CRUISE REPORT
Eco-FOCI's EcoFOCI Arctic Cruise 2015

Cruise Number: RB1505
FOCI Number:1RB15
Ship: NOAA Ship *Ronald H. Brown*

Area of Operations: Chukchi and Beaufort Seas
Depart: Kodiak, AK 06 August 2015
Return: Dutch Harbor, AK 04 September 2015

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NOAA/NOS/NCCOS Report submitted as project RB1506
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Objectives of Cruise:

Ecosystems & Fisheries-Oceanography Coordinated Investigations (EcoFOCI) is an effort by National Oceanic and Atmospheric Administration (NOAA) and associated academic scientists. Eco-FOCI's goal is to understand the effects of abiotic and biotic variability on ecosystems of the Gulf of Alaska, Bering, Chukchi and Beaufort seas. This cruise is in support of research sponsored by NOAA's North Pacific Climate Regimes & Ecosystem Productivity Program, the Bureau of Ocean Energy Management (BOEM), and PMEL/AFSC base.

PMEL/ Eco-FOCI RB-15-05

The Eco-FOCI project goal is to sample the series of transects shown in Figure 1 and 2 and listed Table 1 of the appendix. Station operations always included a CTD cast. In the Chukchi, Tucker sled trawls were taken on some lines, but in the Beaufort Sea, MARMAP (bongo) tows were substituted for the sled trawls. This is part of the multi-institutional effort to obtain a baseline characterization of the biological, chemical and physical oceanography of ice-free portions of the U.S. Chukchi and Beaufort Seas and to understand the changing ecosystems NOAA/PMEL/Eco-FOCI has occupied several transects across their shelves during four of the last five years. In addition, we have deployed multiple moorings at sites on the Chukchi shelf. Several of these transects are part of the "Distributed Biological Observatory (DBO)". DBO sampling is focused on transects centered on locations of high productivity, biodiversity and rates of biological change. The DBO effort has expanded into the Beaufort as of 2015, and comprises part of our effort there.

NOS RB-15-06 (reported in a separate document by S. Ian Hartwell)

The goal of the NOS project was to assess habitat conditions that influence biodiversity and distribution of benthic infaunal communities, contaminants, and chemical body burdens of resident organisms as measures of environmental health in the bays and lagoons in the Chukchi and Beaufort Seas in the vicinity of proposed oil transport pipelines. Baseline data will be essential for monitoring pollution control effectiveness and NRDA activities in the event of a spill. Offshore sampling in the region was carried

out from 2010-2012 in collaboration with the State of Alaska Dept. of Environmental Conservation (DEC) and the University of Alaska Fairbanks (UAF). The assessment will be augmented by further collaboration with the DEC Aquatic Resources Survey to address information gaps relevant to Ocean Discharge Criteria Evaluation (ODCE) of lease sale areas relating to oil and gas development in rivers entering the Chukchi and Beaufort Seas. Information gaps identified by a DEC/UAF working group are determination of baseline concentrations for hydrocarbons and trace metals in key prey of anadromous and marine fishes inhabiting Chukchi and Beaufort Sea estuaries.

We were accompanied by two volunteer bird watchers working for Kathy Kuletz of the U.S. Fish and Wildlife Service Division of Migratory Bird Management in Anchorage, AK. The goal of that project is to examine seabird and marine mammal distribution relative to oceanographic and biological features along the entire cruise track. They began their surveys on 6 August 2015 from Dutch Harbor, and completed their Bering Sea observations on 4 September at the port of Dutch Harbor.

As an ancillary project, scientists from Oregon State University operated a MIMS (Membrane Inlet Mass Spectrometer) on the flow-through science seawater line for determination of O_2/Ar -based net community metabolism. OSU also operated an automated surface POC (Particulate Organic carbon) sampling and optical measurements from the underway line, and perhaps some isotopic (d13C, d15N) determinations on a subset of those. They continued to operate and monitor the pCO_2 system installed for the previous cruise and had the permission of those scientists. They also installed a system to monitor nitrate concentrations from the flow through. These scientists collected discrete samples from the Niskin bottles for DIC, DOC, POC, and O_2/Ar on selected hydrographic transects (LB, IC, WT, BC and B154). At selected stations throughout the cruise, samples were collected and filtered for DNA analysis at Oregon State University.

Katrina Wyllie of the Operations branch of NOAA/NOS requested that the Brown transit from Unimak Pass to Bering Strait follow the PARS corridor to collect bathymetric data from the ship's multibeam system. This study is a continuation of and an expansion of scope to the Port Access Route Study (PARS) in the Bering and Chuckchi Seas. The Coast Guard has developed a potential vessel routing system for the area. The goal of the study

is to help reduce the risk of marine casualties and increase the efficiency of vessel traffic in the region. The recommendations of the study may lead to future rulemaking action or appropriate international agreements. The multibeam data collected during the entire cruise was sent to Ms. Wyllie for processing.

The final ancillary project involved the deployment of two ARGO floats in Bering Canyon on September 3 shortly before arriving in Dutch Harbor, AK at the end of the cruise.

Samples Collected:

EcoFOCI collected water samples for chlorophyll, nutrients, salinity, and dissolved oxygen in the water. Zooplankton tows were done using the following types of gear: MARMAP bongo tows using 60 and 20 cm bongos, with 153, 333, and 505 micron mesh nets, and Tucker sled trawls with 2 nets, one opened for epi-benthic trawling, and a second net for an oblique tow through the rest of the water column. Finally, OSU scientists sampled dissolved inorganic carbon (DIC) and particulate organic carbon (POC) from the flow-through system, the Niskin rosette, and from small boats. At selected stations they sampled O_2/Ar and dissolved organic carbon (DOC). In addition, on certain transects they sampled the Niskins for RNA and DNA.

Methods

1. Station Measurements

a. CTD

The conductivity, temperature and depth (CTD) casts were made with the EcoFOCI's CTD with SeaBird 911 with dual temperature and conductivity sensors. Attached to the CTD were 2 SBE43 oxygen sensors, fluorescence with a WetLabs ECO chlorophyll fluorometer, and a Biospherical Instruments QPC2300-HP Photosynthetically Activated Radiation (PAR) sensor. After every station the CTD was flushed with distilled water.

b. Total Chlorophyll

We collected samples from 6 depths at each station, filtered them through GFF filters and froze them at –80°C for analysis ashore. These were filtered through 5micron

membrane filters, then the GFF filters. Both fractions were then frozen at –80°C for chlorophyll analysis ashore after the cruise.

c. Nutrient Measurements

Nutrient samples were collected from the Niskin bottles in acid-washed 35-ml polyethylene bottles after three complete seawater rinses and typically analyzed within 12 hours of sample collection. Nutrients were analyzed with a continuous flow analyzer (CFA) using the standard analysis protocols for the WOCE hydrographic program as set forth in the manual by L.I. Gordon, et al (2000). Approximately 1900 samples from CTD casts were analyzed for phosphate (PO_4-), nitrate (NO_3-), nitrite (NO_2-), orthosilicic acid (H_4SiO_4), and ammonium (NH4+).

A mixed stock standard consisting of silicic acid, phosphate and nitrate was prepared at PMEL by dissolving high purity standard materials (KNO_3, KH_2PO_4 and Na_2SiF_6) in deionized water using a two-step dilution for phosphate and nitrate. This standard was stored at room temperature. Nitrite and ammonium stock standards were prepared about every 10 days by dissolving in distilled water, and these standards were stored in the refrigerator. Working standards were freshly made each day by diluting the stock solutions in low nutrient seawater. The low nutrient seawater used for the preparation of working standards, determination of blank, and wash between samples was filtered seawater obtained from low-nutrient Pacific surface waters.

A typical analytical run consisted of distilled water blanks, standard blanks, working standards, a standard from the previous run, samples, replicates, and working standards, and standard and distilled water blanks. Four replicates were usually measured on each run, plus any samples with questionable peaks. The overall precision of the analysis was within 1% of full range.

d. Oxygen Measurements

Winkler titrations were conducted according to WOCE protocols. On each cast, the number of samples and the depths sampled were dependent on the oxygen profile from the CTD. In deep water, samples were typically collected at every depth below 100m. On the shelf, samples were usually collected in the upper layer, or in the bottom mixed layer. End point determinations of the Winkler titration were determined poteniometrically.

Thiosulfate was standardized for each batch of sample titrations, and blanks were measured periodically during the cruise.

e. Plankton Sampling

Along the B154 transect in the Beaufort, zooplankton and ichthyoplankton were collected using MARMAP bongo tows with 20-cm and 60-cm bongo nets with 333, and 505-micron mesh. Samples were preserved with buffered formalin. Prior to preservation, the 333-m sample was examined for presence of fish larvae. In the Chuckchi Sea, Tucker sled trawls were conducted instead of the bongo tows along transects LB, IC (DBO4), WT and BC (DBO5). A SeaBird FastCAT was attached to wire, just above the bongo frames to allow the depth of the tow to be monitored, and temperature and salinity of the tow to be recorded.

