

FINAL CRUISE INSTRUCTIONS

FOCI

NOAA Ship *MILLER FREEMAN*, MF-03-11
September 7 – September 21, 2003
Chief Scientist: Matthew T. Wilson, NOAA/AFSC

1.0 FINAL CRUISE INSTRUCTIONS

1.1 **Cruise Title** – Fisheries-Oceanography Coordinated Investigations (FOCI).

1.2 **Cruise Numbers:**

1.2.1 **Cruise Number** – MF-03-11

1.2.2 **FOCI Number** – 7MF03

1.3 **Cruise Dates:**

1.3.1 **Departure** – Sunday, September 7, 2003, at 15:00 ADT, from Kodiak, Alaska.

1.3.2 **Arrival** – Sunday, September 21, 2003, at 09:00 ADT, in Kodiak, Alaska.

1.4 **Operating Area** – Western Gulf of Alaska.

2.0 CRUISE OVERVIEW

2.1 **Cruise Objectives** – The late-summer FOCI cruise is designed to address biological and methodological questions regarding age-0 walleye pollock in the western Gulf of Alaska. The primary cruise objective is to map age-0 pollock density over an area of high environmental heterogeneity, and to relate variations in fish density with environmental variability to provide some insight regarding pollock habitat suitability. Preliminary findings indicate that age-0 pollock are best sampled in the midwater at night. Therefore, to accomplish the primary objective, nighttime samples of age-0 pollock, their prey, and water temperature and salinity will be collected at 42 grid stations between Shelikof Strait and the Shumagin Islands (see Sections [9.1.1 Table 1](#) and [9.2 Figures](#)). These stations, many of which were sampled during September of 2000 and 2001, are situated along ten acoustic transects and form a grid from near shore to the outer shelf. Transits between stations will emphasize the collection of acoustic data along these transects; acoustic data will be collected continuously throughout the cruise.

Secondary cruise objectives, 1) being highest priority, are as follows:

- 1) Occupy during the day any transect segments that were missed at night, and re-occupy some or all transect segments and grid stations for day-night comparison of acoustic and trawl-catch data.

- 2) Opportunistically sample with trawls (Tucker and anchovy) along the ten transects where the acoustic back-scatter is relatively high.
- 3) Opportunistically collect piscivorous fishes for preliminary indication of predation on age-0 pollock.
- 4) Geographically map small-scale variation in acoustic backscatter. This may include net sampling.
- 5) Occupy ten “sea lion” stations, at day or night, which are near sea lion rookeries on Atkins, Chowiet, and Chirikof Islands (see Sections [9.1.2 Table 2](#) and [9.2 Figures](#)).

2.2 Applicability – These instructions, with ***FOCI Standard Operating Instructions for NOAA Ship MILLER FREEMAN***, dated April 8, 2002, present complete information for this cruise.

2.3 Participating Organizations

NOAA – Alaska Fisheries Science Center (AFSC)
7600 Sand Point Way N.E.
Seattle, Washington 98115-0070

Joint Institute for the Study of the Atmosphere and Ocean (JISAO)
University of Washington
Box 354235
Seattle, Washington 98195-4235

2.4 Personnel

2.4.1 Chief Scientist

Name	Gender	Affiliation	E-mail Address
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2.4.2 Participating Scientists

Name	Gender	Affiliation	E-mail Address
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Annette L. Brown	Female	AFSC	Annette.Brown@noaa.gov
Andre Buchheister	Male	AFSC	Andre.Buchheister@noaa.gov
Rachael L. Cartwright	Female	AFSC	Rachael.Cartwright@noaa.gov
Christina M. Deliyanides	Female	AFSC	Christina.Deliyanides@noaa.gov
Jennifer A. Lanksbury	Female	AFSC	Jennifer.Lanksbury@noaa.gov
Frank Morado	Male	AFSC	Frank.Morado@noaa.gov
Steven Porter	Male	AFSC	Steve.Porter@noaa.gov

