

**NIOSH Report of  
Deepwater Horizon  
Response/BP Illness  
and Injury Data  
(April 23 – July 8, 2010)**

7/27/2010

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# **NIOSH Report of Deepwater Horizon Response/BP Illness and Injury Data (April 23 – July 8, 2010)**

## ***Background***

This report is designed to provide a basic overview of illness and injuries recorded by BP safety officials that occurred to workers involved in the Deepwater Horizon response. Injuries and illnesses were coded and categorized utilizing the Bureau of Labor Statistics (BLS) Occupational Injury and Illness Classification System (OIICS). It will be updated on a regular basis as new data becomes available. The data used to produce this report were provided to NIOSH by BP safety officials, who are sharing their health and safety incidents database with CDC/NIOSH. The database is comprised of the information recorded by BP safety officials on an incident form that is filled out for any event leading to injury or illness which was believed to be work-related. It includes incidents which occurred to BP employees, BP contracted workers, federal/state/local responders, and volunteers. There may be some local (parish) workers involved in response efforts who do not fall under the supervision of the Unified Area Command, and thus would not be included in this database. The incident forms are filled out by BP safety officials, as opposed to healthcare personnel, and do not contain strict medical diagnoses of injury or illness. This method of employer-generated data collection is standard occupational safety and health practice. It should be noted that because the data used for this report are being collected by BP, NIOSH cannot independently verify the accuracy and completeness of the database.

NIOSH is producing this report of illness and injuries to promote public health through enhanced awareness of the risks associated with response work in the Gulf. The objective of this report is to provide actionable information to those in a position to reduce the risk of future injuries and illnesses among cleanup workers, such as BP, OSHA, state and local health authorities and others. By pointing to patterns of injury and/or illness, this report may assist interested parties in identifying targets for training, intervention, and other prevention activities. NIOSH welcomes your feedback on the utility of this report and suggestions for future reports. Additional information about specific occupational risks will be reported by NIOSH through health hazard evaluations which will be conducted independently by NIOSH personnel in the field.

Note that portions of this same database are also reported on OSHA's website at <http://www.osha.gov/oilspills/DeepwaterDataJuly1.pdf>. This website provides line listing data for the OSHA reportable injuries.

