	Exterminating and Pest Control Services	26,309	53,454	7.14	7.13	3.94	2	7.48	14.54
56172	Janitorial Services	99,525	180,969	3.15	3.15	2.50	0	0.00	15.41
56173	Landscaping Services	41,939	84,643	4.63	4.63	2.77	2	4.73	7.62
56179	Other Services to Buildings and Dwellings	3,228	6,498	2.31	2.31	1.48	0	0.00	27.25 (23.95*)
5619	Other Support Services	11,254	23,515	2.39	2.39	1.51	0	0.00	17.15
56199	All Other Support Services	11,188	23,369	2.40	2.40	1.51	0	0.00	17.15
562	Waste Management and Remediation Services	71,507	156,078	2.15	2.15	1.32	3	3.84	17.79
5621	Waste Collection	25,466	60,003	2.69	2.69	1.71	1	3.33	21.86
56211	Waste Collection	24,987	59,283	2.65	2.65	1.72	1	3.37	22.13
562111	Solid Waste Collection	16,108	39,448*	2.35	2.34	1.46	1	5.07	30.49
562112	Hazardous Waste Collection	7,588	16,717	3.19	3.19	2.18	0	0.00	8.92 (7.40*)
562119	Other Waste Collection	577	1,490	2.42	2.42	1.61	0	0.00	25.50
5622	Waste Treatment and Disposal	6,672	14,674	1.89	1.89	1.12	0	0.00	22.23
56221	Waste Treatment and Disposal	6,652	14,622	1.90	1.90	1.12	0	0.00	22.23
562211	Hazardous Waste Treatment and Disposal	4,939	10,644*	1.82	1.82	1.09	0	0.00	26.08
562212	Solid Waste Landfill	1,030	2,388	1.93	1.93	1.09	0	0.00	9.78
562219	Other Nonhazardous Waste Treatment and Disposal	592	1,346	2.38	2.38	1.63	0	0.00	20.94
5629	Remediation and Other Waste Management Services	37,846	78,172	1.82	1.82	1.09	2	5.12	12.41
56291	Remediation Services	27,013	53,828	1.71	1.71	1.01	0	0.00	12.54

# Table 1: 2012 Injury and Illness Rates by NAICS Code

NAICS Code <sup>[a]</sup>	NAICS Title <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[c]</sup>		Severity <sup>[d]</sup>
				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)
56299	All Other Waste Management Services	10,456	23,595	2.04	2.03	1.24	2	16.95	12.55 (11.23*)
562991	Septic Tank and Related Services	2,149	5,225	4.02	3.98	2.76	1	38.28	12.94
562998	All Other Miscellaneous Waste Management Services	7,905	17,479	1.51	1.50	0.81	1	11.44	12.62 (10.18*)
61	Educational Services	2,406	3,971 <sup>†</sup>	0.40	0.40	0.30	0	0.00	6.13
611	Educational Services	2,406	3,971 <sup>†</sup>	0.40	0.40	0.30	0	0.00	6.13
62	Health Care and Social Assistance	2,749	6,029	0.53	0.53	0.13	0	0.00	2.94
621	Ambulatory Health Care Services	1,993	4,382	0.55	0.55	0.18	0	0.00	3.92
72	Accommodation and Food Services	14,683	33,308	1.53	1.53	0.64	0	0.00	13.76
722	Food Services and Drinking Places	14,301	32,491	1.51	1.51	0.62	0	0.00	13.97
7223	Special Food Services	14,243	32,406	1.50	1.50	0.61	0	0.00	14.07
72231	Food Service Contractors	12,823	28,447	1.67	1.67	0.67	0	0.00	13.64
81	Other Services (Except Public Administration)	180,409	360,767	2.26	2.26	1.32	4	2.22	11.32
811	Repair and Maintenance	142,794	294,975	1.96	1.96	1.09	3	2.03	10.97
8111	Automotive Repair and Maintenance	1,957	4,325	2.87	2.87	1.71	0	0.00	2.97
8112	Electronic and Precision Equipment Repair and Maintenance	5,031	10,073	1.43	1.43	0.85	0	0.00	14.94 (10.66*)
81121	Electronic and Precision Equipment Repair and Maintenance	4,999	10,004	1.42	1.42	0.86	0	0.00	15.15 (10.81*)
811212	Computer and Office Machine Repair and Maintenance	1,119	2,260	0.80	0.80	0.62	0	0.00	22.67
811213	Communication Equipment Repair and Maintenance	1,284	2,655 <sup>†</sup>	1.21	1.21	0.60	0	0.00	15.81
811219	Other Electronic and Precision Equipment Repair and Maintenance	2,426	4,719	1.78	1.78	1.14	0	0.00	14.74 (7.23*)
8113	Commercial and Industrial Machinery and Equipment (Except Automotive and Electronic) Repair and Maintenance	134,649	278,381	1.96	1.96	1.08	3	2.16	10.98
81131	Commercial and Industrial Machinery and Equipment (Except Automotive and Electronic) Repair and Maintenance	129,740	268,124	1.94	1.94	1.06	3	2.24	10.93
8114	Personal and Household Goods Repair and Maintenance	307	492	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 0.5<sup>th</sup> 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 <sup>[a]</sup>	NAICS Title <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[c]</sup>		Severity <sup>[d]</sup>
				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)
812	Personal and Laundry Services	18,376	40,106	5.02	5.01	3.41	1	4.99	10.49
813	Religious, Grantmaking, Civic, Professional and Similar Organizations	130	262	0.00	0.00	0.00	0	0.00	0.00
8139	Business, Professional, Labor, Political and Similar Organizations	130	262	0.00	0.00	0.00	0	0.00	0.00
92	Public Administration	6,317	14,833*	2.06	2.06	0.93	0	0.00	5.85

[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.

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## Table 2

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### 2012 Injury and Illness Rates, by ISN Work Type

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

ISN Work Type <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[d]</sup>
			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	278,900	608,176	1.15	1.14	0.53	15	4.93	10.40
1.0.1 - Turnaround	249,750	540,838	0.77	0.77	0.31	4	1.48	8.31
1.0.2 - Routine Maintenance	367,451	800,424	1.07	1.07	0.52	23	5.75	11.02
1.0.3 - Compression - Maintenance	87,162	194,742	1.06	1.06	0.51	2	2.05	11.05
1.0.4 - Hydraulic Workover	51,029	123,131	1.41	1.40	0.81	5	8.12	14.51
1.0.5 - Steel Erection and Assembly	164,866	368,214	1.22	1.22	0.56	9	4.89	10.28
1.0.6 - Dredging	23,279	54,754	1.84	1.84	1.02	2	7.31	10.38
1.0.7 - Sheet Metal	81,315	172,554	1.78	1.78	0.79	1	1.16	8.88
1.0.8 - Conveyor System Installation	77,104	163,398	1.56	1.55	0.65	2	2.45	8.21
1.0.9 - Onshore Marine Construction	17,978	40,521	1.35	1.34	0.65	2	9.87	11.90 (10.59*)
1.0.10 - Conveyor Belts - Sales	10,417	21,919	2.00	2.00	1.04	0	0.00	13.09
1.0.11 - Conveyor Belts - Installation	30,280	63,931	2.12	2.11	0.94	2	6.26	10.60 (9.33*)
1.0.12 - Conveyor Belts - Service and Repair	18,743	39,596	2.55	2.54	1.20	2	10.10	12.16 (10.77*)
1.1 - Boiler Repair	144,286	301,346	0.97	0.97	0.40	3	1.99	7.97
1.1.1 - Boiler Troubleshooting	49,025	103,452	1.50	1.50	0.64	2	3.87	9.06
1.1.2 - Boiler Cleaning	32,853	67,201	1.58	1.58	0.64	1	2.98	7.70
1.2 - Building Construction	210,705	455,064	1.42	1.42	0.69	9	3.96	9.19
1.2.1 - Floor Covering	29,128	61,648	1.31	1.31	0.64	1	3.24	11.57
1.2.2 - Carpentry - Finishing	59,608	126,673	1.87	1.87	0.94	2	3.16	9.88
1.2.3 - Interior Finishes/Design	40,827	88,045	1.59	1.59	0.71	1	2.27	9.86
1.2.4 - Joint Sealants/Caulking and Waterproofing	31,208	65,810	2.05	2.05	0.98	2	6.08	10.36
1.2.5 - Masonry	28,445	60,329	1.96	1.95	0.94	2	6.63	10.98
1.2.6 - Epoxy & Other Polymer Flooring	11,219	22,404	2.09	2.09	1.10	0	0.00	9.25

[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.

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\*\* 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 <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[d]</sup>
			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	138,068	297,456	1.30	1.29	0.65	9	6.05	12.46
1.3.1 - Explosive	61,775	180,042	1.42	1.41	0.82	4	4.44	10.34
1.3.2 - Chimney & Stack Demolition	1,043	2,188	3.38	3.38	1.19	0	0.00	3.14
1.4 - Dock	37,674	83,517	0.85	0.84	0.37	3	7.18	9.62 (8.61*)
1.4.1 - Marine Hose Testing	1,661	3,981	1.51	1.51	1.00	0	0.00	24.83 (19.48*)
1.4.2 - Dock Services (Tying Boats, etc)	4,478	11,941	1.09	1.06	0.72	2	33.50	21.63 (19.31*)
1.4.3 - Stevedoring (Loading/Unloading Ship Cargo)	7,109	15,726	1.30	1.28	0.66	1	12.72	18.39
1.5 - Diving	30,028	66,631	0.95	0.95	0.47	0	0.00	11.56
1.6 - Drilling	115,354	300,587	1.61	1.60	0.92	8	5.32	13.32
1.6.1 - Pier and Grade Beam Foundation	14,992	32,148	2.26	2.25	1.23	1	6.22	13.79
1.7 - Exchangers	128,988	268,388	0.74	0.74	0.30	1	0.75	9.56
1.7.1 - Tube Repair	98,834	213,507	0.86	0.86	0.36	2	1.87	9.79
1.7.2 - Bundle Extraction	95,110	208,072	0.79	0.79	0.35	1	0.96	11.14
1.8 - Furnace	107,602	233,837	0.76	0.76	0.32	1	0.86	7.81
1.9 - Heat treating	49,090	109,913	0.82	0.82	0.34	0	0.00	10.04 (8.52*)
1.10 - Mechanical	293,709	623,442	1.03	1.03	0.46	9	2.89	10.11
1.10.1 - Machine Installations	136,339	295,934	1.43	1.42	0.65	6	4.05	8.70
1.10.2 - Machine Troubleshooting and Repair	104,766	223,289	1.52	1.51	0.71	6	5.37	8.24
1.10.3 - Steam Systems	63,066	133,459	1.36	1.36	0.53	1	1.50	6.73
1.10.4 - Engine Repair and Maintenance	11,844	25,815	1.24	1.24	0.50	0	0.00	8.17
1.11 - Metals	95,527	214,937	0.84	0.84	0.34	2	1.86	9.54
1.11.1 - Corrosion Control	167,289	404,476	0.99	0.98	0.50	6	2.97	9.35
1.11.2 - Industrial Steel Cutting	27,850	61,350	1.44	1.43	0.67	2	6.52	9.68
1.11.3 - Electrochemical Cleaning	7,794	17,333	0.85	0.84	0.35	1	11.54	4.96
1.11.4 - Linings & Coatings	49,616	110,864	0.99	0.99	0.42	2	3.61	8.75
1.11.5 - Flame Spray (HVOF, Plasma, Electric Wire Arc)	3,393	7,195	2.17	2.17	0.78	0	0.00	4.56
1.12 - Painting	171,478	373,828	0.91	0.91	0.43	9	4.82	10.79
1.12.1 - Linings & Coatings	159,816	341,205	1.02	1.02	0.49	5	2.93	10.90
1.12.2 - Sandblasting	213,674	469,722	0.97	0.96	0.47	15	6.39	12.09
1.12.3 - Lead Abatement	99,567	209,728	0.82	0.82	0.37	2	1.91	12.17
1.12.4 - Pavement Marking	709	1,420	4.23	4.23	2.25	0	0.00	21.53

