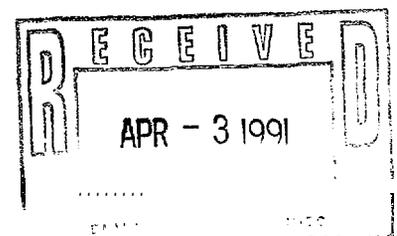


MMS Physical Oceanographic Field Study
of the Florida Straights
Cruise Report No. 2
Three Month Mooring Rotation and Hydrography



Science Applications International Corporation



**MMS PHYSICAL OCEANOGRAPHIC FIELD STUDY
OF THE STRAITS OF FLORIDA
Cruise Report No. 2:
Three Month Mooring Rotation and Hydrography**

R/V SEAWARD EXPLORER CRUISE SE9103
(15 February -1 March 1991)

April 1, 1991

Submitted to:

MINERALS MANAGEMENT SERVICE

Atlantic OCS Office
Department of interior
381 Elden Street
Herndon, Virginia 22070-4817

Submitted by:

SCIENCE APPLICATIONS INTERNATIONAL CORPORATION

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Introduction

Between February 15 and March 2, 1991, **SAIC** conducted a mooring rotation and hydrographic cruise in support of the MMS Physical Oceanographic Field Study of the **Straits of Florida**. The **cruise** tracks are **presented** in Figures **1 and 2**. During **this** effort 19 current meter moorings were rotated and two additional moorings were deployed at the **A2** and **A3** sites. The locations are presented in Figure 3 and Table 1. In **addition**, 68 hydrographic stations (30 CTD and 38 XBT) were occupied, and six Argos drifters were deployed. The hydrographic station locations are shown in Figure 4 and are presented in the Bridge Log in Appendix A. The drifter deployment locations and times are presented in Table 2. Near-surface (5 meter) current measurements were made at 20 of the 21 mooring sites (excluding **H1**) as weather permitted.

Operations Summary

The R/V SEAWARD EXPLORER got underway at 0040 EST on February 15, 1991 and steamed south to deploy the A2 and A3 moorings. These had not previously been deployed during the initial cruise in November/December 1990 because of adverse weather conditions. Following deployment of these moorings, it was discovered that the electromechanical cable for the CTD would not ride properly in the 28" diameter **block**, but would repeatedly ride up the sides of the block and jam. Subsequently, no complete **CTD** casts were made along Line A or Line H. These were replaced with XBT drops. Following turn-around of the **ADCP** in Key West and the installation of a counterbalanced CTD block from RSMAS, no further block problems were encountered. No significant delays due to weather were experienced and the turn-around of the ADCP in Key West by Phil Bedard (**RSMAS**) was without incident, although a fiberglass patch was put over an extensive crack found in the 56" diameter syntactic foam buoy. The sequence of mooring rotations and hydrography along the various lines was adjusted periodically **from** the initial cruise plan to **take** advantage of daylight hours for mooring recoveries and an interest in rotating the moorings on Line E before it was anticipated that Dr. Kevin **Leaman (RSMAS)** would be doing Pegasus transects there aboard the R/V CALANUS. The cruise did not last longer than planned.

All six of the **Argos** drifters deployed during this cruise were tested for transmission prior to deployment and were found to be operational. This check was done through **SAIC/Raleigh** which was monitoring the buoys as they were turned on a day or two before deployment. **SAIC/Raleigh** then relayed confirmation of proper buoy operation to the SEAWARD EXPLORER via a cellular telephone hookup.

During the mooring rotations, the integrity of the mooring line elements was found to be good and no replacements were made. One 20 meter length of VEL LOK **fairing** installed over 1/4" Quiet cable was dangling and was **re-installed**. A couple of **fairing** swivels were replaced and two lengths of **fairing** were shortened 15 to 18 inches. One glass ball was recovered broken and **replaced**, and three steel buoys that were losing paint were replaced.

