

3.3. RECORD OF OPERATIONS



PROTECTED SPECIES RECORDING FORM
OPERATIONS

Regulatory reference number OCS-G 12136#A14
Project number UMV04074

Vessel name Seacor Washington
Operations page number 1 of 1

Date	Time pre-shooting visual monitoring began	Time pre-shooting visual monitoring ended	Time pre-shooting PAM began	Time pre-shooting PAM ended	Was it day or night in period prior to firing?	Reason for firing s = survey t = test x = test followed immediately by survey	Time soft start / ramp-up began	Time soft start / ramp-up ended	Time of start of line / test	Time of end of line / test	Time mitigation gun enabled / source output reduced	Time mitigation gun disabled / end of reduced output	Was any mitigation action required?
2011-06-20			04:08	04:38	night	s	04:38	04:58	12:28	13:39			no
2011-06-20	14:12	14:42			day	s	14:42	15:02	15:29	16:45			yes
2011-06-20									18:17	19:55			no
2011-06-20	22:17	22:47			day	s	22:47	23:07	23:30				no
2011-06-21										02:19			no
2011-06-21									03:21	03:50			no
2011-06-21									05:20	06:56			no
2011-06-21									07:53	08:10			no
2011-06-21									09:36	12:14			no
2011-06-21									12:54	13:32			no
2011-06-21									14:41	15:50			no
2011-06-21									16:46	17:53			no
2011-06-21									19:11	20:33			no
2011-06-21	22:21	22:51			day	s	22:51	23:11	23:27				no
2011-06-22										02:50			no

3.4. LOCATION AND EFFORT

RPS

PROTECTED SPECIES RECORDING FORM
EFFORT

Regulatory reference number OCS-G 12136#A14
Project number UMV04074

Vessel name Seacor Washington
Effort page number 1 of 1

Date	Visual or PAM	Observers' initials	Start of watch				End of watch				Wind speed (knots)	Wind direction	Beaufort sea state	Swell (m)	Visibility (km)	Glare severity
			Time	Latitude	Longitude	Depth (m)	Time	Latitude	Longitude	Depth (m)						
2011-06-19	visual	CW, LB, DP	20:00	28.10167°N	090.19783°W	207	01:20	28.09383°N	090.18983°W	207	12	SW	3	<2	>5	severe
2011-06-20	acoustic	CW	03:57	28.07150°N	090.19017°W	207	05:20	28.07800°N	090.19083°W	207	6	SSW	3	<2	>5	moderate
2011-06-20	visual	CW, LB, DP	10:35	28.08133°N	090.19233°W	207	01:20	28.05333°N	090.19750°W	207	12	SSW	3	<2	>5	moderate
2011-06-21	visual	CW, LB, DP	10:35	28.08333°N	090.18817°W	207	01:20	28.09617°N	090.20000°W	249	16	SSW	3	<2	>5	moderate

