

**AUDIT OF SALMON CLOSURE ZONE COMPLIANCE MONITORING,  
BERING SEA POLLOCK FISHERY, 2015**

Prepared for

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## BACKGROUND

Closure zones were established for the Bering Sea pollock (*Theragra calcogramma*) fishery to ensure that fishing vessels would avoid areas with the potential for substantial bycatch of chum salmon (*Oncorhynchus keta*). Vessel Monitoring System (VMS) units monitored the movement and location of fishing vessels, and fisheries observers and vessel logbooks recorded whether vessels were actively fishing. Sea State, Inc. (Sea State) establishes these closure zones and monitors vessel compliance of these zones using VMS data.

In addition to these requirements, The National Oceanic and Atmospheric Administration (NOAA) Fisheries, Alaska Region, requires for the pollock fishery “an external audit designed to evaluate the accuracy of the approach used by Sea State to monitor compliance.” The 2015 audit, which NOAA required be based on an “[e]xamination of a randomly selected subset of vessel/days representing 10% of the catch” was conducted by ABR, Inc.—Environmental Research and Services (hereafter, ABR) for Sea State. This report presents the analytical methods used to evaluate Sea State’s salmon closure zone compliance monitoring, and the results of the audit.

## STUDY OBJECTIVES

The objectives of the audit were twofold: (1) assess the compliance of fishing vessels within salmon closure zones by sampling 10% of the 2015 fishing effort, and (2) compare the audit findings with Sea State’s conclusions regarding closure violations.

## ASSUMPTIONS

The audit is based upon the following assumptions, which we have not independently verified:

1. Fishing observer data are always correct, and these sources never report non-fishing activity when fishing actually was occurring, or fishing activity when vessels were not fishing.
2. The following data provided by Sea State are free from errors: the table of VMS locations; the tables of observer data indicating haul start and stop times, and catch weights; the tables used to determine co-op membership.

3. All coordinates specified in the VMS location tables and vessel closure announcements were in the same horizontal datum, namely World Geodetic System 1984 (WGS1984).

## **AUDIT METHODS**

### **SUBSET SELECTION**

The pollock fishery has three major sectors (Catcher/Processors, Catcher vessels supplying motherships, and Catcher vessels supplying shoreside fish processors). All vessels have fisheries observers on board, so we have complete data detailing when each vessel was fishing.

Although the NOAA Fisheries requirement stipulated that “vessel/days representing 10% of the catch” were to be audited, we did not interpret this literally because fish catches are not typically reported by day, and the observer data we had did not include catch totals. We believe our sampling method, described in the following paragraph, was consistent with the intent of the permit stipulation.

Data collected by fisheries observers provided full coverage for the fishery with start times and stop times for each haul. To randomly select vessel/days representing 10% of the catch, individual hauls were selected by sector, without replacement until the total number of selected hauls exceeded 10% of the total (Appendix 1).

### **IDENTIFICATION OF CANDIDATE CLOSURE ZONE VIOLATIONS**

Before performing any analyses on the VMS location data, we built closure polygons and verified tier status information by examining all closure notification memos. The dates that a closure applied for each permit cooperative unit (co-op) was also recorded from the original memos.

All VMS points (i.e., a “point” is a specific latitude-longitude coordinate for the fishing vessel) were then passed through a series of geoprocessing operations and database filters to reduce the full set of data down to a limited number of potential closure zone violations.

First, the VMS points were intersected with the dataset of closure polygons (i.e., the geographic area of the closure zones) for all points that were within a closure when the closure was operational. This overlay excluded all points that were outside of closure zones, or were

inside zones when the closure was not in effect. Each occurrence of a point within a closure zone resulted in an output table row linking the VMS point with the closure zone.

Next, these intersections of VMS points and closures were reduced by removing all intersections that weren't part of the 10% random sample of trips or hauls we generated earlier. The remaining point / closure intersections represent the list of "candidate" (i.e. possible) violation points.

We found 27 candidate violations in our 10% sample.

#### BUFFER FILTER

The accuracy of each reported VMS location is subject to the accuracy of the GPS system, which depends on the number and distribution of satellites visible to the equipment on each vessel. Typical GPS accuracy ranges from 5 to 30 meters, which means that points found to be within a closure should only be considered violations if a 30 meter buffer around the reported location is completely within the closure.

We applied a simple 30 meter buffer around each point and compared these with the closure zone boundaries. When the buffer polygons were partially outside the closure zone of interest, the corresponding points were flagged as "excluded by buffer" and these points were eliminated from further consideration.

#### TIER STATUS FILTER

Location points that still remained as candidate violations were then compared to the tier status reports to determine whether the vessel was exempt from the closure restrictions at the time of the candidate violation. Some closures applied to all vessels, regardless of tier status. Other closures were advisory only, and so technically did not apply to any vessels. The remainder of closures applied to only certain vessels—some vessels were exempt, based on past performance of their co-op at avoiding salmon bycatch. Candidate violations that occurred when the vessel was exempt from closure restrictions were flagged as "exempt from closure due to tier status" and excluded from further consideration.

At this point, all remaining observations with observer data were flagged as “possible violation” indicating that the vessel was within a closure zone when it was not allowed to fish there.

## SPEED FILTER

For those locations that have been flagged as “possible violation,” we examined the speed of the vessel between locations to eliminate vessels that were actually running rather than fishing, and to identify any locations where high speeds could indicate an inaccurate satellite position. We applied the simple speed threshold we developed for our assessment of the 2006 season [Macander and Dissing 2007]. This is an automated way to filter out many points that clearly corresponded to rapid vessel travel or were inaccurate, rather than potential fishing activity.

The speed filter applied several criteria to candidate violations to determine whether they could be excluded on the basis of vessel speed. Locational points met the speed test criteria and were excluded based on a high sustained speed, if they had 1) at least 5-min elapsed time from the previous point, 2) at least 5-min elapsed time to the next point, 3) a calculated speed of >5.6 knots from the previous point, and 4) a calculated speed of >5.6 knots to the next point. We excluded locations that were within five minutes of each other because they were likely to be position errors and the speeds between those locations were often artificially high due to this error. The speed filter was able to predict fishing activity correctly for 99.83% of examined points in 2006 [Macander and Dissing 2007].

To develop the data necessary to apply the speed filter, the minimum sustained speed and the time interval to and from successive VMS locations were calculated for each point. Speeds were calculated from the distance and difference in time between successive VMS locations. These values corresponded to a minimum speed because vessels traveling a zig-zag course between two observations would have a speed higher than the calculated speed. Candidate violations from that met our speed test criteria were flagged as “excluded due to high sustained speed.” These data were excluded from further consideration.

## VISUAL EXAMINATION

The remaining candidate violations were reviewed manually. In the past, we have noted that some of the points that did not pass the conservative speed test corresponded to non-fishing activity. For example, some points, which were just below the speed threshold, were along a straight line with several other points that did meet the criteria of the speed filter. Points that did not meet the speed test, but which were determined to correspond to running out to the fishing ground (based on visual review), were flagged as “excluded by manual review: vessel running.” These data were excluded from further consideration.

Remaining points corresponded to fishing in closure zones, and are flagged as “possible violation.” Violations will be reported to Sea State and the North Pacific Fisheries Management Council (NPFMC). A database containing the relevant attribute data for these violations, and maps for each violation, will be provided to Sea State and NPFMC.

## COMPARISON WITH SEA STATE DETERMINATIONS

A comparison of the violations reported by ABR was made to those reported by Sea State. All of the location points that were part of ABR’s 10% selection were considered in this assessment.

## RESULTS AND DISCUSSION

### IDENTIFICATION OF CANDIDATE CLOSURE ZONE VIOLATIONS

#### IDENTIFYING CANDIDATE VIOLATIONS

The identification of candidate violations was entirely automated, without any interpretation or subjective thresholds (Table 1). This automated approach efficiently reduced the number of points requiring closer examination from 404,488 for the total fishery to zero.

Table 1. Number of vessel locations considered at different stages of the closure violation audit, Bering Sea pollock fishery, 2015.

<b>Category</b>	<b>Locations</b>
All VMS Locations	537,519
Select 10% of Hauls	8,843
Points in Closure when Closed (Candidate Violations)	27
Violations	0



## CATEGORIZING CANDIDATE VIOLATIONS

A small degree of subjectivity is involved in setting the buffer distances and vessel speed thresholds, as well as in the process of reviewing vessel tracks manually. We believe, however, that our approach was cautious, well-documented, and reasonable. In this year’s audit, all candidate locations came from vessels fishing in a co-op that was not required to observe the closure. As a result, we found no closure violations in our 10% sample (Table 2).

Table 2. Results of ABR review of candidate violations of the closure zones, Bering Sea pollock fishery, 2015.

Category	Total
Candidate Violations	27
Excluded by buffer	0
Excluded based on tier status	27
Excluded by speed filter	0
Excluded by visual review	0
Violations	0

## COMPARISON WITH SEA STATE DETERMINATIONS

For all cases where we had data, our verdicts agreed with Sea State’s determinations (Appendix 2). Our 10% subsample did not identify any errors in Sea State’s original determinations, and we did not further investigate locations outside of our subsample.

## CONCLUSIONS

ABR agreed with the determinations of Sea State for the 10% sample that we examined, and we found no closure zone violations. Of points examined, our determination agreed with Sea State for all 8,843 locations in our subsample.

With the exception of the closure zone data, from which we reconstruct from the closure documents, ABR’s assessment was based on our review and processing of data tables developed and provided by Sea State. As a result, our audit does not systematically assess any errors that might have occurred during Sea State’s data compilation process.