2.5 Administration

2.5.1 Ship Operations

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2.5.2 Scientific Operations

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3.0 OPERATIONS

3.1 Data To Be Collected

3.1.1 Plankton Net – The Tucker trawl will be deployed to a depth of 200 meters, or 10 meters off the bottom, whichever is shallowest. The first messenger, which opens Net 2, will be sent down the wire when the net is at depth. The second messenger, which closes Net 2 and opens Net 1, will be sent when the net is at 40 meters. The Sea-Cat profiler will be used to position the net in real time and to obtain profiles of water temperature and salinity. Three MOA buttons are needed to mark:

- 1) Net 2 open,
- 2) Net 1 open, and
- 3) Surface

(e.g., 12-1 Net 2 open, etc.) In this example, 12-1 refers to Station 12 Haul 1. All consecutive operations within 0.5 nautical miles of a pre-designated point are assigned the same station number. Haul number indicates operation sequence at each station.

3.1.2 Midwater Trawl – The anchovy/Stauffer net will be deployed to a depth of 200 meters, or 10 meters, off the bottom, whichever is shallowest. Net depth will be monitored using the ship's Furuno echosounder. Standard trawl operations will be

used for deployment. Once equilibrium is achieved, as determined by the fishing officer or scientist, the trawl will be retrieved at a wire rate of about 10 meters per minute. Thus, the trawl will usually be fished over a double-oblique path. Occasionally, the trawl may be used to target a specific depth. In this case, standard trawl deployment and retrieval is desired. Four MOA buttons are required:

- 1) Doors out,
- 2) EQ,
- 3) HB, and
- 4) Doors in.

Note that the third button (HB) will only be used when targeting a depth layer.

- 3.1.3 Bottom Trawl** – A few samples will be collected with the shrimp trawl. It will be deployed to collect benthic fish known to eat age-0 pollock (e.g., arrowtooth flounder) or to sample echo-layers that are too close to the bottom to safely sample with the midwater trawl. Standard trawl operations will be used for deployment and retrieval. Once equilibrium is achieved, as determined by the fishing officer or scientist, the trawl will be fished on the bottom for 10-20 minutes. Four MOA buttons are required:
- 1) Doors out,
 - 2) EQ,
 - 3) HB, and
 - 4) Doors in.
- 3.1.4 Acoustic backscatter** – The EK-500 will be used to continuously collect acoustic data during the cruise. Acoustic transecting will be interrupted to conduct net sampling. Four MOA buttons should be set to mark transect breaks and resumptions (e.g., Break EK Line 1, or Resume EK Line 1) as well as transect start and stop (e.g., Start EK Line 1, or Stop EK Line 1) locations. The geographic coordinates of each break point will be used as the point at which to resume transecting.
- 3.1.5 Conductivity and Temperature at Depth** – Three CTD casts will be conducted to compare with the Sea-Cat profiler, and SBE micro-bathymograph. These casts will occur at about the beginning, middle, and end of the station grid. A MOA button should be set up to mark the at-depth position, date, time, and bottom depth (e.g., 1-1, CTD at depth, etc).
- 3.1.6 Scientific Computer System (SCS)** – The ship's SCS shall operate throughout the cruise, acquiring and logging data from navigation, meteorological, oceanographic, and fisheries sensors. See *FOCI Standard Operating Instructions for NOAA Ship MILLER FREEMAN* (SOI 5.2) for specific requirements.
- 3.2 Staging Plan** – The vessel will be equipped with all necessary material on Tuesday, August 26, 2003, during the Seattle in port between August 13 and September 2, 2003. One possible exception will be to load the necessary pair of trawl doors (each door is 5'x7', steel-v, and 1,250 lbs) during the September 6 through September 7 in port in Kodiak, Alaska, where they may have been stored by vessel personnel. The ship's personnel will ensure that these doors are on board during the cruise.

- 3.3 De-staging Plan** – All material loaded onto the vessel for, or collected during, the cruise will be offloaded in Seattle between October 11 and October 29, 2003.
- 3.4 Cruise Plan** – The station grid will be occupied from southwest (Line 1) to northeast (Line 10) as was done in September of 2000 and 2001. However, sampling will commence at stations 10D, 10E, and 9D before proceeding to Line 1. These stations will again be occupied at the end of the cruise enabling location-specific temporal comparison of age-0 size. Personnel required on deck during operations include a winch operator, a scientific staff of four and a Survey Technician. Because this cruise involves much fishing with otter trawls, a fishing crew will also be necessary.