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

ISN Work Type <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[d]</sup>
			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 - Rail	24,655	49,685	1.88	1.88	1.08	1	4.03	13.86
1.13.1 - Rail Repair	29,967	64,739	1.22	1.22	0.61	1	3.09	8.64
1.13.2 - Switch Engine	8,033	16,436	1.83	1.83	0.99	0	0.00	21.39
1.13.3 - Re-railing	5,818	12,845	1.74	1.74	1.03	0	0.00	17.31
1.13.4 - Railroad Construction	16,044	34,174	2.31	2.30	1.37	2	11.70	13.59
1.13.5 - Industrial Rail Plant Switching	8,532	17,656	1.35	1.35	0.69	0	0.00	17.29
1.13.6 - Railcar Repair, Maintenance and Repair	7,025	18,020*	2.00	2.00	1.17	0	0.00	9.52
1.13.8 - Locomotive Maintenance, Service and Repair	1,362	2,957	3.79	3.72	1.83	1	67.64	11.38
1.13.9 - Railroad Signal Maintenance	1,073	2,245*	0.45	0.45	0.45	0	0.00	40.20
1.13.10 - Rail Bridge Construction and Repair	2,037	4,528	1.81	1.81	0.88	0	0.00	2.51
1.14 - Scaffolding	206,556	449,093	0.66	0.66	0.30	6	2.67	9.39
1.14.1 - Scaffold Installation	97,260	210,880	0.96	0.95	0.45	2	1.90	10.13
1.15 - Tanks	157,300	366,506	1.00	0.99	0.46	8	4.37	9.48
1.15.1 - Cleaning	108,058	239,631	1.25	1.23	0.70	14	11.68	13.37
1.15.2 - Maintenance	162,084	350,776	0.89	0.88	0.41	10	5.70	12.52
1.15.3 - Linings & Coatings	113,771	250,877	0.79	0.78	0.34	2	1.59	12.47
1.15.4 - Construction	138,101	290,520	1.09	1.09	0.51	5	3.44	10.42
1.15.5 - Induction Heating for Fiberglass Removal	11,254	23,243*	0.44	0.44	0.12	0	0.00	8.67
1.15.6 - External Tank Gauge Installation	3,300	6,665*	1.56 (1.04*)	1.56 (1.04*)	0.48	0	0.00	2.38
1.16 - Tower/Vessels	153,963	339,646	0.73	0.73	0.30	3	1.77	9.43
1.17 - Welding	356,394	790,841	1.13	1.13	0.54	21	5.31	12.08
1.17.1 - Structural	99,019	216,585	1.32	1.31	0.60	4	3.69	10.25
1.17.2 - Calibration/Testing Smoke, Heat & Gas Detector	3,163	7,102	2.34	2.31	1.18	1	28.16	8.84
1.18 - Hydroblast	80,467	172,245	1.05	1.04	0.50	5	5.81	11.41
1.19 - Civil	231,113	498,290	1.03	1.02	0.48	10	4.01	10.75
1.19.1 - Concrete	272,585	604,285	1.12	1.12	0.54	10	3.31	10.78
1.19.2 - Pumping/Delivery Service	102,264	264,743	1.42	1.42	0.79	4	3.02	9.32
1.19.3 - Construction	211,050	458,248	1.23	1.22	0.61	12	5.24	11.27
1.19.4 - Underground Sewer Work	129,062	277,982	1.23	1.22	0.65	6	4.32	12.15
1.19.5 - Excavation/Ditching/Dirt Work	340,954	763,647	1.34	1.33	0.72	17	4.45	13.30
1.19.6 - Hydro Vac Excavation/Trenching	91,606	200,590	1.27	1.27	0.65	3	2.99	12.74

## 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)
1.19.7 - Boring	72,642	161,272	1.58	1.57	0.89	6	7.44	14.35
1.19.8 - Precast Concrete	41,465	86,185	1.89	1.89	1.03	1	2.32	12.95
1.19.9 - Air Vac Excavation/Trenching	27,486	59,350	1.71	1.70	0.95	2	6.74	10.36
1.19.10 - Concrete Cutting	11,870	25,037	1.25	1.25	0.48	0	0.00	10.89
1.19.11 - Concrete Core Drilling/Boring	1,569	3,249	1.91	1.91	0.92(0.81*)	0	0.00	27.68(21.40*)
1.20 - Cooling Tower	107,217	228,226	1.16	1.16	0.50	4	3.51	9.78
1.21 - Flare Repairs	75,643	170,099	0.63	0.63	0.27	1	1.18	9.38
1.22 - Precipitator	61,601	128,983	0.97	0.97	0.38	2	3.10	8.02
1.23 - Industrial Cleaning	55,477	117,611	1.65	1.64	1.06	4	6.80	9.69
1.23.1 - Steam/Hydroblast Cleaning	36,182	78,489	1.53	1.52	0.88	4	10.19	11.95
1.23.2 - Cleaning Using Explosives	3,819	8,252	0.75	0.75	0.41	0	0.00	14.58
1.23.3 - Overhead Cleaning	5,063	9,503	1.81	1.81	0.93	0	0.00	11.65(9.67*)
1.23.4 - Dust Collection System	9,962	22,320	1.89	1.89	0.76	0	0.00	7.28
1.23.5 - Industrial Oven Cleaning	3,215	7,013	1.60	1.57	0.66	1	28.52	3.13
1.23.6 - CO <sub>2</sub> /Dry Blast Cleaning	7,681	16,070	1.36	1.36	0.75	0	0.00	5.87
1.23.7 - Food Process Sanitation	12,328	22,736*	4.42	4.42	3.40	0	0.00	4.28
1.24 - Pipeline Construction/Maintenance	282,654	632,303	1.15	1.14	0.57	20	6.33	13.11
1.24.1 - Coatings Repair	139,277	303,345	0.97	0.97	0.44	6	3.96	10.31
1.24.2 - Pipeline/Internal HDPE Lining (including installation)	41,336	94,251	1.70	1.69	0.83	4	8.49	10.95
1.24.3 - Case Cutting	36,267	80,049	1.37	1.37	0.68	2	5.00	13.40
1.24.4 - General Contractor - DOT Covered Tasks	146,413	333,912	1.37	1.36	0.69	15	8.98	12.15
1.24.5 - Install Liners	21,136	45,750	1.65	1.64	0.86	2	8.74	11.29
1.24.6 - Piggable Pressure Isolation	3,561	7,906	1.77	1.75	0.94	1	25.30	13.61
1.24.7 - Dewatering Service	1,835	3,373	2.96	2.96	1.48	0	0.00	8.70
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	1,371	2,680	1.34	1.34	0.97	0	0.00	9.28
1.25 - Steaming/Hot Oilier	12,231	26,618	1.13	1.13	0.56	0	0.00	13.47
1.26 - Line Locating	80,624	180,120	1.34	1.34	0.64	4	4.44	11.47
1.27 - Pumping Services	89,831	248,992	1.58	1.57	0.89	7	5.62	10.10
1.27.1 - Lease Operator/Pumper	22,862	69,858*	1.56	1.56	0.88	1	2.86	8.03
1.27.2 - Water Transfer	12,057	27,641	2.00	1.98	1.19	2	14.47	10.92



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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)
1.27.3 - Pump Supply and Repair	17,116	36,424	1.80	1.80	0.87	1	5.49	6.21
1.28 - Nitrogen	33,394	88,615	1.52	1.52	0.81	0	0.00	9.91
1.28.1 - Nitrogen - Industrial	8,866	18,618	1.17	1.17	0.50	0	0.00	25.90
1.28.2 - Nitrogen - Pipeline	12,660	27,161	1.63	1.63	1.00	0	0.00	27.62
1.28.3 - Nitrogen - Oilfield	17,929	37,133	1.48	1.47	0.82	1	5.39	20.08
1.28.4 - Oxygen	2,493	5,461	1.14	1.14	0.40	0	0.00	7.58 (0.47*)
1.28.5 - Oxygen - Industrial	3,180	6,765	1.33	1.33	0.35	0	0.00	5.18 (0.27*)
1.28.6 - Oxygen - Pipeline	6,709	14,219	1.34	1.34	0.53	0	0.00	11.60 (9.37*)
1.28.7 - Oxygen - Oilfield	1,143	2,409	2.41	2.41	0.66	0	0.00	13.45
1.29 - Piling	96,156	206,905	1.16	1.16	0.57	7	6.77	11.01
1.29.1 - Deep Foundation	23,659	48,770	2.06	2.06	1.11	1	4.10	10.97
1.30 - Right-of-Way	67,103	148,460	1.19	1.18	0.58	2	2.69	10.19
1.30.1 - Acquisition & Land Rights	33,115	69,943	0.65	0.65	0.31	0	0.00	6.16
1.31 - Degassing & Vapor Control	10,318	23,308	1.10	1.10	0.38	0	0.00	8.64
1.32 - Rigging	200,489	481,860	1.21	1.20	0.61	6	2.49	9.54
1.33 - Electrical	154,468	330,274	1.29	1.29	0.58	12	7.27	10.57
1.33.1 - Plant Wiring	110,540	240,098	1.22	1.22	0.54	7	5.83	10.54
1.33.2 - Machine Wiring	107,054	229,858	1.16	1.16	0.52	7	6.09	9.49
1.33.3 - Electrical Trouble Shooting	111,729	240,588	1.29	1.28	0.58	6	4.99	10.58
1.33.4 - Voice Data Wiring	38,096	80,187	1.85	1.85	0.87	2	4.99	12.68
1.33.5 - Lighting Installation and Repair	89,125	194,417	1.24	1.23	0.57	5	5.14	11.85
1.33.6 - Industrial	111,647	240,042	1.15	1.14	0.50	9	7.50	9.92
1.33.7 - Energized Electrical Equipment Cleaning	19,694	42,647	2.05	2.05	0.90	1	4.69	11.37
1.33.8 - Overhead Utility Services	53,018	115,653	1.99	1.98	0.95	4	6.92	14.96
1.33.9 - Underground Utility Services	60,602	132,412	1.97	1.96	0.97	5	7.55	14.36
1.34 - Iron Work	47,278	102,617	1.55	1.55	0.69	2	3.90	8.87 (7.76*)
1.35 - Water Well Services	10,272	22,346	1.46	1.45	0.72	1	8.95	14.57 (12.25*)
1.35.1 - Water Well Drilling	5,744	12,709	2.38	2.36	1.43	1	15.74	19.70
1.35.2 - Water Well Pumps	5,141	12,363	2.64	2.62	1.65	1	16.18	13.38 (11.29*)
1.36 - Engineering Procurement and Construction (EPC)	33,923	70,872	1.09	1.09	0.51	1	2.82	9.77
1.37 - General Contractor - Ammonia Refrigeration	1,627	3,348	1.79	1.79	1.31	0	0.00	15.73