## LITERATURE CITED

Macander, M. J., and D. Dissing. 2007. Audit of salmon closure zone compliance monitoring Bering Sea pollock fishery. ABR, Inc.—Environmental Research & Services, Fairbanks, AK. 48 pp.

Appendix 1. Audited hauls for the Bering Sea pollock fishery, 2015.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Alaskan Defender	2015-06-11 22:25	2015-06-12 02:50
Alaskan Defender	2015-07-12 14:25	2015-07-12 18:30
Alaskan Defender	2015-07-16 21:00	2015-07-17 03:20
Alaskan Defender	2015-07-21 21:00	2015-07-21 21:55
Alaskan Defender	2015-08-14 13:15	2015-08-14 16:10
Alaskan Defender	2015-08-26 08:05	2015-08-26 13:55
Alaska Ocean	2015-06-14 01:00	2015-06-14 02:25
Alaska Ocean	2015-06-15 10:50	2015-06-15 14:10
Alaska Ocean	2015-06-18 09:50	2015-06-18 13:30
Alaska Ocean	2015-06-21 05:30	2015-06-21 07:30
Alaska Ocean	2015-07-03 17:10	2015-07-03 18:30
Alaska Ocean	2015-07-04 21:35	2015-07-04 22:25
Alaska Ocean	2015-07-09 01:15	2015-07-09 05:55
Alaska Ocean	2015-07-14 22:45	2015-07-15 01:50
Alaska Ocean	2015-07-30 10:55	2015-07-30 12:45
Alaska Ocean	2015-07-31 14:20	2015-07-31 15:00
Alaska Ocean	2015-08-01 15:15	2015-08-01 21:25
Alaska Ocean	2015-08-01 23:10	2015-08-02 02:40
Alaska Ocean	2015-08-02 03:30	2015-08-02 07:15
Alaska Ocean	2015-08-05 16:15	2015-08-05 19:25
Alaska Ocean	2015-08-07 09:00	2015-08-07 14:25
Alaska Ocean	2015-08-19 08:15	2015-08-19 12:15
Alaska Ocean	2015-08-19 12:55	2015-08-19 15:45
Alaska Ocean	2015-08-22 18:05	2015-08-22 22:00
Alaska Ocean	2015-08-24 14:25	2015-08-24 20:15
Alaska Ocean	2015-09-03 16:25	2015-09-03 19:10
Alaska Ocean	2015-09-04 05:25	2015-09-04 10:05
Alaska Ocean	2015-09-04 21:15	2015-09-05 02:15
Alaska Ocean	2015-09-07 09:15	2015-09-07 14:45
Alaska Ocean	2015-09-09 00:20	2015-09-09 03:15
Alaska Rose	2015-06-20 03:25	2015-06-20 06:38
Alaska Rose	2015-06-22 05:00	2015-06-22 07:55
Alaska Rose	2015-07-03 13:00	2015-07-03 19:00
Alaska Rose	2015-07-19 14:00	2015-07-19 22:00
Alaska Rose	2015-07-24 09:00	2015-07-24 11:00
Alaska Rose	2015-07-28 10:00	2015-07-28 14:05
Alaska Rose	2015-08-01 18:00	2015-08-01 22:30
Alaska Rose	2015-08-16 11:30	2015-08-16 13:15

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Aldebaran	2015-06-13 09:00	2015-06-13 11:50
Aldebaran	2015-06-26 08:45	2015-06-26 12:55
Aldebaran	2015-08-01 12:20	2015-08-01 13:00
Aldebaran	2015-08-07 11:20	2015-08-07 14:27
Aldebaran	2015-08-14 20:20	2015-08-14 20:45
Aldebaran	2015-08-23 14:05	2015-08-23 16:00
Aldebaran	2015-09-09 16:00	2015-09-09 17:40
Aleutian Challenger	2015-07-20 01:16	2015-07-20 06:36
Aleutian Challenger	2015-07-30 18:30	2015-07-31 01:22
Aleutian Challenger	2015-08-04 09:50	2015-08-04 13:10
Aleutian Challenger	2015-08-12 21:50	2015-08-13 08:05
Aleutian Challenger	2015-08-19 19:15	2015-08-20 00:32
Aleutian Challenger	2015-08-31 01:28	2015-08-31 02:36
Aleutian Challenger	2015-08-31 09:14	2015-08-31 11:23
Aleutian Challenger	2015-08-31 16:26	2015-08-31 20:44
Aleutian Challenger	2015-09-01 03:18	2015-09-01 07:04
Alsea	2015-07-02 18:14	2015-07-02 23:54
Alsea	2015-07-19 01:22	2015-07-19 11:07
Alsea	2015-08-11 13:00	2015-08-11 15:15
Alsea	2015-08-17 14:20	2015-08-17 16:35
Alsea	2015-08-22 15:05	2015-08-22 17:00
Alyeska	2015-09-27 14:30	2015-09-27 18:13
American Beauty	2015-07-28 10:06	2015-07-28 15:09
American Beauty	2015-07-28 16:35	2015-07-28 18:51
American Beauty	2015-08-22 06:20	2015-08-22 12:05
American Beauty	2015-08-22 20:10	2015-08-23 02:10
American Beauty	2015-08-23 09:45	2015-08-23 15:40
American Beauty	2015-08-24 18:26	2015-08-24 22:55
American Beauty	2015-09-01 07:25	2015-09-01 12:12
American Beauty	2015-09-12 01:30	2015-09-12 12:24
American Beauty	2015-09-17 13:00	2015-09-17 16:10
American Beauty	2015-09-17 18:30	2015-09-17 23:45
American Beauty	2015-09-23 15:27	2015-09-23 18:40
American Beauty	2015-09-24 16:50	2015-09-24 20:00
American Dynasty	2015-06-20 04:40	2015-06-20 07:15
American Dynasty	2015-06-21 07:15	2015-06-21 11:35
American Dynasty	2015-06-24 06:50	2015-06-24 09:30
American Dynasty	2015-07-02 03:15	2015-07-02 09:40

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
American Dynasty	2015-07-07 03:50	2015-07-07 06:20
American Dynasty	2015-07-13 20:55	2015-07-14 02:30
American Dynasty	2015-07-14 03:15	2015-07-14 08:30
American Dynasty	2015-07-14 09:50	2015-07-14 14:10
American Dynasty	2015-07-17 04:00	2015-07-17 06:10
American Dynasty	2015-07-18 02:15	2015-07-18 05:00
American Dynasty	2015-07-18 09:45	2015-07-18 15:35
American Dynasty	2015-07-21 05:20	2015-07-21 09:00
American Dynasty	2015-07-28 16:15	2015-07-28 21:55
American Dynasty	2015-07-29 14:50	2015-07-29 18:10
American Dynasty	2015-07-30 03:30	2015-07-30 08:10
American Dynasty	2015-07-31 07:50	2015-07-31 13:30
American Dynasty	2015-08-05 06:40	2015-08-05 08:50
American Dynasty	2015-08-08 14:40	2015-08-08 19:00
American Dynasty	2015-08-09 08:58	2015-08-09 13:15
American Dynasty	2015-08-21 04:45	2015-08-21 07:35
American Dynasty	2015-08-24 10:20	2015-08-24 14:20
American Dynasty	2015-08-30 13:20	2015-08-30 18:00
American Dynasty	2015-08-30 19:05	2015-08-31 00:45
American Dynasty	2015-09-04 02:10	2015-09-04 07:20
American Dynasty	2015-09-05 03:15	2015-09-05 07:55
American Eagle	2015-07-20 07:00	2015-07-20 10:00
American Eagle	2015-07-23 13:50	2015-07-23 15:15
American Eagle	2015-08-13 09:45	2015-08-13 12:45
American Triumph	2015-06-21 12:30	2015-06-21 15:55
American Triumph	2015-06-23 02:20	2015-06-23 05:30
American Triumph	2015-06-27 06:00	2015-06-27 12:00
American Triumph	2015-06-29 12:00	2015-06-29 15:20
American Triumph	2015-07-10 18:20	2015-07-10 19:35
American Triumph	2015-07-12 09:45	2015-07-12 13:30
American Triumph	2015-07-14 21:45	2015-07-15 01:15
American Triumph	2015-07-18 23:40	2015-07-19 05:00
American Triumph	2015-07-20 14:45	2015-07-20 17:30
American Triumph	2015-07-24 14:50	2015-07-24 18:50
American Triumph	2015-07-31 16:45	2015-07-31 20:15
American Triumph	2015-08-04 20:10	2015-08-05 01:00
American Triumph	2015-08-07 14:00	2015-08-07 18:00
American Triumph	2015-08-09 15:30	2015-08-09 18:00