3.5. RECORD OF DETECTION

RPS

PROTECTED SPECIES RECORDING FORM
DETECTION

Date	Project number	Time at first detection (UTC)	Time at last detection (UTC)	Visual detection number	Acoustic detection number
2011-06-19	UMV04074	22:18	00:25	1	n/a
Regulatory reference number	Vessel name		Survey type	Observer(s)	
OCS-G 12136#A14	Seacor Washington		VSP	[REDACTED]	
Detection was made	Detection was first made				
visually	visually by observer keeping a continuous watch				
Latitude of vessel	Longitude of vessel	Bearing of vessel (degrees)		Water depth (metres)	
28d06.102mN	90d11.870mW	235		207	
Swell height (metres)	Beaufort sea state	Precipitation	Visibility (km)	Cloud cover (%)	Glare severity and direction
<2	3	none	>5	25	severe from WNW
Common name	Scientific name		Certainty of identification		
Common bottlenose dolphin	<i>Tursiops truncatus</i>		definite		
Total number	Number of adults	Number of juveniles	Bearing to animal(s) when first detected (degrees)	Range to animal(s) when first detected (metres)	
24	20	4	45	180	
Description (include features such as overall size; shape of head; colour and pattern; size, shape, and position of dorsal fin; height, direction, and shape of blow; etc.)			Visual sighting and/or Acoustic detection details (note behavior, especially changes in relation to gun activity and distance from gun array)		
Mostly large in size and dark brown to dark grey in color. Bulbous head shape with strong and prominent beak, including crease separating beak from head. Dorsal fin strongly falcate and erect, located aft of center.			Initially 2 animals were visually detected ahead of stationary vessel. Animals swam past ship on starboard side and joined pod aft of the stern. Animals were seen breaching, copulation, spy hopping, nursing juveniles, tail slapping, and various other social activities. Animals swam around ship many times over the period of 2 hours. Guns were onboard and not firing.		
Direction of travel / first approach (relative to vessel)			Initial compass heading (degrees)	Final compass heading (degrees)	
parallel in opposite direction as vessel			100	95	
Closest distance of animals to airguns/source (metres)	Closest distance of animals to vessel (metres)		Source activity at initial detection	Source activity at final detection	
			not firing	not firing	
Time at closest approach (UTC)	Distance during soft start (m)		Source mitigation action(s) required	Strike avoidance maneuvers required	
	First	Closest	None	no	
	n/a	n/a			
			Total duration of mitigation action(s) (HH:MM)	Total duration of production loss due to mitigation (HH:MM)	
			n/a	n/a	
Other notes or comments					
Guns on deck. Dolphins from DR1 and 2 were together in same pod					

PROTECTED SPECIES RECORDING FORM
DETECTION

Date	Project number	Time at first detection (UTC)	Time at last detection (UTC)	Visual detection number	Acoustic detection number
2011-06-19	UMV04074	22:18	00:25	2	n/a
Regulatory reference number	Vessel name		Survey type	Observer(s)	
OCS-G 12136#A14	Seacor Washington		VSP	[REDACTED]	
Detection was made	Detection was first made				
visually	visually by observer keeping a continuous watch				
Latitude of vessel	Longitude of vessel	Bearing of vessel (degrees)		Water depth (metres)	
28d06.147mN	90d11.905W	235		207	
Swell height (metres)	Beaufort sea state	Precipitation	Visibility (km)	Cloud cover (%)	Glare severity and direction
<2	3	none	>5	25	severe from WSW
Common name	Scientific name		Certainty of identification		
Pantropical spotted dolphin	<i>Stenella attenuata</i>		definite		
Total number	Number of adults	Number of juveniles	Bearing to animal(s) when first detected (degrees)	Range to animal(s) when first detected (metres)	
4	2	2	170	50	
Description (include features such as overall size; shape of head; colour and pattern; size, shape, and position of dorsal fin; height, direction, and shape of blow; etc.)			Visual sighting and/or Acoustic detection details (note behavior, especially changes in relation to gun activity and distance from gun array)		
Spotted and mottled grey with white spots dorsally. White golf ball sized coloration on snout tip observed. Light colored ventrally. Dorsal fin strongly falcate and posterior to center on back. Calves appeared grey/brown with no spots.			Two mothers with calves were observed after the original pod from DR1 returned to ship. These animals were intermingled with the larger pod of bottlenose dolphins. Nothing extraordinary was observed about their behavior other than swimming tightly together with the rest of the pod.		
Direction of travel / first approach (relative to vessel)			Initial compass heading (degrees)	Final compass heading (degrees)	
parallel in same direction as vessel			350	95	
Closest distance of animals to airguns/source (metres)	Closest distance of animals to vessel (metres)		Source activity at initial detection	Source activity at final detection	
			not firing	not firing	
Time at closest approach (UTC)	Distance during soft start (m)			Source mitigation action(s) required	Strike avoidance maneuvers required
	First	Closest	Last		
	n/a	n/a	n/a	none	no
			Total duration of mitigation action(s) (HH:MM)	Total duration of production loss due to mitigation (HH:MM)	
			n/a	n/a	
Other notes or comments					
Guns on deck. Dolphins from DR1 and 2 were together in same pod					