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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)
1.37.1 - Ammonia Refrigeration - Installation	1,804	3,704	2.00	2.00	1.24	0	0.00	12.76
1.37.2 - Ammonia Refrigeration - Maintenance/Repair	1,858	3,835	1.77	1.77	1.15	0	0.00	13.88
1.38 - General Contractor - Working in Tunnels	1,584	3,283	2.68	2.68	1.34	0	0.00	11.48
1.39 - General Contractor - Fabrication	7,442	16,235	2.35	2.35	1.23	0	0.00	9.06
1.40 - General Contractor - Chimney & Stack Construction & Maintenance	1,180	2,635	3.26	3.26	1.67	0	0.00	9.58
1.41 - General Contractor - Specialized Rigging and Lifting (Without Use of Cranes)	4,462	9,283	2.43	2.43	1.25	0	0.00	8.36
2.0 - Machining	72,243	160,576	1.53	1.53	0.70	2	2.49	9.60
2.1 - Bolting	102,495	219,943	0.85	0.85	0.33	1	0.91	7.97
2.2 - Field	74,352	162,074	1.00	1.00	0.41	1	1.23	8.74
2.3 - Hot Tap	82,187	184,770	0.90	0.90	0.39	3	3.25	9.87 (8.25*)
2.4 - Leak Repair	52,166	116,508	1.33	1.33	0.62	3	5.15	10.88 (9.56*)
2.4.1 - Metal Stitching, Casting Repair and Thread Repair	6,235	13,332	2.04	2.04	1.05	0	0.00	7.26
2.5 - Compressor/Turbine	56,674	126,000	1.24	1.24	0.52	0	0.00	10.68
2.6 - Valve Repair	84,261	185,884	1.37	1.37	0.61	0	0.00	8.11
2.6.1 - Control	60,529	132,318	1.18	1.18	0.55	1	1.51	8.73
2.6.2 - Safety/Relief	50,049	109,651	1.25	1.25	0.57	0	0.00	9.14
2.6.3 - Inspection & Testing	24,788	54,542	1.52	1.51	0.70	1	3.67	8.91 (7.91*)
2.7 - Cold Cutting	69,295	154,131	1.01	1.00	0.48	1	1.30	11.65
2.8 - Pumps & Blowers	55,008	119,105	1.57	1.56	0.73	2	3.36	9.40
2.9 - Inplace Boring of Machine Sideframes	7,769	16,762	1.92	1.92	0.89	0	0.00	11.57
2.10 - Onsite Machine Shop Work	22,027	49,405	1.79	1.79	0.89	2	8.10	9.60
3.0 - Instrumentation & Electrical	212,468	462,366	1.04	1.04	0.45	6	2.60	9.58
3.1 - Analyzers	93,921	200,283	1.00	1.00	0.46	3	3.00	9.88
3.2 - Electric	192,603	415,918	1.16	1.16	0.53	10	4.81	11.40
3.2.1 - Batteries	142,520	306,807	1.03	1.02	0.49	8	5.22	10.28
3.2.2 - Generator	240,329	508,191	1.28	1.28	0.66	17	6.69	10.88
3.2.3 - Motors	170,180	366,862	1.25	1.24	0.61	9	4.91	10.28
3.2.4 - Motor Operated Valve	156,726	338,157	1.04	1.04	0.50	6	3.55	10.20
3.2.5 - Program Logic Control	158,613	343,801	1.08	1.07	0.51	6	3.49	9.89
3.2.6 - Polelines	89,492	190,329	1.26	1.25	0.61	8	8.41	11.87
3.2.7 - Precipitator	59,565	128,918	1.06	1.05	0.52	2	3.10	11.44

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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)
3.2.8 - Protective Relays	138,872	301,327	0.94	0.94	0.43	7	4.65	10.84
3.2.9 - Switchgear	213,196	454,532	1.21	1.21	0.59	12	5.28	10.84
3.2.10 - Transformers	201,912	433,278	1.18	1.17	0.57	13	6.00	11.85
3.2.11 - Uninterrupted Power Supply	132,038	282,653	1.41	1.40	0.72	12	8.49	10.91
3.2.12 - Variable Frequency/Speed Drive	131,204	282,157	1.35	1.35	0.66	7	4.96	11.24
3.2.13 - Fiber Optics	114,650	248,953	1.23	1.22	0.60	4	3.21	12.77
3.2.14 - Electrical Construction/Repair	225,088	482,368	1.20	1.19	0.58	12	4.98	11.30
3.2.15 - Wireline	80,158	190,330	1.32	1.32	0.69	7	7.36	11.40
3.2.16 - Cathodic Protection - Installation	92,355	200,074	1.10	1.10	0.50	4	4.00	12.39
3.2.17 - Acknowledgement of PCB Awareness	32,854	70,602	1.67	1.67	0.80	0	0.00	12.11
3.2.18 - Lightning Arrestors	16,909	34,946	1.92	1.91	0.84	3	17.17	12.99
3.2.19 - Remote Racking	1,806	3,505	2.00	2.00	0.97	0	0.00	10.91
3.3 - Instrumentation	205,234	444,450	1.09	1.09	0.50	6	2.70	10.42
3.3.1 - Control Systems	243,701	519,537	1.16	1.16	0.57	4	1.54	10.89
3.3.2 - Control Valves	173,031	373,060	1.08	1.08	0.51	3	1.61	9.96
3.3.3 - Meter prover	81,166	175,621	0.95	0.95	0.46	1	1.14	11.03
3.3.4 - Measurement/Calibration	142,051	307,895	1.01	1.00	0.50	3	1.95	11.51
3.3.5 - Transmitters	120,323	257,902	0.98	0.98	0.45	3	2.33	11.04
3.3.6 - Vibration Monitors	115,171	252,852	1.05	1.05	0.51	3	2.37	10.44
3.3.7 - Cameras	106,013	223,064	1.23	1.23	0.58	2	1.79	10.51
3.3.8 - Test Equipment	108,557	233,353	1.18	1.18	0.58	2	1.71	11.50
3.3.9 - Safety Systems	49,004	106,040	1.52	1.52	0.78	1	1.89	9.92
3.3.10 - Meter Monitoring	53,233	118,426	1.15	1.15	0.59	2	3.38	11.73
3.3.11 - Radioactive	7,173	14,757	1.33	1.33	0.49	0	0.00	8.79
3.3.12 - Meter Reader	15,356	31,803	1.84	1.84	0.90	0	0.00	10.93
3.3.13 - Petroleum Measurement Equipment	4,060	8,892	1.21	1.21	0.56	0	0.00	11.04
3.4 - Pneumatic	50,869	108,980	1.23	1.23	0.61	2	3.67	9.50
4.0 - Heating, Ventilation, & Air Conditioning	94,412	195,848	1.87	1.86	0.84	2	2.04	9.53
4.1 - Filter Medium Changeout for Safe Havens	41,444	85,826	1.67	1.66	0.78	1	2.33	8.13
4.1.1 - HEPA Certification and Testing	12,289	24,912	1.83	1.83	0.75	0	0.00	9.66
4.2 - HVAC Preventative Maintenance, Installations and Repairs	85,765	173,805	2.38	2.37	1.25	2	2.30	10.22

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4.3 - Testing and Balancing of Air-HVAC	49,903	100,923	2.15	2.15	1.03	1	1.98	9.12
4.4 - Duct Cleaning	20,586	41,753	1.84	1.84	0.82	0	0.00	12.23
4.5 - Duct Inspection	21,423	43,904	2.29	2.29	1.03	0	0.00	7.80
4.6 - Duct Design	28,238	57,960	2.53	2.53	1.15	0	0.00	8.74
5.0 - Insulation	125,310	263,699	0.64	0.64	0.24	2	1.52	7.97
5.1 - Asbestos Abatement	96,329	201,751	0.61	0.61	0.30	1	0.99	12.58
5.2 - Refractory	93,247	192,048	0.59	0.59	0.23	1	1.04	8.77 (7.66*)
5.3 - Insulation - Fire Proofing	122,180	254,533	0.47	0.47	0.17	1	0.79	8.82
5.4 - Routine Insulation	138,199	291,562	0.62	0.62	0.26	1	0.69	8.77
5.5 - Furnace/Fire Brick	46,353	94,265	0.66	0.66	0.27	1	2.12	10.81 (8.78*)
5.5.1 - Refractory Dryout (Bake Bricks)	6,754	13,517	1.35	1.35	0.41	0	0.00	10.52 (3.38*)
5.6 - Acid Brick	33,332	66,262	0.42	0.42	0.18	0	0.00	11.85 (8.49*)
5.7 - Industrial	106,095	221,614	0.67	0.66	0.30	2	1.80	10.68
6.0 - Buildings, Grounds & Right-of-Way Maintenance	150,677	307,430	1.91	1.91	1.35	1	0.65	14.36
6.1 - Elevator	25,336	48,933	1.92	1.92	1.30	1	4.09	14.88
6.2 - Janitorial	185,035	347,481	2.18	2.18	1.61	1	0.58	14.81
6.2.1 - Kitchen Hood Cleaning	6,995	11,167	2.08	2.08	0.91	0	0.00	12.26
6.2.2 - Lab Cleaning and Sanitizing	13,491	21,851	1.88	1.88	1.22	0	0.00	34.51
6.3 - Chem spraying	58,854	124,104	1.52	1.51	0.89	3	4.83	12.88
6.4 - Pest Control	33,540	68,218	5.75	5.75	3.17	2	5.86	14.19
6.5 - Plumbing	66,915	135,148	2.11	2.10	1.09	4	5.92	10.06
6.5.1 - Drain Cleaning	13,236	25,665	3.10	3.09	1.62	2	15.59	8.76
6.5.2 - Backflow Preventer Install/Service/Testing	11,492	22,346	3.48	3.47	1.71	1	8.95	6.79
6.6 - Road	74,877	161,008	1.27	1.26	0.67	8	9.94	12.61
6.6.1 - Dust Control	10,448	23,429	2.12	2.12	1.09	0	0.00	11.39
6.7 - Roofing	78,907	163,093	1.23	1.23	0.65	2	2.45	12.98
6.8 - Scales	4,758	10,964	1.26	1.26	0.42	0	0.00	13.84 (11.60*)
6.8.1 - Weighing and Instrument Repairs and Calibration	3,549	7,598	1.66	1.66	0.89	0	0.00	11.46 (8.97*)
6.9 - Signs	20,968	45,534	1.26	1.25	0.59	2	8.78	15.86
6.9.1 - Installation	37,325	80,799	0.92	0.91	0.42	2	4.95	14.29
6.9.2 - Repair	34,268	73,073	0.82	0.81	0.36	2	5.47	12.74