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
American Triumph	2015-08-19 10:10	2015-08-19 15:45
American Triumph	2015-08-20 16:50	2015-08-20 20:50
American Triumph	2015-08-30 03:55	2015-08-30 08:25
American Triumph	2015-09-02 22:05	2015-09-03 04:00
American Triumph	2015-09-03 13:30	2015-09-03 15:45
American Triumph	2015-09-03 16:30	2015-09-03 19:20
Anita J	2015-07-24 09:14	2015-07-24 10:52
Anita J	2015-09-17 18:20	2015-09-18 00:58
Anita J	2015-09-25 22:13	2015-09-26 00:11
Anita J	2015-09-26 17:40	2015-09-26 19:13
Anita J	2015-10-01 09:30	2015-10-01 17:40
Arctic Explorer	2015-06-20 04:11	2015-06-20 07:30
Arctic Explorer	2015-06-22 15:50	2015-06-22 16:08
Arctic Explorer	2015-07-04 23:59	2015-07-05 15:12
Arctic Explorer	2015-07-14 23:58	2015-07-15 08:42
Arctic Explorer	2015-07-31 08:16	2015-07-31 10:25
Arctic Explorer	2015-09-01 21:45	2015-09-02 12:35
Arctic Fjord	2015-06-16 08:50	2015-06-16 10:00
Arctic Fjord	2015-06-17 03:40	2015-06-17 09:50
Arctic Fjord	2015-06-17 10:35	2015-06-17 12:30
Arctic Fjord	2015-06-18 14:20	2015-06-18 15:55
Arctic Fjord	2015-06-18 17:10	2015-06-18 19:10
Arctic Fjord	2015-06-25 08:35	2015-06-25 10:30
Arctic Fjord	2015-06-27 04:25	2015-06-27 06:30
Arctic Fjord	2015-06-28 14:50	2015-06-28 15:20
Arctic Fjord	2015-07-05 03:35	2015-07-05 07:30
Arctic Fjord	2015-07-06 01:30	2015-07-06 05:30
Arctic Fjord	2015-07-08 12:45	2015-07-08 15:50
Arctic Fjord	2015-07-09 18:45	2015-07-09 23:10
Arctic Fjord	2015-07-16 16:40	2015-07-16 20:35
Arctic Fjord	2015-07-18 16:10	2015-07-18 18:30
Arctic Fjord	2015-07-19 09:55	2015-07-19 13:25
Arctic Fjord	2015-07-24 10:30	2015-07-24 13:20
Arctic Fjord	2015-07-24 22:05	2015-07-25 00:25
Arctic Fjord	2015-07-30 14:25	2015-07-30 15:25
Arctic Fjord	2015-07-31 00:15	2015-07-31 03:50
Arctic Fjord	2015-08-03 22:05	2015-08-03 23:35
Arctic Fjord	2015-08-04 13:10	2015-08-04 17:35

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Arctic Fjord	2015-08-10 20:35	2015-08-11 00:55
Arctic Fjord	2015-08-14 21:15	2015-08-15 00:45
Arctic Fjord	2015-08-15 01:40	2015-08-15 06:00
Arctic Fjord	2015-08-16 19:40	2015-08-17 00:35
Arctic Fjord	2015-08-18 19:50	2015-08-19 01:10
Arctic Fjord	2015-08-20 03:20	2015-08-20 08:20
Arctic Fjord	2015-08-31 16:55	2015-08-31 20:45
Arctic Fjord	2015-09-01 11:30	2015-09-01 15:50
Arctic Fjord	2015-09-01 17:05	2015-09-01 21:35
Arctic Fjord	2015-09-07 15:05	2015-09-07 19:05
Arctic Fjord	2015-09-10 18:15	2015-09-10 20:30
Arctic Fjord	2015-09-11 22:45	2015-09-12 03:00
Arctic Fjord	2015-09-12 16:10	2015-09-12 19:30
Arctic Fjord	2015-09-14 15:45	2015-09-14 18:12
Arctic Fjord	2015-09-15 10:35	2015-09-15 11:50
Arctic Fjord	2015-09-16 11:50	2015-09-16 13:10
Arctic Fjord	2015-09-23 09:50	2015-09-23 12:45
Arctic Ram	2015-06-15 12:45	2015-06-15 23:30
Arctic Ram	2015-06-21 00:15	2015-06-21 06:50
Arctic Ram	2015-06-25 00:30	2015-06-25 13:00
Arctic Ram	2015-08-14 14:30	2015-08-14 19:08
Arctic Ram	2015-08-18 14:20	2015-08-18 16:22
Arctic Ram	2015-09-03 14:00	2015-09-03 23:59
Arctic Ram	2015-09-05 17:40	2015-09-06 08:30
Arctic Storm	2015-06-14 01:30	2015-06-14 02:20
Arctic Storm	2015-06-14 03:25	2015-06-14 04:45
Arctic Storm	2015-06-14 19:25	2015-06-14 23:00
Arctic Storm	2015-06-15 06:00	2015-06-15 08:55
Arctic Storm	2015-06-16 19:55	2015-06-16 21:00
Arctic Storm	2015-06-17 21:30	2015-06-18 00:25
Arctic Storm	2015-06-30 23:20	2015-07-01 02:10
Arctic Storm	2015-07-03 22:15	2015-07-03 23:45
Arctic Storm	2015-07-20 13:15	2015-07-20 16:25
Arctic Storm	2015-07-20 18:45	2015-07-21 00:30
Arctic Storm	2015-07-21 17:40	2015-07-21 19:30
Arctic Storm	2015-07-24 07:15	2015-07-24 09:25
Arctic Storm	2015-07-31 01:40	2015-07-31 05:45
Arctic Storm	2015-07-31 08:20	2015-07-31 12:35

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Arctic Storm	2015-08-01 14:05	2015-08-01 17:55
Arctic Storm	2015-08-03 01:05	2015-08-03 05:30
Arctic Storm	2015-08-05 16:00	2015-08-05 18:30
Arctic Storm	2015-08-06 01:40	2015-08-06 04:55
Arctic Storm	2015-08-14 07:30	2015-08-14 09:55
Arctic Wind	2015-06-13 01:45	2015-06-13 07:00
Arctic Wind	2015-06-21 12:30	2015-06-21 19:30
Arctic Wind	2015-09-09 01:15	2015-09-09 02:00
Arcturus	2015-06-18 21:45	2015-06-19 02:00
Arcturus	2015-09-09 14:40	2015-09-09 19:15
Arcturus	2015-10-07 18:00	2015-10-08 01:30
Arcturus	2015-10-12 17:00	2015-10-12 22:55
Argosy	2015-07-16 15:00	2015-07-16 22:50
Argosy	2015-08-10 10:15	2015-08-10 14:30
Argosy	2015-08-20 15:05	2015-08-20 20:00
Auriga	2015-06-10 21:00	2015-06-11 00:35
Auriga	2015-07-04 17:20	2015-07-04 20:55
Auriga	2015-07-11 12:10	2015-07-11 14:58
Auriga	2015-08-04 13:00	2015-08-04 19:12
Auriga	2015-08-04 20:27	2015-08-05 02:05
Auriga	2015-08-20 23:40	2015-08-21 10:25
Auriga	2015-08-24 17:00	2015-08-24 18:45
Auriga	2015-08-29 04:05	2015-08-29 12:35
Auriga	2015-09-06 16:30	2015-09-06 18:20
Aurora	2015-06-14 21:40	2015-06-15 02:45
Aurora	2015-07-15 13:10	2015-07-15 18:55
Aurora	2015-07-19 20:45	2015-07-20 10:20
Aurora	2015-08-28 01:05	2015-08-28 10:30
Aurora	2015-09-05 17:40	2015-09-06 07:30
Aurora	2015-09-07 17:50	2015-09-07 20:15
Aurora	2015-09-07 22:00	2015-09-08 08:20
Bering Defender	2015-06-26 12:25	2015-06-26 15:40
Bering Defender	2015-08-20 15:05	2015-08-20 20:30
Bering Defender	2015-08-30 11:00	2015-08-30 13:25
Bering Defender	2015-08-30 14:50	2015-08-30 15:20
Bering Defender	2015-09-09 16:00	2015-09-09 19:25
Bering Rose	2015-06-19 20:45	2015-06-20 06:15
Bering Rose	2015-06-23 21:15	2015-06-24 11:00

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Bering Rose	2015-07-20 16:45	2015-07-21 09:32
Bering Rose	2015-08-12 16:39	2015-08-12 23:29
Bering Rose	2015-09-05 11:35	2015-09-05 15:33
Bristol Explorer	2015-06-13 10:44	2015-06-13 13:22
Bristol Explorer	2015-07-11 06:04	2015-07-11 09:04
Bristol Explorer	2015-07-21 13:04	2015-07-21 16:59
Bristol Explorer	2015-07-21 19:02	2015-07-21 20:40
Bristol Explorer	2015-07-21 21:58	2015-07-21 22:35
Bristol Explorer	2015-09-11 19:54	2015-09-11 23:00
Bristol Explorer	2015-09-28 14:01	2015-09-28 16:57
Bristol Explorer	2015-10-05 14:08	2015-10-05 19:48
Bristol Explorer	2015-10-06 01:48	2015-10-06 09:17
Caitlin Ann	2015-06-13 01:40	2015-06-13 09:10
Caitlin Ann	2015-06-17 10:20	2015-06-17 14:50
Caitlin Ann	2015-07-12 17:55	2015-07-13 05:30
Caitlin Ann	2015-07-21 19:45	2015-07-22 07:40
Caitlin Ann	2015-08-09 08:05	2015-08-09 16:50
Caitlin Ann	2015-09-03 09:55	2015-09-03 15:30
Caitlin Ann	2015-09-03 17:20	2015-09-04 03:00
Caitlin Ann	2015-09-14 21:20	2015-09-15 07:55
Cape Kiwanda	2015-08-14 19:15	2015-08-14 21:10
Cape Kiwanda	2015-08-22 02:58	2015-08-22 13:51
Cape Kiwanda	2015-09-02 13:05	2015-09-02 13:15
Cape Kiwanda	2015-09-04 13:19	2015-09-04 14:23
Cape Kiwanda	2015-09-06 10:59	2015-09-06 12:52
Cape Kiwanda	2015-09-06 19:12	2015-09-06 20:47
Chelsea K	2015-06-10 14:40	2015-06-10 15:30
Chelsea K	2015-06-11 15:38	2015-06-11 20:23
Chelsea K	2015-06-16 15:05	2015-06-16 20:18
Chelsea K	2015-07-20 15:33	2015-07-21 00:38
Chelsea K	2015-08-08 14:46	2015-08-08 15:00
Chelsea K	2015-08-09 08:58	2015-08-09 15:36
Chelsea K	2015-08-12 17:40	2015-08-12 22:50
Chelsea K	2015-08-16 18:28	2015-08-16 20:45
Chelsea K	2015-08-17 10:14	2015-08-17 13:05
Chelsea K	2015-09-08 09:03	2015-09-08 09:16
Columbia	2015-08-09 03:20	2015-08-09 09:00
Columbia	2015-08-09 20:50	2015-08-09 21:30



## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Columbia	2015-08-23 20:00	2015-08-24 00:30
Columbia	2015-09-08 12:05	2015-09-08 13:20
Columbia	2015-09-10 22:55	2015-09-11 01:00
Columbia	2015-09-11 03:00	2015-09-11 11:50
Columbia	2015-09-12 18:10	2015-09-13 03:35
Commodore	2015-06-22 19:15	2015-06-22 22:10
Commodore	2015-08-13 14:40	2015-08-13 15:05
Commodore	2015-09-22 10:00	2015-09-22 14:20
Commodore	2015-09-26 16:30	2015-09-26 17:15
Commodore	2015-10-02 19:30	2015-10-02 23:50
Defender	2015-06-21 14:30	2015-06-22 01:00
Defender	2015-06-26 09:00	2015-06-26 10:30
Defender	2015-07-21 16:40	2015-07-21 21:35
Defender	2015-08-21 05:15	2015-08-21 12:15
Defender	2015-08-27 06:20	2015-08-27 07:50
Defender	2015-09-02 19:00	2015-09-03 03:40
Destination	2015-07-12 09:55	2015-07-12 17:15
Destination	2015-07-22 17:50	2015-07-22 18:30
Destination	2015-07-31 09:30	2015-07-31 13:05
Destination	2015-07-31 18:25	2015-08-01 05:00
Destination	2015-08-14 17:35	2015-08-14 20:55
Dominator	2015-07-14 13:55	2015-07-14 16:05
Dominator	2015-07-17 14:00	2015-07-17 20:20
Dominator	2015-07-17 22:25	2015-07-18 05:25
Dominator	2015-09-26 10:50	2015-09-26 18:20
Dominator	2015-10-07 04:20	2015-10-07 08:15
Dominator	2015-10-09 18:40	2015-10-09 20:20
Elizabeth F	2015-06-25 12:45	2015-06-25 22:00
Elizabeth F	2015-06-26 01:30	2015-06-26 05:45
Elizabeth F	2015-06-30 02:00	2015-06-30 07:15
Excalibur II	2015-06-11 12:12	2015-06-11 13:22
Excalibur II	2015-06-22 21:49	2015-06-23 03:31
Fierce Allegiance	2015-08-05 15:00	2015-08-06 01:00
Gladiator	2015-07-09 13:01	2015-07-09 16:10
Gladiator	2015-07-10 08:20	2015-07-10 17:10
Gladiator	2015-07-19 16:16	2015-07-19 18:27
Golden Dawn	2015-07-23 04:58	2015-07-23 08:18
Golden Dawn	2015-07-30 09:38	2015-07-30 12:46

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Golden Dawn	2015-08-11 13:45	2015-08-11 15:48
Golden Dawn	2015-09-01 18:00	2015-09-01 18:58
Golden Dawn	2015-09-17 11:00	2015-09-17 14:36
Golden Dawn	2015-09-17 16:08	2015-09-17 21:23
Golden Dawn	2015-09-22 10:50	2015-09-22 14:37
Golden Dawn	2015-09-23 00:50	2015-09-23 12:02
Golden Pisces	2015-06-10 12:00	2015-06-10 15:05
Golden Pisces	2015-06-20 09:20	2015-06-20 18:18
Golden Pisces	2015-07-07 00:25	2015-07-07 06:35
Golden Pisces	2015-07-11 04:50	2015-07-11 10:30
Golden Pisces	2015-08-02 10:25	2015-08-02 11:55
Golden Pisces	2015-08-10 15:45	2015-08-10 18:22
Golden Pisces	2015-08-17 00:02	2015-08-17 03:00
Gold Rush	2015-06-13 02:00	2015-06-13 10:00
Gold Rush	2015-07-13 20:26	2015-07-14 04:43
Gold Rush	2015-07-16 04:10	2015-07-16 14:17
Gold Rush	2015-07-21 00:10	2015-07-21 12:20
Gold Rush	2015-08-05 12:55	2015-08-05 18:23
Great Pacific	2015-07-10 18:38	2015-07-11 08:54
Great Pacific	2015-07-18 22:55	2015-07-19 09:54
Great Pacific	2015-07-31 09:41	2015-07-31 12:55
Great Pacific	2015-08-03 11:19	2015-08-03 12:42
Great Pacific	2015-08-14 11:08	2015-08-14 17:50
Half Moon Bay	2015-09-08 17:20	2015-09-08 20:25
Half Moon Bay	2015-09-18 03:15	2015-09-18 03:25
Half Moon Bay	2015-09-24 19:00	2015-09-24 21:20
Hickory Wind	2015-06-10 19:00	2015-06-11 10:00
Hickory Wind	2015-07-01 08:00	2015-07-01 13:30
Hickory Wind	2015-08-21 22:00	2015-08-22 10:30
Island Enterprise	2015-08-03 16:45	2015-08-03 17:45
Island Enterprise	2015-08-05 23:10	2015-08-06 05:10
Island Enterprise	2015-08-07 17:40	2015-08-07 20:15
Island Enterprise	2015-08-18 16:10	2015-08-18 17:00
Island Enterprise	2015-08-21 03:05	2015-08-21 11:00
Island Enterprise	2015-08-23 06:15	2015-08-23 11:25
Island Enterprise	2015-09-01 02:55	2015-09-01 09:20
Island Enterprise	2015-09-04 10:00	2015-09-04 12:35
Island Enterprise	2015-09-06 00:30	2015-09-06 02:20

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Island Enterprise	2015-09-14 21:05	2015-09-14 23:35
Island Enterprise	2015-09-19 00:20	2015-09-19 04:10
Island Enterprise	2015-09-29 17:40	2015-09-29 21:10
Kodiak Enterprise	2015-06-10 23:05	2015-06-11 00:30
Kodiak Enterprise	2015-06-11 12:15	2015-06-11 14:30
Kodiak Enterprise	2015-06-12 02:30	2015-06-12 04:30
Kodiak Enterprise	2015-06-15 13:30	2015-06-15 15:30
Kodiak Enterprise	2015-06-18 14:40	2015-06-18 17:05
Kodiak Enterprise	2015-06-23 21:35	2015-06-24 01:25
Kodiak Enterprise	2015-06-25 07:00	2015-06-25 08:30
Kodiak Enterprise	2015-07-07 11:45	2015-07-07 16:20
Kodiak Enterprise	2015-07-12 01:30	2015-07-12 04:45
Kodiak Enterprise	2015-07-12 21:35	2015-07-12 23:15
Kodiak Enterprise	2015-07-13 11:00	2015-07-13 11:30
Kodiak Enterprise	2015-07-18 16:45	2015-07-18 18:15
Kodiak Enterprise	2015-07-28 17:00	2015-07-28 18:10
Kodiak Enterprise	2015-08-01 13:00	2015-08-01 15:15
Kodiak Enterprise	2015-08-04 17:30	2015-08-04 19:25
Kodiak Enterprise	2015-08-09 20:55	2015-08-09 21:05
Kodiak Enterprise	2015-08-13 00:40	2015-08-13 04:20
Kodiak Enterprise	2015-08-13 14:20	2015-08-13 17:20
Kodiak Enterprise	2015-08-14 02:15	2015-08-14 04:15
Kodiak Enterprise	2015-08-15 01:05	2015-08-15 04:30
Kodiak Enterprise	2015-08-15 05:55	2015-08-15 08:30
Kodiak Enterprise	2015-08-17 11:30	2015-08-17 13:30
Leslie Lee	2015-07-17 08:11	2015-07-17 15:05
Leslie Lee	2015-08-02 10:35	2015-08-02 13:48
Leslie Lee	2015-08-13 08:15	2015-08-13 11:26
Leslie Lee	2015-08-28 18:53	2015-08-28 19:37
Majesty	2015-06-13 01:10	2015-06-13 07:50
Majesty	2015-07-09 17:25	2015-07-09 23:50
Majesty	2015-07-10 13:20	2015-07-10 16:55
Majesty	2015-07-10 19:20	2015-07-10 21:45
Majesty	2015-07-13 13:50	2015-07-13 17:10
Majesty	2015-09-04 09:22	2015-09-04 10:56
Marcy J	2015-07-02 09:20	2015-07-02 14:00
Marcy J	2015-08-23 10:02	2015-08-23 11:51
Marcy J	2015-08-29 10:30	2015-08-29 15:30

