



Annual Summary of Oil and Hazardous Substance Spills

Fiscal Year 2012 (July 1, 2011-June 30, 2012)

Alaska Department of Environmental Conservation ■ Division of Spill Prevention and Response ■ October 2012

Significant Responses

M/V Monterrey Grounding

On the evening of June 8 the M/V Monterrey, a 174-foot landing craft belonging to the U.S. Army 311th Expeditionary Sustainment Command (Army 311 ESC), hit a submerged object in Chiniak Bay near Kalsin Reef. The hull of the vessel was breached and the vessel was run aground at Puffin Island, approximately 2.5 miles south of the city of Kodiak, to avoid sinking. It was initially reported that two starboard fuel tanks had been breached and were releasing diesel fuel into the marine waters of Chiniak Bay. The Monterrey was carrying 42,000 gallons of fuel on board when it departed Kodiak shortly before the incident. A Unified Command was formed to respond to the incident.

The USCG began cleanup operations on behalf of the Army 311 ESC and contracted Chadux to conduct containment and cleanup activities. Approximately 3,000 feet of boom were deployed around the Monterrey to contain the ongoing release. The Monterrey's crew transferred the remaining fuel from the damaged tanks into undamaged tanks. Free oil recovery was implemented in areas along the shoreline where fuel was in recoverable concentrations.

On June 15 the Monterrey was refloated and transported to Lash Dock in Kodiak where temporary repairs were made.



M/V Monterrey Grounding on Puffin Island, Chiniak Bay, Kodiak Island, June 9, 2012. (Photo courtesy of USCG)

Response vessels followed the Monterrey and observed no sheen or pollution incidents during transit. The vessel was subsequently towed to Seward (a distance of 220 miles) for permanent repair work

M/V Morning Cedar Adrift Incident (potential spill)

On December 5, 2011, the M/V Morning Cedar was adrift 10 miles north of Tanaga Island due to a loss of steering. The crew was not able to make repairs while they were underway.

Two US Coast Guard teams boarded the distressed vessel to provide assistance with repairs but were unable to assist. It was reported that the rudder was swinging back and forth and that the vessel's crew was fabricating a ring to place around the rudder post.

On December 8, the Morning Cedar began using its engine and bow thruster in a limited capacity to minimize set and drift toward land. On December 9, the vessel's crew and technical engineers were able to complete temporary repairs to the steering system and the vessel was escorted to Dutch Harbor by the USCG Cutter Sherman. The Morning Cedar arrived in Dutch Harbor on December 11. Once the steering system repair was completed, the steering system was inspected and underway testing was monitored and approved by a USCG Marine Inspector prior to the vessel's release from Dutch Harbor on December 15.

Tug Nathan E Stewart and Barge DBL-55 (potential spill)

On December 18, 2011, the Tug Nathan E Stewart and Barge DBL-55, an articulated tug and barge system, were adrift 20 miles west of Cape Fairweather. The tug was towing the Barge DBL-55, a 300-foot fuel barge, en route to Skagway. The tug had 45,000 gallons of diesel fuel and 500 gallons of lube oil on board. The cargo on board the barge was reported

FY 2012 Summary

Top 5 Products

| Product | Spills | Gallons |
|----------------|--------|---------|
| Diesel | 533 | 69,104 |
| Drilling Muds | 16 | 48,975 |
| Produced Water | 30 | 13,075 |
| Crude | 39 | 10,828 |
| Process Water | 24 | 9,561 |

Top 5 Facility Types

| Facility Type | Spills | Gallons |
|------------------|--------|---------|
| Oil Exploration | 36 | 45,897 |
| Oil Production | 302 | 36,913 |
| Other | 222 | 26,454 |
| Vessel | 164 | 25,591 |
| Mining Operation | 377 | 19,334 |

Top 5 Causes

| Cause | Spills | Gallons |
|-------------------|--------|---------|
| External Factors | 21 | 49,222 |
| Human Error | 331 | 27,059 |
| Line Failure | 153 | 18,898 |
| Overfill | 93 | 17,096 |
| Equipment Failure | 476 | 14,307 |

at 2.2 million gallons of diesel fuel, 1,028 gallons of aviation fuel and 700 gallons of other petroleum products.