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

ISN Work Type <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[e]</sup>
			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)
6.9.3 - Digital	2,672	5,504	1.85	1.82	0.84	1	36.34	8.02
6.10 - Appliances	10,590	21,702	1.54	1.53	1.02	1	9.22	9.92
6.11 - Mowing and Groundcare	173,028	356,266	2.48	2.48	1.69	9	5.05	11.80
6.11.1 - Tree Trimming/Clearing and Wood Grinding	83,277	177,947	1.50	1.49	0.78	6	6.74	13.42
6.12 - Fence Installation and Repair	88,349	193,060	1.22	1.22	0.60	8	8.29	13.07
6.13 - Locks	30,565	61,888	1.40	1.39	0.74	3	9.69	7.43
6.14 - Door Repair	29,458	59,219	1.45	1.44	0.81	2	6.75	9.51
6.14.1 - Overhead Door Installation/Repair	8,768	18,161	2.72	2.71	1.44	1	11.01	10.35 (8.87*)
6.15 - Surveying	97,266	200,579	0.80	0.80	0.32	0	0.00	10.47
6.15.1 - Leak Surveying	9,042	19,350	1.43	1.43	0.73	0	0.00	18.03
6.15.2 - Topographic	43,838	96,066	0.82	0.81	0.32	1	2.08	6.54
6.15.3 - Boundary	28,106	59,141	0.88	0.88	0.40	0	0.00	7.07
6.16 - Dock Plate and Dock Lock Preventative Maintenance/Repair	12,189	22,073	2.94	2.93	1.63	1	9.06	15.93
6.17 - Snow Plowing/Removal	38,032	75,981	4.44	4.43	2.72	2	5.26	6.48
6.18 - Glass Repair	3,632	6,383	2.51	2.51	1.32	0	0.00	8.54
6.19 - Medical Gas Piping-Repair	5,661	12,017	2.63	2.63	1.28	0	0.00	13.77
6.20 - Structural Repair	16,264	38,563	1.72	1.71	0.76	1	5.19	10.53
6.21 - Irrigation Sprinkler Installation/Repair	17,470	37,206	1.37	1.37	0.65	0	0.00	7.65
6.22 - Cooking Equipment Repair & Maintenance	1,652	4,007	2.84	2.84	1.55	0	0.00	4.28
6.23 - Refrigeration Equipment Repair & Maintenance	6,492	13,405	3.88	3.88	2.09	0	0.00	9.23
6.24 - Interior Landscaping	2,123	3,690	2.60	2.60	1.30	0	0.00	9.67
6.25 - Logging	2,250	5,089	1.93	1.89	1.10	1	39.30	4.67
6.26 - Curtainwalls	968	1,969	1.42	1.42	0.81 (0.71*)	0	0.00	34.79
7.0 - Drilling	111,602	271,361	1.69	1.68	0.97	8	5.90	13.73
7.1 - Directional	132,903	353,968	1.73	1.72	1.02	13	7.35	12.99
7.2 - Tongs - Power Drill Pipe	33,034	98,556	1.78	1.76	1.05	6	12.18	9.70
7.3 - Tongs - Casing	73,771	216,065	1.64	1.63	0.99	10	9.26	11.80
7.4 - Hot Oil Services	61,040	180,068	1.56	1.55	0.93	4	4.44	11.69
7.5 - Fluids	74,099	217,513	1.48	1.47	0.90	5	4.60	10.42
7.6 - Rat and Mouse Hole	33,978	102,329	1.66	1.65	0.99	5	9.77	8.08
7.7 - Reverse Circulation and Rotary Drilling	28,928	72,127	2.00	1.99	1.20	5	13.86	13.76

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

ISN Work Type <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[d]</sup>
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
7.8 - Coalbed Methane Drilling	749	1,587	3.66	3.66	2.14	0	0.00	30.14
7.9 - Control of Solids in Drilling Fluids	26,563	81,109	1.52	1.51	0.84	1	2.47	8.00
7.10 - Rig Up Service	22,702	64,336 <sup>+</sup>	1.49	1.48	1.04	2	6.22	15.69
8.0 - Original Equipment Manufacturer	89,884	197,319	2.15	2.15	1.01	3	3.04	6.52
8.1 - Design & Manufacturer Lubrication Systems	2,702	5,895	3.02	2.99	1.42	1	33.93	7.94
8.2 - Manufacturing Electronic Controls and/or Pilots	6,360	13,361	3.56	3.56	1.71	0	0.00	7.37
8.3 - Fiberglass Products	1,248	2,429	1.32	1.32	1.07	0	0.00	17.50
8.4 - Heat Exchangers	10,067	21,802	3.44	3.44	1.87	0	0.00	9.96
8.5 - Pressure vessels	12,705	28,593	3.41	3.41	1.64	0	0.00	9.65
8.7 - Power Transmission Products	4,455	9,761	2.05	2.05	1.00	0	0.00	12.77 (8.13*)
8.8 - Overhead Crane Manufacturing	2,830	6,274	3.19	3.19	2.26	0	0.00	9.52
8.9 - Wellhead Equipment	5,033	11,375	3.78	3.78	1.88	0	0.00	6.39
8.10 - Above Ground Storage Tanks	9,398	20,673	1.34	1.34	0.53	0	0.00	5.37
9.0 - Inspection	133,956	310,807	1.11	1.11	0.54	1	0.64	8.78
9.1 - Cathodic Protection	80,627	175,309	0.91	0.90	0.45	1	1.14	9.52
9.1.1 - Rectifier	6,735	14,364	1.16	1.16	0.60	0	0.00	6.23 (4.11*)
9.2 - Aerial Patrol	4,756	10,279	0.49	0.49	0.21	0	0.00	0.20
9.2.1 - Charter Helicopter Service	3,420	7,742	0.62	0.62	0.44	0	0.00	14.63
9.2.2 - Aerial Photography/Surveying	6,666	15,724	0.56	0.56	0.24	0	0.00	6.07
9.2.5 - Remote Stack Emission Testing	41,890	83,517	0.68	0.68	0.30	0	0.00	12.60
9.3 - Tanks	83,242	178,712	0.61	0.61	0.26	1	1.12	9.47
9.3.1 - Gauging	34,577	75,668	0.87	0.86	0.44	2	5.29	10.31
9.3.2 - Sampling	31,325	67,847	0.78	0.78	0.41	1	2.95	11.02
9.3.3 - Strapping	18,051	39,232	0.65	0.65	0.35	1	5.10	8.93
9.4 - Non-Destructive Testing	160,798	364,576	0.90	0.90	0.46	3	1.65	9.24
9.4.1 - Thermographic Testing	8,430	17,500	1.51	1.51	0.83	0	0.00	10.67
9.4.2 - Ground Penetrating Radar	2,834	5,902	0.54	0.54	0.20	0	0.00	10.38
9.4.3 - Inspection Service, Visual (Other than Construction/Fabrication)	19,826	41,799	1.01	1.00	0.40	1	4.78	9.21
9.5 - Infrared	38,213	81,622	1.04	1.04	0.51	1	2.45	11.88 (10.69*)
9.6 - Eddy Current	38,307	81,220	0.66	0.66	0.33	0	0.00	14.70 (12.85*)
9.7 - Civil	108,738	237,926	0.55	0.55	0.23	2	1.68	8.44

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

ISN Work Type <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[d]</sup>
			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)
9.8 - Electrical	142,565	311,191	0.85	0.84	0.36	5	3.21	9.71
9.9 - Hydrotesting	119,320	267,278	0.89	0.89	0.43	3	2.24	12.22
9.10 - Line Pigging	83,201	200,974	1.10	1.10	0.54	2	1.99	8.36
9.11 - X-ray	90,980	216,952	0.94	0.94	0.47	0	0.00	8.37
9.12 - Crane	54,237	121,554	0.98	0.98	0.50	2	3.29	7.83
9.13 - Tower	21,627	44,890	0.89	0.89	0.41	0	0.00	8.95
9.14 - Safety Equipment	97,501	210,514	0.79	0.79	0.33	1	0.95	8.38
9.15 - Project Inspection	96,984	214,455	0.56	0.56	0.24	1	0.93	10.28
9.16 - Coating Inspection	125,361	272,880	0.75	0.75	0.31	2	1.47	7.85
9.17 - Welding Inspection	139,815	309,391	0.67	0.67	0.28	1	0.65	8.89
9.18 - Hydrostatic Testing	88,346	189,453	0.98	0.98	0.44	3	3.17	9.56
9.19 - General Contractor - Rope Access	4,619	9,812	0.71	0.71	0.18	0	0.00	4.17
9.20 - Mine Hoist Rope Inspection & Service	1,350	2,472	1.70	1.70	0.89	0	0.00	4.24
9.21 - Sling and Lift	10,043	22,840	1.11	1.10	0.62	1	8.76	7.91
9.22 - Dismantling	16,962	36,883	0.98	0.97	0.48	1	5.42	7.22
9.23 - Pipeline	115,835	272,027	1.03	1.03	0.49	2	1.47	8.43
9.24 - Concrete Testing	6,171	12,544	0.96	0.96	0.45	0	0.00	6.72
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	3,340	7,768	1.31	1.29	0.77	1	25.75	7.65
10.0 - Consultant	200,505	434,704	0.84	0.84	0.40	4	1.84	10.01
10.1 - Training	97,314	203,606	0.77	0.77	0.33	3	2.95	11.00
10.1.1 - Training - Confined Space Training (onsite)	2,066	3,995	0.90	0.90	0.30	0	0.00	0.67
10.1.2 - Training - HAZMAT Training (onsite)	1,491	3,081	1.36	1.36	0.52	0	0.00	3.14
10.2 - Engineering	247,168	526,834	0.78	0.78	0.34	6	2.28	8.16
10.2.1 - Drafting	160,589	333,139	0.73	0.72	0.32	6	3.60	9.22
10.2.2 - Survey	141,107	290,233	0.71	0.71	0.32	2	1.38	9.47
10.2.3 - Electrical	176,244	367,770	0.86	0.86	0.38	6	3.26	9.33
10.2.4 - Chemical	77,110	157,035	0.45	0.45	0.16	1	1.27	9.56(8.60*)
10.2.5 - Metallurgical	38,830	79,547	0.47	0.47	0.20	0	0.00	9.06
10.2.6 - Control	105,670	219,638	0.54	0.54	0.24	2	1.82	7.99
10.2.7 - Civil	154,915	316,578	0.68	0.68	0.28	4	2.53	8.78