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Marcy J	2015-08-29 17:00	2015-08-29 21:00
Margaret Lyn	2015-06-14 00:57	2015-06-14 04:35
Margaret Lyn	2015-06-14 10:01	2015-06-14 11:32
Margaret Lyn	2015-06-14 17:37	2015-06-14 18:33
Margaret Lyn	2015-06-23 14:54	2015-06-23 17:55
Margaret Lyn	2015-06-27 17:38	2015-06-27 19:42
Margaret Lyn	2015-06-29 16:17	2015-06-29 19:31
Margaret Lyn	2015-07-05 09:17	2015-07-05 09:50
Margaret Lyn	2015-07-20 23:18	2015-07-21 04:31
Margaret Lyn	2015-07-21 08:10	2015-07-21 10:13
Margaret Lyn	2015-07-28 23:01	2015-07-29 06:00
Margaret Lyn	2015-07-31 05:35	2015-07-31 09:12
Margaret Lyn	2015-08-02 03:31	2015-08-02 07:45
Margaret Lyn	2015-08-05 11:19	2015-08-05 11:42
Mark I	2015-06-22 03:00	2015-06-22 12:07
Mark I	2015-06-24 09:30	2015-06-24 20:05
Mark I	2015-07-21 05:05	2015-07-21 10:55
Mark I	2015-08-07 08:20	2015-08-07 15:00
Mark I	2015-08-09 01:05	2015-08-09 04:50
Mark I	2015-08-14 14:40	2015-08-14 19:00
Mark I	2015-08-21 10:50	2015-08-21 15:30
Mark I	2015-08-25 09:20	2015-08-25 12:20
Misty Dawn	2015-06-20 01:30	2015-06-20 09:45
Misty Dawn	2015-06-20 18:25	2015-06-20 21:05
Misty Dawn	2015-06-30 02:40	2015-06-30 07:52
Misty Dawn	2015-07-07 01:00	2015-07-07 03:40
Misty Dawn	2015-07-10 05:35	2015-07-10 09:45
Misty Dawn	2015-07-23 21:10	2015-07-24 03:15
Misty Dawn	2015-07-24 04:25	2015-07-24 15:35
Misty Dawn	2015-08-13 05:00	2015-08-13 10:45
Misty Dawn	2015-08-14 15:30	2015-08-14 16:45
Misty Dawn	2015-08-15 05:25	2015-08-15 08:10
Misty Dawn	2015-08-24 17:50	2015-08-24 20:36
Misty Dawn	2015-08-29 08:51	2015-08-29 10:24
Misty Dawn	2015-09-02 19:59	2015-09-03 00:10
Misty Dawn	2015-09-05 11:15	2015-09-05 12:55
Misty Dawn	2015-09-10 07:00	2015-09-10 11:10
Misty Dawn	2015-09-17 16:20	2015-09-18 03:30

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Misty Dawn	2015-09-24 00:51	2015-09-24 04:40
Morning Star	2015-06-26 00:05	2015-06-26 06:35
Morning Star	2015-07-30 19:23	2015-07-30 22:40
Morning Star	2015-08-29 19:00	2015-08-30 07:21
Nordic Fury	2015-06-17 08:01	2015-06-17 10:25
Nordic Fury	2015-06-18 10:21	2015-06-18 11:43
Nordic Fury	2015-07-17 04:55	2015-07-17 14:15
Nordic Fury	2015-08-09 12:00	2015-08-09 19:40
Nordic Fury	2015-08-19 09:50	2015-08-19 16:50
Nordic Fury	2015-08-29 18:00	2015-08-29 21:40
Nordic Fury	2015-09-06 16:40	2015-09-06 18:00
Nordic Star	2015-06-19 20:32	2015-06-19 22:12
Nordic Star	2015-06-24 01:32	2015-06-24 09:36
Nordic Star	2015-06-29 11:15	2015-06-29 13:14
Nordic Star	2015-07-07 13:47	2015-07-07 18:06
Nordic Star	2015-07-18 12:52	2015-07-18 16:46
Nordic Star	2015-08-23 12:17	2015-08-23 13:16
Northern Eagle	2015-06-10 14:40	2015-06-10 17:30
Northern Eagle	2015-06-14 18:55	2015-06-14 22:30
Northern Eagle	2015-06-20 03:10	2015-06-20 08:40
Northern Eagle	2015-06-20 09:45	2015-06-20 12:30
Northern Eagle	2015-06-30 05:00	2015-06-30 07:00
Northern Eagle	2015-07-03 01:40	2015-07-03 05:20
Northern Eagle	2015-07-11 01:00	2015-07-11 05:50
Northern Eagle	2015-07-13 09:00	2015-07-13 09:30
Northern Eagle	2015-07-15 12:00	2015-07-15 15:25
Northern Eagle	2015-07-16 09:55	2015-07-16 13:25
Northern Eagle	2015-07-16 23:15	2015-07-17 04:55
Northern Eagle	2015-07-19 11:40	2015-07-19 12:40
Northern Eagle	2015-07-27 20:20	2015-07-27 23:20
Northern Eagle	2015-07-31 05:45	2015-07-31 09:10
Northern Eagle	2015-08-01 07:20	2015-08-01 12:40
Northern Eagle	2015-08-02 22:25	2015-08-03 02:45
Northern Eagle	2015-08-08 02:45	2015-08-08 06:05
Northern Eagle	2015-08-08 13:30	2015-08-08 19:55
Northern Eagle	2015-08-10 16:55	2015-08-10 21:50
Northern Eagle	2015-08-18 15:15	2015-08-18 20:55
Northern Eagle	2015-08-24 09:35	2015-08-24 13:20

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Northern Eagle	2015-08-28 03:00	2015-08-28 06:20
Northern Hawk	2015-06-20 02:50	2015-06-20 05:20
Northern Hawk	2015-06-21 10:30	2015-06-21 12:25
Northern Hawk	2015-06-27 07:10	2015-06-27 09:15
Northern Hawk	2015-07-06 17:15	2015-07-06 20:50
Northern Hawk	2015-07-08 01:15	2015-07-08 04:30
Northern Hawk	2015-07-09 22:50	2015-07-10 03:05
Northern Hawk	2015-07-11 12:20	2015-07-11 14:35
Northern Hawk	2015-07-13 19:35	2015-07-14 00:05
Northern Hawk	2015-07-14 05:40	2015-07-14 09:20
Northern Hawk	2015-07-23 06:10	2015-07-23 09:05
Northern Hawk	2015-07-24 20:40	2015-07-25 00:30
Northern Hawk	2015-07-25 01:20	2015-07-25 04:25
Northern Hawk	2015-07-25 05:20	2015-07-25 07:10
Northern Hawk	2015-07-25 18:30	2015-07-25 21:45
Northern Hawk	2015-07-26 05:15	2015-07-26 07:50
Northern Hawk	2015-08-04 07:35	2015-08-04 13:35
Northern Hawk	2015-08-05 01:20	2015-08-05 03:15
Northern Hawk	2015-08-08 18:25	2015-08-08 23:20
Northern Hawk	2015-08-09 18:15	2015-08-10 00:50
Northern Hawk	2015-08-15 04:10	2015-08-15 07:15
Northern Hawk	2015-08-16 12:15	2015-08-16 15:15
Northern Hawk	2015-08-17 20:45	2015-08-18 00:55
Northern Hawk	2015-08-19 14:00	2015-08-19 16:00
Northern Jaeger	2015-06-18 10:30	2015-06-18 13:30
Northern Jaeger	2015-06-29 21:18	2015-06-30 01:46
Northern Jaeger	2015-06-30 03:20	2015-06-30 09:38
Northern Jaeger	2015-07-04 10:00	2015-07-04 11:00
Northern Jaeger	2015-07-10 21:48	2015-07-11 03:16
Northern Jaeger	2015-07-11 04:33	2015-07-11 12:35
Northern Jaeger	2015-07-18 02:04	2015-07-18 07:48
Northern Jaeger	2015-07-18 13:08	2015-07-18 16:58
Northern Jaeger	2015-07-19 18:00	2015-07-19 22:00
Northern Jaeger	2015-07-28 20:09	2015-07-28 21:05
Northern Jaeger	2015-07-29 18:38	2015-07-29 22:20
Northern Jaeger	2015-07-30 22:30	2015-07-31 04:10
Northern Jaeger	2015-08-02 15:05	2015-08-02 18:30
Northern Jaeger	2015-08-05 19:48	2015-08-05 23:45