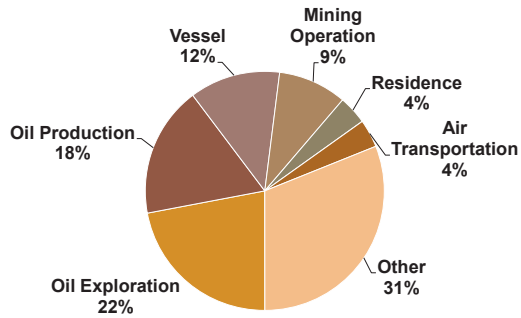
On December 19, the tug Le Cheval Rouge, escorted by the USCG cutter Maple, took Barge DBL-55 and tug Nathan E Stewart under a stern tow. The Le Cheval Rouge used the slack tides on December 20 to tow the disabled tug and barge through the North Indian Pass. The group anchored in Mud Bay to reset and reconfigure the towing gear and then continued underway to Skagway escorted by the cutter Maple. The following day the vessels arrived in Skagway where Barge DBL-55 offloaded its cargo and the vessels were met by K-Sea Transportation representatives, engine technicians and USCG Sector Juneau Prevention staff.

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All Products - FY 2012

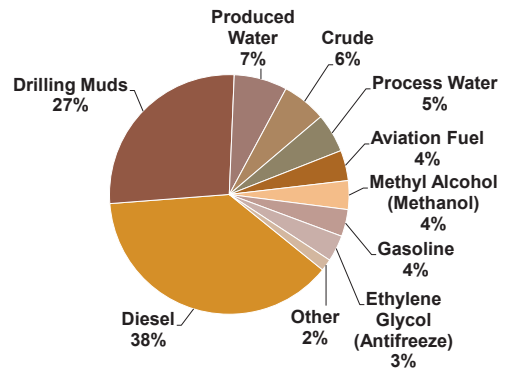
Number of Spills Reported 1,922
 Total Gallons 208,487

Volume Released by Facility Type



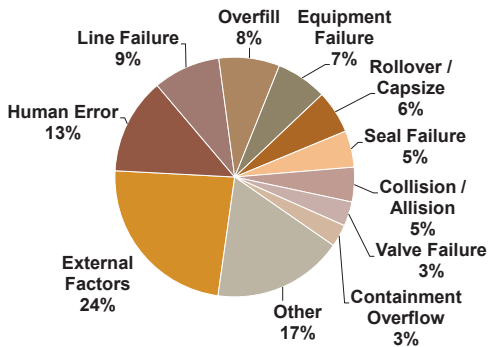
For graphing purposes, 'Other' includes facility categories comprising 3% or less of the total volume released.

Volume Released by Product



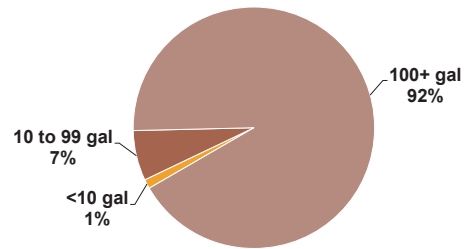
For graphing purposes, 'Other' includes product categories comprising 3% or less of the total volume released.

Volume Released by Cause



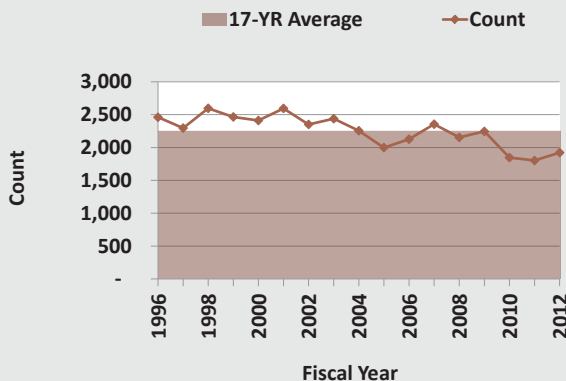
For graphing purposes, 'Other' includes cause categories comprising 3% or less of the total volume released.