## 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)
10.2.8 - Mechanical	156,872	325,674	0.72	0.71	0.29	4	2.46	9.62
10.2.9 - Environment	172,959	350,646	0.70	0.70	0.31	1	0.57	9.31
10.2.10 - Rotating Equipment	74,213	157,552	0.60	0.60	0.23	0	0.00	8.63
10.2.11 - Cathodic Protection	47,411	100,000	0.86	0.86	0.35	1	2.00	8.52
10.2.12 - Drilling	77,319	191,400	1.11	1.11	0.54	0	0.00	7.70
10.2.13 - Acoustical	11,672	24,512	0.38	0.38	0.16	0	0.00	15.34
10.2.14 - Flow Calibration	21,270	45,829	0.46	0.46	0.21	0	0.00	11.94
10.2.15 - Geosciences	62,643	128,296	0.82	0.82	0.36	0	0.00	9.76
10.2.16 - Architecture and Drafting	47,535	99,032	0.51	0.51	0.21	1	2.02	10.20
10.2.17 - Architectural Design	47,437	98,647	0.52	0.52	0.21	1	2.03	8.22
10.2.18 - Deepwater	1,981	4,177	0.81	0.81	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	6,132	11,838	0.71	0.71	0.29	0	0.00	23.14 (11.45*)
10.2.21 - Material Handling	15,988	34,062	1.35	1.35	0.61	0	0.00	7.90
10.2.22 - Electrical Analysis	32,722	67,184	0.81	0.81	0.34	0	0.00	5.21 (3.95*)
10.2.23 - Roof	11,396	23,893	0.85	0.85	0.41	0	0.00	14.70
10.2.24 - Arc Flash Analysis	6,111	12,400	0.73	0.73	0.31	0	0.00	4.24
10.3 - Project Management	250,399	525,889	0.79	0.79	0.34	3	1.14	8.55
10.3.1 - Construction Management	168,215	354,427	0.83	0.83	0.35	1	0.56	8.53
10.4 - Site Consultant	104,484	218,861	0.75	0.75	0.29	1	0.91	7.00
10.4.1 - Drilling	36,289	82,575	1.21	1.20	0.69	3	7.27	11.64
10.4.2 - Construction	99,593	207,931	0.83	0.83	0.36	1	0.96	9.26
10.4.3 - Diving	10,891	22,425	0.54	0.54	0.23	0	0.00	10.82
10.4.4 - Safety & Environmental	171,988	361,093	0.84	0.83	0.39	4	2.22	9.73
10.4.5 - Construction Safety	44,499	93,461	0.76	0.75	0.32	1	2.14	4.60
10.4.6 - Regulatory Consultant	62,412	128,016	0.62	0.62	0.23	1	1.56	5.69
10.4.7 - Logistics Management	6,108	12,882	0.81	0.81	0.33	0	0.00	8.34
10.5 - Ergonomic Assessments	5,649	11,335	0.79	0.79	0.19	0	0.00	6.29
10.5.1 - Ergonomic Industrial	7,979	15,746	0.94	0.94	0.30	0	0.00	10.97
10.5.2 - Ergonomic Office	8,237	16,221	0.91	0.91	0.30	0	0.00	10.97
10.6 - Industrial Hygiene	20,896	42,826	0.95	0.95	0.36	0	0.00	7.99



## 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)
10.7 - IT	7,967	15,835	0.97	0.97	0.45	0	0.00	7.51
11.0 - Rentals	87,744	238,369	1.62	1.62	0.98	4	3.36	10.58
11.1 - Equipment	138,669	358,621	1.70	1.70	0.99	8	4.46	10.98
11.1.1 - Air Conditioning	29,845	66,951	1.37	1.37	0.73	1	2.99	12.66
11.1.2 - Generators	86,560	201,969	2.16	2.15	1.29	9	8.91	12.08
11.1.3 - Compressors	67,854	155,663	1.87	1.86	1.12	7	8.99	13.37
11.1.4 - Elevators	2,709	6,413	2.56	2.56	1.37	0	0.00	21.90
11.1.5 - Well Drilling Equipment	72,692	207,341	1.50	1.50	0.90	2	1.93	11.31
11.1.6 - Oilfield Equipment	106,409	294,195	1.68	1.67	1.05	9	6.12	13.43
11.1.7 - Safety Equipment	14,720	34,972	1.02	1.02	0.46	0	0.00	9.96
11.1.8 - Intercom/Communication Equipment	2,128	5,762	1.28	1.28	0.38	0	0.00	7.35
11.1.9 - Audio Visual Equipment	5,013	11,367	1.71	1.71	0.74	0	0.00	8.47
11.1.10 - Portable, Flameless Heating	3,608	7,118	1.49	1.49	0.73	0	0.00	10.58
11.2 - Office Trailers	27,463	66,799	1.40	1.39	0.72	3	8.98	15.67 (13.90*)
11.3 - Furniture	6,510	14,813	0.77	0.77	0.26	0	0.00	9.67 (6.63*)
11.4 - Tools	107,697	297,124	1.41	1.41	0.86	5	3.37	11.32
11.5 - Welding Equipment	27,061	62,923	1.14	1.14	0.58	0	0.00	12.83
11.6 - Gas Cylinders	23,986	52,744	1.67	1.67	1.14	0	0.00	6.84
11.7 - Portable Toilets	10,166	27,210	2.40	2.39	1.33	2	14.70	16.24
12.0 - Environmental	172,433	363,522	1.07	1.07	0.53	4	2.20	11.39
12.1 - Laboratory	56,548	119,411	0.89	0.89	0.46	0	0.00	12.17
12.2 - Vac Trucks	159,528	374,058	1.50	1.49	0.88	17	9.09	14.58
12.3 - Well Services	53,466	133,347	1.24	1.23	0.67	4	6.00	12.27
12.4 - Waste - Hazardous	138,215	309,265	1.06	1.06	0.60	2	1.29	11.01
12.4.1 - Transportation	89,631	196,891	1.32	1.32	0.77	6	6.09	11.38
12.4.2 - Disposal	69,713	153,219	1.42	1.41	0.83	5	6.53	11.16
12.5 - Spill Cleanup	109,463	238,628	1.27	1.26	0.72	6	5.03	11.18
12.5.1 - Microbial Treatment	19,107	40,432	1.59	1.59	0.95	1	4.95	12.05
12.6 - Soils	134,882	281,646	1.05	1.05	0.55	4	2.84	11.39
12.7 - Drilling	71,392	159,508	1.00	1.00	0.51	0	0.00	9.13
12.8 - Consulting	171,523	346,350	0.77	0.77	0.35	2	1.15	10.24

## 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)
12.8.1 - Permitting	105,743	213,865	0.71	0.71	0.30	0	0.00	8.82
12.8.2 - Asbestos Survey	10,203	20,833	1.40	1.40	0.80	0	0.00	15.88
12.8.3 - Mold Assessment/Sampling	846	1,653	1.45	1.45	0.61	0	0.00	4.58
12.9 - Environmental Remediation	173,409	361,137	1.19	1.18	0.64	5	2.77	11.80
12.10 - Environmental Site Assessment	148,521	307,168	0.85	0.85	0.39	1	0.65	10.40
12.11 - Laboratory Analysis/Mobile	28,444	57,734	0.72	0.72	0.30	0	0.00	10.87
12.12 - Waste Services-Treatment (Including Water)	71,945	155,284	1.24	1.24	0.73	1	1.29	11.36
12.12.1 - Water Treatment	26,633	56,054	1.41	1.41	0.77	0	0.00	12.18
12.12.2 - Resin Restoration	2,636	5,469	1.76	1.76	0.80	0	0.00	9.33
12.13 - Waste Services - Disposal Non-Hazardous	99,801	226,021	1.58	1.58	0.97	6	5.31	16.98
12.14 - Emergency Response	75,560	160,433	1.37	1.37	0.84	2	2.49	11.11
12.14.1 - Radiation	3,405	7,175	1.62	1.62	0.86	0	0.00	13.03
12.15 - Emissions Testing	74,362	151,920	0.57	0.57	0.23	0	0.00	9.90
12.16 - Pit Lining	30,038	66,562	1.25	1.24	0.73	3	9.01	12.18
12.17 - Source/Air Pollution Testing	75,036	151,321	0.64	0.64	0.26	0	0.00	9.69
12.18 - Erosion Control	95,744	197,536	1.04	1.04	0.53	1	1.01	10.09
12.19 - Recontouring	29,834	61,774	0.98	0.98	0.48	1	3.24	10.50
12.20 - Site Reclamation	134,601	283,523	1.04	1.03	0.51	4	2.82	11.46
12.20.1 - Restorative Planting Services	13,843	28,078	1.19	1.19	0.60	0	0.00	15.39
12.20.2 - Mold Abatement/Remediation	1,388	2,815	3.84	3.84	2.84	0	0.00	10.83
12.20.3 - Water/Flood Damage Remediation	1,392	2,876	3.69	3.69	2.99	0	0.00	21.00
12.21 - Supply & Installation of Secondary Containment	33,856	72,346	1.19	1.18	0.61	2	5.53	14.35
12.22 - Supply & Installation of Liner & Geotextile	21,606	45,203	1.21	1.20	0.63	2	8.85	13.47
12.23 - Acoustical	12,019	24,019	0.52	0.52	0.17	0	0.00	3.39
12.23.1 - Design	5,927	12,357	1.28	1.28	0.52	0	0.00	6.97
12.23.2 - Construction	8,721	17,298	1.32	1.32	0.68	0	0.00	5.97
12.23.3 - Manufacturing	604	1,212	3.96 (2.71*)	3.96 (2.71*)	2.31	0	0.00	12.42
12.24 - Recycling	25,883	60,053	2.38	2.37	1.54	1	3.33	21.90
12.24.1 - Computer Components/Lighting Components	3,094	6,963	1.64	1.64	0.98	0	0.00	14.42
12.24.2 - Scrap Metal	8,035	16,914	2.10	2.10	1.36	0	0.00	15.85
12.24.3 - Material Management	3,406	7,024	1.37	1.37	0.80	0	0.00	15.23

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

ISN Work Type <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[e]</sup>
			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)
12.25 - Natural Resources Sciences	35,747	71,098	0.72	0.72	0.25	1	2.81	10.09
12.25.1 - Wetland Delineation	44,199	86,279	0.72	0.72	0.26	2	4.64	8.08
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	4,866	9,687	1.11	1.11	0.62	0	0.00	23.61
12.27 - Environmental Quality Assurance (EQA)	85,287	173,778	0.68	0.68	0.26	0	0.00	9.64
13.0 - Chemicals	40,845	109,970	1.22	1.22	0.65	1	1.82	8.58
13.1 - Catalyst	10,515	23,443	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	35,511	95,072	1.58	1.58	0.99	1	2.10	8.97
13.3 - Water Treatment	55,390	131,585	1.19	1.19	0.61	1	1.52	9.56
13.4 - Gas Processing	43,587	106,652	1.23	1.23	0.70	1	1.88	8.47
13.5 - Passivation	5,962	11,926	0.60	0.60	0.22	0	0.00	14.42
13.6 - Oil Processing	31,644	80,984	1.06	1.05	0.52	1	2.47	7.15 (6.41*)
14.0 - Manpower	58,868	126,232	0.99	0.98	0.48	4	6.34	11.47
14.1 - Catering and Food Services	25,183	56,674	1.41	1.41	0.62	1	3.53	15.75
14.2 - Clerical	55,779	120,006	0.66	0.66	0.30	2	3.33	12.83
14.3 - Labor	209,478	482,647	1.35	1.35	0.69	14	5.80	11.84
14.3.1 - Vendor Stocking of Inventory	6,421	13,536	1.99	1.99	1.17	0	0.00	19.47
14.3.2 - Storeroom Management/Warehousing	9,275	20,121	1.56	1.56	0.88	0	0.00	17.75
14.3.3 - Mail Services	91,392	190,935 <sup>†</sup>	0.83	0.83	0.57	0	0.00	17.53
14.3.4 - Forklift Operator	68,955	153,993	1.11	1.10	0.57	5	6.49	14.18
14.4 - Tools & Stores	41,756	94,893	1.03	1.03	0.50	1	2.11	14.43
14.5 - Product Loading	21,322	48,273	1.10	1.09	0.53	1	4.14	17.97 (15.33*)
14.6 - Personnel Transportation	15,961	35,856	1.31	1.30	0.64	1	5.58	14.00
14.7 - Contract Operators	42,433	100,845	1.45	1.45	0.70	2	3.97	13.73
14.8 - Mechanic - Equipment - Repair	75,186	164,218	1.44	1.43	0.70	3	3.65	10.33
14.8.1 - Tool Repair	31,006	67,457	0.98	0.98	0.44	1	2.96	10.88
14.8.2 - Belt Splicing	13,297	29,180	1.75	1.75	0.83	0	0.00	13.12
14.8.3 - Maintenance of Rotating Equipment	35,852	74,713	1.74	1.74	0.78	1	2.68	10.03
14.9 - Emergency Medical Responder/Medical Technician	26,219	67,777	1.23	1.23	0.66	0	0.00	10.81
14.10 - Service/Maintenance Technician	71,717	155,124	1.75	1.74	0.84	4	5.16	9.38

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

ISN Work Type <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[e]</sup>
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
14.10.1 - Nuclear Equipment Service	4,865	9,975	1.86	1.86	1.02	0	0.00	22.11
14.10.2 - Millwright Service	62,171	130,491	1.55	1.55	0.68	0	0.00	9.19
14.10.3 - Pressure/Temperature Service	36,537	96,447	1.44	1.44	0.72	0	0.00	8.22
14.10.4 - Water Line Maintenance	18,599	39,477	2.00	1.99	1.01	1	5.07	14.79
14.10.5 - Lubrication System Maintenance	17,272	38,084	1.69	1.68	0.81	1	5.25	11.41
14.10.6 - Automation Service	19,168	39,960	1.19	1.19	0.55	0	0.00	12.84
14.10.7 - Pipe Fitting	112,631	251,339	1.21	1.21	0.56	3	2.39	10.57
14.10.8 - Dust Collectors/Baghouses	19,993	42,748	2.04	2.04	0.91	0	0.00	12.77
14.10.9 - Refrigerated Equipment	12,287	26,254	2.04	2.03	1.03	1	7.62	11.62
14.11 - Liquid Product Transfer Service	14,682	37,368	1.30	1.30	0.80	0	0.00	11.82
14.14 - Window Cleaning	6,099	12,350	2.17	2.17	1.26	0	0.00	17.73
14.15 - Paraffin Remover	3,364	6,848*	2.25	2.25	1.40	0	0.00	26.82
14.16 - Person In Charge (PIC)	11,264	25,662	1.53	1.52	0.90	1	7.79	19.53
14.17 - Recruiting and Staffing Service	22,368	43,925	0.67	0.67	0.34	0	0.00	17.33
15.0 - Mobile Equipment	210,424	473,717	1.42	1.42	0.76	7	2.96	13.17
15.1 - Repair Onsite	37,901	82,219	2.61	2.61	1.37	2	4.87	9.76
15.1.1 - Forklift Maintenance and Repair	22,931	47,378	3.86	3.85	1.97	3	12.66	10.19
15.1.2 - Vehicle Maintenance	17,243	39,988	3.18	3.17	1.31	3	15.00	7.65
15.2 - Tire Repair	29,909	64,352	3.42	3.42	1.66	1	3.11	7.93
15.3 - Tractor	17,138	36,210	3.09	3.09	1.43	1	5.52	10.16
15.3.1 - Mechanical/Maintenance Service	21,646	46,509	3.26	3.26	1.46	0	0.00	9.30
16.0 - IT	17,551	36,536	0.71	0.71	0.36	0	0.00	9.59 (8.26*)
16.1 - Computers	52,309	109,171	0.62	0.62	0.33	1	1.83	13.61
16.2 - Towers/Antennas (Communication)	13,932	29,501	1.19	1.19	0.60	0	0.00	18.77
16.3 - Pagers	9,591	19,996	0.74	0.74	0.31	0	0.00	13.23
16.4 - Telephones	31,205	65,796	1.12	1.12	0.53	0	0.00	11.91
16.5 - Distributive Control Systems	20,991	45,171	0.63	0.63	0.29	0	0.00	10.72
16.6 - Radios	46,929	98,590	0.63	0.63	0.28	0	0.00	11.46
16.7 - Msc. Technical Services	17,570	36,020	0.75	0.75	0.36	0	0.00	15.32
16.8 - Audio Visual	34,129	72,647	0.82	0.82	0.37	0	0.00	9.69
16.9 - Software	7,100	14,935	0.76	0.76	0.28	0	0.00	1.14

## 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)
16.9.1 - Software Installation & Repair	6,658	13,869	0.78	0.78	0.25	0	0.00	0.17
16.10 - Telecommunication	12,863	27,177	1.67	1.66	0.87	1	7.36	8.68
16.11 - Hardware Installation & Repair	13,519	27,914	1.66	1.66	1.05	0	0.00	6.89 (6.13*)
17.0 - Safety	71,660	155,327	0.80	0.80	0.40	0	0.00	15.79
17.1 - Fire Protection	72,677	156,911	1.07	1.07	0.52	2	2.55	9.54
17.1.1 - Fire Sprinkler Service	40,969	88,326	1.81	1.81	0.91	0	0.00	8.74
17.1.2 - Fire Sprinkler Installation, Inspection & Testing	34,742	73,718	1.83	1.82	0.92	1	2.71	8.56
17.1.3 - Fire Extinguisher Service	12,425	26,560	2.00	2.00	0.98	0	0.00	7.30
17.1.4 - Heavy Equipment Fire Suppression System	2,381	4,847	1.77	1.77	1.03	0	0.00	10.51
17.1.5 - Fireproofing/Firestopping	3,538	6,908*	0.72	0.72	0.32	0	0.00	11.64
17.2 - Emergency Response	45,448	113,347	1.07	1.07	0.56	1	1.76	8.49
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	15,651	33,369	0.40	0.40	0.07	0	0.00	3.57
17.3 - Security	150,435	284,245	1.27	1.26	0.61	3	2.11	14.37
17.3.1 - Trafficking/Gate Guarding	102,584	188,868	1.27	1.26	0.51	3	3.18	16.68
17.3.2 - Security System Installations	32,114	64,460	1.55	1.55	0.75	1	3.10	8.06
17.3.3 - Cameras/Closed Circuit Television	29,178	58,194	1.48	1.47	0.71	1	3.44	7.31
17.3.4 - Outdoor Warning/Sirens	28,616	58,568	1.27	1.27	0.59	1	3.41	6.58
17.4 - FRC Onsite Delivery	9,939	23,043	0.76	0.76	0.37	0	0.00	5.84
17.5 - Medical Services	35,218	77,279	0.57	0.57	0.25	1	2.59	7.65
17.6 - Confined Space Attendant (Fire Watch/Hole Watch)	80,597	180,089	0.94	0.94	0.47	1	1.11	12.59
17.7 - Confined Space Rescue	33,996	77,326	0.93	0.92	0.43	2	5.17	9.14
17.8 - Fall Protection	37,672	83,903	0.98	0.97	0.48	3	7.15	10.23
17.9 - Access Platforms	13,901	29,296	0.82	0.82	0.31	0	0.00	15.78 (11.69*)
18.0 - Trucking/Transportation	251,320	621,446	1.56	1.55	0.92	17	5.47	14.97
18.1 - Hauling	203,835	498,465	1.95	1.94	1.18	39	15.65	18.41
18.1.1 - Water Trucks/Hauling	91,793	220,047	2.17	2.14	1.39	29	26.36	18.91
18.1.2 - Fresh Water Hauling	78,977	188,273	2.16	2.14	1.37	24	25.49	18.86
18.1.3 - Heavy Truck Hauling (Dump or Larger)	170,729	395,221	1.65	1.64	0.93	25	12.65	18.22
18.1.4 - Oversized/Heavy Materials	119,885	285,510	1.57	1.56	0.86	16	11.21	16.20
18.1.5 - Coke	4,752	10,712	1.40	1.40	0.84	0	0.00	11.68 (9.41*)

## 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)
18.2 - Freight	34,789	83,895	1.99	1.99	1.27	0	0.00	22.10
18.3 - Tank Truck	133,456	329,635	1.86	1.85	1.11	20	12.13	17.67
18.3.1 - Waste - Non Hazardous	118,429	292,185	1.89	1.87	1.14	19	13.01	17.64
18.4 - Navigation and Positioning	2,220	5,697	2.39	2.32	1.65	2	70.21	26.81
18.5 - Logistics	25,317	58,915	1.73	1.72	1.17	5	16.97	20.76
18.6 - Weigh Scale Service	2,271	5,317	2.22	2.22	1.47	0	0.00	19.08(13.96*)
18.7 - Pick-up and Delivery Driver	56,493	125,240	2.10	2.10	1.44	3	4.79	14.72
18.8 - Tarping	8,445	21,505	3.05	3.05	1.92	0	0.00	22.20
19.0 - Down Hole Services	92,775	269,506	1.69	1.68	1.03	12	8.91	11.67
19.1 - Fishing (Down Hole Recovery)	123,919	343,223	1.47	1.46	0.86	8	4.66	10.53
19.2 - Pumper Svc.	123,131	349,473	1.50	1.49	0.89	7	4.01	10.03
19.3 - Seismic Operations	52,427	151,354	1.12	1.12	0.54	2	2.64	6.47
19.4 - Well Drilling (Workover/Completion)	143,288	393,738	1.63	1.62	0.98	12	6.10	12.07
19.5 - Wireline Service	140,399	392,066	1.47	1.47	0.86	9	4.59	10.32
19.6 - Consultant - Well Service	81,888	229,523	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	60,276	167,784	1.85	1.84	1.06	7	8.34	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	71,801	205,055	1.54	1.53	0.94	6	5.85	11.01
19.11 - Well - Services	123,162	335,825	1.78	1.77	1.10	16	9.53	12.71
19.11.1 - Snubbing Coil Tubing	87,492	249,804	1.61	1.60	0.96	8	6.41	10.30
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	41,876	128,247	1.65	1.65	1.02	4	6.24	10.62
19.13 - Casing	68,422	204,809	1.69	1.68	1.07	8	7.81	11.42
19.14 - Plug and Abandonment	92,017	266,951	1.62	1.61	0.97	11	8.24	11.50
19.15 - Mudlogging	60,250	179,856	1.36	1.36	0.81	2	2.22	10.41
19.16 - Well Blowout Control	62,886	189,166	1.53	1.52	0.94	5	5.29	10.53
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	30,752	86,622	1.66	1.66	0.97	3	6.93	8.02
19.19 - Wellhead Service	64,298	191,318	1.57	1.56	0.97	7	7.32	10.36
19.20 - Logging Services	178	413	1.94	1.94	0.97	0	0.00	48.50

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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)
20.0 - 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	11,295	29,937	1.15	1.15	0.59	0	0.00	12.12
20.4 - Marine Service	11,354	32,944	0.75	0.75	0.50	0	0.00	21.02
20.4.1 - Marine Vessels - Repairs	1,777	4,401	2.05	1.95	1.27	2	90.90	11.91
20.4.2 - Marine Aids to Navigation	487	987	3.04	3.04	1.82	0	0.00	13.07
20.5 - Offshore Construction	30,425	79,148	0.67	0.66	0.34	5	12.63	13.29
20.5.1 - Marine Construction	8,646	21,011	1.35	1.35	0.80	0	0.00	12.18
20.5.2 - Offshore Construction - Underwater	8,080	17,940	0.55	0.55	0.29	0	0.00	14.37
20.5.3 - Offshore Construction - Above water	11,000	27,765	0.74	0.71	0.36	4	28.81	15.50
20.6 - Diving	9,540	23,893	0.85	0.85	0.49	0	0.00	14.48
20.7 - Offshore Transportation	6,579	20,214	0.68	0.68	0.41	0	0.00	16.94
20.7.1 - Marine	21,872	72,219	0.43	0.43	0.23	0	0.00	16.26 (14.29*)
20.8 - Contract Operators	12,908	31,819	0.69	0.69	0.27	0	0.00	25.06
20.8.1 - Crane Operator	21,540	53,523	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	41,347	90,402	0.43	0.43	0.17	1	2.21	13.12
20.14 - Instrumentation	19,888	43,059	0.65	0.65	0.24	0	0.00	8.15
20.14.1 - Pneumatic	18,783	41,082	0.63	0.63	0.21	0	0.00	12.12
20.14.2 - Electrical	18,561	40,109	0.68	0.68	0.21	0	0.00	9.95
20.15 - Site Consultants	12,928	28,976	0.55	0.55	0.28	0	0.00	15.78
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	11,251	24,020	0.68	0.68	0.19	0	0.00	2.02
20.15.3 - Diving	4,718	10,615	0.89	0.89	0.45	0	0.00	14.70
20.15.4 - Safety & Environmental	7,288	18,586	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	57,580	145,155	0.82	0.82	0.44	4	5.51	9.14

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

ISN Work Type <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[d]</sup>
			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)
20.18 - Underwater Acoustics	2,364	6,869	0.87	0.87	0.47	0	0.00	2.03
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)	16,958	42,299	2.16	2.14	1.35	4	18.91	11.11
21.1 - General Contracting	23,283	50,810	1.30	1.29	0.59	2	7.87	11.20
21.2 - Tank & Piping (UST)	19,740	46,872	1.78	1.77	0.92	2	8.53	10.93
21.3 - Tank & Piping (UST) Maintenance	15,212	37,163	1.72	1.71	0.91	2	10.76	14.98
21.4 - Service Station Maintenance	1,856	3,761	2.07	2.07	1.44	0	0.00	7.54
21.5 - Canopies/Awnings & Installation	3,672	7,959	1.36	1.31	0.80	2	50.26	4.44
21.6 - Materials/Geotechnical Testing	13,008	23,511	1.06	1.06	0.46	0	0.00	12.48
21.7 - Signage	1,188	2,448	2.12	2.12	1.31	0	0.00	10.73
21.8 - Tank Tightness Testing (UST)	3,558	7,687	1.04	1.04	0.81	0	0.00	18.68
21.9 - Car Wash (Install, Maintenance/Repair)	1,047	2,163	2.96	2.96	2.50	0	0.00	7.06
21.10 - Electrical Construction	19,297	40,691	1.80	1.80	0.89	0	0.00	9.38
21.11 - Consulting Engineer	23,846	48,043	0.71	0.71	0.29	0	0.00	6.25
21.12 - Asphalt Paving	18,694	37,818	2.43	2.41	1.43	4	21.15	9.84
21.13 - Engineering Design	13,706	29,937	0.67	0.67	0.36	0	0.00	14.36
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	5,879	12,468	1.24	1.24	0.56	0	0.00	4.60
21.16 - HVAC	11,913	24,608	1.96	1.96	0.97	0	0.00	11.24
21.17 - Dispensers and Related Accessories	1,240	2,523	2.22	2.22	1.43	0	0.00	10.32
21.18 - Tank & Vessel Cleaning	14,870	32,250	1.35	1.34	0.71	1	6.20	15.26 (13.11*)
21.19 - Soil Boring/Load Analysis	4,643	9,811	0.77	0.77	0.47	0	0.00	20.34
21.20 - Septic System Pump Out	1,649	3,692	2.28	2.28	1.41	0	0.00	15.12
21.21 - Landscaping & Mowing	12,903	21,997	2.48	2.47	1.50	1	9.09	15.82
21.22 - Security Fire Protection	21,483	43,264	1.59	1.59	0.79	1	4.62	6.85
21.23 - Water / Sewer Piping Construction	18,162	36,840	2.11	2.10	1.14	2	10.86	9.25
21.24 - Underground Storage Tank Removal	8,184	17,840	1.55	1.52	1.01	2	22.42	8.19 (7.07*)
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	20,297	41,678	2.03	2.03	1.04	2	9.60	7.54



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

ISN Work Type <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[d]</sup>
			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)
22.0 - Supplier	49,620	102,667	1.61	1.61	0.98	3	5.84	8.06
22.1 - Gasses	45,970	95,336	2.06	2.06	1.54	1	2.10	6.35
22.1.1 - Industrial Purposes	83,984	176,816	1.90	1.90	1.43	2	2.26	8.16
22.1.2 - Medical Purposes	28,144	58,819	1.86	1.86	1.42	1	3.40	7.79
22.3 - Furniture Supplier	1,725	3,516	3.13	3.13	2.05	0	0.00	11.11
22.3.1 - Selling	10,137	20,330	2.56	2.55	1.71	1	9.84	9.22
22.3.2 - Delivery/Installation	10,719	20,706	3.44	3.44	2.30	0	0.00	7.86
22.3.3 - Furniture Storage Offsite	3,873	7,413	4.64 (4.17*)	4.64 (4.17*)	3.21 (2.86*)	0	0.00	7.62
22.3.4 - Moving Services	4,704	8,855	5.22	5.22	3.32	0	0.00	5.03
22.4 - Industrial Pipe, Fittings and Valves	25,738	53,649	2.15	2.14	0.98	4	14.91	7.65
22.4.1 - Tower/Vessels/Pipe Assemblies Manufacturer	3,739	8,099	2.79	2.79	1.41	0	0.00	10.52
22.5 - Chemicals	22,855	48,107	1.75	1.74	1.06	2	8.31	11.28
22.6 - Packaging Suppliers, Equipment and Services	15,766	32,383	2.23	2.21	1.36	3	18.53	6.61
22.7 - Doors/Frames/Hardware	3,779	7,845*	3.01	2.96	1.43	2	50.99	8.30 (6.86*)
22.9 - Industrial Storage and Shelving	1,361	2,708	3.77	3.77	2.22	0	0.00	8.14
22.11 - Electrical Supplies	23,177	41,030	2.82	2.82	1.97	1	4.87	12.97
22.12 - Industrial Metal and Plastic Products	2,653	5,791*	2.66	2.59	1.14	2	69.07	4.58
23.0 - Sales	29,241	59,878	1.91	1.91	1.15	0	0.00	8.55
23.1 - Bits & Tools	53,148	107,298	2.16	2.16	1.36	3	5.59	9.65
23.2 - Safety Equipment	96,555	195,620	1.94	1.93	1.32	4	4.09	8.75
23.3 - Lube & Fuels	49,452	96,894	2.44	2.44	1.62	3	6.19	12.11
23.4 - Seawater Pumps	2,038	4,317	3.71	3.71	2.13	0	0.00	16.39 (12.15*)
24.0 - Pharmaceutical	4,027	8,809	0.66	0.66	0.36	0	0.00	7.93
24.1 - Validation	14,380	28,934	0.23	0.23	0.12	0	0.00	2.09
24.1.1 - Computers	1,063	2,179	0.46	0.46	0.09	0	0.00	0.20
24.1.2 - Mechanical	23,853	50,903	0.86	0.86	0.31	0	0.00	5.95
24.1.3 - Electrical	19,167	40,270	1.14	1.14	0.50	0	0.00	9.07
24.1.4 - Process	9,673	20,654	0.57	0.57	0.26	0	0.00	13.27 (10.26*)
24.2 - Commissioning Quality	6,989	15,753	0.57	0.57	0.19	0	0.00	11.73
24.2.1 - Computers	1,098	2,265	0.18	0.18	0.09	0	0.00	0.50
24.2.2 - Mechanical	16,152	35,576	0.85	0.85	0.35	0	0.00	7.95

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

ISN Work Type <sup>[a]</sup>	Total Number of Employees	Total Number of Exposure Hours (in 1,000s)	Injuries and Illnesses <sup>[b]</sup>			Fatalities <sup>[d]</sup>		Severity <sup>[d]</sup>
			Total Recordable Incident Rate (TRIR)	Nonfatal Total Recordable Incident Rate (Nonfatal TRIR)	Days Away/Restricted or Transfer Rate (DART)	Total Number of Fatalities	Fatality Rate per 100,000 Workers	Incident Severity (In Days)
24.2.3 - Electrical	28,273	58,321	0.85	0.85	0.32	0	0.00	6.30
24.2.4 - Process	9,453	20,286	0.56	0.56	0.26	0	0.00	8.61
24.4 - Msc. Technical Services	6,939	13,853	0.61	0.61	0.32	0	0.00	15.04
25.0 - Labs/Cleanrooms	8,036	15,556	1.61	1.61	0.76	0	0.00	15.51
25.1 - Cleanroom Certification	3,720	7,762	1.06	1.06	0.33	0	0.00	12.40
25.1.1 - Particle Counts	3,155	7,287	0.69	0.69	0.38	0	0.00	26.14
25.2 - Testing and Balancing	7,565	16,665	1.30	1.30	0.68	0	0.00	12.11 (10.67*)
25.3 - Contamination Control	4,828	10,157	1.04	1.04	0.67	0	0.00	35.10
25.4 - BioSafety Cabinet Certification	3,164	7,314	0.68	0.68	0.41	0	0.00	30.10
25.5 - Cleanroom Installation	3,577	7,084	1.95 (1.68*)	1.95 (1.68*)	0.90	0	0.00	10.25
25.6 - Sampling Services	38,331	78,543	0.69	0.69	0.35	0	0.00	11.22
25.8 - Lab Instruments	12,365	24,321	0.95	0.95	0.50	0	0.00	7.78
26.0 - Energy	14,225	32,179	1.52	1.52	0.76	0	0.00	11.30
26.1 - Electrical Generation	36,872	76,623	1.02	1.02	0.47	1	2.61	8.66
26.2 - Steam Generation	13,486	27,127	1.02	1.02	0.46	0	0.00	9.63
27.0 - Heavy Equipment	114,946	264,685	1.54	1.53	0.74	2	1.51	13.08
27.1 - Sales	16,437	33,233	5.04	5.04	2.06	1	6.02	6.47
27.2 - Service/Repair	33,351	69,809	3.48	3.48	1.53	0	0.00	6.97
27.2.1 - Shatterproof Windows	1,945	3,893	4.68	4.68	1.95	0	0.00	6.54
27.3 - Operation	98,606	231,954	1.55	1.54	0.83	3	2.59	16.46
27.4 - Rentals	21,421	47,006	4.00	4.00	1.74	0	0.00	7.25
27.5 - Inspection	14,993	32,774	2.95	2.95	1.32	0	0.00	8.12
28.0 - Fixed Cranes	31,236	67,044	1.63	1.62	0.87	1	2.98	12.36
28.1 - Rentals	3,043	6,679	2.96	2.96	2.01	0	0.00	14.24
28.1.1 - Overhead and Gantry	3,050	6,912	3.53	3.53	2.11	0	0.00	12.22
28.1.2 - Rentals - Tower	467	970	1.44 (1.25*)	1.44 (1.25*)	1.24 (1.04*)	0	0.00	26.14
28.2 - Operator/Rigger	16,951	36,990	1.61	1.60	0.85	2	10.81	11.08
28.2.1 - Operator/Rigger - Overhead & Gantry	9,834	21,466	2.00	2.00	1.06	0	0.00	8.46
28.2.2 - Operator/Rigger - Tower	5,458	12,823 <sup>+</sup>	1.05	1.05	0.34	0	0.00	3.39
28.2.3 - Operator/Rigger - Derrick	8,839	19,652	1.05	1.04	0.45	1	10.18	7.32 (5.73*)
28.3 - Service / Repair	6,996	15,368	2.07	2.06	1.43	1	13.01	12.21