On the first occupation of the LB line there were several casts during which the net for the oblique tow failed to open. Therefore, at the end of the cruise stations LB09-LB03 were re-occupied with both hydrographic casts and successful Tucker trawls.

e. Bird Observations

Observers surveyed marine birds and mammals from the port side of the bridge using standard USFWS survey protocol during daylight hours while the vessel was underway. A single observer scanned the water ahead of the ship, using hand-held 10x binoculars for identification, and recorded all birds and mammals within a 300-m arc, extending 90^0 from the bow to the beam. They used strip transect methodology with three distance bins extending from the vessel: 0-100 m, 101- 200 m, 201-300 m. Unusual sightings beyond the 300 m transect were also recorded for rare birds, large bird flocks, and mammals. They noted the animal's behavior (flying, on water, foraging). Birds on the water were counted continuously, whereas flying birds were recorded during quick 'Scans' of the transect window at approximately 1-min intervals, depending on the ship's speed.

Observations were entered directly into a laptop computer using the DLOG3 program (Ford Ecological Consultants, Inc.) with a GPS interface from the ship's system. Location data from the GPS were automatically written to the program at 20-second intervals, as well as our entries on weather conditions, Beaufort Sea State, and glare

conditions. At the beginning of each transect the observers recorded wind speed and direction, air temperature, and sea surface temperature.

e. Satellite Tracked drifter Deployments (ARGOS)

At four sites marked on Figure 2 satellite -tracked drifters were deployed.

e. ARGO float deployments

At two sites on the Bering Sea slope north of Bering Canyon ARGO floats were deployed.

2. Underway Seawater Systems

The ship's underway seawater flow-through analysis system collects temperature, salinity, and fluorescence through a typical TSG system. The OSU group (led by Dr. Laurie Juranak) installed a nitrate system in a second flow-through location on the ship. Calibration samples were taken 1-2 times daily from the flow-through seawater line and analyzed for chlorophyll, and nitrate concentration and salinity. This group sampled the flow-through system for POC approximately every two hours for the duration of the cruise.

Members of Dr. Richard Feely's research team from NOAA/PMEL installed a GO 8050 Underway pCO_2 system that collected real time pCO_2 measurements from seawater and air. This was operated by the team of scientists from Oregon State University.

Cruise Summary:

This cruise incorporated two projects in the Chukchi and Beaufort Seas by scientists from NOAA/PMEL/ EcoFOCI (RB1505) and from NOAA/NOS (RB1506). This was the first such joint effort on a NOAA ship by two groups attempting very different objectives. The captain and chief operatrions officer ensured that the projects were able to operate simultaneously by ensuring that extensive planning and communication took place during the seven months of planning the projects prior to the cruise. The scientists for these two projects, working with Captain Kamphouse and Adrienne Hopper, the Operations officer, demonstrated considerable flexibility in cooperating and compromising before and during the cruise in order for each to achieve the majority of the desired goals. Challenging

weather and ice conditions also influenced the ability of each group to achieve its goals. As such, it was considered highly successful by all involved.

The EcoFOCI project focused on occupying transects across the shelves taking hydrographic casts at every station. In the Chukchi, Tucker sled trawls were taken on the LB, IC, WT and BC transects to sample the epi-benthos as well as the zooplankton. In the Beaufort Sea, MARMAP bongo tows were taken instead, due to the irregular, and poorly-known bathymetry. The NOAA/NOS group used the workboat *Peggy D*, from the NOAAShip *Oscar Dyson* primarily to assess habitat conditions that influence biodiversity and distribution of benthic infaunal communities, contaminants, and chemical body burdens of resident organisms as measures of environmental health in the bays and lagoons in the Chukchi and Beaufort Seas in the vicinity of proposed oil transport pipelines. Dr. S. Ian Hartwell of NOS is submitting a separate report for that project (RB1506).

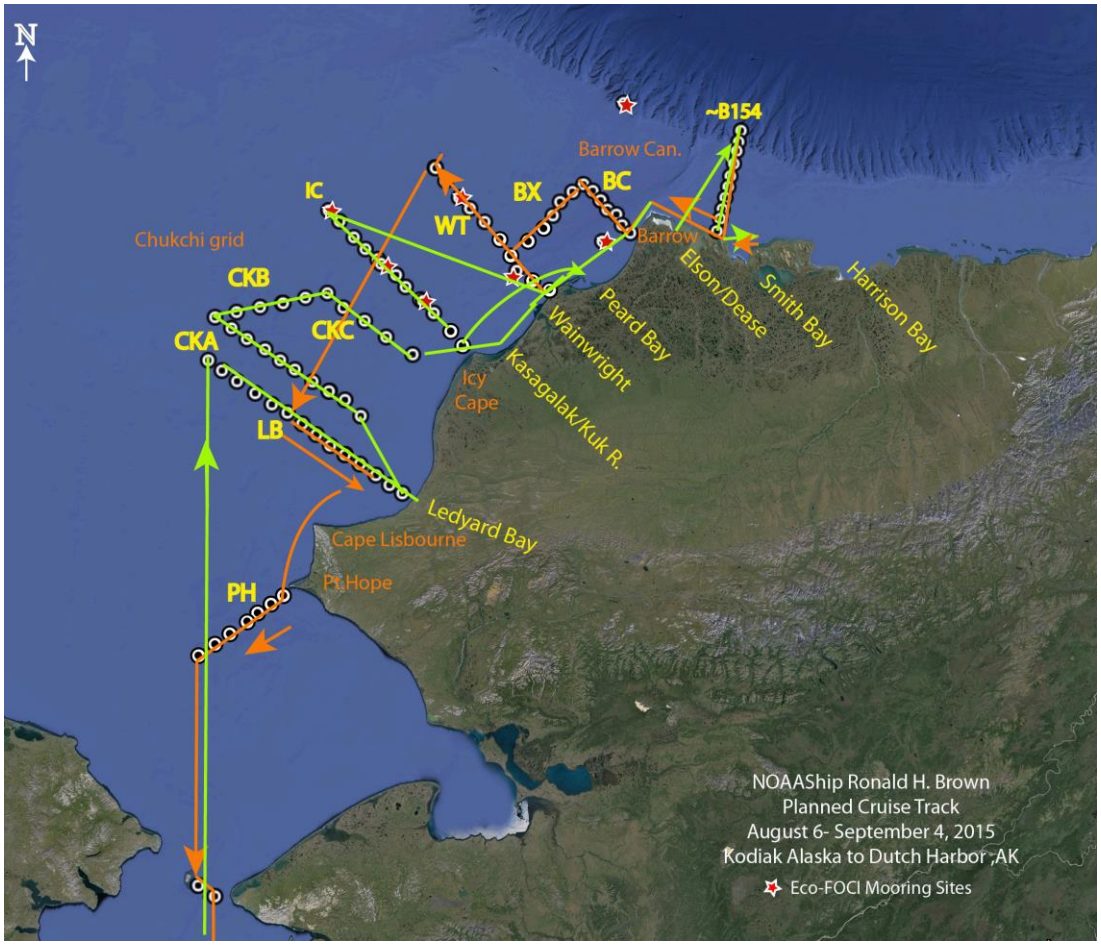

Figure 1. Cruise track for RB1505/1506. Transect names appear in black. The Eco-FOCI mooring sites are shown as red stars. The cruise track to the north and east is shown in green, and the track returning to the south and west are shown in orange.Small boat operations were conducted to sample Wainwright, Peard Bay, Elson Lagoon, Dease Inlet and Smith Bay, as well as two alongshore set of stations between Wainwright and Peard Bay. Sampling in Harrison Bay and Transects planned to the east of Smith Bay were abandoned due to the presence of multi-year ice coverage exceeding 60%. Three other short lines (not shown) across Barrow canyon were occupied. They are shown in Figure 2 labeled BCA, BCB, and BCC.