**Table 1**

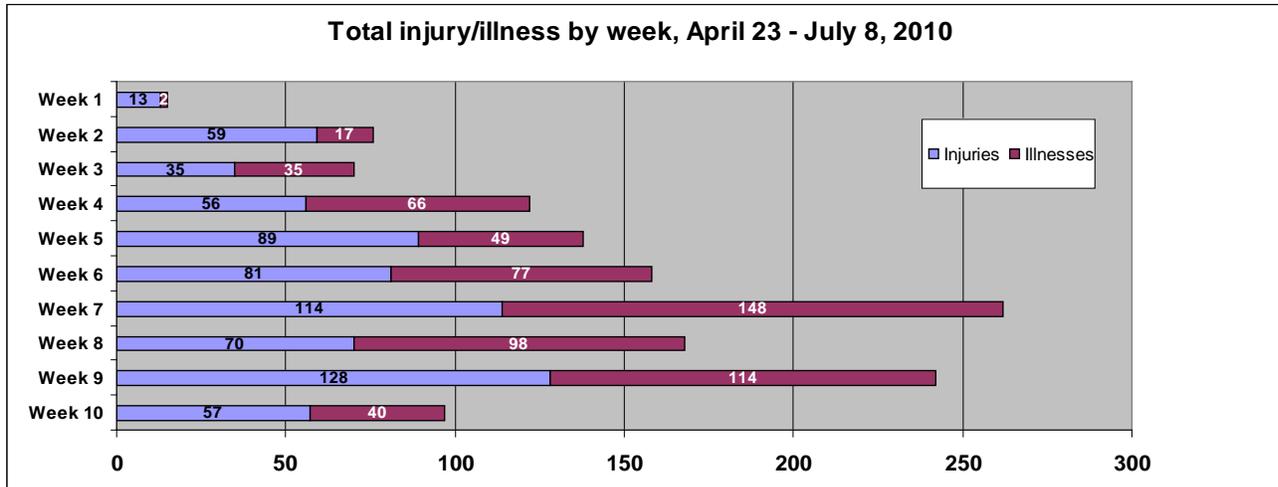
| <b>Summary of injuries and illnesses, April 23 – July 8, 2010</b> |                 |          |                  |          |              |
|---|-----------------|----------|------------------|----------|--------------|
| <b>Characteristic</b>   | <b>Injuries</b> |          | <b>Illnesses</b> |          | <b>Total</b> |
|   | <b>Number</b>   | <b>%</b> | <b>Number</b>    | <b>%</b> |              |
| <b>Total<sup>a</sup></b>  | <b>761</b>      | 52.3     | <b>693</b>       | 47.7     | <b>1454</b>  |
| <b>First Aid cases</b>  | <b>595</b>      | 50.1     | <b>581</b>       | 49.9     | <b>1176</b>  |
| <b>OSHA-recordable cases<sup>b</sup></b>                          | <b>161</b>      | 59.6     | <b>109</b>       | 40.4     | <b>270</b>   |
| <b>Missed or Restricted Duty cases</b>                            | <b>12</b>       | 70.6     | <b>5</b>         | 29.4     | <b>17</b>    |
| <b>Command Center<sup>c</sup></b>                                 |                 |          |                  |          |              |
| Houma, Louisiana  | <b>398</b>      | 52.4     | <b>361</b>       | 47.6     | <b>759</b>   |
| Mobile, Alabama   | <b>222</b>      | 47.8     | <b>242</b>       | 52.2     | <b>464</b>   |
| Unspecified/Other   | <b>141</b>      | 61.0     | <b>90</b>        | 39.0     | <b>231</b>   |
| <b>Worker Type</b>  |                 |          |                  |          |              |
| BP employee   | <b>4</b>        | 50.0     | <b>4</b>         | 50.0     | <b>8</b>     |
| Contractor  | <b>721</b>      | 52.1     | <b>663</b>       | 47.9     | <b>1384</b>  |
| Federal/State/Local   | <b>21</b>       | 67.8     | <b>10</b>        | 32.2     | <b>31</b>    |
| Volunteer   | <b>1</b>        | 50.0     | <b>1</b>         | 50.0     | <b>2</b>     |
| Unspecified   | <b>14</b>       | 48.3     | <b>15</b>        | 51.7     | <b>29</b>    |

**Notes:**

- a. The incident type (injury vs. illness) was not able to be determined for 19 cases.
- b. OSHA-recordable cases are defined as those cases which led to missed day of work, restricted duty, or required medical treatment beyond first aid. 8 cases had insufficient information to determine if they were OSHA-recordable. Note that counts of recordable/first aid cases may differ from previous reports as information and decisions regarding OSHA-recordable injuries and illnesses change.
- c. Command Center refers to the BP/UAC safety commands which geographically divide responsibility and oversight over Safety concerns. The Houma, LA command site is responsible for safety issues occurring in the state of LA, while the Mobile, AL command is responsible for safety issues occurring in MS, AL, FL, and TX. The

“Other” category for Command Center often implies that those incidents were recorded on a vessel. Also included in the “Other” category are 10 cases which were listed as Houston and 5 which were listed as New Orleans.