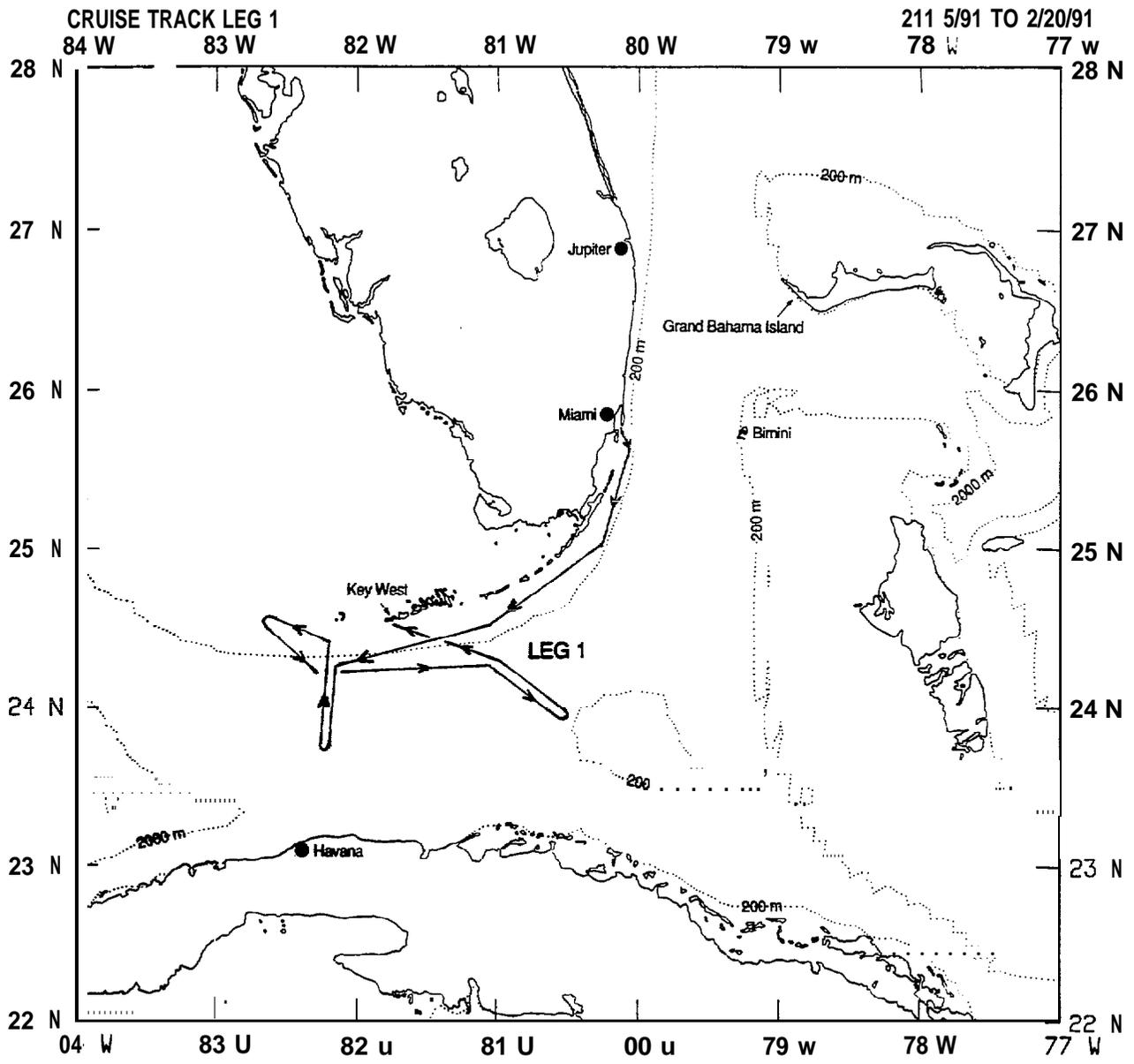


Figure 1. Cruise track for Leg 1 (15-20 February 1991).