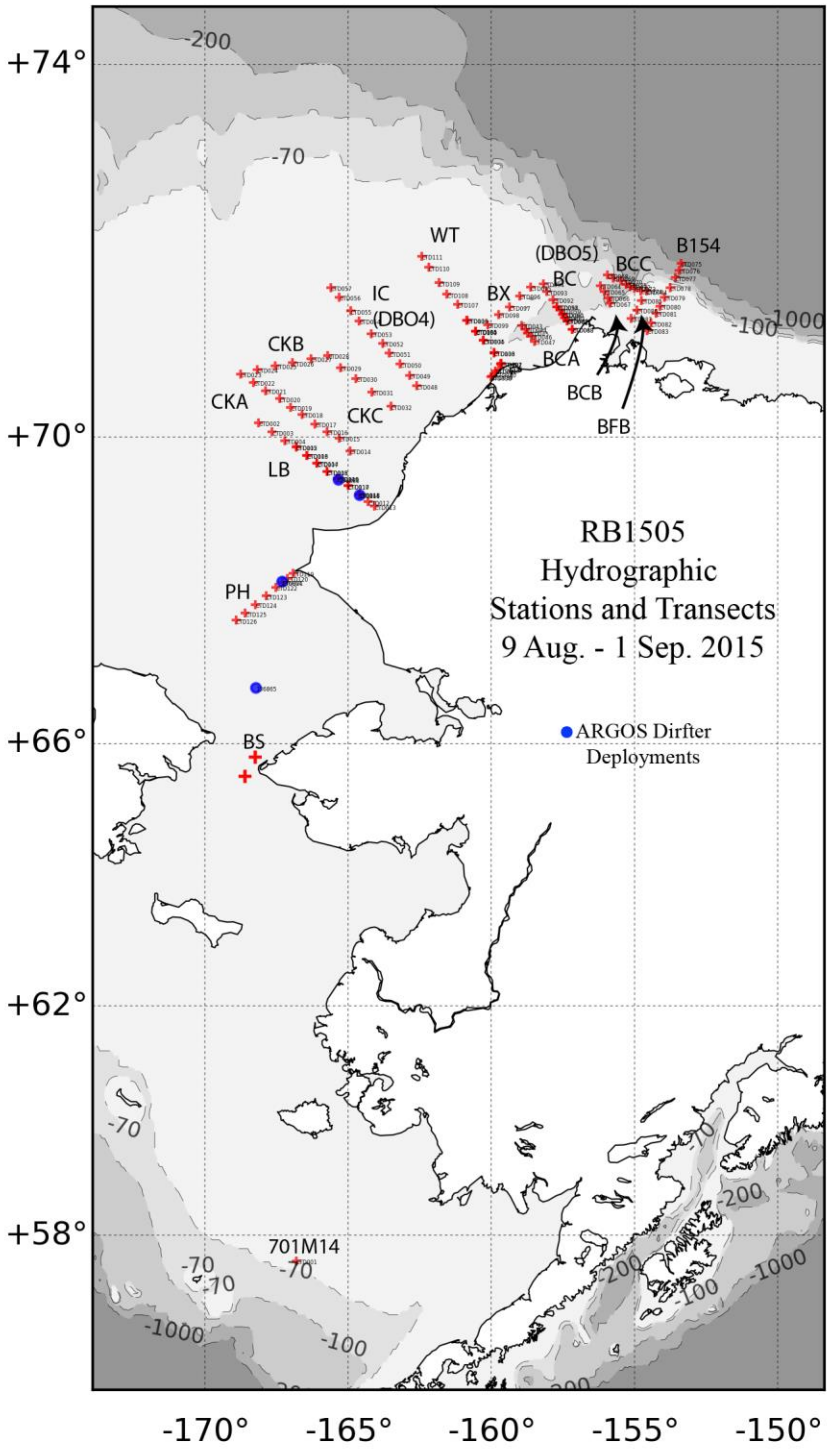

Figure 2. Map of CTD stations. Transect names appear in black.

On 09 August 2015 one CTD cast was taken at the EcoFOCI station 70M14, a site where high ammonium concentrations have been observed in previous summers. This cast

was sampled for an experiment to determine the effects of sampling techniques and timing of analyses on measurements of nutrient concentrations.

The ship proceeded northward through Bering Strait. It had been planned that operations would begin with occupation of the Point Hope (DBO3) transect followed by small boat operations in Kasagalak Bay and Wainwright. However, the weather forecast was unfavorable for starting small boat operations on time. Therefore, the ship proceeded to the northern end of the LB hydrographic/ Tucker sled transect on 11 August. This was followed by occupation of the CK grid of hydrographic stations 12-14 August.

Small boat operations began at noon on 14 August at Wainwright. That evening CTD stations were occupied from WT5-WT1, the portion of the Wainwright hydrographic line at the head of Barrow Canyon. On 15 August NOS scientists again sampled from the *Peggy D* in Wainwright/ Kuk River, while the *Brown* took CTD casts and grab samples for the NOS stations between Wainwright and Peard Bay. That night the BCA the hydrographic transect was occupied.

On 16 August, NOS scientists sampled a second line of stations between Wainwright and Peard Bay, this one inshore (10-12m depth) of that sampled from the *Brown* on the 15th. With weather no longer favorable for small boat operations, the ship transited to the northern end of the Icy Cape line (DBO4). August 17 was spent taking CTD casts and Tucker trawls on that line.

The Brown returned to Peard Bay for small boat operations on 18 and 19 August, before transiting to Elson Lagoon/ Dease Inlet on the Beaufort Sea just east of Barrow, where NOS scientists sampled on 20 and 21 August. At night three, more hydrographic transects across successively deeper portions of Barrow Canyon were occupied: BC, BCB, and BCC. Ice flows caused at least one station to be relocated on the last of these lines. After the completion of the small boat ops in Dease Inlet, the ship transited toward the outer end of the B154 line, which was approximately the location of heavy pack ice. The goal was to occupy at least one station with a bottom depth exceeding 1000m, which we succeeded in doing at the edge ice conditions deemed to be navigable by the *Ronald H. Brown.*

Upon completion of the B154 line the ship began to transit alongshore to the inner end of the B152 (DBO6) transect. Almost immediately, multi-year ice was encountered. The percent ice cover rapidly increased, such that at longitude 153°50' W progress was halted when the coverage approached 60%, and the cruise objectives east of there had to be abandoned. What the ship encountered was a large swath of multi-year ice that had broken free of the main arctic ice pack earlier in the summer, then rotated westward under winds that were dominantly from the east. At the time the *Brown* encountered this band, it had pressed close to the coast as far west as Smith Bay and blocked access to the east.

Two days of small boat operations by NOS were possible in Smith Bay on August 23 and 24.

With a forecast of stormy weather for the next week, the NOS science party chose to debark via small boat at Barrow on 25 August, two days earlier than planned. For the next 24 hours the EcoFOCI scientists were able to occupy the BC transect (DBO5) and the BX line. Operations ceased after we completed the first station on the WT line (WT01-CTD100) on the evening of 26 August. A peristant gale prevented resumption of operations until until 3 days later, on 29 August.

The ship then transited back to the LB line, so that on 30 August we were able to reoccupy stations LB09-LB03. At several of those stations on their first occupation, the second net on the Tucker trawl had failed to open. On the second transit, all trawls were successful. Re-sampling a major portion of the LB line and the occupation of the entire WT line after the large storm meant that this project succeeded in sampling two transects under different wind regimes, before and after a major mixing event.

As the Ron Brown continued the transit west and south to the Bering Sea, CTD stations were made on the Point Hope Line (DBO3) and at 2 DBO sites in Bering Strait on 01 September. The transit to to Dutch Harbor followed the PARS line until the latitude of the Pribilof Islands, where we left it to cross over the Bering Slope. There, we deployed two ARGO floats at bottom depths exceeding 2000m for Elizabeth Steffen of NOAA/PMEL.

The NOAA Ship *Ronald H. Brown* arrived at Dutch Harbor, AK on 4 September at 0930ADT, where the scientists from EcoFOCI, Oregon State University, and sea bird observers from U.S. Fish and Wildlife Service departed the ship.

APPENDIX

Comments

Table 1 lists the transect ID, name, the casts included in each, as well as the direction of travel. Table 2 summarizes the operations conducted, while Table 3 summarizes the samples collected. .Table 4 is an event log of operations. It includes, in the last column, comments on conditions and some observations.