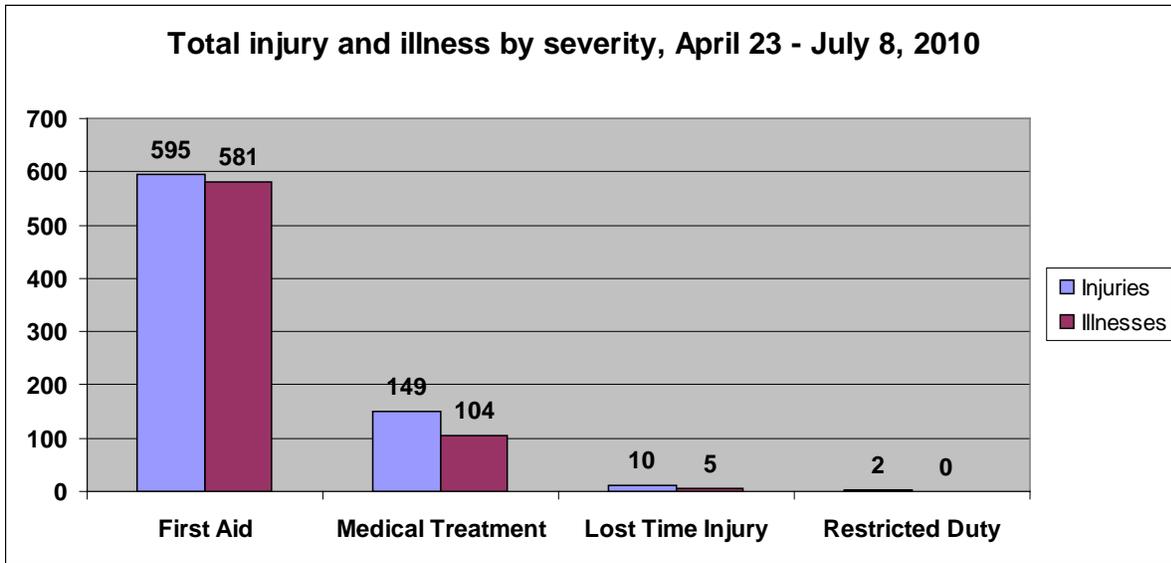
### Graph 1



#### Notes:

- Week 1 is defined as Monday April 26 -Sunday May 2, 2010. Each subsequent week begins on the following Monday.
- Week 11 is not included in this graph, because it contained only 4 days of data (62 cases). Four cases had no date assigned.

**Graph 2**



**Notes:**

- Medical Treatment refers to any case requiring treatment beyond first aid, but which did not result in restricted duty or lost time.
- Twenty three cases had insufficient information to include in this graph.

**Table 2**

Injury and illness frequencies are presented below stratified by location of their occurrence: onshore vs. offshore. This distinction may ultimately be useful in identifying important exposures that vary by location or identifying specific worker groups at risk. Injury and illness frequencies may vary by onshore/offshore location for a variety of reasons, including the nature of tasks performed on the shore vs. on the water; the number of workers employed in each setting; varying degrees of exposure to crude and weathered oil and dispersants, and workers' access to medical facilities or medical care when they feel ill or sustain an injury.