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Northern Jaeger	2015-08-13 03:48	2015-08-13 07:06
Northern Jaeger	2015-08-14 07:42	2015-08-14 12:00
Northern Jaeger	2015-08-18 17:25	2015-08-18 20:04
Northern Jaeger	2015-08-25 13:15	2015-08-25 13:36
Northern Jaeger	2015-08-29 02:15	2015-08-29 05:22
Northern Jaeger	2015-08-31 03:13	2015-08-31 05:00
Northern Jaeger	2015-09-01 14:52	2015-09-01 16:05
Northern Jaeger	2015-09-02 16:38	2015-09-02 21:03
Northern Jaeger	2015-09-05 08:28	2015-09-05 13:00
Northern Patriot	2015-06-27 12:14	2015-06-27 21:02
Northern Patriot	2015-07-10 16:27	2015-07-10 18:24
Northern Patriot	2015-07-20 23:32	2015-07-21 10:58
Northern Patriot	2015-07-21 12:10	2015-07-21 16:59
Northern Patriot	2015-08-02 19:48	2015-08-02 21:40
Northern Patriot	2015-09-06 12:35	2015-09-06 14:42
Northern Patriot	2015-09-11 18:16	2015-09-11 19:30
Northern Patriot	2015-09-25 00:03	2015-09-25 05:24
Northwest Explorer	2015-09-23 20:04	2015-09-24 06:28
Northwest Explorer	2015-09-24 08:55	2015-09-24 16:32
Ocean Explorer	2015-07-20 06:23	2015-07-20 13:33
Ocean Explorer	2015-07-26 22:21	2015-07-27 09:45
Ocean Explorer	2015-07-27 10:31	2015-07-27 11:15
Ocean Explorer	2015-08-02 08:10	2015-08-02 10:47
Ocean Explorer	2015-08-02 18:20	2015-08-02 18:47
Ocean Explorer	2015-08-15 07:48	2015-08-15 13:04
Ocean Explorer	2015-08-20 15:55	2015-08-21 01:48
Ocean Explorer	2015-08-28 07:15	2015-08-28 08:37
Ocean Explorer	2015-10-06 08:03	2015-10-06 14:34
Ocean Explorer	2015-10-09 05:54	2015-10-09 13:28
Ocean Hope 3	2015-06-19 18:30	2015-06-19 20:20
Ocean Hope 3	2015-07-06 18:45	2015-07-06 22:50
Ocean Hope 3	2015-07-14 10:15	2015-07-14 15:00
Ocean Hope 3	2015-08-03 04:00	2015-08-03 05:30
Ocean Hope 3	2015-08-07 15:45	2015-08-07 18:25
Ocean Hope 3	2015-08-18 14:20	2015-08-18 15:50
Ocean Hope 3	2015-08-24 14:10	2015-08-24 15:30
Oceanic	2015-06-25 01:39	2015-06-25 05:07
Oceanic	2015-06-26 10:13	2015-06-26 10:30

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Oceanic	2015-06-29 17:30	2015-06-29 19:59
Oceanic	2015-07-01 21:19	2015-07-02 01:38
Oceanic	2015-07-20 18:53	2015-07-20 20:48
Oceanic	2015-07-23 01:12	2015-07-23 10:25
Oceanic	2015-07-25 11:21	2015-07-25 14:55
Oceanic	2015-08-06 16:06	2015-08-06 19:55
Oceanic	2015-08-07 18:17	2015-08-07 18:47
Oceanic	2015-08-08 21:22	2015-08-09 02:00
Oceanic	2015-08-09 04:15	2015-08-09 06:07
Oceanic	2015-08-09 10:43	2015-08-09 14:35
Oceanic	2015-08-14 19:40	2015-08-15 00:58
Oceanic	2015-08-16 12:28	2015-08-16 15:11
Ocean Leader	2015-06-17 17:50	2015-06-17 20:50
Ocean Leader	2015-06-18 17:35	2015-06-18 21:05
Ocean Leader	2015-06-20 12:55	2015-06-20 16:05
Ocean Leader	2015-06-20 19:25	2015-06-20 20:15
Ocean Leader	2015-06-21 11:15	2015-06-21 12:55
Ocean Leader	2015-07-02 07:35	2015-07-02 11:35
Ocean Leader	2015-07-09 00:45	2015-07-09 06:45
Ocean Leader	2015-07-09 16:50	2015-07-09 19:15
Ocean Leader	2015-07-11 00:40	2015-07-11 06:00
Ocean Leader	2015-07-11 09:45	2015-07-11 13:30
Ocean Leader	2015-07-13 18:15	2015-07-13 19:10
Ocean Leader	2015-07-17 02:05	2015-07-17 07:50
Ocean Leader	2015-07-17 09:20	2015-07-17 12:50
Ocean Leader	2015-07-17 15:35	2015-07-17 17:25
Ocean Leader	2015-07-18 05:00	2015-07-18 09:50
Ocean Rover	2015-06-23 00:10	2015-06-23 04:20
Ocean Rover	2015-06-24 17:30	2015-06-24 21:25
Ocean Rover	2015-06-29 08:35	2015-06-29 11:20
Ocean Rover	2015-06-29 19:40	2015-06-29 23:45
Ocean Rover	2015-06-30 11:55	2015-06-30 14:40
Ocean Rover	2015-07-03 23:00	2015-07-04 02:05
Ocean Rover	2015-07-05 00:55	2015-07-05 05:00
Ocean Rover	2015-07-05 23:15	2015-07-06 04:35
Ocean Rover	2015-07-10 19:55	2015-07-11 01:50
Ocean Rover	2015-07-12 20:55	2015-07-13 01:20
Ocean Rover	2015-07-14 05:30	2015-07-14 12:00



## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Ocean Rover	2015-07-16 04:25	2015-07-16 09:15
Ocean Rover	2015-07-18 04:35	2015-07-18 09:40
Ocean Rover	2015-07-24 01:55	2015-07-24 06:20
Ocean Rover	2015-07-27 14:45	2015-07-27 16:35
Ocean Rover	2015-07-28 03:10	2015-07-28 04:35
Ocean Rover	2015-07-28 17:25	2015-07-28 19:55
Ocean Rover	2015-07-29 08:00	2015-07-29 13:30
Ocean Rover	2015-08-03 11:20	2015-08-03 16:45
Ocean Rover	2015-08-03 23:30	2015-08-04 01:45
Ocean Rover	2015-08-04 02:25	2015-08-04 09:30
Ocean Rover	2015-08-05 13:30	2015-08-05 18:10
Ocean Rover	2015-08-06 23:00	2015-08-07 03:45
Ocean Rover	2015-08-07 17:35	2015-08-07 23:30
Ocean Rover	2015-08-08 00:15	2015-08-08 03:40
Ocean Rover	2015-08-09 17:35	2015-08-10 00:10
Ocean Rover	2015-08-14 22:10	2015-08-15 00:10
Ocean Rover	2015-08-16 08:50	2015-08-16 11:20
Ocean Rover	2015-08-17 10:45	2015-08-17 13:10
Ocean Rover	2015-08-19 20:35	2015-08-19 23:25
Ocean Rover	2015-08-20 00:45	2015-08-20 06:35
Ocean Rover	2015-08-20 16:30	2015-08-20 20:35
Ocean Rover	2015-08-20 21:20	2015-08-21 04:05
Ocean Rover	2015-08-21 23:25	2015-08-22 09:50
Ocean Rover	2015-08-25 12:40	2015-08-25 14:10
Ocean Rover	2015-08-27 02:55	2015-08-27 05:20
Ocean Rover	2015-08-28 19:30	2015-08-29 02:30
Ocean Rover	2015-08-29 04:55	2015-08-29 09:15
Ocean Rover	2015-08-30 00:15	2015-08-30 04:00
Ocean Rover	2015-09-08 23:05	2015-09-09 06:05
Ocean Rover	2015-09-11 16:10	2015-09-11 20:25
Pacific Challenger	2015-06-14 17:06	2015-06-15 04:26
Pacific Challenger	2015-07-19 07:10	2015-07-19 10:10
Pacific Challenger	2015-07-25 23:45	2015-07-26 05:33
Pacific Challenger	2015-07-31 18:44	2015-07-31 23:03
Pacific Challenger	2015-08-01 19:55	2015-08-01 23:00
Pacific Challenger	2015-08-07 02:55	2015-08-07 07:40
Pacific Challenger	2015-08-20 13:24	2015-08-20 17:15
Pacific Challenger	2015-08-21 20:00	2015-08-21 21:23

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Pacific Challenger	2015-09-11 09:43	2015-09-11 11:30
Pacific Challenger	2015-09-16 14:07	2015-09-16 15:19
Pacific Challenger	2015-09-26 15:37	2015-09-26 16:11
Pacific Explorer	2015-06-11 17:35	2015-06-12 11:40
Pacific Explorer	2015-07-14 12:00	2015-07-14 14:00
Pacific Explorer	2015-07-30 16:00	2015-07-30 17:20
Pacific Explorer	2015-08-05 14:45	2015-08-05 22:25
Pacific Explorer	2015-08-10 21:00	2015-08-10 22:25
Pacific Explorer	2015-08-16 21:35	2015-08-17 00:24
Pacific Explorer	2015-09-19 15:20	2015-09-19 16:50
Pacific Explorer	2015-09-22 13:05	2015-09-22 15:17
Pacific Fury	2015-06-20 05:30	2015-06-20 08:35
Pacific Fury	2015-06-21 16:30	2015-06-21 19:10
Pacific Fury	2015-06-21 20:20	2015-06-21 22:15
Pacific Fury	2015-06-22 11:30	2015-06-22 17:15
Pacific Fury	2015-07-01 17:20	2015-07-01 22:02
Pacific Fury	2015-07-01 23:35	2015-07-02 03:45
Pacific Fury	2015-07-02 20:30	2015-07-02 22:10
Pacific Fury	2015-07-18 23:50	2015-07-19 05:20
Pacific Fury	2015-07-19 08:05	2015-07-19 13:15
Pacific Fury	2015-07-20 12:45	2015-07-20 16:10
Pacific Fury	2015-07-22 11:20	2015-07-22 13:25
Pacific Fury	2015-07-30 18:30	2015-07-30 20:15
Pacific Fury	2015-08-06 13:00	2015-08-06 14:10
Pacific Fury	2015-08-06 20:20	2015-08-07 03:00
Pacific Fury	2015-08-09 02:40	2015-08-09 03:55
Pacific Fury	2015-09-11 00:32	2015-09-11 03:30
Pacific Fury	2015-09-13 05:58	2015-09-13 08:10
Pacific Fury	2015-09-14 15:05	2015-09-14 19:20
Pacific Fury	2015-09-18 15:06	2015-09-18 18:30
Pacific Fury	2015-09-22 22:42	2015-09-23 00:45
Pacific Glacier	2015-06-11 07:40	2015-06-11 10:00
Pacific Glacier	2015-06-21 04:25	2015-06-21 08:00
Pacific Glacier	2015-06-23 11:45	2015-06-23 15:40
Pacific Glacier	2015-06-23 16:50	2015-06-23 20:55
Pacific Glacier	2015-06-28 10:35	2015-06-28 12:55
Pacific Glacier	2015-06-30 05:10	2015-06-30 10:05
Pacific Glacier	2015-06-30 16:10	2015-06-30 21:20