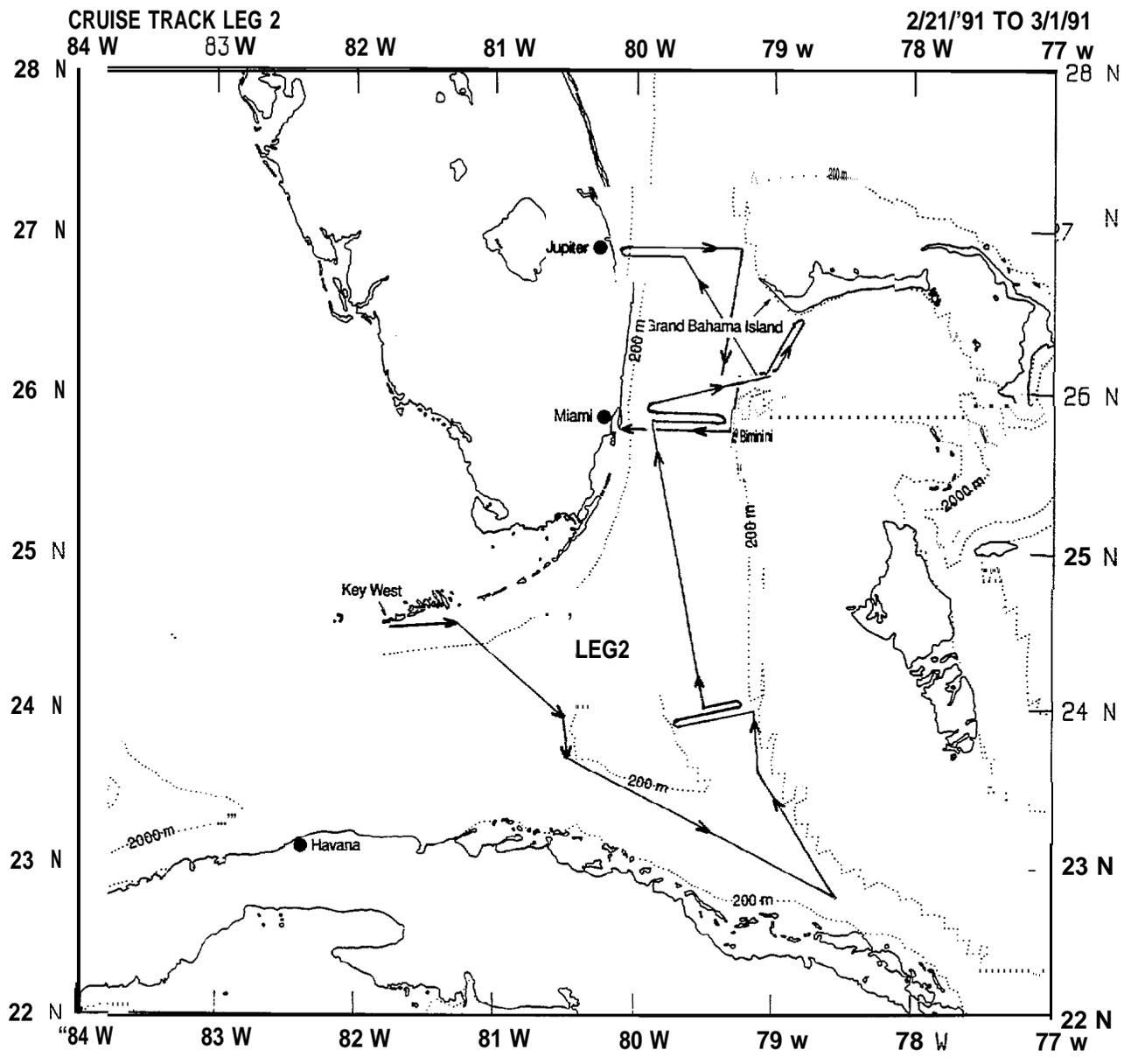


Figure 2. Cruise track for Leg 2 (21 February -1 March 1991).