Operations will be conducted 24 hours a day. The activities to be conducted are day-night sensitive. There will be about nine hours of darkness, 11 hours of light, and four hours of twilight (dawn and dusk). At night, operations will focus on occupying a grid of 42 stations over the shelf and nearshore areas between Kodiak and the Shumagin Islands (see Section [9.2 Figures](#)). Sampling at each station will generally be to first collect a plankton sample (Tucker trawl) and then collect midwater fishes. Daytime will be used to accomplish one or more of the secondary cruise objectives as briefly described in the cruise objectives.

- 3.5 Station Locations** – See Sections [9.1.1 Table 1](#) and [9.1.2 Table 2](#).
- 3.6 Station Operations** – The following are operations to be conducted on this cruise. The procedures for these operations are listed in the ***FOCI Standard Operating Instructions for NOAA Ship MILLER FREEMAN*** (SOI). Operations not addressed in the SOI and changes to standard procedures are addressed below.
- CTD/Water Sample Operations (SOI 3.2.1),
 - Midwater Trawls (SOI 3.2.8),
 - Tucker Trawls (SOI 3.2.9), and
 - SIMRAD EK 500 Scientific Echosounder Monitoring (SOI 3.2.12).
- 3.7 Underway Operations** – The following are underway operations to be conducted on this cruise. The procedures for these operations are listed in the ***FOCI Standard Operating Instructions for NOAA Ship MILLER FREEMAN*** (SOI). Operations not addressed in the SOI and changes to standard procedures are addressed below.
- Acoustic Doppler Current Profiler (ADCP) Operations (SOI 3.2.13),
 - SIMRAD EK 500 Scientific Echosounder Monitoring (SOI 3.2.12),
 - Scientific Computer System (SCS) data acquisition (SOI 5.2), and
 - Thermosalinograph monitoring (SOI 5.3).
- 3.8 Applicable Restrictions** – Sea lion rookery/haulout protected areas.
- 3.9 Small Boat Operations** – None.

4.0 FACILITIES

4.1 Equipment and Capabilities Provided by Ship

- Oceanographic winch with slip rings and 3-conductor cable terminated for CTD,
- Manual wire-angle indicator,
- Oceanographic winch with slip rings and 3-conductor cable terminated for the SBE SEACAT, for net tow operations,
- Sea-Bird Electronics' SBE 911*plus* CTD system with stand, each CTD system should include underwater CTD, weights, and pinger. There should be one deck unit and tape recorder for the two systems,
- AUTOSAL salinometer, for CTD field corrections,
- Sea-Bird Electronics' SBE-19 SEACAT system,
- Meter block for plankton tows,
- Wire speed indicators and readout for quarterdeck, Rowe, and Marco winches,
- For meteorological observations: 2 anemometers (one R. M. Young system interfaced to the SCS), calibrated air thermometer (wet-and dry-bulb) and a calibrated barometer and/or barograph,
- Stern trawl system (winches, wire, electronics, etc.),
- Furuno netsonde system,
- Freezer space for storage of biological and chemical samples (blast and storage freezers, indicate desired temperatures),
- Sorting tables on deck and in the slime lab,
- Dynamometer and load cell,
- SIMRAD EQ-50 echosounder,
- JRC JFV-200R color sounder recorder,
- RD Instruments' ADCP written to Iomega Zip drive,
- Use of Pentium PC in DataPlot for data analysis,
- Scientific Computer System (SCS),
- Removable stern platform (removed),
- Laboratory space with exhaust hood, sink, lab tables and storage space,
- Sea-water hoses and nozzles to wash nets (quarterdeck and aft deck),
- Adequate deck lighting for night-time operations,
- Navigational equipment including GPS and radar,
- Safety harnesses for working on quarterdeck and fantail, and
- Ship's crane(s) used for loading and/or deploying.