Table 1. List of CTD stations on each Transect

Transect ID	Transect Name	CTD numbers	Direction
70M14	nut. methods expt	1	n-s
LB (full)	Ledyard Bay	2-13	n-s
CKA	Chukchi grid -A	14-23	s-n
CKB	Chukchi grid -B	23-28	sw-ne
CKC	Chukchi grid -C	28-32	nw-se
IC (DBO4)	Icy Cape	48-57	n-s
WT(short)	Wainwright	33-37	n-s
WT-Peard Bay	NOS alongshelf	38-42	w-e
BCA	Barrow Canyon-A	43-47	n-s
BC short (DBO5)	Barrow Canyon	58-63	n-s
BC (DBO5)	Barrow Canyon	88-94	s-n
BX (BC11-WT4)	Barrow Box	94-100	ne-sw
BCB	Barrow Canyon-B	64-67	n-s
BCC	Barrow Canyon-C	68-74	n-s
BFB- east of Barrow Can.	Beaufort-B	84-87	ne-sw
B154(BFA)	Beaufort 154°W	75-84	n-s
WT01	Wainwright	101	1-station
WT (full)	Wainwright	102-111	s-n
LB (partial)	Ledyard Bay	112-118	n-s
PH (DBO3)	Point Hope	119-126	ne-sw

Table 2. Summary of Gear Deployed

Gear Used	Tows
20cm bongo (20BON)	8
60cm bongo (60BON)	8
Seabird SeaCAT CTD (CAT)	55
CTDB- SeaBird 9+ CTD cast with bottle samples	124
LG-CB 10"inner diameter modified Clarke Bumpas zooplankton sampler	47

SLED- Epibenthic Tucker sled trawls	47
Seabird SeaCAT CTD (CAT)	55
TAPS-6 - Tracor Acostic Profiler with 6 frequencies	47
Bird and mammal observations	29 days

Table 3. Summary of Samples Collected

Samples Collected	**Number**
SeaBird SeaCat CTD (CAT)	55
CTDB- SeaBird 9+ CTD cast with bottle samples	124
LG-CB zooplankton samples	47
Epibenthic Tucker sled samples	47
Extracted chlorophyll (Chlor)	~600
Stimulated fluorescence collected during CTD casts (Fluor)	~600
Photosynthetically Active Radiation data collected during CTD casts (PAR)	124
Nutrient samples analyzed from CTD casts	~600
Nutrient samples analyzed from flow-through system	~54
Nutrient samples from methods experiment analyzed at time intervals aboard ship and at PMEL stored at 4 temperatures (filtered and unfiltered)	315
O2 samples from Niskin bottles-analyzed using Winkler method	~260
DIC/pCO2 from Niskin bottles	314
POC from Niskin bottles	286
POC from small boats	30
POC from flow-through system	310
DOC	36
DNA and RNA	38
O2/Ar from Niskin bottles	27
O2/Ar flow-through system	51
Salinity from Niskin bottles	48
Salinity from Flow-through system	~24
Chlorophyll form flow through system	~56

Cruise Summary For FOCI Cruise 1RB15 (RB1505)

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-09	09:15	1	1	CTD001	68	57 31.43 N	166 48.2 W	CTDB	CHLOR
2015-08-12	00:35	2	1	CTD002	46	70 10.16 N	168 7.26 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-12	01:49	2	2	SLED001	46	70 9.41 N	168 6.54 W	LG-CB	QTOWF
2015-08-12	01:49	2	2	SLED001	46	70 9.41 N	168 6.54 W	SLED	QTOWF
2015-08-12	01:49	2	2	SLED001	46	70 9.41 N	168 6.54 W	SLED	QTOWF
2015-08-12	01:49	2	2	SLED001	46	70 9.41 N	168 6.54 W	TAPS-6	TAPS6
2015-08-12	01:49	2	2	SLED001	46	70 9.41 N	168 6.54 W	CAT	CAT
2015-08-12	03:31	3	1	CTD003	48	70 3.52 N	167 39.03 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-12	04:08	3	2	SLED002	48	70 3.13 N	167 37.95 W	LG-CB	QTOWF
2015-08-12	04:08	3	2	SLED002	48	70 3.13 N	167 37.95 W	SLED	QTOWF
2015-08-12	04:08	3	2	SLED002	48	70 3.13 N	167 37.95 W	SLED	QTOWF
2015-08-12	04:08	3	2	SLED002	48	70 3.13 N	167 37.95 W	CAT	CAT
2015-08-12	04:08	3	2	SLED002	48	70 3.13 N	167 37.95 W	TAPS-6	TAPS6
2015-08-12	05:39	4	1	CTD004	47	69 57.5 N	167 12.8 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-12	06:07	4	2	SLED003	48	69 57.21 N	167 11.49 W	SLED	QTOWF
2015-08-12	06:07	4	2	SLED003	48	69 57.21 N	167 11.49 W	LG-CB	QTOWF
2015-08-12	06:07	4	2	SLED003	48	69 57.21 N	167 11.49 W	SLED	QTOWF
2015-08-12	06:07	4	2	SLED003	48	69 57.21 N	167 11.49 W	CAT	CAT
2015-08-12	06:07	4	2	SLED003	48	69 57.21 N	167 11.49 W	TAPS-6	TAPS6
2015-08-12	07:32	5	1	CTD005	47	69 52.95 N	166 48.88 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-12	08:00	5	2	SLED004	46	69 52.64 N	166 47.28 W	SLED	QTOWF
2015-08-12	08:00	5	2	SLED004	46	69 52.64 N	166 47.28 W	CAT	CAT
2015-08-12	08:00	5	2	SLED004	46	69 52.64 N	166 47.28 W	TAPS-6	TAPS6
2015-08-12	08:00	5	2	SLED004	46	69 52.64 N	166 47.28 W	SLED	DISCARD
2015-08-12	08:00	5	2	SLED004	46	69 52.64 N	166 47.28 W	LG-CB	DISCARD
2015-08-12	09:24	6	1	CTD006	45	69 46.88 N	166 26.41 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-12	09:52	6	2	SLED005	46	69 46.82 N	166 25.8 W	SLED	QTOWF

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Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-12	09:52	6	2	SLED005	46	69 46.82 N	166 25.8 W	LG-CB	QTOWF
2015-08-12	09:52	6	2	SLED005	46	69 46.82 N	166 25.8 W	SLED	QTOWF
2015-08-12	09:52	6	2	SLED005	46	69 46.82 N	166 25.8 W	CAT	CAT
2015-08-12	09:52	6	2	SLED005	46	69 46.82 N	166 25.8 W	TAPS-6	TAPS6
2015-08-12	11:15	7	1	CTD007	41	69 41.02 N	166 4.93 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-12	11:43	7	2	SLED006	42	69 40.84 N	166 4.26 W	SLED	QTOWF
2015-08-12	11:43	7	2	SLED006	42	69 40.84 N	166 4.26 W	CAT	CAT
2015-08-12	11:43	7	2	SLED006	42	69 40.84 N	166 4.26 W	TAPS-6	TAPS6
2015-08-12	11:43	7	2	SLED006	42	69 40.84 N	166 4.26 W	LG-CB	DISCARD
2015-08-12	11:43	7	2	SLED006	42	69 40.84 N	166 4.26 W	SLED	DISCARD
2015-08-12	13:02	8	1	CTD008	38	69 34.92 N	165 44.27 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-12	13:26	8	2	SLED007	38	69 34.76 N	165 44.72 W	SLED	QTOWF
2015-08-12	13:26	8	2	SLED007	38	69 34.76 N	165 44.72 W	CAT	CAT
2015-08-12	13:26	8	2	SLED007	38	69 34.76 N	165 44.72 W	TAPS-6	TAPS6
2015-08-12	13:26	8	2	SLED	38	69 34.76 N	165 44.72 W	SLED	DISCARD
2015-08-12	13:26	8	2	SLED	38	69 34.76 N	165 44.72 W	LG-CB	DISCARD
2015-08-12	14:44	9	1	CTD009	34	69 29.89 N	165 22.11 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-12	15:11	9	2	SLED008	35	69 29.6 N	165 21.13 W	SLED	QTOWF
2015-08-12	15:11	9	2	SLED008	35	69 29.6 N	165 21.13 W	CAT	CAT
2015-08-12	15:11	9	2	SLED008	35	69 29.6 N	165 21.13 W	TAPS-6	TAPS6
2015-08-12	15:11	9	2	SLED008	35	69 29.6 N	165 21.13 W	SLED	DISCARD
2015-08-12	15:11	9	2	SLED008	35	69 29.6 N	165 21.13 W	LG-CB	DISCARD
2015-08-12	16:33	10	1	CTD010	31	69 24.5 N	165 0.38 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-12	16:54	10	2	SLED009	31	69 24.29 N	164 59.68 W	SLED	QTOWF
2015-08-12	16:54	10	2	SLED009	31	69 24.29 N	164 59.68 W	CAT	CAT
2015-08-12	16:54	10	2	SLED009	31	69 24.29 N	164 59.68 W	TAPS-6	TAPS6
2015-08-12	16:54	10	2	SLED009	31	69 24.29 N	164 59.68 W	SLED	QTOWF
2015-08-12	16:54	10	2	SLED009	31	69 24.29 N	164 59.68 W	LG-CB	QTOWF
2015-08-12	18:18	11	1	CTD011	25	69 18.32 N	164 37.19 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR

Cruise Summary For FOCI Cruise 1RB15 (RB1505)

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-12	18:42	11	2	SLED010	25	69 18.19 N	164 37.01 W	SLED	QTOWF
2015-08-12	18:42	11	2	SLED010	25	69 18.19 N	164 37.01 W	LG-CB	QTOWF
2015-08-12	18:42	11	2	SLED010	25	69 18.19 N	164 37.01 W	SLED	QTOWF
2015-08-12	18:42	11	2	SLED010	25	69 18.19 N	164 37.01 W	CAT	CAT
2015-08-12	18:42	11	2	SLED010	25	69 18.19 N	164 37.01 W	TAPS-6	TAPS6
2015-08-12	20:08	12	1	CTD012	20	69 12.69 N	164 17.66 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-12	20:30	12	2	SLED011	19	69 12.56 N	164 17.5 W	SLED	QTOWF
2015-08-12	20:30	12	2	SLED011	19	69 12.56 N	164 17.5 W	LG-CB	QTOWF
2015-08-12	20:30	12	2	SLED011	19	69 12.56 N	164 17.5 W	SLED	QTOWF
2015-08-12	20:30	12	2	SLED011	19	69 12.56 N	164 17.5 W	CAT	CAT
2015-08-12	20:30	12	2	SLED011	19	69 12.56 N	164 17.5 W	TAPS-6	TAPS6
2015-08-12	21:56	13	1	CTD013	16	69 9.38 N	164 4.21 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-13	03:02	14	1	CTD014	36	69 50.09 N	164 55.96 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-13	04:44	15	1	CTD015	41	69 59.15 N	165 19.25 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-13	06:13	16	1	CTD016	43	70 3.9 N	165 43.99 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-13	07:47	17	1	CTD017	46	70 9.4 N	166 9.11 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-13	09:29	18	1	CTD018	46	70 16.1 N	166 36.68 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-13	10:58	19	1	CTD019	48	70 21.11 N	166 59.88 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-13	12:25	20	1	CTD020	49	70 27.08 N	167 23.8 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-13	14:00	21	1	CTD021	47	70 32.68 N	167 52.97 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-13	15:32	22	1	CTD022	41	70 38.46 N	168 17.99 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-13	17:10	23	1	CTD023	35	70 44.27 N	168 44.88 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-13	18:46	24	1	CTD024	44	70 47.34 N	168 9.98 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL

Cruise Summary For FOCI Cruise 1RB15 (RB1505)

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-13	20:40	25	1	CTD025	53	70 50.12 N	167 32.22 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-13	23:09	26	1	CTD026	46	70 52.01 N	166 56.1 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-14	00:05	27	1	CTD027	43	70 54.86 N	166 18.18 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-14	02:27	28	1	CTD028	43	70 57.0 N	165 42.24 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-14	04:04	29	1	CTD029	42	70 48.8 N	165 15.83 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-14	05:46	30	1	CTD030	45	70 41.28 N	164 43.16 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-14	07:43	31	1	CTD031	45	70 31.9 N	164 9.88 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-14	10:04	32	1	CTD032	34	70 21.71 N	163 29.7 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-15	08:27	33	1	CTD033	48	71 21.01 N	160 51.22 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-15	09:51	34	1	CTD034	50	71 13.48 N	160 32.56 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-15	11:06	35	1	CTD035	57	71 7.36 N	160 16.32 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-15	12:40	36	1	CTD036	68	70 59.0 N	159 54.42 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-15	14:06	37	1	CTD037	31	70 51.6 N	159 39.68 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-16	08:24	38	1	CTD043	65	71 17.44 N	158 56.4 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-16	09:28	39	1	CTD044	112	71 14.1 N	158 47.97 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-16	10:29	40	1	CTD045	106	71 12.39 N	158 43.97 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-16	11:35	41	1	CTD046	77	71 9.99 N	158 36.79 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-16	12:43	42	1	CTD047	35	71 6.53 N	158 29.55 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-17	03:42	43	1	CTD048	38	70 36.09 N	162 36.18 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-17	04:30	43	2	SLED012	38	70 36.22 N	162 35.09 W	TAPS-6	TAPS6
2015-08-17	04:30	43	2	SLED012	38	70 36.22 N	162 35.09 W	LG-CB	DISCARD
2015-08-17	04:30	43	2	SLED012	38	70 36.22 N	162 35.09 W	CAT	CAT
2015-08-17	04:30	43	2	SLED012	38	70 36.22 N	162 35.09 W	SLED	DISCARD
2015-08-17	04:30	43	2	SLED012	38	70 36.22 N	162 35.09 W	SLED	QTOWF
2015-08-17	06:07	44	1	CTD049	42	70 43.32 N	162 51.04 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-17	06:42	44	2	SLED013	41	70 43.49 N	162 49.07 W	LG-CB	QTOWF
2015-08-17	06:42	44	2	SLED013	41	70 43.49 N	162 49.07 W	CAT	CAT
2015-08-17	06:42	44	2	SLED013	41	70 43.49 N	162 49.07 W	SLED	QTOWF
2015-08-17	06:42	44	2	SLED013	41	70 43.49 N	162 49.07 W	SLED	QTOWF
2015-08-17	06:42	44	2	SLED013	41	70 43.49 N	162 49.07 W	TAPS-6	TAPS6
2015-08-17	08:29	45	1	CTD050	45	70 51.17 N	163 10.67 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-17	08:59	45	2	SLED014	45	70 51.27 N	163 9.64 W	SLED	QTOWF
2015-08-17	08:59	45	2	SLED014	45	70 51.27 N	163 9.64 W	SLED	QTOWF
2015-08-17	08:59	45	2	SLED014	45	70 51.27 N	163 9.64 W	LG-CB	QTOWF
2015-08-17	08:59	45	2	SLED014	45	70 51.27 N	163 9.64 W	CAT	CAT
2015-08-17	08:59	45	2	SLED014	45	70 51.27 N	163 9.64 W	TAPS-6	TAPS6
2015-08-17	11:09	46	1	CTD051	46	70 58.54 N	163 33.6 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-17	12:25	46	2	SLED015	1135	70 58.62 N	163 32.84 W	LG-CB	QTOWF
2015-08-17	12:25	46	2	SLED015	1135	70 58.62 N	163 32.84 W	CAT	CAT
2015-08-17	11:35	46	2	SLED015	45	70 58.62 N	163 32.84 W	SLED	QTOWF, AMGEN
2015-08-17	12:25	46	2	SLED015	1135	70 58.62 N	163 32.84 W	SLED	QTOWF, AMGEN
2015-08-17	12:25	46	2	SLED015	1135	70 58.62 N	163 32.84 W	TAPS-6	TAPS6
2015-08-17	13:03	47	1	CTD052	53	71 5.28 N	163 47.81 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-17	13:29	47	2	SLED016	43	71 5.3 N	163 47.6 W	SLED	QTOWF
2015-08-17	13:29	47	2	SLED016	43	71 5.3 N	163 47.6 W	SLED	QTOWF
2015-08-17	13:29	47	2	SLED016	43	71 5.3 N	163 47.6 W	CAT	CAT
2015-08-17	13:29	47	2	SLED016	43	71 5.3 N	163 47.6 W	LG-CB	QTOWF
2015-08-17	13:29	47	2	SLED016	43	71 5.3 N	163 47.6 W	TAPS-6	TAPS6
2015-08-17	15:11	48	1	CTD053	44	71 11.94 N	164 12.04 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-17	15:40	48	2	SLED017	44	71 11.51 N	164 12.05 W	SLED	QTOWF
2015-08-17	15:40	48	2	SLED017	44	71 11.51 N	164 12.05 W	SLED	QTOWF
2015-08-17	15:40	48	2	SLED017	44	71 11.51 N	164 12.05 W	LG-CB	QTOWF
2015-08-17	15:40	48	2	SLED017	44	71 11.51 N	164 12.05 W	CAT	CAT
2015-08-17	15:40	48	2	SLED017	44	71 11.51 N	164 12.05 W	TAPS-6	TAPS6
2015-08-17	17:53	49	1	CTD054	44	71 20.37 N	164 36.44 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-17	18:21	49	2	SLED018	44	71 20.43 N	164 36.07 W	SLED	QTOWF
2015-08-17	18:21	49	2	SLED018	44	71 20.43 N	164 36.07 W	SLED	QTOWF
2015-08-17	18:21	49	2	SLED018	44	71 20.43 N	164 36.07 W	LG-CB	QTOWF
2015-08-17	18:21	49	2	SLED018	44	71 20.43 N	164 36.07 W	CAT	CAT
2015-08-17	18:21	49	2	SLED018	44	71 20.43 N	164 36.07 W	TAPS-6	TAPS6
2015-08-17	20:24	50	1	CTD055	42	71 27.09 N	164 54.82 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-17	20:45	50	2	SLED019	42	71 27.19 N	164 54.54 W	SLED	QTOWF
2015-08-17	20:45	50	2	SLED019	42	71 27.19 N	164 54.54 W	SLED	QTOWF

Cruise Summary For FOCI Cruise 1RB15 (RB1505)

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-17	20:45	50	2	SLED019	42	71 27.19 N	164 54.54 W	CAT	CAT
2015-08-17	20:45	50	2	SLED019	42	71 27.19 N	164 54.54 W	TAPS-6	TAPS6
2015-08-17	22:53	51	1	CTD056	42	71 36.25 N	165 18.08 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-17	23:20	51	2	SLED020	42	71 36.32 N	165 17.5 W	SLED	QTOWF
2015-08-17	23:20	51	2	SLED020	42	71 36.32 N	165 17.5 W	SLED	QTOWF
2015-08-17	23:20	51	2	SLED020	42	71 36.32 N	165 17.5 W	LG-CB	QTOWF
2015-08-17	23:20	51	2	SLED020	42	71 36.32 N	165 17.5 W	CAT	CAT
2015-08-17	23:20	51	2	SLED020	42	71 36.32 N	165 17.5 W	TAPS-6	TAPS6
2015-08-18	01:01	52	1	CTD057	42	71 42.46 N	165 36.15 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-18	01:28	52	2	SLED021	42	71 42.6 N	165 35.2 W	SLED	QTOWF
2015-08-18	01:28	52	2	SLED021	42	71 42.6 N	165 35.2 W	SLED	QTOWF
2015-08-18	01:28	52	2	SLED021	42	71 42.6 N	165 35.2 W	TAPS-6	TAPS6
2015-08-18	01:28	52	2	SLED021	42	71 42.6 N	165 35.2 W	CAT	CAT
2015-08-18	01:28	52	2	SLED021	42	71 42.6 N	165 35.2 W	LG-CB	QTOWF
2015-08-19	06:46	53	1	CTD058	82	71 29.92 N	157 42.17 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-19	07:49	54	1	CTD059	108	71 27.48 N	157 35.99 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-19	08:55	55	1	CTD060	128	71 24.89 N	157 30.38 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-19	10:01	56	1	CTD061	114	71 22.48 N	157 26.48 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-19	11:01	57	1	CTD062	95	71 20.35 N	157 20.94 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-19	12:10	58	1	CTD063	46	71 14.76 N	157 9.91 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-20	09:54	59	1	CTD064	99	71 43.76 N	156 11.25 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-20	11:14	60	1	CTD065	115	71 39.99 N	156 3.58 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-20	12:35	61	1	CTD066	217	71 35.7 N	155 54.93 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-20	14:13	62	1	CTD067	131	71 32.21 N	155 51.86 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-20	14:13	62	2	CTD067	131	71 32.21 N	155 51.86 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-21	06:22	63	1	CTD068	91	71 50.77 N	155 57.22 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-21	07:35	64	1	CTD069	101	71 48.76 N	155 44.07 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-21	09:00	65	1	CTD070	141	71 46.91 N	155 28.9 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-21	10:23	66	1	CTD071	225	71 44.63 N	155 17.57 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-21	11:30	67	1	CTD072	272	71 43.52 N	155 9.96 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL
2015-08-21	12:54	68	1	CTD073	145	71 42.1 N	155 0.0 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR
2015-08-21	14:03	69	1	CTD074	61	71 40.34 N	154 46.66 W	CTDB	PAR, CTD, NUT, OXYGEN, FLUOR, SAL

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-22	07:35	70	1	CTD075	1531	71 58.57 N	153 22.25 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-22	09:34	70	2	BON001	1322	71 59.77 N	153 29.76 W	60BON	QTOWF
2015-08-22	09:34	70	2	BON001	1322	71 59.77 N	153 29.76 W	60BON	DISCARD, AMGEN
2015-08-22	09:34	70	2	BON001	1322	71 59.77 N	153 29.76 W	20BON	QTOWF
2015-08-22	09:34	70	2	BON001	1322	71 59.77 N	153 29.76 W	CAT	CAT
2015-08-22	11:35	71	1	CTD076	684	71 53.95 N	153 27.12 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-22	12:46	71	2	BON002	873	71 54.0 N	153 25.8 W	CAT	CAT
2015-08-22	12:46	71	2	BON002	873	71 54.0 N	153 25.8 W	20BON	QTOWF
2015-08-22	12:46	71	2	BON002	873	71 54.0 N	153 25.8 W	60BON	QTOWF
2015-08-22	14:18	72	1	CTD077	175	71 49.13 N	153 34.93 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-22	16:14	73	1	CTD078	52	71 42.56 N	153 45.5 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-22	16:50	73	2	BON003	52	71 42.59 N	153 45.18 W	60BON	QTOWF
2015-08-22	16:50	73	2	BON003	52	71 42.59 N	153 45.18 W	20BON	QTOWF
2015-08-22	16:50	73	2	BON003	52	71 42.59 N	153 45.18 W	CAT	CAT
2015-08-22	18:02	74	1	CTD079	47	71 36.13 N	153 57.5 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-22	19:12	75	1	CTD080	46	71 30.2 N	154 6.86 W	CTDB	PAR, CAT, CHLOR, NUT, OXYGEN, FLUOR
2015-08-22	19:37	75	2	BON004	46	71 30.32 N	154 6.44 W	20BON	QTOWF
2015-08-22	19:37	75	2	BON004	46	71 30.32 N	154 6.44 W	60BON	QTOWF
2015-08-22	19:37	75	2	BON004	46	71 30.32 N	154 6.44 W	60BON	DISCARD, AMGEN
2015-08-22	19:37	75	2	BON004	46	71 30.32 N	154 6.44 W	CAT	CAT
2015-08-22	21:22	76	1	CTD081	37	71 25.68 N	154 14.84 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-22	22:12	76	2	BON005	38	71 25.91 N	154 16.11 W	60BON	QTOWF
2015-08-22	22:12	76	2	BON005	38	71 25.91 N	154 16.11 W	CAT	CAT
2015-08-22	22:12	76	2	BON005	38	71 25.91 N	154 16.11 W	60BON	DISCARD, AMGEN
2015-08-22	22:12	76	2	BON005	38	71 25.91 N	154 16.11 W	20BON	QTOWF
2015-08-22	23:53	77	1	CTD082	23	71 19.0 N	154 25.41 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-23	00:11	77	2	BON006	25	71 18.99 N	154 24.98 W	60BON	QTOWF
2015-08-23	00:11	77	2	BON006	25	71 18.99 N	154 24.98 W	60BON	DISCARD, AMGEN
2015-08-23	00:11	77	2	BON006	25	71 18.99 N	154 24.98 W	20BON	QTOWF
2015-08-23	00:11	77	2	BON006	25	71 18.99 N	154 24.98 W	CAT	CAT
2015-08-23	01:27	78	1	CTD083	19	71 13.97 N	154 33.22 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-24	08:51	79	1	CTD084	53	71 40.26 N	154 34.73 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-24	09:19	79	2	BON007	51	71 40.21 N	154 34.08 W	20BON	QTOWF

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-24	09:19	79	2	BON007	51	71 40.21 N	154 34.08 W	60BON	QTOWF
2015-08-24	09:19	79	2	BON007	51	71 40.21 N	154 34.08 W	60BON	DISCARD, AMGEN
2015-08-24	09:59	79	2	BON007	51	71 40.21 N	154 34.08 W	CAT	CAT
2015-08-24	11:15	80	1	CTD085	35	71 34.23 N	154 46.17 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-24	11:34	80	2	BON008	35	71 34.0 N	154 46.0 W	20BON	QTOWF
2015-08-24	11:34	80	2	BON008	35	71 34.0 N	154 46.0 W	60BON	QTOWF
2015-08-24	11:34	80	2	BON008	35	71 34.0 N	154 46.0 W	CAT	CAT
2015-08-24	12:59	81	1	CTD086	27	71 27.76 N	154 55.05 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-24	14:30	82	1	CTD087	21	71 22.08 N	155 6.95 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-25	21:25	83	1	CTD088	47	71 14.81 N	157 9.93 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-25	22:29	83	2	SLED022	45	71 14.76 N	157 9.37 W	SLED	QTOWF
2015-08-25	22:29	83	2	SLED022	45	71 14.76 N	157 9.37 W	LG-CB	QTOWF
2015-08-25	22:29	83	2	SLED022	45	71 14.76 N	157 9.37 W	CAT	CAT
2015-08-25	22:29	83	2	SLED022	45	71 14.76 N	157 9.37 W	TAPS-6	TAPS6
2015-08-25	23:38	84	1	CTD089	95	71 20.81 N	157 20.82 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-26	00:13	84	2	SLED023	95	71 20.16 N	157 20.93 W	CAT	CAT
2015-08-26	00:13	84	2	SLED023	95	71 20.16 N	157 20.93 W	SLED	QTOWF
2015-08-26	00:13	84	2	SLED023	95	71 20.16 N	157 20.93 W	LG-CB	QTOWF
2015-08-26	00:13	84	2	SLED023	95	71 20.16 N	157 20.93 W	TAPS-6	TAPS6
2015-08-26	02:01	85	1	CTD090	124	71 24.8 N	157 30.33 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-26	02:40	85	2	SLED024	122	71 24.55 N	157 30.49 W	SLED	QTOWF
2015-08-26	02:40	85	2	SLED024	122	71 24.55 N	157 30.49 W	LG-CB	QTOWF
2015-08-26	02:40	85	2	SLED024	122	71 24.55 N	157 30.49 W	CAT	CAT
2015-08-26	02:40	85	2	SLED024	122	71 24.55 N	157 30.49 W	TAPS-6	TAPS6
2015-08-26	04:07	86	1	CTD091	81	71 29.99 N	157 42.18 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-26	04:38	86	2	SLED025	91	71 29.83 N	157 42.15 W	LG-CB	QTOWF
2015-08-26	04:38	86	2	SLED025	91	71 29.83 N	157 42.15 W	SLED	QTOWF
2015-08-26	04:38	86	2	SLED025	91	71 29.83 N	157 42.15 W	TAPS-6	TAPS6
2015-08-26	04:38	86	2	SLED025	91	71 29.83 N	157 42.15 W	CAT	CAT
2015-08-26	05:41	87	1	CTD092	65	71 34.56 N	157 50.42 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-26	06:18	87	2	SLED026	65	71 34.29 N	157 50.54 W	LG-CB	QTOWF

Cruise Summary For FOCI Cruise 1RB15 (RB1505)

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-26	06:18	87	2	SLED026	65	71 34.29 N	157 50.54 W	SLED	QTOWF
2015-08-26	06:18	87	2	SLED026	65	71 34.29 N	157 50.54 W	CAT	CAT
2015-08-26	06:18	87	2	SLED026	65	71 34.29 N	157 50.54 W	TAPS-6	TAPS6
2015-08-26	07:45	88	1	CTD093	61	71 39.89 N	158 3.92 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-26	08:13	88	2	SLED027	61	71 39.79 N	158 3.93 W	SLED	QTOWF
2015-08-26	08:13	88	2	SLED027	61	71 39.79 N	158 3.93 W	LG-CB	QTOWF
2015-08-26	08:13	88	2	SLED027	61	71 39.79 N	158 3.93 W	CAT	CAT
2015-08-26	08:13	88	2	SLED027	61	71 39.79 N	158 3.93 W	TAPS-6	TAPS6
2015-08-26	09:22	89	1	CTD094	55	71 44.99 N	158 11.08 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-26	09:50	89	2	SLED028	56	71 44.8 N	158 11.02 W	SLED	QTOWF
2015-08-26	09:50	89	2	SLED028	56	71 44.8 N	158 11.02 W	CAT	CAT
2015-08-26	09:50	89	2	SLED028	56	71 44.8 N	158 11.02 W	LG-CB	QTOWF
2015-08-26	09:50	89	2	SLED028	56	71 44.8 N	158 11.02 W	TAPS-6	TAPS6
2015-08-26	11:29	90	1	CTD095	57	71 42.79 N	158 37.99 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-26	13:30	91	1	CTD086	53	71 37.01 N	159 0.25 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-26	15:53	92	1	CTD097	52	71 29.64 N	159 21.81 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-26	18:17	93	1	CTD098	50	71 24.62 N	159 45.05 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-26	20:08	94	1	CTD099	54	71 17.76 N	160 7.78 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-26	21:52	95	1	CTD100	51	71 13.44 N	160 32.62 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-27	01:13	96	1	CTD101	32	70 51.44 N	159 40.11 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-27	01:42	96	2	SLED029	33	70 51.32 N	159 41.04 W	SLED	QTOWF
2015-08-27	01:42	96	2	SLED029	33	70 51.32 N	159 41.04 W	LG-CB	QTOWF
2015-08-27	01:42	96	2	SLED029	33	70 51.32 N	159 41.04 W	SLED	QTOWF
2015-08-27	01:42	96	2	SLED029	33	70 51.32 N	159 41.04 W	CAT	CAT
2015-08-27	01:42	96	2	SLED029	33	70 51.32 N	159 41.04 W	TAPS-6	TAPS6
2015-08-29	17:44	97	1	CTD102	31	70 51.49 N	159 39.82 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-29	19:14	98	1	CTD103	68	70 58.91 N	159 54.14 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-29	19:50	98	2	SLED030	68	70 59.05 N	159 54.57 W	SLED	QTOWF
2015-08-29	19:50	98	2	SLED030	68	70 59.05 N	159 54.57 W	LG-CB	QTOWF
2015-08-29	19:50	98	2	SLED030	68	70 59.05 N	159 54.57 W	CAT	CAT
2015-08-29	19:50	98	2	SLED030	68	70 59.05 N	159 54.57 W	SLED	QTOWF

Cruise Summary For FOCI Cruise 1RB15 (RB1505))

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-29	21:48	99	1	CTD104	62	71 7.3 N	160 16.61 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2012-08-30	22:26	99	2	SLED031	55	71 7.4 N	160 17.35 W	LG-CB	QTOWF
2012-08-30	22:26	99	2	SLED031	55	71 7.4 N	160 17.35 W	SLED	QTOWF
2012-08-30	22:26	99	2	SLED031	55	71 7.4 N	160 17.35 W	SLED	QTOWF
2012-08-30	22:26	99	2	SLED031	55	71 7.4 N	160 17.35 W	CAT	CAT
2012-08-30	22:26	99	2	SLED031	55	71 7.4 N	160 17.35 W	TAPS-6	TAPS6
2015-08-29	23:47	100	1	CTD105	51	71 13.48 N	160 32.58 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-30	00:15	100	2	SLED032	52	71 13.55 N	160 33.15 W	SLED	QTOWF
2015-08-30	00:15	100	2	SLED032	52	71 13.55 N	160 33.15 W	SLED	QTOWF
2015-08-30	00:15	100	2	SLED032	52	71 13.55 N	160 33.15 W	LG-CB	QTOWF
2015-08-30	00:15	100	2	SLED032	52	71 13.55 N	160 33.15 W	CAT	CAT
2015-08-30	00:15	100	2	SLED032	52	71 13.55 N	160 33.15 W	TAPS-6	TAPS6
2015-08-30	01:46	101	1	CTD106	47	71 20.95 N	160 50.68 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-30	02:15	101	2	SLED033	48	71 21.13 N	160 51.66 W	LG-CB	QTOWF
2015-08-30	02:15	101	2	SLED033	48	71 21.13 N	160 51.66 W	SLED	QTOWF
2015-08-30	02:15	101	2	SLED033	48	71 21.13 N	160 51.66 W	SLED	QTOWF
2015-08-30	02:15	101	2	SLED033	48	71 21.13 N	160 51.66 W	CAT	CAT
2015-08-30	02:15	101	2	SLED033	48	71 21.13 N	160 51.66 W	TAPS-6	TAPS6
2015-08-30	04:13	102	1	CTD107	47	71 31.47 N	161 10.54 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-30	04:39	102	2	SLED034	48	71 31.64 N	161 11.22 W	SLED	QTOWF
2015-08-30	04:39	102	2	SLED034	48	71 31.64 N	161 11.22 W	SLED	QTOWF
2015-08-30	04:39	102	2	SLED034	48	71 31.64 N	161 11.22 W	LG-CB	QTOWF
2015-08-30	04:39	102	2	SLED034	48	71 31.64 N	161 11.22 W	CAT	CAT
2015-08-30	04:39	102	2	SLED034	48	71 31.64 N	161 11.22 W	TAPS-6	TAPS6
2015-08-30	06:23	103	1	CTD108	45	71 38.07 N	161 32.86 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-30	06:54	103	2	SLED035	46	71 38.27 N	161 34.25 W	SLED	QTOWF
2015-08-30	06:54	103	2	SLED035	46	71 38.27 N	161 34.25 W	SLED	QTOWF
2015-08-30	06:54	103	2	SLED035	46	71 38.27 N	161 34.25 W	LG-CB	QTOWF
2015-08-30	06:54	103	2	SLED035	46	71 38.27 N	161 34.25 W	CAT	CAT
2015-08-30	06:54	103	2	SLED035	46	71 38.27 N	161 34.25 W	TAPS-6	TAPS6
2015-08-30	08:22	104	1	CTD109	43	71 45.67 N	161 49.84 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-30	08:55	104	2	SLED036	43	71 46.63 N	161 50.43 W	SLED	QTOWF
2015-08-30	08:55	104	2	SLED036	43	71 46.63 N	161 50.43 W	SLED	QTOWF
2015-08-30	08:55	104	2	SLED036	43	71 46.36 N	161 50.43 W	CAT	CAT
2015-09-30	08:55	104	2	SLED036	43	71 46.36 N	161 50.43 W	LG-CB	QTOWF