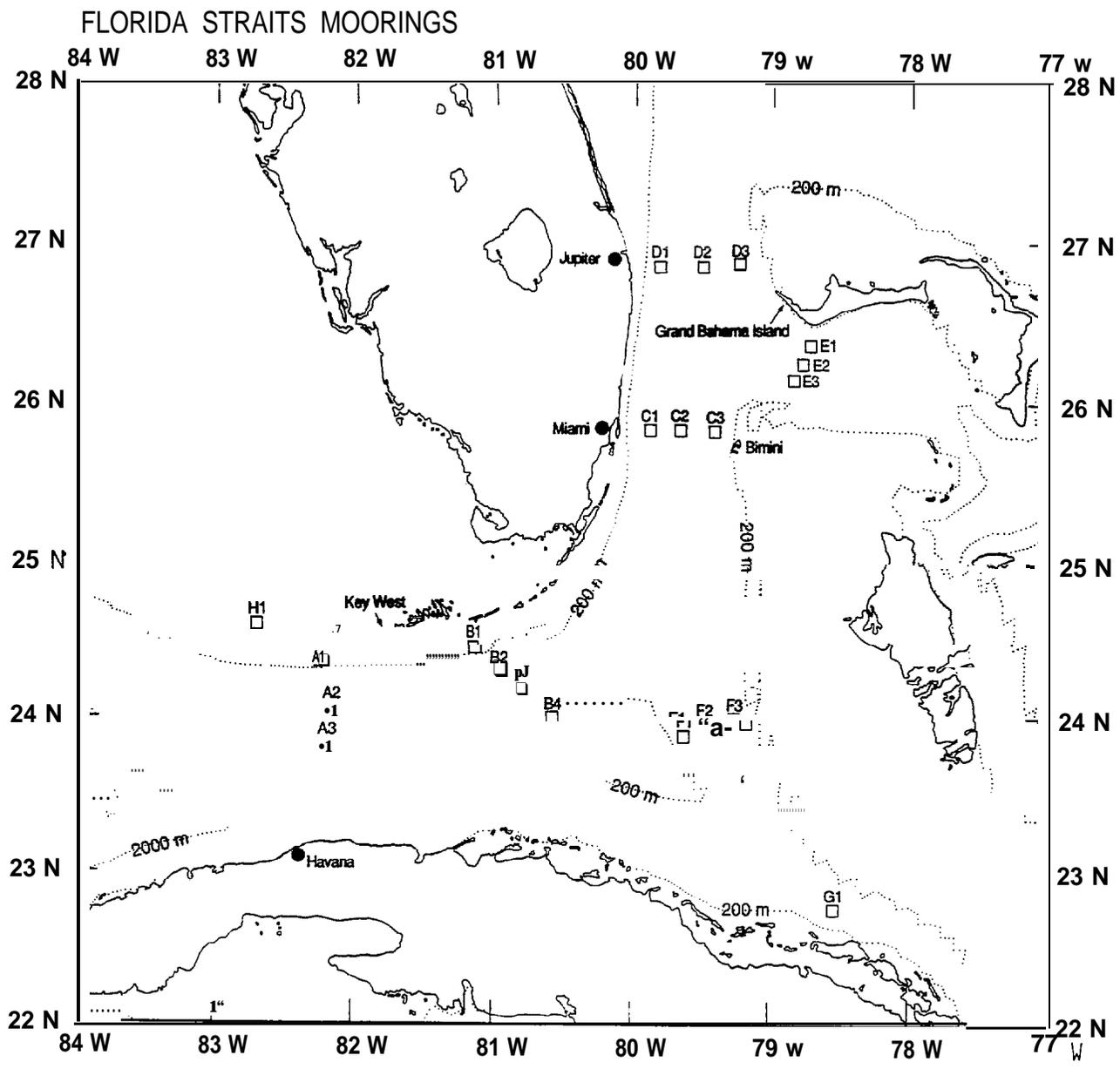


Figure 3. Map showing locations of moorings rotated and newly deployed in February 1991.

Table 1. Florida Straits mooring locations following mooring rotation cruise in February 1991.

Mooring	Depth (m)	TDs	Plotted Lat/Long	Instrument (Depth)
A1	245	13851.6 62752.3 43770.9	24°17.7 ' N 82°12.2 ' W	AA 7262 (75m) AA 7239 (150m)
A2	820	13832.9 62743.0 43749.3	24°03.2 ' N 82°09.7 ' W	GO 281 (145m) GO311 (300m) GO 173 (600m)
A3	1500	13808.4 62750.5 43752.0	23°49.7 ' N 82°11.8 ' W	GO 283 (145m) GO 271 (300m) GO 191 (600m) AA 7403 (1000m) AA 7404 (1400m)
51	200	13995.3 62489.4 43456.7	24°27.1 ' N 81°07.9 ' W	AA 6539 (75m) AA 7238 (150m)
B2	320	13998.5 62450.8 43415.2	24°18.1 ' N 80°57.6 ' W	AA 6922 (75m) AA 6538 (200m)
B3	830	14005.9 62411.3 43376.0	24°11.5' N 80°47.0 ' W	RD 322 (273m) GO 284 (280m) GO 192 (580m) AA 7528 (785m)
64	1080	14009.3 62370.9 43339.9	24°00.0 ' N 80°35.1 ' W	GO 379 (145m) GO 333 (300m) GO 156 (600m) AA 7582 (1000m)

Table 1. Florida Straits mooring locations following mooring rotation cruise in February 1991 (continued).