4.2 Equipment and Capabilities Provided by Scientists

- Plankton collecting gear:
 - Tucker trawl, complete 1-m² sampling array (0.333-mm mesh nets),
 - 60-cm bongo sampling arrays (backup for Tucker if 2nd Tucker unavailable),
 - Sea-Bird Electronics' SBE-19 SEACAT system,
 - PMEL PC with SEASOFT software for CTD data collection and processing, and
 - Spare wire angle indicator.

- Fish collecting gear:
 - Midwater (anchovy/Stauffer) trawl (1/8" codend liner),
 - Bottom (high-opening shrimp) trawl (1/8" codend liner),
 - Dandylines and pucker strings for all trawls,
 - Spare web for all trawls,
 - Two 5'x7' steel-v doors (1,250 lbs each),
 - Scanmar net spread mensuration gear, and
 - Sea-Bird Electronics' SB-39 bathythermograph system.

- Acoustic system (MACE's system):
 - EK-500 (38 & 120 kHz) scientific acoustic system,
 - Four HP-855C single-sheet printers,
 - Printer paper,
 - Printer cartridges (tentatively, 1 color per d and 1 b/w per 2 d), and
 - Data storage tapes and optical disks.

- Miscellaneous scientific sampling, gear mending, and catch processing equipment:
 - 5 flowmeters, calibration data, hardware for attaching and maintaining them,
 - Fish baskets, dishpans, 5-gal buckets, and wading pool,
 - Length board and strips for adult fish,
 - Length board for age-0 fish,
 - Mechanical and Marel platform scales for catch weights,
 - Triple-beam balance for individual fish weights,
 - Sieves, jar holder, funnels, squirt bottles,
 - Haul and catch forms for anchovy trawls, and COD for all other operations
 - 450 32-oz jars, closures, and labels (grid: anchovy, 100; Tucker, 150; extra, 150),
 - 1000 Zip-loc bags (12"),
 - Scalpel and scalpel blade (for body piercing),
 - Material Data Safety Sheets (MSDS),
 - Preservatives and dispenser equipment,
 - Hazardous materials spill kit,
 - Miscellaneous bookkeeping equipment/supplies, and
 - Spare wire angle indicator.

- Bookkeeping:
 - Binders and folders,
 - 3-ring hole punch,
 - Pencils, pens, paper,
 - Haul, catch, length, shrink, and length-weight forms (paper and electronic versions),
 - 5 Compact disks (CD-R/W),
 - 20 3.25" 1.44 MB diskettes, and
 - Computer (w/CD read/writer), lap-top, and printer.

- Software:
 - SeaPlot/Globe (MACE cave),
 - Sigmaplot 2000 (lap-top),
 - Excel 97 (lap-top),
 - Word 97 (lap-top),

- ArcMap and ArcCatalog 8.2, and
 - Cruise Operations Database (COD).
- Scientific ultra-cold freezer.

5.0 DISPOSITION OF DATA AND REPORTS

5.1 The following data products will be included in the cruise data package:

- **NOAA Form 77-13d – Deck Log – Weather Observation Sheets**,
- Electronic Marine Operations Abstracts,
- SCS backup – recordable compact diskette (CD-RW),
- Calibration Sheets for all ship's instruments used,
- PMEL CTD Weather Observation Logs,
- CTD VHS videocassettes,
- CTD Cast Information/Rosette Log,
- Autosalinometer Logs,
- ADCP Log Sheets,
- ADCP Iomega Zip and/or recordable compact diskette (CD-RW),
- Trawl haul and catch processing forms,
- Electronic Navigation suite's export files on diskette, and
- Ultra-cold Freezer Temperature Daily Log (SOI 5.4).

5.2 **Pre- and Post-cruise Meetings** – Cruise meetings may be held in accordance with **FOCI Standard Operating Instructions for NOAA Ship MILLER FREEMAN** (SOI 5.5).

6.0 ADDITIONAL PROJECTS

6.1 **Definition** – Ancillary and piggyback projects are secondary to the objectives of the cruise and should be treated as additional investigations. The difference between the two types of secondary projects is that an ancillary project does not have representation aboard and is accomplished by the ship's force.