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Pacific Glacier	2015-07-01 05:57	2015-07-01 10:00
Pacific Glacier	2015-07-05 01:25	2015-07-05 03:05
Pacific Glacier	2015-07-08 11:35	2015-07-08 13:30
Pacific Glacier	2015-07-09 08:45	2015-07-09 12:45
Pacific Glacier	2015-07-10 11:00	2015-07-10 14:40
Pacific Glacier	2015-07-13 06:30	2015-07-13 09:55
Pacific Glacier	2015-07-13 22:15	2015-07-14 01:10
Pacific Glacier	2015-07-14 02:25	2015-07-14 07:00
Pacific Glacier	2015-07-19 01:35	2015-07-19 04:10
Pacific Glacier	2015-07-23 22:30	2015-07-24 02:05
Pacific Glacier	2015-08-01 06:39	2015-08-01 09:30
Pacific Glacier	2015-08-02 21:06	2015-08-02 23:37
Pacific Glacier	2015-08-03 00:27	2015-08-03 05:32
Pacific Glacier	2015-08-03 20:23	2015-08-04 00:29
Pacific Glacier	2015-08-05 14:00	2015-08-05 15:10
Pacific Glacier	2015-08-09 10:09	2015-08-09 12:25
Pacific Glacier	2015-08-21 20:30	2015-08-22 02:20
Pacific Glacier	2015-08-24 08:11	2015-08-24 17:10
Pacific Glacier	2015-08-25 02:42	2015-08-25 04:10
Pacific Glacier	2015-08-26 13:05	2015-08-26 15:25
Pacific Glacier	2015-09-07 16:35	2015-09-07 17:50
Pacific Glacier	2015-09-08 18:40	2015-09-08 22:00
Pacific Glacier	2015-09-20 15:10	2015-09-20 20:28
Pacific Glacier	2015-09-21 23:55	2015-09-22 01:50
Pacific Prince	2015-07-05 21:21	2015-07-06 04:21
Pacific Prince	2015-07-10 16:28	2015-07-11 03:49
Pacific Prince	2015-07-20 14:17	2015-07-20 16:20
Pacific Prince	2015-07-23 23:55	2015-07-24 02:50
Pacific Prince	2015-07-24 04:27	2015-07-24 08:13
Pacific Prince	2015-08-11 19:00	2015-08-11 22:05
Pacific Prince	2015-08-31 09:00	2015-08-31 10:20
Pacific Prince	2015-08-31 14:10	2015-08-31 17:53
Pacific Prince	2015-09-07 02:30	2015-09-07 04:00
Pacific Prince	2015-09-12 09:15	2015-09-12 13:35
Pacific Prince	2015-09-12 15:05	2015-09-12 16:05
Pacific Viking	2015-09-06 23:52	2015-09-07 11:18
Pacific Viking	2015-09-10 10:48	2015-09-10 15:31
Pacific Viking	2015-09-23 18:06	2015-09-24 09:43

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Pacific Viking	2015-09-24 10:42	2015-09-24 15:47
Pacific Viking	2015-10-10 20:52	2015-10-11 08:36
Pacific Viking	2015-10-11 09:36	2015-10-11 20:54
Patricia L	2015-06-16 16:50	2015-06-16 17:47
Patricia L	2015-06-22 09:15	2015-06-22 15:40
Patricia L	2015-07-01 20:40	2015-07-02 01:30
Patricia L	2015-08-07 08:15	2015-08-07 10:00
Patricia L	2015-08-12 10:40	2015-08-12 16:00
Patricia L	2015-08-18 14:30	2015-08-18 18:15
Patricia L	2015-08-28 09:30	2015-08-28 20:00
Patricia L	2015-09-09 18:30	2015-09-09 22:00
Patricia L	2015-09-18 21:00	2015-09-19 00:30
Patricia L	2015-09-22 13:00	2015-09-22 14:10
Patricia L	2015-09-24 14:40	2015-09-24 23:00
Peggy Jo	2015-08-12 16:20	2015-08-12 22:35
Peggy Jo	2015-08-28 08:00	2015-08-28 12:20
Peggy Jo	2015-09-04 13:15	2015-09-04 14:30
Peggy Jo	2015-09-06 07:40	2015-09-06 11:00
Peggy Jo	2015-09-08 12:50	2015-09-08 16:17
Peggy Jo	2015-09-10 08:30	2015-09-10 11:30
Peggy Jo	2015-09-13 19:00	2015-09-13 22:30
Peggy Jo	2015-09-17 14:30	2015-09-17 15:40
Peggy Jo	2015-09-19 18:25	2015-09-19 20:00
Peggy Jo	2015-09-27 09:00	2015-09-27 11:20
Perseverance	2015-06-15 11:09	2015-06-15 18:43
Perseverance	2015-06-28 15:22	2015-06-28 16:50
Perseverance	2015-07-01 18:54	2015-07-02 02:52
Perseverance	2015-07-11 08:30	2015-07-11 12:29
Progress	2015-06-26 09:10	2015-06-26 14:40
Progress	2015-07-10 15:25	2015-07-10 23:10
Progress	2015-07-17 00:15	2015-07-17 12:05
Progress	2015-07-19 11:00	2015-07-19 11:55
Progress	2015-08-07 14:05	2015-08-07 14:45
Royal American	2015-06-24 00:30	2015-06-24 11:22
Royal American	2015-07-21 12:40	2015-07-21 21:00
Royal American	2015-08-22 20:10	2015-08-23 08:11
Royal American	2015-09-05 01:05	2015-09-05 12:45
Royal American	2015-09-07 21:02	2015-09-08 00:32

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Royal Atlantic	2015-06-12 22:36	2015-06-12 23:33
Royal Atlantic	2015-08-15 11:07	2015-08-15 12:52
Royal Atlantic	2015-09-04 15:21	2015-09-04 18:00
Royal Atlantic	2015-09-14 18:28	2015-09-14 19:51
Seadawn	2015-06-12 22:01	2015-06-13 07:10
Seadawn	2015-07-01 10:55	2015-07-01 15:13
Seadawn	2015-07-05 02:54	2015-07-05 08:42
Seadawn	2015-07-10 14:03	2015-07-10 23:30
Seadawn	2015-07-18 06:40	2015-07-18 17:00
Seadawn	2015-07-28 15:52	2015-07-28 21:14
Seadawn	2015-07-30 22:42	2015-07-31 09:08
Seadawn	2015-08-03 11:31	2015-08-03 12:07
Seattle Enterprise	2015-06-12 13:10	2015-06-12 15:45
Seattle Enterprise	2015-06-14 10:50	2015-06-14 12:50
Seattle Enterprise	2015-06-14 15:30	2015-06-14 16:25
Seattle Enterprise	2015-06-19 11:20	2015-06-19 11:40
Seattle Enterprise	2015-06-24 06:40	2015-06-24 11:35
Seattle Enterprise	2015-06-28 03:10	2015-06-28 08:15
Seattle Enterprise	2015-07-02 14:10	2015-07-02 17:25
Seattle Enterprise	2015-07-03 08:25	2015-07-03 12:00
Seattle Enterprise	2015-07-06 14:10	2015-07-06 15:55
Seattle Enterprise	2015-07-16 12:15	2015-07-16 14:25
Seattle Enterprise	2015-07-27 10:45	2015-07-27 14:50
Seattle Enterprise	2015-08-01 18:20	2015-08-01 21:10
Seattle Enterprise	2015-08-06 07:50	2015-08-06 11:00
Seattle Enterprise	2015-08-07 23:15	2015-08-08 02:15
Seattle Enterprise	2015-08-08 05:20	2015-08-08 09:20
Seattle Enterprise	2015-08-09 06:05	2015-08-09 08:50
Seattle Enterprise	2015-08-20 16:00	2015-08-20 17:30
Seattle Enterprise	2015-08-26 05:25	2015-08-26 06:55
Seattle Enterprise	2015-09-20 02:00	2015-09-20 05:45
Sea Wolf	2015-07-01 14:55	2015-07-01 19:15
Sea Wolf	2015-07-10 05:50	2015-07-10 07:50
Sea Wolf	2015-07-13 15:30	2015-07-13 19:10
Sea Wolf	2015-07-27 06:55	2015-07-27 09:05
Sea Wolf	2015-07-27 13:55	2015-07-27 16:15
Sea Wolf	2015-08-10 09:50	2015-08-10 11:05
Sea Wolf	2015-08-23 10:00	2015-08-23 14:40

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Sea Wolf	2015-08-23 16:20	2015-08-23 20:15
Sovereignty	2015-06-21 11:20	2015-06-21 13:30
Sovereignty	2015-06-25 02:50	2015-06-25 11:15
Sovereignty	2015-06-29 22:30	2015-06-30 07:10
Sovereignty	2015-07-17 14:35	2015-07-17 15:55
Sovereignty	2015-07-30 17:35	2015-07-30 19:20
Sovereignty	2015-09-08 15:45	2015-09-08 17:40
Sovereignty	2015-09-11 05:30	2015-09-11 12:15
Sovereignty	2015-09-27 15:05	2015-09-27 17:25
Sovereignty	2015-10-07 21:40	2015-10-08 04:15
Sovereignty	2015-10-09 22:30	2015-10-10 06:05
Sovereignty	2015-10-10 15:00	2015-10-10 20:40
Starbound	2015-06-14 03:55	2015-06-14 07:05
Starbound	2015-06-15 17:36	2015-06-15 19:44
Starbound	2015-06-24 18:30	2015-06-24 21:03
Starbound	2015-06-27 18:16	2015-06-27 23:35
Starbound	2015-06-28 00:55	2015-06-28 06:09
Starbound	2015-06-29 02:03	2015-06-29 09:25
Starbound	2015-07-03 10:16	2015-07-03 15:36
Starbound	2015-07-08 09:03	2015-07-08 15:00
Starbound	2015-07-08 15:50	2015-07-08 18:33
Starbound	2015-07-09 14:55	2015-07-09 17:47
Starbound	2015-07-19 08:10	2015-07-19 12:33
Starbound	2015-07-20 06:22	2015-07-20 10:21
Starbound	2015-07-20 20:58	2015-07-20 22:35
Starbound	2015-07-26 19:47	2015-07-26 20:46
Starbound	2015-08-06 15:03	2015-08-06 18:44
Starbound	2015-08-10 02:55	2015-08-10 06:50
Starbound	2015-08-11 23:31	2015-08-12 04:50
Starbound	2015-08-16 08:27	2015-08-16 12:18
Starbound	2015-08-18 13:47	2015-08-18 16:21
Starbound	2015-08-19 16:17	2015-08-19 17:47
Starbound	2015-08-21 14:37	2015-08-21 17:23
Starbound	2015-08-22 05:08	2015-08-22 10:14
Starfish	2015-06-13 23:50	2015-06-14 03:00
Starfish	2015-06-19 07:50	2015-06-19 14:10
Starfish	2015-06-24 20:00	2015-06-25 05:00
Starfish	2015-06-28 07:45	2015-06-28 14:00

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Starfish	2015-07-03 15:15	2015-07-04 02:00
Starfish	2015-07-14 13:30	2015-07-14 23:00
Starfish	2015-07-19 10:00	2015-07-19 21:05
Starlite	2015-06-10 12:20	2015-06-10 16:00
Starlite	2015-08-23 14:40	2015-08-23 16:50
Starward	2015-07-18 15:30	2015-07-19 08:15
Storm Petrel	2015-06-20 01:05	2015-06-20 11:05
Storm Petrel	2015-08-21 00:05	2015-08-21 12:33
Traveler	2015-06-17 09:20	2015-06-17 17:00
Traveler	2015-07-04 15:40	2015-07-04 19:30
Traveler	2015-07-09 09:45	2015-07-09 13:00
Traveler	2015-07-20 10:15	2015-07-20 13:45
Traveler	2015-07-21 18:45	2015-07-21 23:05
Traveler	2015-07-22 16:50	2015-07-22 19:55
Traveler	2015-07-24 11:25	2015-07-24 13:37
Traveler	2015-07-25 10:40	2015-07-25 15:30
Traveler	2015-08-05 14:10	2015-08-05 16:30
Traveler	2015-08-08 00:45	2015-08-08 05:55
Traveler	2015-08-08 23:40	2015-08-09 04:45
Traveler	2015-08-09 10:00	2015-08-09 16:10
Traveler	2015-08-18 01:10	2015-08-18 07:15
Traveler	2015-08-23 09:50	2015-08-23 12:30
Vanguard	2015-06-19 06:10	2015-06-19 12:52
Vanguard	2015-06-22 13:04	2015-06-22 15:41
Vanguard	2015-06-23 00:07	2015-06-23 10:41
Vanguard	2015-06-23 13:21	2015-06-23 17:37
Vanguard	2015-06-27 20:16	2015-06-28 03:40
Vanguard	2015-07-03 20:09	2015-07-03 23:28
Vanguard	2015-07-04 06:21	2015-07-04 11:00
Vanguard	2015-07-10 10:00	2015-07-10 14:21
Vanguard	2015-07-12 21:51	2015-07-13 02:46
Vanguard	2015-07-14 10:29	2015-07-14 15:27
Vanguard	2015-07-21 12:04	2015-07-21 22:00
Vesteraalen	2015-08-07 20:31	2015-08-08 06:30
Vesteraalen	2015-08-09 15:15	2015-08-09 18:12
Vesteraalen	2015-08-14 18:11	2015-08-14 20:27
Vesteraalen	2015-08-28 08:42	2015-08-28 11:46
Vesteraalen	2015-08-30 11:38	2015-08-30 17:30

## Appendix 1. Continued.

<b>Vessel</b>	<b>Deploy Date/Time</b>	<b>Retrieve Date/Time</b>
Vesteraalen	2015-09-06 12:15	2015-09-06 16:30
Vesteraalen	2015-09-06 18:03	2015-09-07 04:30
Vesteraalen	2015-09-19 07:15	2015-09-19 12:35
Viking	2015-06-17 12:15	2015-06-18 00:16
Viking	2015-06-18 09:55	2015-06-18 20:52
Viking	2015-06-26 10:38	2015-06-26 16:38
Viking	2015-06-26 17:49	2015-06-27 06:21
Viking	2015-08-11 09:08	2015-08-11 11:45
Viking	2015-08-15 10:13	2015-08-15 12:12
Viking	2015-08-24 18:56	2015-08-25 07:41
Viking	2015-08-30 15:54	2015-08-30 17:22
Viking	2015-09-05 13:21	2015-09-05 17:34
Viking	2015-09-15 09:03	2015-09-15 13:30
Viking	2015-09-15 15:00	2015-09-15 16:10
Viking Explorer	2015-08-07 17:25	2015-08-07 23:10
Viking Explorer	2015-08-19 12:50	2015-08-19 15:40
Viking Explorer	2015-08-24 05:30	2015-08-24 14:20
Viking Explorer	2015-09-29 15:00	2015-09-29 19:30
Viking Explorer	2015-10-02 21:30	2015-10-03 04:40
Viking Explorer	2015-10-05 08:00	2015-10-05 13:50
Walter N	2015-06-11 13:15	2015-06-11 15:10
Walter N	2015-06-16 20:15	2015-06-16 20:40
Walter N	2015-06-28 08:00	2015-06-28 16:00
Walter N	2015-06-30 23:00	2015-07-01 08:00
Western Dawn	2015-06-11 07:35	2015-06-11 11:20
Western Dawn	2015-08-24 17:00	2015-08-25 02:00
Western Dawn	2015-08-29 11:35	2015-08-29 13:35
Western Dawn	2015-09-05 15:50	2015-09-05 18:40
Western Dawn	2015-09-08 11:10	2015-09-08 17:30
Western Dawn	2015-09-12 01:20	2015-09-12 05:30
Westward I	2015-06-25 01:55	2015-06-25 03:33
Westward I	2015-07-28 13:45	2015-07-28 14:15
Westward I	2015-07-28 15:15	2015-07-28 16:25
Westward I	2015-08-13 12:40	2015-08-13 16:55
Westward I	2015-08-17 08:50	2015-08-17 16:05
Westward I	2015-08-17 17:30	2015-08-17 18:50



Appendix 2. Candidate violations and verdicts by ABR and Sea State for a selected subset (10% observed hauls by sector) of the Bering Sea pollock fishery, 2015.

<b>Vessel</b>	<b>Location Date/Time</b>	<b>ABR Verdict</b>	<b>Sea State Verdict</b>	<b>Agree?</b>
Arctic Fjord	2015-09-23 12:16	No violation	OK	Yes
Bering Rose	2015-08-12 17:01	No violation	OK	Yes
Bering Rose	2015-08-12 17:30	No violation	OK	Yes
Bering Rose	2015-08-12 18:02	No violation	OK	Yes
Bering Rose	2015-08-12 18:31	No violation	OK	Yes
Bering Rose	2015-08-12 19:01	No violation	OK	Yes
Bering Rose	2015-08-12 19:31	No violation	OK	Yes
Bering Rose	2015-08-12 20:01	No violation	OK	Yes
Bering Rose	2015-08-12 20:31	No violation	OK	Yes
Bering Rose	2015-08-12 21:01	No violation	OK	Yes
Bering Rose	2015-08-12 21:31	No violation	OK	Yes
Bering Rose	2015-08-12 22:00	No violation	OK	Yes
Bering Rose	2015-08-12 22:31	No violation	OK	Yes
Bering Rose	2015-08-12 23:01	No violation	OK	Yes
Great Pacific	2015-08-14 11:30	No violation	OK	Yes
Great Pacific	2015-08-14 12:01	No violation	OK	Yes
Great Pacific	2015-08-14 12:31	No violation	OK	Yes
Great Pacific	2015-08-14 13:00	No violation	OK	Yes
Great Pacific	2015-08-14 13:30	No violation	OK	Yes
Great Pacific	2015-08-14 14:01	No violation	OK	Yes
Great Pacific	2015-08-14 14:31	No violation	OK	Yes
Great Pacific	2015-08-14 15:00	No violation	OK	Yes
Great Pacific	2015-08-14 15:30	No violation	OK	Yes
Great Pacific	2015-08-14 16:02	No violation	OK	Yes
Great Pacific	2015-08-14 16:31	No violation	OK	Yes
Great Pacific	2015-08-14 17:01	No violation	OK	Yes
Great Pacific	2015-08-14 17:30	No violation	OK	Yes