PROTECTED SPECIES RECORDING FORM
DETECTION

Date	Project number	Time at first detection (UTC)	Time at last detection (UTC)	Visual detection number	Acoustic detection number
2011-06-20	UMV04074	14:00	14:12	3	n/a
Regulatory reference number	Vessel name		Survey type	Observer(s)	
OCS-G 12136#A14	Seacor Washington		VSP	[REDACTED]	
Detection was made	Detection was first made				
visually	visually by observer keeping a continuous watch				
Latitude of vessel	Longitude of vessel	Bearing of vessel (degrees)		Water depth (metres)	
28.05467°N	090.19067°W	0		207	
Swell height (metres)	Beaufort sea state	Precipitation	Visibility (km)	Cloud cover (%)	Glare severity and direction
<2	4	none	>5	30	severe from E
Common name		Scientific name		Certainty of identification	
Common bottlenose dolphin		<i>Tursiops truncatus</i>		definite	
Total number	Number of adults	Number of juveniles	Bearing to animal(s) when first detected (degrees)	Range to animal(s) when first detected (metres)	
9	8	1	20	10	
Description (include features such as overall size; shape of head; colour and pattern; size, shape, and position of dorsal fin; height, direction, and shape of blow; etc.)			Visual sighting and/or Acoustic detection details (note behavior, especially changes in relation to gun activity and distance from gun array)		
Mostly large (2-3 m) in size and dark brown to dark grey in color. Bulbous head shape with strong and prominent beak, including crease separating beak from head. Dorsal fin strongly falcate and erect, located aft of center.			Animals were first spotted off the starboard bow. They were bow riding, jumping, and swimming upside down. They crossed the bow after riding it for a bit and then started jumping off the port side. After 12 min. they left the area heading in the same direction the dolphins were originally heading. One Pantropical Spotted Dolphin was with the pod.		
Direction of travel / first approach (relative to vessel)			Initial compass heading (degrees)	Final compass heading (degrees)	
crossing ahead of vessel			300	300	
Closest distance of animals to airguns/source (metres)	Closest distance of animals to vessel (metres)		Source activity at initial detection	Source activity at final detection	
72	2		not firing	not firing	
Time at closest approach (UTC)	Distance during soft start (m)			Source mitigation action(s) required	Strike avoidance maneuvers required
14:01	First	Closest	Last	delayed start of firing	no
	n/a	n/a	n/a	Total duration of mitigation action(s) (HH:MM)	Total duration of production loss due to mitigation (HH:MM)
				00:12	00:42
Other notes or comments					
Dolphins from DR3 and 4 were in same pod					