6.2 **Ancillary Projects** – Any ancillary work done during this project will be accomplished with the concurrence of the Chief Scientist and on a not-to-interfere basis with the programs described in these instructions and in accordance with the **NOAA Fleet Standing Ancillary Instructions**.

6.3 **Piggyback Projects** – None.

7.0 HAZARDOUS MATERIALS

7.1 **HAZMAT Inventory** – See Section [9.3 Cruise MF-03-11 HAZMAT Inventory](#).

7.2 **Material Safety Data Sheet (MSDS)** – All MSDSs can be found on the **OERD HAZMAT Emergency Guidelines – MSDS** compact diskette dated January 15, 2003, supplied to the ship.

8.0 MISCELLANEOUS

8.1 **Communications** – Specific information on how to contact the NOAA Ship *MILLER FREEMAN* and all other fleet vessels can be found at:

<http://www.pmc.noaa.gov/phone.htm>

8.2 **Important Telephone and Facsimile Numbers and E-mail Addresses**

8.2.1 **Alaska Fisheries Science Center (AFSC)**

FOCI – Resource Assessment and Conservation Engineering (RACE):

- (206) 526-4171 (voice)
- (206) 526-6723 (fax)

E-Mail: FirstName.LastName@noaa.gov

8.2.2 **NOAA Ship MILLER FREEMAN** – Telephone methods listed in order of increasing expense:

Homeport – Seattle, Washington:

- (206) 553-4589
- (206) 553-4581
- (206) 553-8344

United States Coast Guard – Kodiak, Alaska

- (907) 487-9752
- (907) 487-9753
- (907) 487-4397
- (907) 487-4398

Cellular:

- (206) 660-7167

INMARSAT Mini-M

- 011-872-761-267-346 (voice/PBX)
- 011-872-761-267-347 (voice)
- 011-872-761-267-348 (fax)

INMARSAT B

- 011-872-330-394-120 (voice)
- 011-872-330-394-121 (fax)

E-Mail: NOAA.Ship.Miller.Freeman@noaa.gov (mention the person's name in SUBJECT field)

8.2.3 Marine Operations Center, Pacific (MOP)

Operations Division (MOP1):

- (206) 553-4548 (voice)
- (206) 553-1109 (facsimile)

E-Mail: FirstName.LastName@noaa.gov

E-Mail to Radio Room: Radio.Room@noaa.gov

9.0 APPENDICES

9.1 Tables

9.1.1 Table 1 – Cruise MF-03-11 Grid Stations.

Station Label	Objective	Latitude	Longitude	Latitude (dd.dddd)	Longitude (ddd.dddd)
1A	Grid	54° 40.912' N	158° 03.271' W	54.6819	-158.0545
1B	Grid	54° 54.619' N	158° 21.039' W	54.9103	-158.3507
1C	Grid	55° 11.540' N	158° 43.460' W	55.1923	-158.7243
1D	Grid	55° 28.000' N	159° 06.990' W	55.4667	-159.1165
1E	Grid	55° 42.850' N	159° 26.190' W	55.7142	-159.4365
2A	Grid	54° 49.900' N	157° 40.100' W	54.8317	-157.6683
2B	Grid	55° 05.015' N	157° 59.279' W	55.0836	-157.9880
2C	Grid	55° 21.943' N	158° 21.896' W	55.3657	-158.3649
2D	Grid	55° 39.360' N	158° 45.430' W	55.6560	-158.7572
2E	Grid	55° 53.715' N	159° 04.256' W	55.8953	-159.0709
3A	Grid	54° 57.449' N	157° 16.058' W	54.9575	-157.2676
3B	Grid	55° 14.473' N	157° 37.960' W	55.2412	-157.6327
3C	Grid	55° 31.748' N	158° 02.779' W	55.5291	-158.0463
3D	Grid	55° 48.944' N	158° 26.631' W	55.8157	-158.4439
3E	Grid	55° 56.029' N	158° 36.137' W	55.9338	-158.6023
4A	Grid	55° 06.100' N	156° 53.800' W	55.1017	-156.8967
4B	Grid	55° 23.113' N	157° 15.565' W	55.3852	-157.2594
4C	Grid	55° 43.218' N	157° 41.043' W	55.7203	-157.6841
4D	Grid	55° 58.858' N	158° 05.706' W	55.9810	-158.0951
4E	Grid	56° 07.076' N	158° 17.314' W	56.1179	-158.2886
5A	Grid	55° 12.848' N	156° 30.025' W	55.2141	-156.5004
5B	Grid	55° 31.804' N	156° 54.117' W	55.5301	-156.9020
5C	Grid	55° 52.493' N	157° 20.855' W	55.8749	-157.3476
5D	Grid	56° 08.656' N	157° 45.026' W	56.1443	-157.7504