Mooring	Depth (m)	TDs	Plotted Lat/Long	Instrument (Depth)
c1	320	14246.2 62077.5 43076.5	25048.3 ' N 79°51.8' W	GO 290 (100m) GO 190 (250m)
C2	765	14261.8 62014.5 43045.4	25048.5 ' N 79°38.7' W	GO 256 (145m) GO 330 (300m) GO 272 (600m)
C3	720	14277.1 61946.4 43022.2	25048.3 ' N 79°23.8 ' W	GO 289 (145m) GO 378 (300m) GO 185 (600m) AA 1329 (719m)
D1	350	14350.0 61959.9 42998.6	26°49.5 ' N 79°48.2 ' W	GO 380 (145m) GO 198 (300m)
D2	770	14369.0 61862.2 43015.7	26°51.0 ' N 79°29.8' W	GO 328 (145m) GO 200 (300m) GO 075 (600m)
D3	630	14383.7 61778.2 42035.4	26°51.1 ' N 79°14.0 ' W	GO 331 (145m) GO 204 (300m) GO 181 (600m)
E1	775	14365.2 61691.2 43012.2	26°20.8 ' N 78°42.6 ' W	GO 293 (100m) GO 266 (300m) GO 339 (600m)
E2	510	14352.3 61721.9 43004.1	26°13.9 ' N 78°46.2 ' W	GO 291 (100m) GO 344 (300m) GO 222 (450m)

Table 1. Florida Straits mooring locations following mooring rotation cruise in February 1991 (continued).

Mooring	Depth (m)	TDs	Plotted Lat/Long	Instrument (Depth)
E3	395	14339.6 61753.0 42999.3	26°07.2' N 78°049.9' W	GO 280 (100m) GO 276 (200m) AA 7364 (304m)
F1	550	14086.0 62146.4 43174.3	23°51.8' N 79°36.9' W	GO 298 (50m) GO 297 (300m) AA 6536 (500m)
F2	560	14104.5 62102.7 43147.9	23°055.0' N 79°026.3' W	GO 274 (50m) GO 275 (300m) AA 7402 (500m)
F3	575	14123.7 62052.3 43120.9	23°057.0' N 79°14.5' W	GO 299 (50m) GO 268 (300m) AA 6537 (500m)
G1	495	14081.0 61973.7 43112.9	22°44.5' N 78°31.8' W	GO 335 (50m) GO 288 (250m) AA 7583 (435m)
HI	26	43949.9 62870.4 13815.0	24°36.4' N 82°41.8' W	AA 7594 (16m)

Table 2. Argos drifter deployments during the February 1991 mooring rotation/hydrography cruise.

Drifter No.	Deployment Location	Date (GMT) Deployed	Time (GMT) Deployed
12955 (near A3)	23°50.29 'N 82°12.11 'W	02/17/91	2118
12956 (near A2)	24°03.03 'N 82°10.08' W	02/18/91	0404
12958 (near A1)	24°18.01 'N 82°12.68 'W	02/18/91	0820
12957 (inshore of A1)	24°25.02 'N 82°11.43 'W	02/18/91	0926
12959 (near H1)	24°37.01 'N 82°41.72 'W	02/18/91	1927
12960 (near G1)	22°46.56 'N 78°33.03 ' W	02/23/91	2028

Note: All drifters were Technocean ministar drifters drogued at 15 meters.

Of the 54 data logging instruments deployed, 53 were recovered. The Water Level Recorder (**WLR**) at B4 was lost. The weak-link recovery line had apparently become entangled in the 1/2 mooring anchor chain and performed as intended.

AU recovered instruments exhibited the expected amount of tape transport except for two. Those were the General **Oceanics** Mk2 current meters at E2 at 450m and at **F1** at 300m. The E2 instrument exhibited 100% tape transport and the **F1** instrument had 0% tape transport. These two instruments have since been repaired at General **Oceanics**. The E2 instrument required EPROM upgrade and the F1 instrument had an intermittent problem in the on-off reed switch. Both problems had been missed by the manufacturer in **predeployment** calibration and operational checks. The 50m depth General **Oceanics** current meters at **F1** and F3 had been hindered by fishing or other activities. The wing on the **F1** instrument was broken (cracked) in two places, the standoff destroyed and the wirestop moved 13 feet up the line. The F3 instrument was entangled in long line monofilament about **the** swivel. In **addition**, the wing on the F2 General **Oceanics** current meter at 300m was broken (cracked) in one place and there was evidence of something having scraped along the Nil Spin wire coating at 315m depth. The 200m depth **Aanderaa** current meter at B2 was found to have tight bearings in the rotor counter (not a tight rotor) on recovery. This problem was repaired in the field and the instrument was redeployed. The only instrument that experienced significant fouling was the 17m depth **Aanderaa** current meter at **H1**. There, the rotor was somewhat impaired by a hairy growth on the rotor. All other fouling was limited to a thin slippery **film** which was washed off during the instrument **turn-arounds**.