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-30	08:55	104	2	SLED036	43	71 46.36 N	161 50.43 W	TAPS-6	TAPS6
2015-08-30	10:33	105	1	CTD110	35	71 55.67 N	162 11.16 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-30	10:54	105	2	SLED037	35	71 55.72 N	162 10.8 W	SLED	QTOWF
2015-08-30	10:54	105	2	SLED037	35	71 55.72 N	162 10.8 W	LG-CB	QTOWF
2015-08-30	10:54	105	2	SLED037	35	71 55.72 N	162 10.8 W	CAT	CAT
2015-08-30	10:54	105	2	SLED037	35	71 55.72 N	162 10.8 W	SLED	QTOWF, AMGEN
2015-08-30	10:54	105	2	SLED037	35	71 55.72 N	162 10.8 W	TAPS-6	TAPS6
2015-08-30	12:22	106	1	CTD111	32	72 2.88 N	162 26.11 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-30	12:41	106	2	SLED038	33	72 2.92 N	162 25.81 W	SLED	QTOWF, AMGEN
2015-08-30	12:41	106	2	SLED038	33	72 2.92 N	162 25.81 W	SLED	QTOWF
2015-08-30	12:41	106	2	SLED038	33	72 2.92 N	162 25.81 W	LG-CB	QTOWF
2015-08-30	12:41	106	2	SLED038	33	72 2.92 N	162 25.81 W	CAT	CAT
2015-08-30	12:41	106	2	SLED038	33	72 2.92 N	162 25.81 W	TAPS-6	TAPS6
2015-08-31	02:45	107	1	CTD112	46	69 52.88 N	166 48.88 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-31	03:13	107	2	SLED039	46	69 53.12 N	166 49.19 W	SLED	QTOWF
2015-08-31	03:13	107	2	SLED039	46	69 53.12 N	166 49.19 W	SLED	QTOWF
2015-08-31	03:13	107	2	SLED039	46	69 53.12 N	166 49.19 W	LG-CB	QTOWF
2015-08-31	03:13	107	2	SLED039	46	69 53.12 N	166 49.19 W	CAT	CAT
2015-08-31	03:13	107	2	SLED039	46	69 53.12 N	166 49.19 W	TAPS-6	TAPS6
2015-08-31	04:53	108	1	CTD113	45	69 46.82 N	166 26.32 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-31	05:19	108	2	SLED040	44	69 47.09 N	166 26.77 W	SLED	QTOWF
2015-08-31	05:19	108	2	SLED040	44	69 47.09 N	166 26.77 W	SLED	QTOWF
2015-08-31	05:19	108	2	SLED040	44	69 47.09 N	166 26.77 W	LG-CB	QTOWF
2015-08-31	05:19	108	2	SLED040	44	69 47.09 N	166 26.77 W	CAT	CAT
2015-08-31	05:19	108	2	SLED040	44	69 47.09 N	166 26.77 W	TAPS-6	TAPS6
2015-08-31	06:51	109	1	CTD114	41	69 41.36 N	166 4.97 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-31	07:17	109	2	SLED041	41	69 41.66 N	166 5.47 W	SLED	QTOWF
2015-08-31	07:17	109	2	SLED041	41	69 41.66 N	166 5.47 W	LG-CB	QTOWF
2015-08-31	07:17	109	2	SLED041	41	69 41.66 N	166 5.47 W	SLED	QTOWF
2015-08-31	07:17	109	2	SLED041	41	69 41.66 N	166 5.47 W	CAT	CAT
2015-08-31	07:17	109	2	SLED041	41	69 41.66 N	166 5.47 W	TAPS-6	TAPS6
2015-08-31	08:55	110	1	CTD115	38	69 34.94 N	165 44.23 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-31	09:16	110	2	SLED042	37	69 35.07 N	165 44.39 W	SLED	QTOWF

Cruise Summary For FOCI Cruise 1RB15 (RB1505)

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-08-31	09:16	110	2	SLED042	37	69 35.07 N	165 44.39 W	SLED	QTOWF, AMGEN
2015-08-31	09:16	110	2	SLED042	37	69 35.07 N	165 44.39 W	LG-CB	QTOWF
2015-08-31	09:16	110	2	SLED042	37	69 35.07 N	165 44.39 W	CAT	CAT
2015-08-31	09:16	110	2	SLED042	37	69 35.07 N	165 44.39 W	TAPS-6	TAPS6
2015-08-31	10:54	111	1	CTD116	33	69 29.86 N	165 22.16 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-31	11:10	111	2	SLED043	33	69 29.74 N	165 22.04 W	CAT	CAT
2015-08-31	11:10	111	2	SLED043	33	69 29.74 N	165 22.04 W	LG-CB	QTOWF
2015-08-31	11:10	111	2	SLED043	33	69 29.74 N	165 22.04 W	SLED	QTOWF, AMGEN
2015-08-31	11:10	111	2	SLED043	33	69 29.74 N	165 22.04 W	SLED	QTOWF, AMGEN
2015-08-31	11:10	111	2	SLED043	33	69 29.74 N	165 22.04 W	TAPS-6	TAPS6
2015-08-31	12:29	112	1	CTD117	31	69 24.51 N	165 0.44 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-08-31	12:47	112	2	SLED044	30	69 24.38 N	165 0.23 W	SLED	QTOWF, AMGEN
2015-08-31	12:47	112	2	SLED044	30	69 24.38 N	165 0.23 W	SLED	QTOWF
2015-08-31	12:47	112	2	SLED044	30	69 24.38 N	165 0.23 W	LG-CB	QTOWF
2015-08-31	12:47	112	2	SLED044	30	69 24.38 N	165 0.23 W	CAT	CAT
2015-08-31	12:47	112	2	SLED044	30	69 24.38 N	165 0.23 W	TAPS-6	TAPS6
2015-08-31	14:06	113	1	CTD118	24	69 18.27 N	164 36.85 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-31	14:24	113	2	SLED045	24	69 18.16 N	164 36.54 W	LG-CB	QTOWF
2015-08-31	14:24	113	2	SLED045	24	69 18.16 N	164 36.54 W	CAT	CAT
2015-08-31	14:24	113	2	SLED045	24	69 18.16 N	164 36.54 W	SLED	QTOWF
2015-08-31	14:24	113	2	SLED045	24	69 18.16 N	164 36.54 W	SLED	QTOWF, AMGEN
2015-08-31	14:24	113	2	SLED045	24	69 18.16 N	164 36.54 W	TAPS-6	TAPS6
2015-08-31	22:18	114	1	CTD119	34	68 18.48 N	166 55.69 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-08-31	23:18	115	1	CTD120	45	68 14.6 N	167 6.99 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR

Cruise Summary For FOCI Cruise 1RB15 (RB1505)

Date (GMT)	Time (GMT)	Station	Haul	Alt. Station	Depth (m)	Latitude	Longitude	Gear	Samples Collected
2015-09-01	00:16	116	1	CTD121	47	68 11.64 N	167 18.21 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-09-01	01:19	117	1	CTD122	49	68 7.67 N	167 30.7 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-09-01	02:54	118	1	CTD123	56	68 0.78 N	167 51.71 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-09-01	04:28	119	1	CTD124	58	67 54.05 N	168 13.83 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-09-01	06:05	120	1	CTD125	50	67 47.17 N	168 35.4 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-09-01	07:40	121	1	CTD126	50	67 41.68 N	168 54.99 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR
2015-09-01	19:14	122	1	CTD127	49	65 40.1 N	168 19.98 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-09-02	19:38	122	2	SLED046	50	65 40.05 N	168 19.52 W	SLED	DISCARD
2015-09-02	19:38	122	2	SLED046	50	65 40.05 N	168 19.52 W	CAT	CAT
2015-09-02	19:38	122	2	SLED046	50	65 40.05 N	168 19.52 W	SLED	DISCARD
2015-09-02	19:38	122	2	SLED046	50	65 40.05 N	168 19.52 W	LG-CB	DISCARD
2015-09-02	19:38	122	2	SLED046	50	65 40.05 N	168 19.52 W	TAPS-6	TAPS6
2015-09-01	21:24	123	1	CTD128	26	65 40.07 N	168 10.74 W	CTDB	PAR, CTD, CHLOR, NUT, OXYGEN, FLUOR, SAL
2015-09-01	21:49	123	2	SLED047	35	65 40.14 N	168 11.19 W	SLED	QTOWF
2015-09-01	21:49	123	2	SLED047	35	65 40.14 N	168 11.19 W	LG-CB	QTOWF
2015-09-01	21:49	123	2	SLED047	35	65 40.14 N	168 11.19 W	CAT	CAT
2015-09-01	21:49	123	2	SLED047	35	65 40.14 N	168 11.19 W	SLED	QTOWF
2015-09-01	21:49	123	2	SLED047	35	65 40.14 N	168 11.19 W	TAPS-6	TAPS6
2015-09-04	05:59	124		Argo Float	2200	54 52.24 N	168 23.49 W	ARGO	ARGO Float
2015-09-01	06:09	125		SLED047	2200	54 52.87 N	168 23.45 W	ARGO	ARGO Float