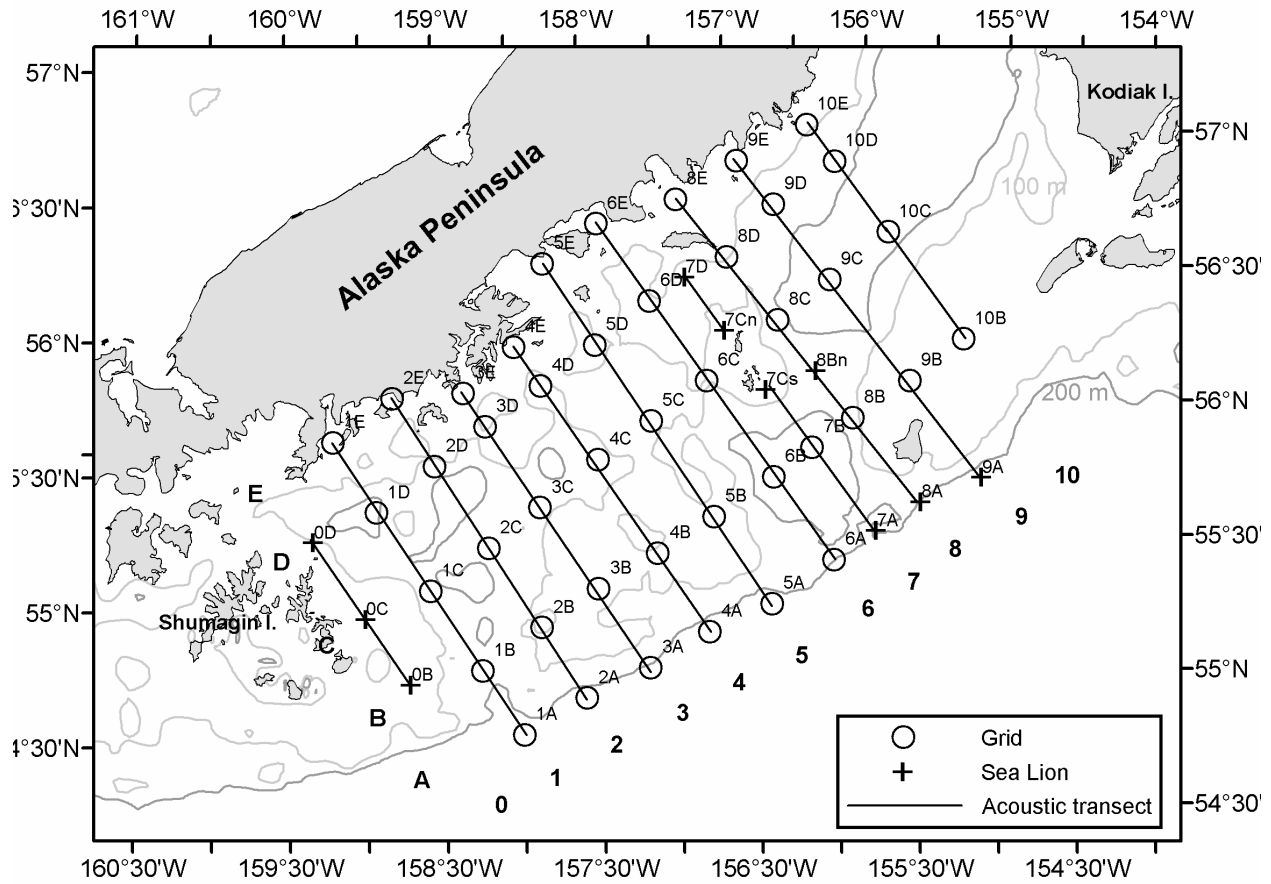
Station Label	Objective	Latitude	Longitude	Latitude (dd.dddd)	Longitude (ddd.dddd)
5E	Grid	56° 26.066' N	158° 07.914' W	56.4344	-158.1319
6A	Grid	55° 23.200' N	156° 06.400' W	55.3867	-156.1067
6B	Grid	55° 41.231' N	156° 31.255' W	55.6872	-156.5209
6C	Grid	56° 02.062' N	156° 59.570' W	56.0344	-156.9928
6D	Grid	56° 19.190' N	157° 24.068' W	56.3198	-157.4011
6E	Grid	56° 35.728' N	157° 47.368' W	56.5955	-157.7895
7B	Grid	55° 48.116' N	156° 16.444' W	55.8019	-156.2741
8B	Grid	55° 54.978' N	156° 00.675' W	55.9163	-156.0113
8C	Grid	56° 16.273' N	156° 32.170' W	56.2712	-156.5362
8D	Grid	56° 29.769' N	156° 53.721' W	56.4962	-156.8954
8E	Grid	56° 42.042' N	157° 15.456' W	56.7007	-157.2576
9B	Grid	56° 03.681' N	155° 38.398' W	56.0614	-155.6400
9C	Grid	56° 25.614' N	156° 11.678' W	56.4269	-156.1946
9D	Grid	56° 41.970' N	156° 35.554' W	56.6995	-156.5926
9E	Grid	56° 51.358' N	156° 51.330' W	56.8560	-156.8555
10B	Grid	56° 13.200' N	155° 17.100' W	56.2200	-155.2850
10C	Grid	56° 36.640' N	155° 48.580' W	56.6107	-155.8097
10D	Grid	56° 52.024' N	156° 11.284' W	56.8671	-156.1881
10E	Grid	57° 00.000' N	156° 23.302' W	57.0000	-156.3884