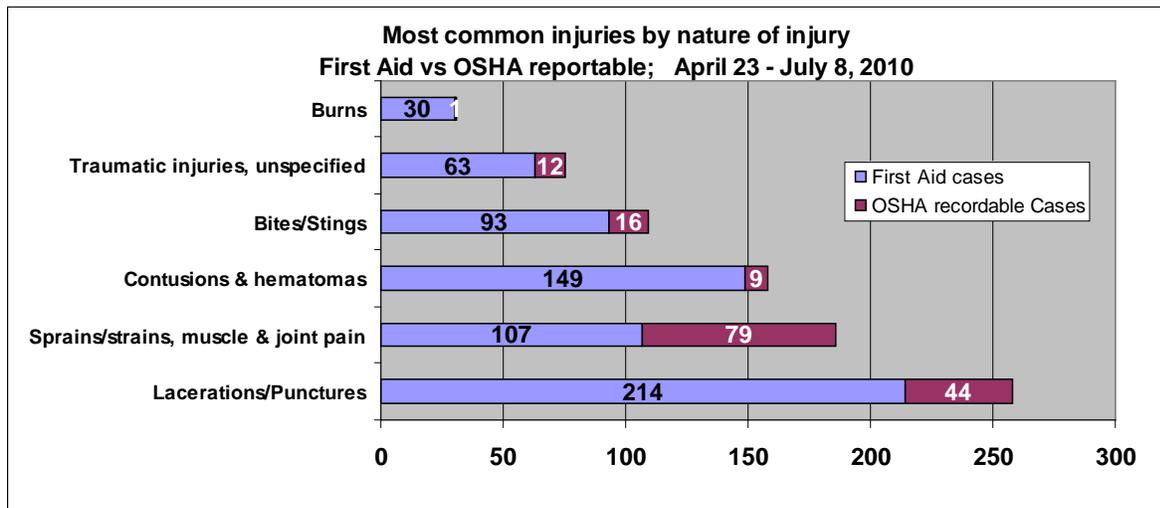
| <b>Breakdown of injuries and illnesses by location,<br/>April 23 – July 8, 2010</b> |                |      |                 |      |              |
|---|----------------|------|-----------------|------|--------------|
| <b>Characteristic</b>   | <b>Onshore</b> |      | <b>Offshore</b> |      | <b>Total</b> |
|   | Number         | %    | Number          | %    |              |
| <b>Total<sup>a</sup></b>  | 998            | 68.9 | 451             | 31.1 | <b>1449</b>  |
| <b>Injuries<sup>b</sup></b>   |                |      |                 |      |              |
| First Aid Cases   | 375            | 63.0 | 219             | 37.0 | <b>595</b>   |
| OSHA-recordable cases   | 113            | 70.2 | 48              | 29.8 | <b>161</b>   |
| <b>Illnesses<sup>c</sup></b>  |                |      |                 |      |              |
| First Aid cases   | 430            | 74.0 | 151             | 26.0 | <b>581</b>   |
| OSHA-recordable cases   | 79             | 72.5 | 30              | 27.5 | <b>109</b>   |
| <b>Command Center<sup>d</sup></b>   |                |      |                 |      |              |
| Houma   | 556            | 73.3 | 202             | 26.7 | <b>758</b>   |
| Mobile  | 415            | 89.4 | 49              | 10.6 | <b>464</b>   |
| Unspecified/Other   | 27             | 11.9 | 200             | 88.1 | <b>227</b>   |
| <b>Selected Injuries/Illnesses</b>  |                |      |                 |      |              |
| Heat Stress   | 90             | 69.2 | 40              | 30.8 | <b>130</b>   |
| Multiple Symptoms   | 98             | 78.4 | 27              | 21.6 | <b>125</b>   |

|                               |     |      |    |      |            |
|-------------------------------|-----|------|----|------|------------|
| Lacerations/Punctures         | 168 | 65.4 | 89 | 34.6 | <b>257</b> |
| Sprains/Strains & Muscle Pain | 139 | 75.1 | 45 | 24.9 | <b>185</b> |

**Notes:**

- a. Five cases did not contain sufficient information to define its location onshore vs. offshore.
- b. Case severity information missing for five injuries.
- c. Case severity information missing for three illnesses.
- d. Command Center refers to the BP/UAC safety commands which geographically divide responsibility and oversight over Safety concerns. The Houma, LA command site is responsible for safety issues occurring in the state of LA, while the Mobile, AL command is responsible for safety issues occurring in MS, AL, FL, and TX. The “Other” category for Command Center often implies that those incidents were recorded on a vessel. Also included in the “Other” category are 10 cases which were listed as Houston and 5 which were listed as New Orleans.

**Graph 3**

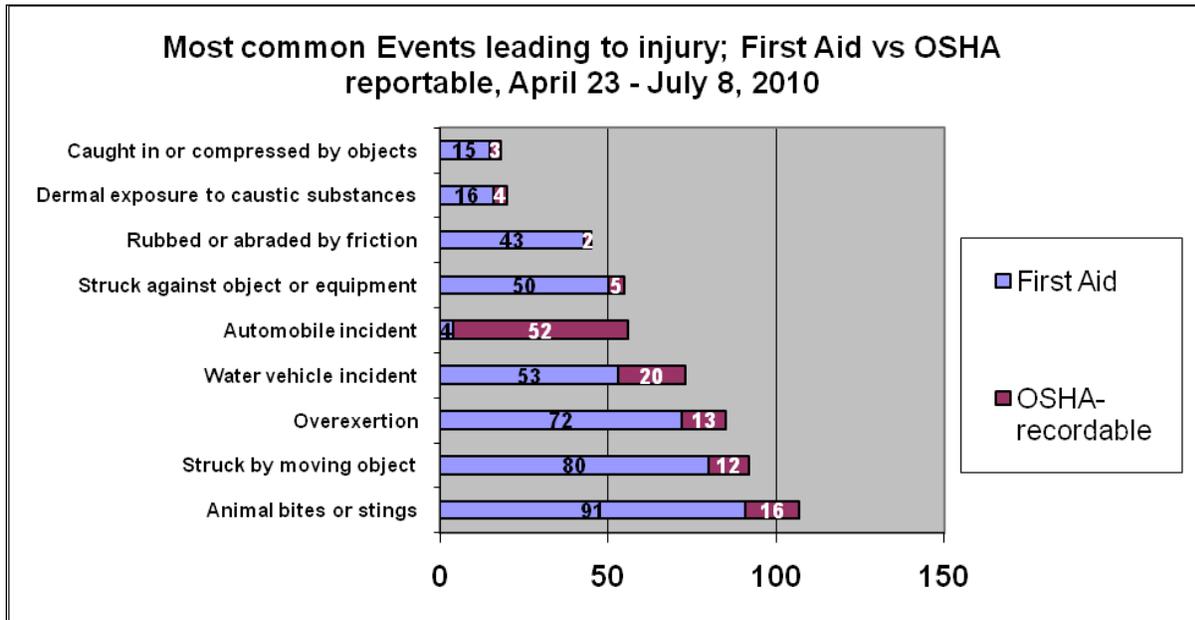


**Notes:**

- OSHA-recordable cases are defined as those cases which led to missed day of work, restricted duty, or required medical treatment beyond first aid.
- “Traumatic injuries, unspecified” are defined as those cases in which the data were not sufficient to provide a more specific description of the nature of the traumatic

injury. For example, the case description could read, “worker slipped and injured leg” but it is not clear what type of injury resulted, e.g. sprain/strain, contusion, or laceration.

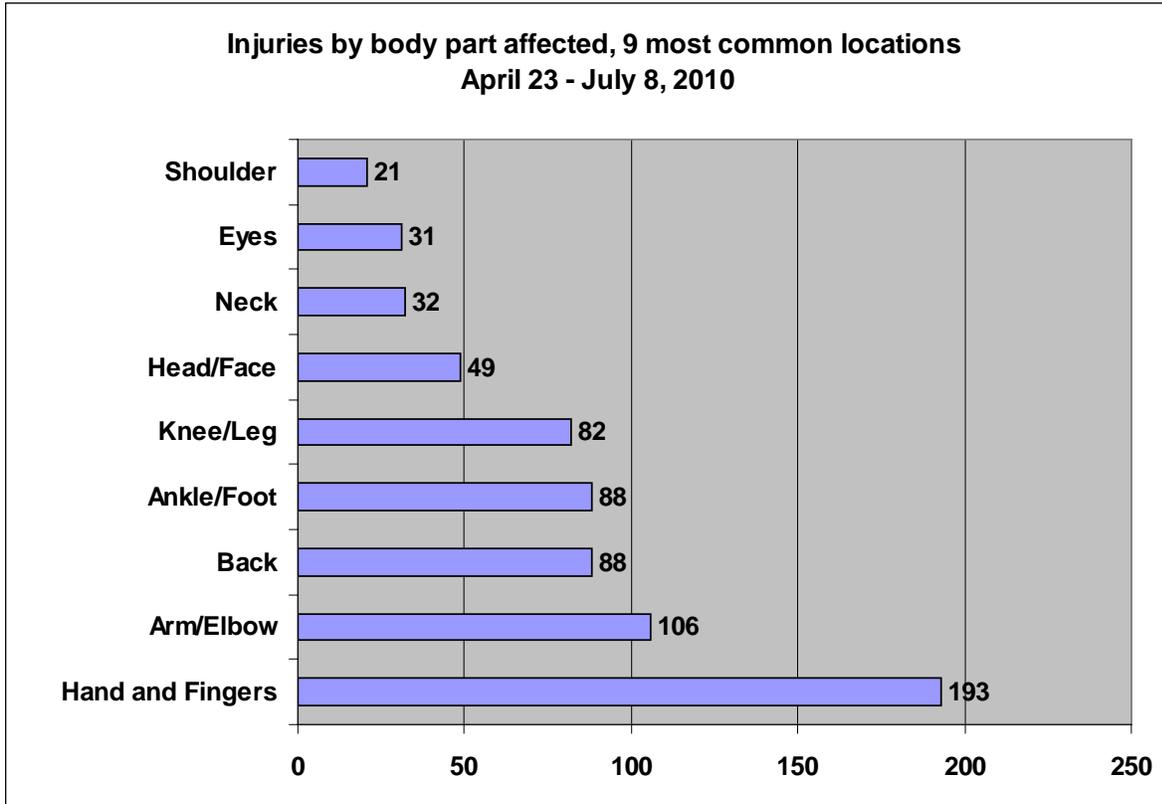
**Graph 4**



**Notes:**

- OSHA-recordable cases are defined as those cases which led to missed day of work, restricted duty, or required medical treatment beyond first aid.

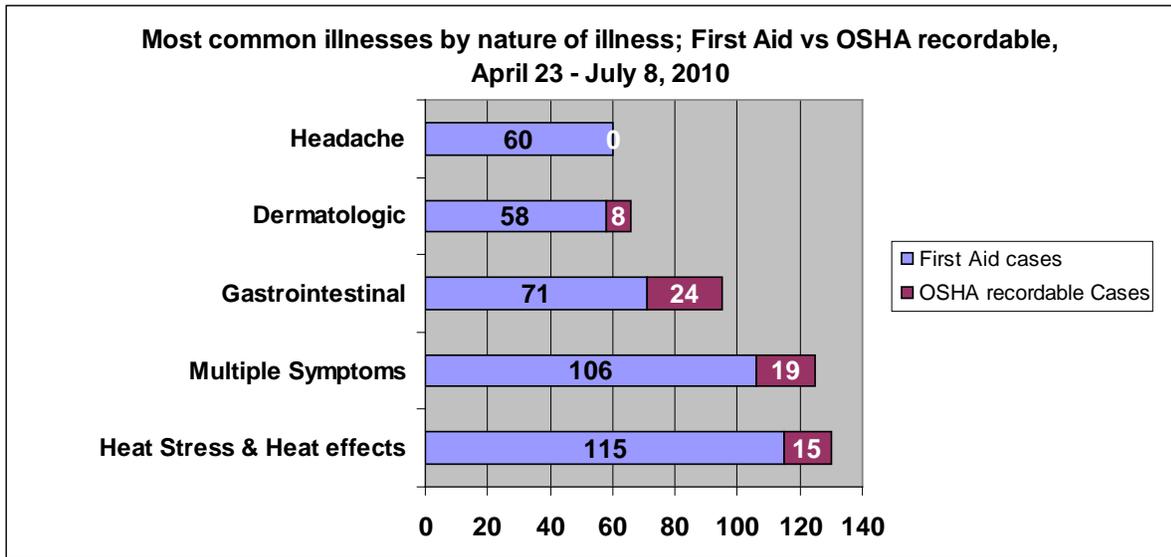
**Graph 5**



**Notes:**

- Head/Face category excludes the “eyes” category.

**Graph 6**



**Notes:**

- Multiple Symptoms refers to symptoms occurring in more than one organ system for a given case which were not attributed to a single, specific underlying cause (such as heat stress).
- OSHA-recordable cases are defined as those cases which led to missed day of work, restricted duty, or required medical treatment beyond first aid.