Volume Released by Size Class

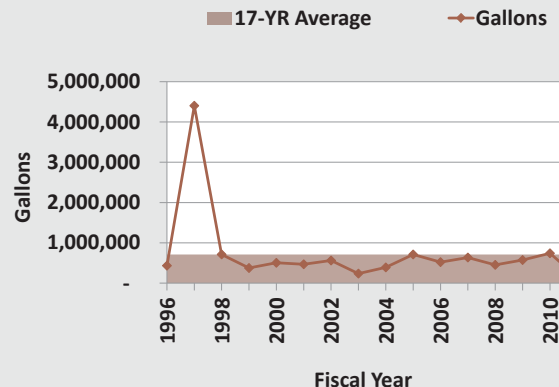


17-Year Trend

Number of Spills by Fiscal Year



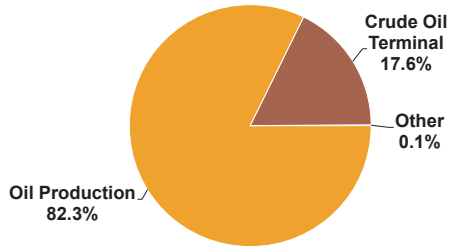
Total Volume by Fiscal Year*



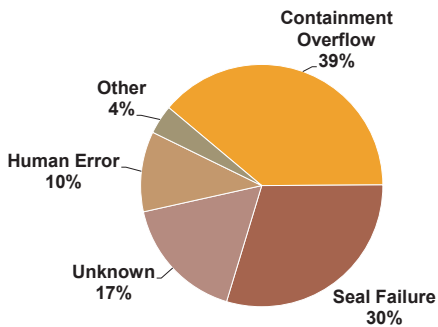
*Notes: 1/25/1997 (FY 1997) - a barge capsized and lost 3,125,000 gal of Urea (Solid).
 3/17/1997 (FY 1997) - 995,400 gal of Seawater released at ARCO DS-14 in Prudhoe Bay

Number of Spills Reported 39
 Total Gallons 10,828

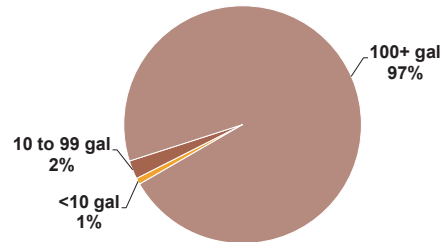
Volume Released by Facility Type



Volume Released by Cause

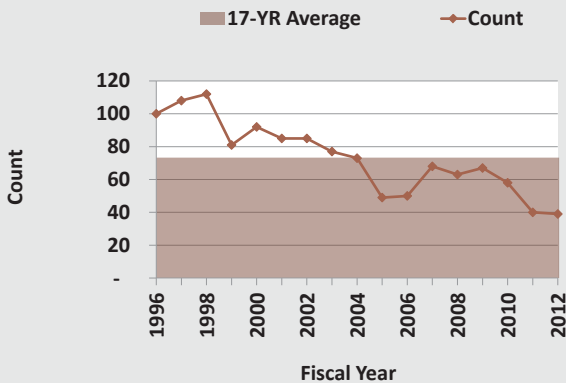


Volume Released by Size Class

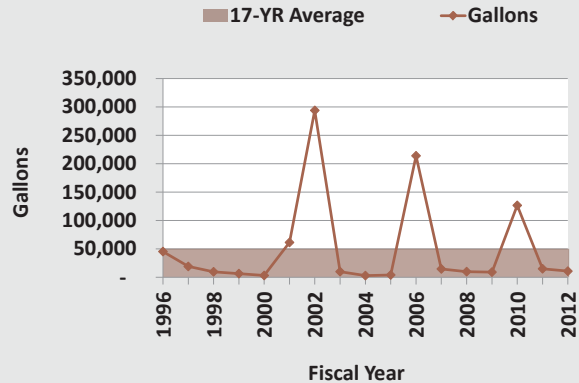


For graphing purposes, 'Other' includes cause categories comprising 3% or less of the total volume released.

Number of Spills by Fiscal Year



Total Volume by Fiscal Year*



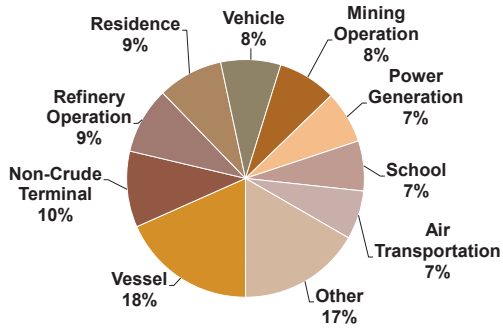
*Notes: 10/4/2001 (FY 2002) - TAPS Bullet Hole Release; 285,600 gal Crude
 3/2/2006 (FY 2006) - BP GC-2 Oil Transit Line Release; 212,252 gal Crude

17-Year Trend

Non-crude Oil - FY 2012

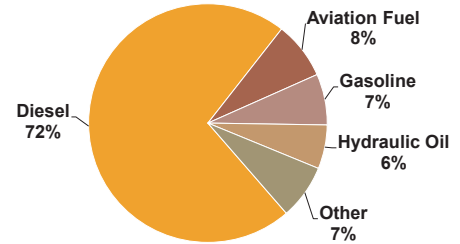
Number of Spills Reported 1,406
 Total Gallons 96,018

Volume Released by Facility Type



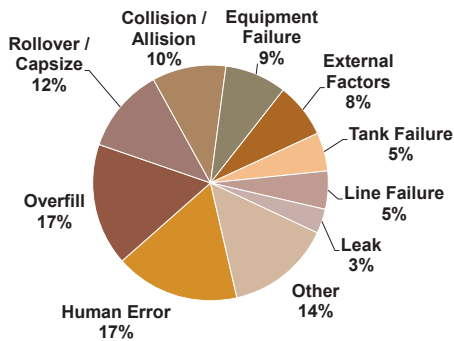
For graphing purposes, 'Other' includes facility categories comprising 4% or less of the total volume released.

Volume Released by Product



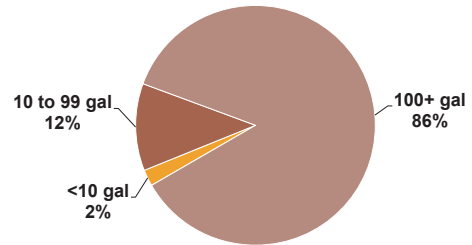
For graphing purposes, 'Other' includes product categories comprising 2% or less of the total volume released.

Volume Released by Cause



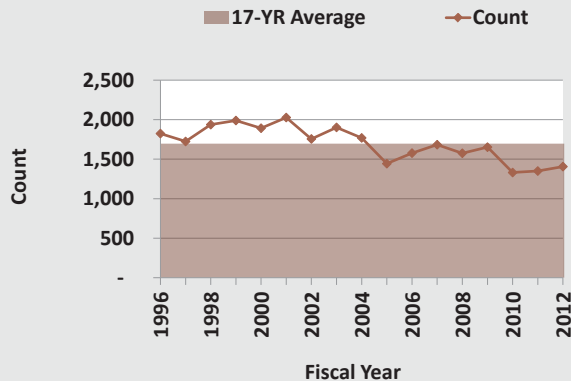
For graphing purposes, 'Other' includes cause categories comprising 3% or less of the total volume released.

Volume Released by Size Class

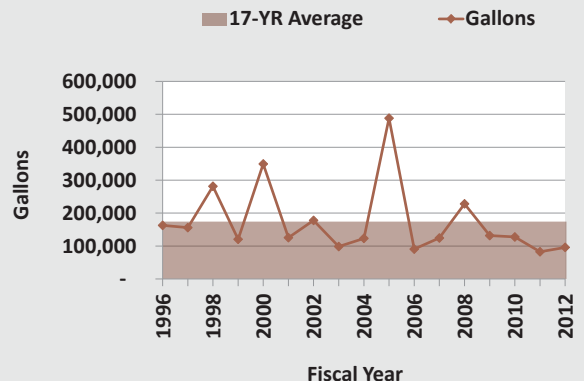


17-Year Trend

Number of Spills by Fiscal Year



Total Volume by Fiscal Year*

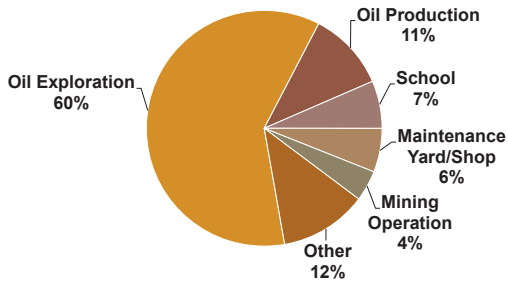


*Notes: 12/8/2004 (FY 2005) - the M/V Selendang Ayu broke apart, releasing 321,052 gal of IFO 380 and 14,680 gal of Diesel

Hazardous Substances - FY 2012

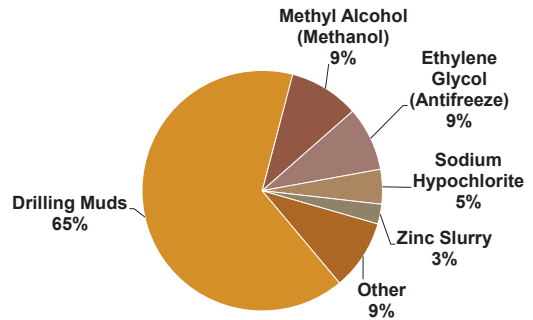
Number of Spills 417
 Total Gallons 74,960

Volume Released by Facility Type



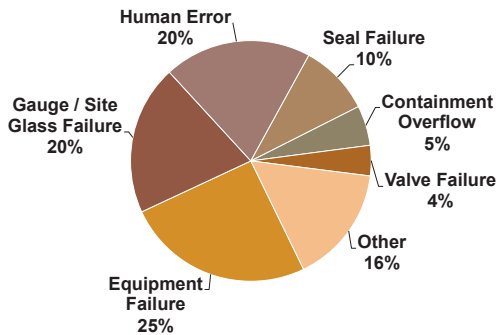
For graphing purposes, 'Other' includes facility categories comprising 4% or less of the total volume released.

Volume Released by Product



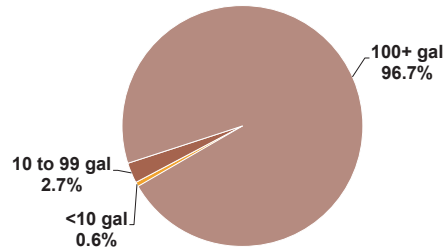
For graphing purposes, 'Other' includes product categories comprising 2% or less of the total volume released.

Volume Released by Cause

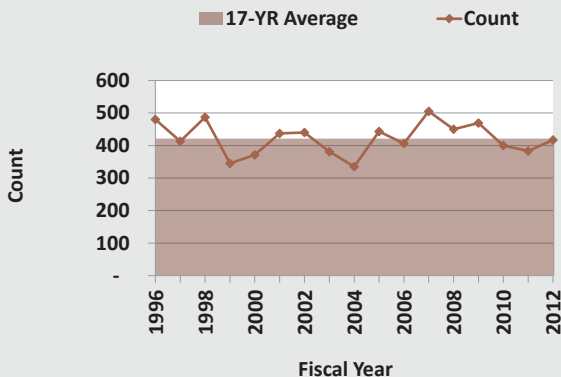


For graphing purposes, 'Other' includes cause categories comprising 3% or less of the total volume released.

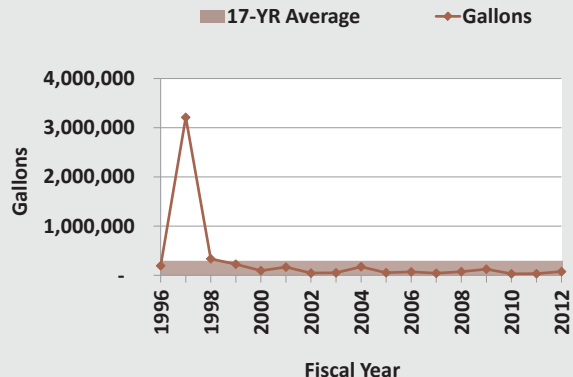
Volume Released by Size Class



Number of Spills by Fiscal Year



Total Volume by Fiscal Year*



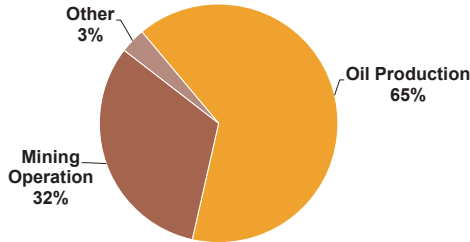
*Notes: 1/25/1997 (FY 1997) - a barge capsized and lost 3,125,000 gal of Urea (Solid).

17-Year Trend

Process Water - FY 2012

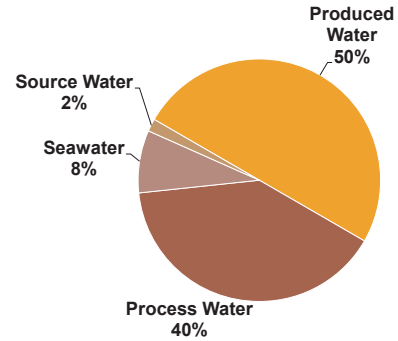
Number of Spills Reported 60
 Total Gallons 26,681

Volume Released by Facility Type

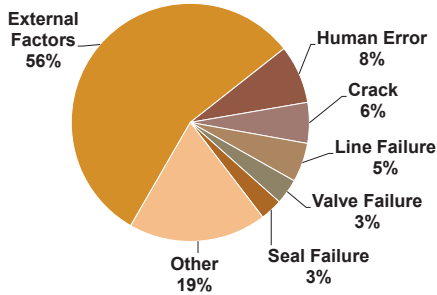


For graphing purposes, 'Other' includes facility categories comprising 2% or less of the total volume released.

Volume Released by Product

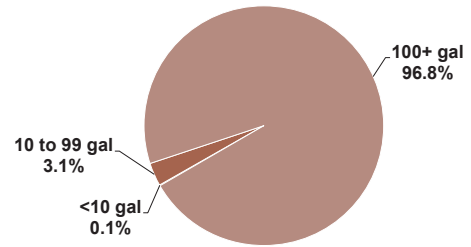


Volume Released by Cause



For graphing purposes, 'Other' includes cause categories comprising 3% or less of the total volume released.

Volume Released by Size Class



17-Year Trend

Number of Spills by Fiscal Year

Total Volume by Fiscal Year*

**Notes: 3/17/1997 (FY 1997) - 995,400 gal of Seawater released at ARCO DS-14 in Prudhoe Bay*

Process Water (Oil Exploration and Production Operations): Process water includes seawater (and occasionally freshwater), produced water and commingled or mixed water.

Seawater is typically from the Beaufort Sea that has undergone primary treatment at the Seawater Treatment Plant.

Produced Water is water that was included with crude oil and natural gas pumped from the formation then separated from the oil and gas and treated for disposal or reuse. Produced water includes some level of crude oil but the amount varies. Commingled or mixed water is typically a mix of seawater and produced water, although other combinations exist in the operations on the North Slope.

The percentage of crude oil occurring in process water can vary somewhat based on the source of the spill.

Process Water (Mining Operations): Process water for mining operations includes water taken from tailing ponds for the milling process (reclaim water), water that has been through the water treatment plant but not the sand filter (process water), water that has been through both the water treatment and sand filter (discharge water), water mixed with ground ore materials (slurry) or water used in the milling and product recovery process (process solution water).

Spill: a discharge or release of oil or a hazardous substance to the lands, waters or air of the State of Alaska as defined in Alaska Statutes 46.03.826(9).

DISCLAIMER

The data presented and summarized in this report is provisional only due to ongoing quality assurance/quality control on the part of data entry staff and primary users. Additional on-going reviews will further refine the accuracy of the data.

NOTES:

- Some spill incidents involve releases of multiple substances. In FY 2012, there were 1,848 spill incidents, resulting in 1,922 oil and hazardous substance releases.
- Some releases (such as gases and solids) are reported in pounds rather than gallons. In FY 2012, forty-three (42) releases totalling 16,290 pounds were reported to DEC. For graphing purposes, spill quantities reported in pounds were converted to gallons using a conversion factor of 8 pounds per gallon.

Significant Responses - continued from page 1

Repsol Q2 Pad Gas and Mud Release

On February 15, 2012, Repsol contractor Nabors Drilling was drilling an exploratory well when the drill penetrated a shallow gas pocket at a depth of 2,523 feet, resulting in a gas kick. The gas kick drove drilling mud, down-hole materials and water out of the well and through the gas diverter onto the ice pad and adjacent snow-covered tundra. Additional mud was pumped into the well in an attempt to control it, but that mud was also forced out by the gas.

Approximately 6,286 cubic yards of spilled material were removed from the snow covered tundra. In addition, 2,402 cubic yards of down-hole material and 116,928 gallons of water-based mud and fresh water from the steam units were recovered from the drilling pad during the initial response.

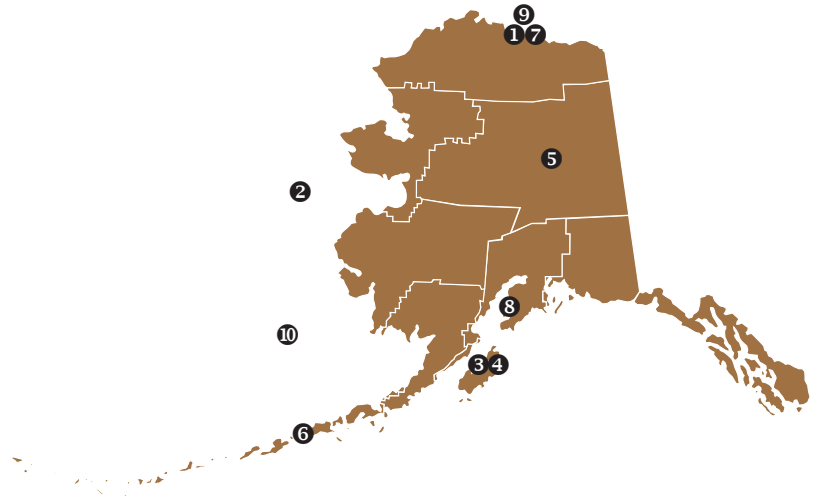
A surveying contractor hired by Repsol estimated that

21,114 barrels of down-hole material were released to the tundra during the initial blow-out and calculated the total impacted area to be 23.75 acres. An area of 16.76 acres of lightly misted material was determined to be unrecoverable and no cleanup occurred in this zone.



Cleanup operations at site of Repsol Q2 Gas and Mud Release. (Photo courtesy of ADEC)

Top 10 Releases During FY 2012



| Map Key | Spill Date | Spill Name | Product | Gallons |
|---------|------------|---------------------------------------|------------------------------|---------|
| 1 | 02/15/12 | Repsol Q2 Pad Gas and Mud Release | Drilling Muds | 42,000 |
| 2 | 01/19/12 | Savoonga Tank Farm | Diesel | 12,045 |
| 3 | 01/25/12 | F/V Heritage | Diesel | 8,000 |
| 4 | 06/08/12 | M/V Monterrey Fuel Tank Release | Diesel | 8,000 |
| 5 | 06/18/12 | UAF, Wood Center Ethylene Glycol | Ethylene Glycol (Antifreeze) | 4,500 |
| 6 | 03/04/12 | Peter Pan Seafoods False Pass Spill | Gasoline | 4,373 |
| 7 | 05/21/12 | BPXA, FS-2 Tank 1984 | Crude | 4,200 |
| 8 | 03/13/12 | Weaver Brothers Methanol Spill | Methyl Alcohol (Methanol) | 4,140 |
| 9 | 04/10/12 | BPXA DS 1-Well 11 Pipeline Spill | Seawater | 3,675 |
| 10 | 02/09/12 | Trident / TDX St. Paul warehouse fire | Sodium Hypochlorite | 3,500 |

Total Volume by Subarea FY 2012

| Subarea | Gallons |
|----------------------|---------|
| Bristol Bay | 2,228 |
| Western Alaska | 2,617 |
| Prince William Sound | 8,987 |
| Southeast Alaska | 9,336 |
| Aleutian | 14,110 |
| Kodiak Island | 18,645 |
| Cook Inlet | 20,999 |
| Northwest Arctic | 22,962 |
| Interior Alaska | 31,678 |
| North Slope | 76,924 |