PROTECTED SPECIES RECORDING FORM
DETECTION

Date	Project number	Time at first detection (UTC)	Time at last detection (UTC)	Visual detection number	Acoustic detection number
2011-06-20	UMV04074	14:00	14:12	4	n/a
Regulatory reference number	Vessel name		Survey type	Observer(s)	
OCS-G 12136#A14	Seacor Washington		VSP	[REDACTED]	
Detection was made	Detection was first made				
visually	visually by observer keeping a continuous watch				
Latitude of vessel	Longitude of vessel		Bearing of vessel (degrees)	Water depth (metres)	
28.05467°N	090.19067°W		0	207	
Swell height (metres)	Beaufort sea state	Precipitation	Visibility (km)	Cloud cover (%)	Glare severity and direction
<2	4	none	>5	30	severe from E
Common name		Scientific name		Certainty of identification	
Pantropical spotted dolphin		<i>Stenella attenuata</i>		definite	
Total number	Number of adults	Number of juveniles	Bearing to animal(s) when first detected (degrees)	Range to animal(s) when first detected (metres)	
1	1	0	20	10	
Description (include features such as overall size; shape of head; colour and pattern; size, shape, and position of dorsal fin; height, direction, and shape of blow; etc.)			Visual sighting and/or Acoustic detection details (note behavior, especially changes in relation to gun activity and distance from gun array)		
The animal was about 2.5m in length with a slender body. The dorsal fin was narrow and falcate on a dark dorsal cap that reaches lower on flanks. Spots along flanks. Beak had a white spot on the tip.			This dolphin was seen with a pod of Bottlenose dolphins. The Pantropical spotted was seen bow riding and raking breaths. It left with the other dolphins.		
Direction of travel / first approach (relative to vessel)			Initial compass heading (degrees)	Final compass heading (degrees)	
crossing ahead of vessel			300	300	
Closest distance of animals to airguns/source (metres)	Closest distance of animals to vessel (metres)		Source activity at initial detection	Source activity at final detection	
72	1		not firing	not firing	
Time at closest approach (UTC)	Distance during soft start (m)			Source mitigation action(s) required	Strike avoidance maneuvers required
14:03	First	Closest	Last	delayed start of firing	no
	n/a	n/a	n/a		
			Total duration of mitigation action(s) (HH:MM)	Total duration of production loss due to mitigation (HH:MM)	
			00:12	00:42	
			Other notes or comments		
			Dolphins from DR3 and 4 were in same pod		

PROTECTED SPECIES RECORDING FORM
DETECTION

Date	Project number	Time at first detection (UTC)	Time at last detection (UTC)	Visual detection number	Acoustic detection number
2011-06-20	UMV04074	23:56	23:57	5	n/a
Regulatory reference number	Vessel name		Survey type	Observer(s)	
OCS-G 12136#A14	Seacor Washington		VSP	[REDACTED]	
Detection was made	Detection was first made				
visually	visually by observer keeping a continuous watch				
Latitude of vessel	Longitude of vessel		Bearing of vessel (degrees)	Water depth (metres)	
28.10150°N	090.19633°W		180	207	
Swell height (metres)	Beaufort sea state	Precipitation	Visibility (km)	Cloud cover (%)	Glare severity and direction
<2	4	none	>5	40	moderate from W
Common name		Scientific name		Certainty of identification	
Pantropical spotted dolphin		<i>Stenella attenuata</i>		definite	
Total number	Number of adults	Number of juveniles	Bearing to animal(s) when first detected (degrees)	Range to animal(s) when first detected (metres)	
4	4	0	360	150	
Description (include features such as overall size; shape of head; colour and pattern; size, shape, and position of dorsal fin; height, direction, and shape of blow; etc.)			Visual sighting and/or Acoustic detection details (note behavior, especially changes in relation to gun activity and distance from gun array)		
The animals were 2.5m in length with slender body shape. The dorsal fins were narrow and falcate on a dark dorsal cap that reached lower on flanks. Spots along flanks. Beak had a white tip.			The dolphins were observed approaching the bow head on. They approached the bow but did not bow ride then turned to our port, east, and left.		
Direction of travel / first approach (relative to vessel)			Initial compass heading (degrees)	Final compass heading (degrees)	
towards vessel			0	90	
Closest distance of animals to airguns/source (metres)	Closest distance of animals to vessel (metres)		Source activity at initial detection	Source activity at final detection	
76	2		full power while on survey line	full power while on survey line	
Time at closest approach (UTC)	Distance during soft start (m)			Source mitigation action(s) required	Strike avoidance maneuvers required
23:56	First	Closest	Last	none	no
	n/a	n/a	n/a		
			Total duration of mitigation action(s) (HH:MM)	Total duration of production loss due to mitigation (HH:MM)	
			n/a	n/a	
Other notes or comments					