

Accident Rate for Oil Spill Cleanup not Unusual

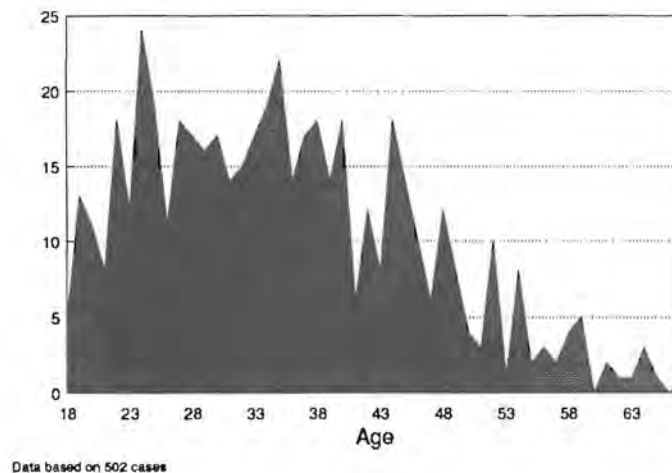
by James Wilson

The Exxon Valdez ran aground on Bligh Reef on March 24, 1989. Within 7 days, the discharged crude oil contaminated much of the western half of Prince William Sound. Within 20 days, the oil slick reached far out of the sound to the entrance of Cook Inlet, and eventually traveled over 400 miles reaching the Shelikof Strait, east of Kodiak Island. A cleanup effort of massive proportions took place during the following months. During 1989, spill related employment for the prime oil company contractors reached more than 11,000 workers, with over 21 million hours of work. This article presents some of the statistical data on worker injuries and illnesses reported from the oil spill cleanup.

Beginning in March, the Alaska Division of Workers' Compensation started receiving claims from work associated with the cleanup. To date, 518 time loss claims, and two fatality claims, have been received for cases occurring in 1989. The Alaska Workers' Compensation division also received 837 non-time loss claims for 1989 oil spill-related work. Of the total 1,797 cases on file for 1989, 440 are classified as being outside of the juris-

Figure • 1

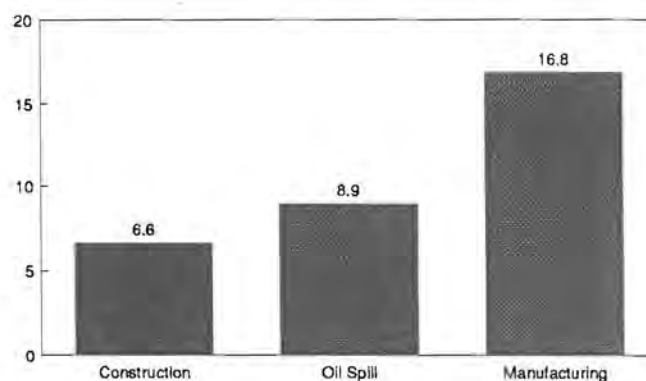
1989 Valdez Oil Spill Claims by Age of Worker



Source: Alaska Department of Labor, Research and Analysis Section.

Figure • 2

Time Loss Case Rates Alaska 1989 Oil Spill Cleanup Project



Source: Alaska Department of Labor, Research and Analysis Section.

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Reported Injuries and Illnesses by Nature of Injury or Illness Alaska

SDS Code	Nature of Injury or Illness	1989 Oil Spill Time Loss		1987 Time Loss	
		Cases	Percent	Cases	Percent
	Total	518	100.0	9,661	100.0
10	Amputation or Enucleation	0	0.0	35	0.4
11	Asphyxia, Strangulation, Drowning, Suffocation	0	0.0	5	0.1
12	Burn (Heat)	4	0.8	191	2.0
13	Burn (Chemical)	1	0.2	66	0.7
14	Concussion	4	0.8	121	1.3
15	Infective or Parasitic Disease	15	2.9	11	0.1
16	Contusion, Crushing, Bruise	41	7.9	1,024	10.6
17	Cut, Laceration, Puncture	18	3.5	1,041	10.8
18	Dermatitis	5	1.0	42	0.4
19	Dislocation	13	2.5	196	2.0
20	Electric Shock, Electrocutation	2	0.4	8	0.1
21	Fracture	18	3.5	792	8.2
22	Effect of Exposure to Low Temp	2	0.4	13	0.1
23	Hearing Loss, or Impairment	0	0.0	11	0.1
24	Effect of Environmental Heat	0	0.0	1	0.0
25	Hernia, Rupture	6	1.2	132	1.4
26	Inflammation of Joint, Tendon, Muscle	10	1.9	187	1.9
27	Poisoning, Systemic	14	2.7	78	0.8
29	Radiation Effect	0	0.0	16	0.2
30	Scratch, Abrasion	10	1.9	322	3.3
31	Sprain, Strain	187	36.1	4,859	50.3
32	Hemorrhoid	0	0.0	2	0.0
33	Hepatitis (Serum and Infective)	1	0.2	5	0.1
40	Multiple Injury	7	1.4	118	1.2
50	Effect of Change in Atmospheric Pressure	0	0.0	1	0.0
51	Cerebrovascular System	3	0.6	10	0.1
52	Complication Peculiar to Medical Care	1	0.2	1	0.0
53	Eye, Other Disease of the Eye	3	0.6	12	0.1
54	Mental Disorder	1	0.2	30	0.3
55	Neoplasm, Tumor	0	0.0	3	0.0
56	Nervous System, Condition of	7	1.4	93	1.0
57	Respiratory System, Condition of	63	12.2	25	0.3
58	Symptom and Ill-Defined Condition	32	6.2	19	0.2
90	No Injury or Illness	4	0.8	1	0.0
95	Damage to Prosthetic Device	1	0.2	2	0.0
99	Other Injury/Disease & Nonclassifiable	34	6.6	188	1.9
	Not Coded	11	2.1	0	0.0

Source: Alaska Department of Labor, Research and Analysis Section.

diction of the Workers' Compensation program. Most of these cases are duplicates of the cases filed under the Longshore and Harborworkers Act.

As mentioned above, there were two fatalities on the oil spill cleanup project in 1989. One was a 46 year old electrician who suffered a heart attack. The other case was a 48 year old kitchen helper who was crushed in a dumbwaiter shaft. Both cases were aboard vessels. Neither of these workers died while removing oil from the environment.

Of the 1,797 Workers' Compensation filed cases, 93% were from persons who listed Alaska as their state of residence. People from 93 Alaskan cities and communities were represented in the Workers' Compensation cases. Of the 1,679 Alaskan cases, 31% came from workers who resided in the coastal cities nearest the spill. 34% of the cases filed were from Anchorage area residents and 13% from the Fairbanks area. Only 19 cases were from residents of the southeast region.

Women accounted for 26% of the time loss cases associated with the spill cleanup project. By way of contrast, 23% of all private sector time loss cases filed for 1989 were from women workers. The sex of the worker was coded for only 510 of the total 1,797 cases filed with Workers' Comp-

Reported Injuries and Illnesses by Part of Body Affected Alaska

sation (only time loss cases are coded for sex).

Of the 1,797 cases filed with Workers' Compensation, 70% were from employees of the two prime spill cleanup contractors. Another 13% came from the largest company which provided support services for the cleanup.

A rough time loss case rate for the oil spill cleanup was calculated to be 8.9 cases per 100 workers. This figure was developed using counts of total time loss cases filed (Ak. Workers' Comp. and L&HA) and hours worked by all contractors for the project. The time loss case rate of 8.9 places the spill cleanup project rate in between the 1989 rates for construction (6.6) and manufacturing (16.8). This should not be seen as unusual or unexpected, considering the scale and nature of the project, the working conditions, time constraints, and the logistical difficulties involved.

Readers should note that this time loss case rate for the cleanup project is not an official comparison to the published OSHA recordable time loss case rates because of differing methodologies. It does provide a rough means of comparison, however. It should also be stressed that the 8.9 rate includes all the lower risk service and support activities of the cleanup project.

SDS Code	Part of Body Affected	1989 Oil Spill		1987 Time Loss	
		Cases	Percent	Cases	Percent
	Total	518	100.0	9,661	100.0
	Head	36	6.9	757	7.8
10	Head, Unspecified	3	0.6	36	0.4
11	Brain	3	0.6	122	1.3
12	Ear	4	0.8	21	0.2
13	Eye	15	2.9	381	3.9
14	Face	11	2.1	138	1.4
15	Scalp	0	0.0	38	0.4
16	Skull	0	0.0	6	0.1
19	Head, Multiple	0	0.0	15	0.2
20	Neck	5	1.0	288	3.0
	Upper Extremity	62	12.0	2,141	22.2
30	Upper Extremity, Unspecified	0	0.0	31	0.3
31	Arm	12	2.3	389	4.0
32	Wrist	11	2.1	354	3.7
33	Hand	15	2.9	409	4.2
34	Finger	18	3.5	876	9.1
39	Upper Extremity, Multiple	6	1.2	82	0.8
	Trunk	124	23.9	3,637	37.6
40	Trunk, Unspecified	1	0.2	6	0.1
41	Abdomen	21	4.1	223	2.3
42	Back	75	14.5	2,707	28.0
43	Chest	10	1.9	237	2.5
44	Hip	4	0.8	89	0.9
45	Shoulder	13	2.5	363	3.8
49	Trunk, Multiple	0	0.0	12	0.1
	Lower Extremity	130	25.1	2,041	21.1
50	Lower Extremity, Unspecified	1	0.2	25	0.3
51	Leg	67	12.9	923	9.6
52	Ankle	41	7.9	525	5.4
53	Foot	17	3.3	369	3.8
54	Toe	3	0.6	145	1.5
59	Lower Extremity, Multiple	1	0.2	54	0.6
70	Multiple Parts	31	6.0	547	5.7
	Body System	113	21.8	225	2.3
80	Body System, Unspecified	27	5.2	89	0.9
81	Digestive System	7	1.4	14	0.1
82	Excretory System	7	1.4		
83	Musculo-Skeletal System	0	0.0	1	0.0
84	Nervous System	4	0.8	35	0.4
85	Respiratory System	65	12.5	55	0.6
86	Circulatory System	1	0.2	28	0.3
88	Other Body System	2	0.4	3	0.0
99	Nonclassifiable	6	1.2	25	0.3
	Not Coded	11	2.1	0	0.0

Source: Alaska Department of Labor, Research and Analysis Section.

Table • 3

Reported Injuries and Illnesses by Source of Injury or Illness Alaska

SDS Code	Source of Injury or Illness	1989 Oil Spill Time Loss		1987 Time Loss	
		Cases	Percent	Cases	Percent
	Total	518	100.0	9,661	100.0
01	Air Pressure	0	0.0	2	0.0
02	Animal, Insect, Etc	2	0.4	26	0.3
03	Animal Product	0	0.0	8	0.1
04	Bodily Motion	52	10.0	822	8.5
05	Boiler, Pressure Vessel	14	2.7	67	0.7
06	Box, Barrel, Container	61	11.8	1,270	13.1
07	Building or Structure	4	0.8	228	2.4
08	Ceramic Item	0	0.0	9	0.1
09	Chemical, Chemical Compound	12	2.3	145	1.5
10	Clothing	2	0.4	18	0.2
11	Coal and Petroleum Product	11	2.1	20	0.2
12	Cold (Atmospheric, Environmental)	46	8.9	14	0.1
13	Conveyor	0	0.0	34	0.4
14	Drug & Medicine	0	0.0	2	0.0
15	Electric Apparatus	2	0.4	62	0.6
17	Flame, Fire, Smoke	1	0.2	46	0.5
18	Food Product	2	0.4	217	2.2
19	Furniture, Fixture, Etc	7	1.4	323	3.3
20	Glass Item, Nec	0	0.0	51	0.5
22	Hand Tool, Not Powered	8	1.5	535	5.5
23	Hand Tool, Powered	4	0.8	193	2.0
24	Heat, (Atmospheric, Environmental)	0	0.0	1	0.0
25	Heating Equipment, Nec	1	0.2	36	0.4
26	Hoisting Apparatus	8	1.5	105	1.1
27	Infectious, Parasitic Agent, Nec	25	4.8	30	0.3
28	Ladder	3	0.6	32	0.3
29	Liquid	3	0.6	60	0.6
30	Machine	6	1.2	417	4.3
40	Mechanical Power Trans Apparatus	0	0.0	2	0.0
41	Metal Item	21	4.1	849	8.8
42	Mineral Item, Metallic, Nec	0	0.0	1	0.0
43	Mineral Item, Nonmetallic, Nec	6	1.2	53	0.5
44	Noise	0	0.0	7	0.1
45	Paper and Pulp	0	0.0	20	0.2
46	Particle (Unidentified)	0	0.0	78	0.8
47	Plant, Tree, Vegetation	0	0.0	84	0.9
48	Plastic Item, Nec	0	0.0	12	0.1
49	Pump and Prime Mover	3	0.6	41	0.4
50	Radiating Substance and Equipment	0	0.0	18	0.2
52	Silica	0	0.0	1	0.0
53	Scrap, Debris, Waste Material, Nec	4	0.8	26	0.3
54	Steam	2	0.4	17	0.2
55	Textile Item, Nec	0	0.0	16	0.2
56	Vehicle	20	3.9	765	7.9
57	Wood Item	13	2.5	353	3.7
58	Working Surface	75	14.5	1,667	17.3
60	Person	15	2.9	433	4.5
61	Recreation and Athletic Equipment	0	0.0	35	0.4
62	Rubber Product	0	0.0	53	0.5
65	Ice, Snow	0	0.0	4	0.0
88	Miscellaneous, Nec	6	1.2	105	1.1
98	Nonclassifiable	68	13.1	248	2.6
	Not Coded	11	2.1	0	0.0

Source: Alaska Department of Labor, Research and Analysis Section.

Tables 1 through 4 contain injury and illness characteristic data for oil spill related time loss cases filed with the Alaska Division of Workers' Compensation. Each of these tables also contains the coded data for all time loss cases in 1987, the last full year of coded data now available (coding of 1989 time loss cases is in progress). This was done to provide a comparative percent distribution for the time loss injury characteristic data. For example, Table 1 shows that 50% of 1987 time loss cases were due to sprains and strains. Sprains and strains accounted for 36% of the spill related time loss cases.

Reported Injuries and Illnesses by Type of Accident or Exposure Alaska

The prevalence of work related illnesses on the oil spill cleanup is notable in the Alaska Workers' Compensation case data. Table 2 shows 12.5% of the oil spill time loss cases involved the respiratory system. Working in a cold environment was a major source of injury/illness listed in Table 3 (8.9% versus normally 0.1%). In fact, the major source of all respiratory cases was due to cold weather. Petroleum was the source of injury/illness for only 3% of all cases.

SDS Code	Type of Accident or Exposure	1989 Oil Spill Time Loss		1987 Time Loss	
		Cases	Percent	Cases	Percent
	Total	518	100.0	9,661	100.0
01	Struck Against	32	6.2	668	6.9
02	Struck By	34	6.6	1,470	15.2
03	Fall From Elevation	28	5.4	699	7.2
05	Fall on Same Level	63	12.2	1,160	12.0
06	Caught In, Under, Between	16	3.1	453	4.7
08	Rubbed or Abraded	9	1.7	382	4.0
10	Bodily Reaction	52	10.0	822	8.5
12	Overexertion	91	17.6	3,148	32.6
13	Contact with Electric Current	1	0.2	10	0.1
15	Contact with Temp Extreme	61	11.8	214	2.2
18	Contact with Radiation, Caustic, Etc	24	4.6	255	2.6
20	Transportation Accident, Not Motor Vehicle	0	0.0	31	0.3
30	Highway Motor Vehicle, Unspecified	1	0.2	12	0.1
31	Highway Motor Vehicle, Moving	2	0.4	51	0.5
32	Highway Motor Vehicle, Standing	0	0.0	31	0.3
33	Highway Motor Vehicle, Noncollision	0	0.0	58	0.6
40	Exposure to Noise	0	0.0	11	0.1
50	Explosion	0	0.0	6	0.1
60	Nonhighway Motor Vehicle, Unspecified	0	0.0	38	0.4
61	Nonhighway Motor Vehicle, Moving	2	0.4	1	0.0
62	Nonhighway Motor Vehicle, Standing	0	0.0	1	0.0
63	Nonhighway Motor Vehicle, Noncollision	0	0.0	68	0.7
89	Accident Type, Nec	9	1.7	68	0.7
99	Nonclassifiable	82	15.8	76	0.8
	Not Coded	11	2.1	0	0.0

Source: Alaska Department of Labor, Research and Analysis Section.