9.1.2 **Table 2** – Cruise MF-03-11 Sea Lion Stations.

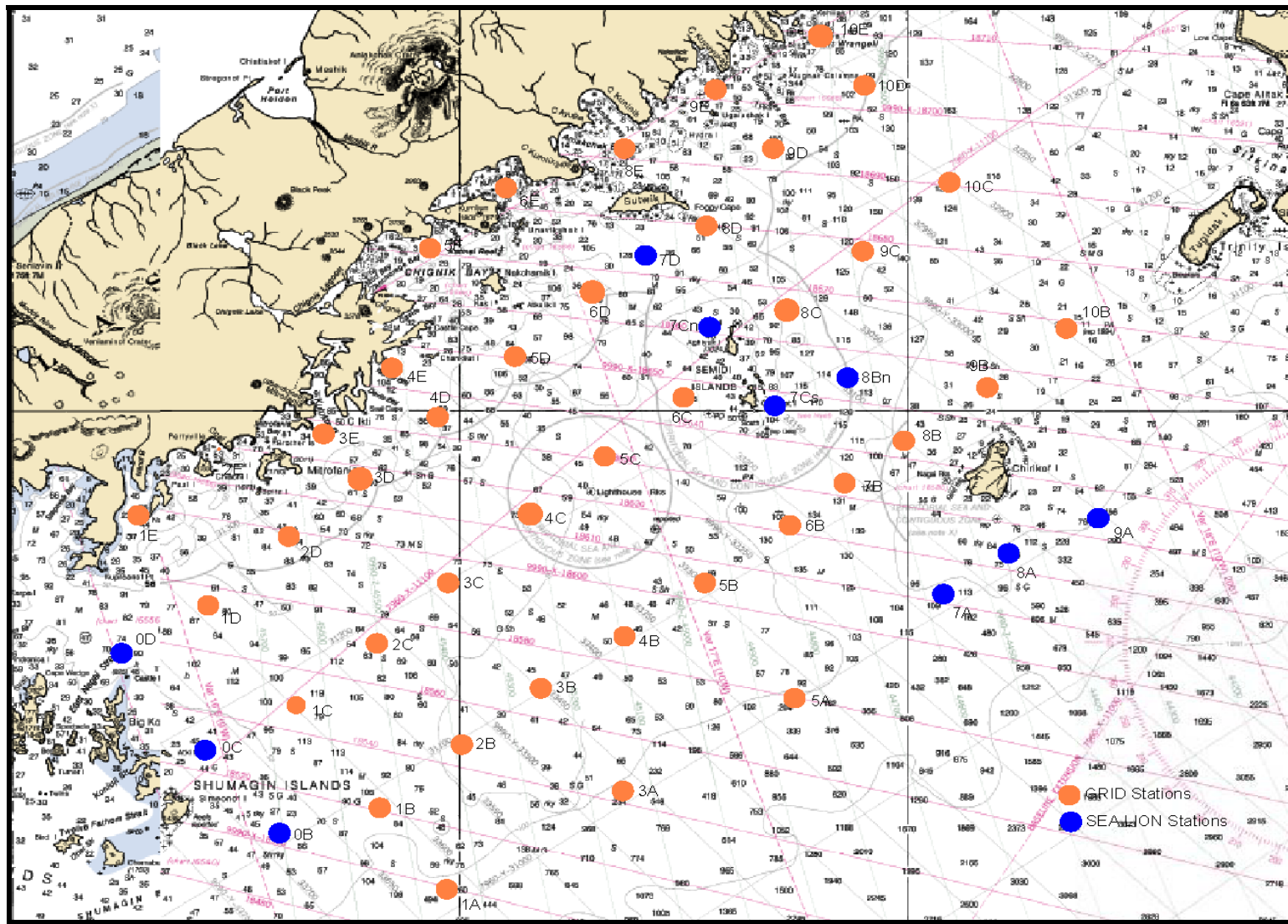
Station Label	Objective	Latitude	Longitude	Latitude (dd.dddd)	Longitude (ddd.dddd)
0B	Sea Lion	54° 50.360' N	158° 48.265' W	54.8393	-158.8044
0C	Sea Lion	55° 04.217' N	159° 07.817' W	55.0703	-159.1303
0D	Sea Lion	55° 20.366' N	159° 30.573' W	55.3394	-159.5096
7A	Sea Lion	55° 30.039' N	155° 50.028' W	55.5007	-155.8338
7Cn	Sea Lion	56° 13.480' N	156° 52.954' W	56.2247	-156.8826
7D	Sea Lion	56° 24.965' N	157° 10.032' W	56.4161	-157.1672
7Cs	Sea Lion	56° 00.722' N	156° 35.521' W	56.0120	-156.5920
8A	Sea Lion	55° 36.743' N	155° 32.780' W	55.6124	-155.5463
8Bn	Sea Lion	56° 05.344' N	156° 15.812' W	56.0891	-156.2635
9A	Sea Lion	55° 42.480' N	155° 08.793' W	55.7080	-155.1466

9.2 Figures

9.2.1 **Figure 1** – Cruise MF-03-11 Station Locations and Acoustic Transects.



9.2.2 **Figure 2** – Cruise MF-03-11 Station Locations (NOAA Chart 16011).



9.3 Cruise MF-03-11 HAZMAT Inventory

Chemical	CAS Number	Respondee	Org.	Qty.	H	F	R	Storage Color Code	Hazard Class	Packing Group Number	UN	Reportable Quantity	Response Indices
Formaldehyde, 37%	mix	Wilson	AFSC	15-gal.	3	2	2	Flammable	3 & 8	III	1198	100-lb	1
Sodium Borate	1330-43-4	Wilson	AFSC	2-gal.	2	0	0	General	Not regulated			None	2

Spill Response 1: Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment. Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, or earth), and place in a chemical waste container. Do not use combustible materials, such as saw dust. **Do not flush to sewer!** If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures. U.S. Regulations (CERCLA) requires reporting spills and releases to soil, water and air in excess of reportable quantities. The toll free number for the U.S. Coast Guard National Response Center is (800) 424-8802.

Spill Response 2: Ventilate area of leak or spill. Wear appropriate personal protective equipment. Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust.