

Date: 2000 PDT August 5, 2007  
To: NOAA SSC Ruth Yender



FROM: NOAA/NOS Office of Response and Restoration  
Emergency Response Division  
Seattle, WA 98115

SUBJECT: Mystery Spill, Neah Bay, WA

FOR ADDITIONAL INFORMATION, PLEASE CONTACT CJ Beegle-Krause  
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We have looked at the issue of a reported mystery spill. These notes are based on the following information:

A mystery "diesel" spill off the coast of Neah Bay, WA, was first reported yesterday, August 4<sup>th</sup>, at 11:40 AM. At 3:12 PM, a cruise ship in the area did not detect a spill. Today at 4:30 PM a USCG vessel reported oil ½ nm x 75 yards located about 600 yards off the west side of Neah Bay. Coordinates were provided as follows:

North extent: 48 deg 23.03'N, 124 deg 44.51'W  
Middle: 48 deg 23.25'N, 124 deg 44.13'W  
South: 48 deg 22.60'N, 124 deg 44.50'W

If any of this initial information is incorrect, please let us know ASAP as it would affect any trajectory implications.

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1) 24-hour Wind Forecast

Sunday: Evening: SW 10 knots; Night: S 10 knots  
Monday: Morning: S 10 knots; Afternoon: SW 10 knots

2) Trajectory

Weather conditions yesterday were light and variable conditions, increasing this afternoon to be from the SW to W at 6-8 knots. Under such light wind conditions, diesel would evaporate very little; while under the forecast 10 knot winds conditions, diesel would evaporate much more quickly.

Today's positions indicate that the spill is located along the Washington coast near the mouth of the Strait of Juan de Fuca rather than the western edge of Neah Bay. The movement of the spill with ebb tidal currents out of the Straits should be greater than then both the flood tidal currents and the shoreward component of the winds. However, the report of the spill located 600 yards from shore indicates that small scale coastal winds and currents are likely to influence the movement of the spill. Potential exists for remaining oil to contact the shoreline, but more detailed information on position is required to make a more specific forecast.

ADIOS oil weathering results are shown below for a 500 gallon spill under 6 knot vs 10 knot wind conditions. Persistence drops from 5 days to less than 1 day under higher winds.

Oil Name = DIESEL FUEL OIL (SOUTHERN USA 1997)

API = 37.6

Pour Point = 7 deg F

Wind Speed = constant at 6 knots

Wave Height = computed from winds

Water Temperature = 55 deg F

Time of Initial Release = August 5, 2100 hours

Total Amount of Oil Released = 500 gal

Hours Into Spill	Released gal		Evaporated percent		Dispersed percent		Remaining percent
1	500	-	8	-	0	-	92
2	500		15		0		85
4	500	-	23	-	1	-	76
8	500		32		1		67
12	500	-	36	-	2	-	62
16	500		39		3		59
20	500	-	40	-	3	-	56
24	500		42		4		54
30	500	-	44	-	5	-	51
36	500		46		5		49
42	500	-	48	-	6	-	46
48	500		49		7		44
54	500	-	51	-	7	-	42
60	500		52		8		40
66	500	-	53	-	8	-	39
72	500		54		9		37
78	500	-	55	-	10	-	36
84	500		56		10		34
90	500	-	56	-	11	-	33
96	500		57		11		32
102	500	-	58	-	11	-	31
108	500		58		12		30
114	500	-	58	-	12	-	29
120	500		58		13		29

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Total Amount of Oil Released = 500 gal

Hours Into Spill	Released gal		Evaporated percent		Dispersed percent		Remaining percent
1	500	-	10	-	5	-	84
2	500		18		15		67
3	500	-	22	-	24	-	53
4	500		25		32		43
5	500	-	27	-	38	-	35
6	500		28		43		29
7	500	-	28	-	47	-	24
8	500		29		51		21
9	500	-	29	-	54	-	17
10	500		29		56		15
11	500	-	30	-	58	-	12
12	500		30		60		11
13	500	-	30	-	61	-	9