## 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)
28.3.1 - Service / Repair Overhead & Gantry	7,179	16,336	2.49	2.49	1.37	0	0.00	6.83
28.3.2 - Service / Repair - Tower	544	1,161	2.41	2.41	1.21 (1.04*)	0	0.00	2.36
28.3.3 - Service / Repair - Derrick	746	1,727	1.74	1.74	0.93 (0.81*)	0	0.00	0.40
28.4 - Inspection	12,714	29,345	1.25	1.24	0.72	1	6.82	9.49
28.4.1 - Inspection - Overhead & Gantry	8,715	20,211	2.01	2.01	1.14	0	0.00	7.45
28.4.2 - Inspection - Tower	6,692	16,101	0.78	0.78	0.31	0	0.00	4.89
28.4.3 - Inspection - Derrick	6,826	16,436	0.75	0.75	0.28	0	0.00	4.44
29.0 - Mobile Crane	230,943	561,242	1.18	1.17	0.61	12	4.28	10.45
29.1 - Rental	97,899	264,179	1.47	1.46	0.86	5	3.79	10.44
29.1.1 - Rental - Crawler	4,783	11,264	1.67	1.63	0.69	2	35.51	7.10
29.1.2 - Rental - Rough Terrain	6,246	14,290	1.78	1.75	0.76	2	27.99	7.24
29.1.3 - Rental - Telescopic	12,899	30,673	1.98	1.98	1.15	0	0.00	6.14
29.1.4 - Rental - Truck Mounted	13,345	30,935	2.21	2.21	1.20	0	0.00	6.30
29.1.5 - Rental - Wheel Mounted	9,068	19,051	1.93	1.93	1.03	0	0.00	7.28
29.1.6 - Rental - Straddle	778	1,657	4.11	4.11	1.09	0	0.00	9.21
29.2 - Operator / Rigger	224,024	553,355	1.17	1.16	0.62	14	5.06	10.31
29.2.1 - Operator / Rigger - Crawler	13,799	31,934	1.22	1.20	0.55	2	12.53	7.24
29.2.2 - Operator / Rigger - Rough Terrain	16,778	39,189	1.39	1.38	0.63	2	10.21	8.96
29.2.3 - Operator / Rigger - Telescopic	18,555	42,893	1.80	1.80	1.01	0	0.00	7.04
29.2.4 - Operator / Rigger - Truck Mounted	23,941	55,464	1.65	1.64	0.85	1	3.61	6.73
29.2.5 - Operator / Rigger - Wheel Mounted	17,497	38,316	1.40	1.40	0.70	0	0.00	8.03
29.2.6 - Operator / Rigger - Straddle	1,700	3,657	2.24	2.24	0.60	0	0.00	7.63
29.3 - Service / Repair	60,350	135,699	1.27	1.27	0.64	5	7.37	10.43
29.3.1 - Service / Repair - Crawler	4,355	8,530	4.55	4.55	1.13	0	0.00	4.32
29.3.2 - Service / Repair - Rough Terrain	2,692	5,705	3.16	3.16	1.19	0	0.00	7.33
29.3.3 - Service / Repair - Telescopic	3,823	8,151	2.99	2.99	1.89	0	0.00	12.04
29.3.4 - Service / Repair - Truck Mounted	5,079	10,865	3.09	3.09	1.71	0	0.00	10.66
29.3.5 - Service / Repair - Wheel Mounted	3,994	8,762	2.26	2.26	1.44	0	0.00	13.72 (12.02*)
29.3.6 - Service / Repair - Straddle	706	1,564	2.94	2.94	1.02	0	0.00	13.65
29.4 - Inspection	8,460	18,477	1.81	1.81	1.00	0	0.00	8.68
29.4.1 - Inspection - Crawler	2,082	4,450	2.79	2.79	1.26	0	0.00	9.94

## 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)
29.4.2 - Inspection - Rough Terrain	2,473	5,294	2.57	2.57	1.13	0	0.00	9.09
29.4.3 - Inspection - Telescopic	3,855	8,245	2.96	2.96	1.84	0	0.00	12.05
29.4.4 - Inspection - Truck Mounted	4,503	9,688	2.81	2.81	1.63	0	0.00	10.82
29.4.5 - Inspection - Wheel Mounted	3,529	7,719	2.51	2.51	1.58	0	0.00	12.15
29.4.6 - Inspection - Straddle	653	1,409	2.84	2.84	1.14	0	0.00	15.80
30.0 - Mining	4,041	9,259	1.81	1.79	0.95	1	21.60	14.51
30.1 - Demolition / Salvage	3,163	6,638	1.69	1.69	0.93	0	0.00	19.91
30.1.1 - Equipment	2,594	5,761	2.74	2.74	1.67	0	0.00	10.49
30.1.2 - Scrap Bin Removal	2,185	4,537	1.32	1.32	0.66	0	0.00	16.60
30.2 - Drilling	2,293	5,054	2.18	2.18	1.38	0	0.00	19.09 (15.44*)
30.2.1 - Blast Holes	2,449	5,675	2.26	2.26	1.27	0	0.00	21.83 (18.75*)
30.3 - Environmental Services	17,115	34,281	0.74	0.74	0.34	0	0.00	8.69
30.3.1 - Agricultural Activities	1,450	3,082	1.23	1.23	0.45	0	0.00	12.74
30.3.2 - Hydrology Studies / Monitor	8,111	15,175	0.71	0.71	0.22	0	0.00	5.72
30.3.3 - Hydro seeding	2,341	5,012	2.95	2.95	1.44 (1.28*)	0	0.00	6.78
30.4 - Equipment Maintenance	20,994	36,801*	3.21	3.21	1.91	0	0.00	6.21
30.4.3 - Gearcase Repair	2,816	6,399	1.44	1.44	0.59	0	0.00	12.35
30.4.4 - Locomotive Repair	1,646	3,590	2.79	2.79	1.00	0	0.00	11.96
30.4.6 - Mine Fan Repair / Maintenance	1,444	3,104	2.71	2.71	1.29	0	0.00	7.00
30.5 - General Services	11,133	20,295	1.63	1.63	0.85	0	0.00	5.87
30.5.1 - Fan Balancing	1,748	3,426	1.81	1.81	0.76	0	0.00	6.19
30.5.3 - Roadway Maintenance	5,497	11,289	2.32	2.32	1.44	0	0.00	11.25
30.5.4 - Silo/Bin/Bunker Cleanout	987	2,074	2.03	2.03	0.87	0	0.00	8.90
30.6 - Haulage	3,205	6,487	2.07	2.07	0.83	0	0.00	6.99
30.6.2 - Ready Mix Concrete	24,285	60,986	1.39	1.39	0.66	1	3.28	6.71
30.7 - Major Construction	8,150	18,246	1.91	1.90	1.07	1	10.96	12.54
30.7.1 - Bridge Construction	19,281	37,621	2.53	2.52	1.32	2	10.63	10.96
30.7.6 - Pond & Dam Construction	19,166	37,359	2.36	2.36	1.25	1	5.35	11.37
30.7.7 - River Facility Construction	9,290	18,816	2.30	2.29	1.04	1	10.63	11.55
30.7.8 - Underground Concrete Work	2,563	5,254	2.78	2.78	1.98	0	0.00	18.89
30.7.9 - Underground Excavation	2,648	5,411	2.48	2.48	1.77	0	0.00	28.10 (25.26*)

## 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)
30.8 - Miscellaneous	707	1,283	1.40	1.40	0.94	0	0.00	61.78
30.8.2 - Freeze Proofing	558	1,194	2.34	2.34	1.51	0	0.00	7.21
30.8.4 - Pipe Recovery	829	1,765	2.15	2.15	1.36	0	0.00	24.84
30.9 - Prep Plant Repair	2,630	5,238	1.64	1.64	0.61	0	0.00	3.42
30.9.1 - Chute Work	1,504	3,136	2.30	2.30	0.89	0	0.00	3.28
31.0 - Archaeology	5,855	11,900*	0.37	0.37	0.08	0	0.00	2.91
31.1 - Cultural Resource Management	6,051	12,209*	0.36	0.36	0.07	0	0.00	3.77
32.0 - Wind Farm	-	-	-	-	-	-	-	-
32.2 - Ground Level Work	7,420	15,791*	0.82	0.82	0.19	0	0.00	0.91

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

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

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

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

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

\* Indicates that the difference between the rate computed using all valid records and that computed using only those records excluding the highest 0.5<sup>th</sup> 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

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- 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)<sup>1</sup> for more information.
- 2. ISN Work Type:** A detailed list of commonly performed work classifications and activities available in the [ISNetworld](http://ISNetworld.com)<sup>2</sup> 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)<sup>3</sup> 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.

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<sup>1</sup> <http://www.census.gov/naics>

<sup>2</sup> [ISNetworld.com](http://ISNetworld.com)

<sup>3</sup> [http://www.osha.gov/pls/oshaweb/owastand.display\\_standard\\_group?p\\_toc\\_level=1&p\\_part\\_number=1904](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:

$N_{\text{NONFATAL}}$  = 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:

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

$N_{\text{DRAJT}}$  = 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:

$N_{\text{FATAL}}$  = 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:

$N_{\text{DAYS}}$  = 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).

<sup>4</sup> 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 0.5<sup>th</sup> 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 0.5<sup>th</sup> 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 0.5<sup>th</sup> 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 0.5<sup>th</sup> 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 0.5<sup>th</sup> 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 0.5<sup>th</sup> 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 0.5<sup>th</sup> 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 0.5<sup>th</sup> percentile extreme values removed; the difference between 2.3 and 1.8 is greater than or equal to 10 percent.

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