## ***Observations***

### **Illnesses**

#### ***Heat Stress***

- 90/130 Heat stress illnesses occurred “Onshore.” Based on job title information provided in the data, 74 of the 90 onshore heat stress cases occurred among laborers, beach cleanup workers, boom decontamination workers, and heavy equipment operators.
- Of the 130 Heat-related cases, 15 were OSHA-recordable, and of these, 2 were listed as resulting in restricted duty or a missed day of work. Of the 115 heat-related cases recorded as “First Aid”, five were listed as being “transported to hospital”, but according to best available information, were transported for evaluation only.

#### ***Multiple symptoms***

- “Multiple symptoms” designation refers to symptoms occurring in more than one organ system for a given case which were not attributed to a single, specific underlying cause. Examples from the database include cases of:
  - nausea, vomiting, headache, and dizziness
  - stomach ache, dizziness, stiff neck
- The majority of all “multiple symptoms” cases occurred onshore (78%), as opposed to offshore where exposure to oils vapors and dispersants is considered greater or more likely. Of the 19 OSHA-recordable cases involving multiple symptoms, 15 occurred onshore. Many of these had symptoms consistent with heat stress, but were not identified as such in the database. Of the 4 cases which occurred offshore, none reported exposure to oil, dispersant, or other chemicals.
- Of the 106 multiple symptoms cases listed as treated by First Aid, 83 occurred onshore. Of the 23 which occurred offshore, 7 were from a cluster of fishermen whose cases are part of a NIOSH HHE investigation. Of the remaining 16 cases, none reported exposure to oil, dispersant, or any other chemical exposures.

#### ***Gastrointestinal***

Ninety-five gastrointestinal cases were recorded in the data, with 71 (75%) occurring onshore. Fifty-six of the 71 cases reported as “onshore” occurred among the following three job titles: beach workers, laborers, and technicians. Over half of all GI cases reported only the symptoms of nausea and/or vomiting, with 75% of those cases occurring onshore. One of these cases was explicitly attributed to oil exposure, and none to dispersant exposure. There were 35 cases of non-specific abdominal pain. While seven of the 95 cases were referred to a hospital or physician to rule out a gastrointestinal virus, the data did not provide details as to whether a GI virus had been confirmed by diagnosis or testing.

## ***Dermatologic***

Sixty-six dermatologic illness cases were recorded between April 23 and July 8, 2010, of which 48 were listed as a case of “Dermatitis”. None of these 48 cases were attributed to oil or dispersant exposure. Forty of these 48 cases occurred onshore. Of the 40 onshore cases, 3 were listed as occurring among “beach workers”, and 17 were listed as onshore “laborers.” Fourteen dermatitis cases overall were attributed to the use of sunscreen wipes, which appeared to cause an allergic/irritant skin reaction in these cases. Seven were attributed to heat rash, and 6 to skin infections.

## ***Respiratory***

Fourteen cases were recorded that were respiratory in nature, ten of which occurred onshore. The fourteen cases could be grouped into four categories: 5 cases of obstructive airway symptoms consistent with asthma, five with multiple general respiratory symptoms (primarily shortness of breath), and 2 cases of respiratory infection (2 cases could not be specified). 7/14 required medical treatment, but none led to a missed day or work or restricted duty. In none of these cases was oil or dispersant exposure recorded.

## ***Illnesses resulting in Missed or Restricted Duty***

There were five cases total which resulted in one or more missed days of duty (No restricted duty cases). Four of the five cases either reported symptoms consistent with heat stress illness, or were identified as a heat stress illness.

## **Chemical Exposures**

### ***Carbon monoxide poisoning***

On June 14, 2010, four related cases of carbon monoxide poisoning were recorded. No further cases of this nature were reported from June 14 – July 8, 2010.

### ***Crude/weathered oil/dispersants***

Oil and/or dispersants were explicitly mentioned as a contributing factor in a total of 6 cases. Five of these 6 cases were treated by first aid alone, and four of the six cases occurred offshore.

## **Injuries**

### ***Injuries resulting in Missed or Restricted Duty***

There were 12 cases in this category (10 which led to missed days of work, 2 resulting in restricted duty). The most common injury types in this category were back pain (5 cases), and lacerations (3 cases).