An activity summary compiled by the chief scientist reviewing the **cruise** events in greater detail is presented in Appendix B and a copy of the weather forecast received from Weather **Services** Corporation on February 14, 1991 is presented in Appendix C. Finally, a comprehensive inventory of all equipment deployed and on hand as spares following this cruise is presented in Appendix D.

**APPENDIX A
BRIDGE LOG**

DATES: B 2/15/91
E 2/18/91

CRUISE SE9103
XBT/CTD/CURRENT PROFILE LOG

B = Begin
E = End

X = XBT

Stat on#	LORAN C TD 1	LORAN TD 2	LATITUDE	LONGITUDE	Day	Local Time	Depth	Wave Dir.	3700 Sea State Code	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
B1	30336.4	43456.9	81° 08.44'	154° 34'	2/15	2113	200m	135 deg	4	315 deg	20 mph	1020.0	60°F	X 1
A1	30091.2	43770.5	82° 22.51'	154° 27.93'	SUN 2/16	12:05	245m	225 deg	4	045 deg	20	1020.3	60°F	X 1
A-2	30034.6	43749.5	82° 10.14'	154° 02.97'	SUN 2/17	00:45	820m	160 deg	4	090 deg	10/15	1020.2	62°F	X 1
A-3	29971.1	43752.0	82° 50.08'	153° 50.08'	SUN 2/17	16:00	1500m	045 deg	4	090 deg	10/15	1020.1	60°F	X 2
Dr. Rev 12852	29971.0	43753.0	82° 50.29'	153° 50.29'	"	16:18	1500m	" deg	"	"	"	"	"	X "
CTD #1	29972.6	43753.5	82° 50.69'	153° 50.69'	"	16:40	1500m	deg	code	deg	—	—	—	X
CTD #1 End	29979.8	43754.3	82° 51.03'	153° 51.03'	"	17:10	1500m	deg	code	deg	—	—	—	X
XBT #1	29976.0	43754.5	82° 51.20'	153° 51.20'	"	17:25	1490m	deg	code	deg	—	—	—	X
METER IN	29974.2	43752.9	82° 51.203'	153° 51.203'	SUN 2/17	18:51	820m	270 deg	3	090 deg	12	1020.1	65°F	X 1
METER OUT	29975.5	43753.2	82° 51.016'	153° 51.016'	SUN 2/17	19:09	820m	270 deg	3	090 deg	12	1020.1	65°F	X 1
Current Meter In	29973.7	43751.6	82° 50.59'	153° 50.59'	SUN 2/17	19:29	820m	270 deg	3	090 deg	12	1020.1	65°F	X 1
METER OUT	29975.5	43752.3	82° 51.10'	153° 51.10'	SUN 2/17	20:01	820m	270 deg	3	090 deg	12	1020.1	65°F	X 1
METER	30027.9	43752.9	82° 51.203'	153° 51.203'	SUN 2/17	22:07	820m	deg	code	deg	12	1020.1	65°F	X 1
ow board	30030.1	43760.4	82° 52.203'	153° 52.203'	2/17	22:39	820m	270 deg	3	090 deg	12	1020.1	65°F	X 1
Dim. Fin	30034.9	43749	82° 50.08'	153° 50.08'	SUN 2/17	23:02	820m	270 deg	3	090 deg	15	1020.1	65°F	X 1
XBT 104	30038.0	43758.2	82° 51.203'	153° 51.203'	2/17	23:45	785m	deg	code	deg	15	1020.1	65°F	X 1
B-5	30067.1	43761.7	82° 51.69'	153° 51.69'	2/18	00:50	606m	deg	code	deg	15	1020.1	65°F	X 1
XBT 6	30090.7	43764.3	82° 51.82'	153° 51.82'	2/18	01:25	518m	deg	code	deg	15	1020	65°F	X 1

XBT #4(3) not on log

DATES: B 2/18/91
E 2/21/91

CRUISE SE 9103
XBT/CTD/CURRENT PROFILE LOG

B = Begin
E = End
X = XBT

Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	Day	Local Time	Depth	Wave Dir.	WMO 3700 Sea State code	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
XBT 7	30095.5	43766.0	24° 18.02' N 82° 11.60' W	MON 2/18	01:55	236m	380°	3	090	10-15	1020.0	65°F	X 1
XBT 7	3009	4377	24° 18.02' N 82° 11.60' W	MON 2/18			180°	3	090	15	1020.0	65°F	X 1
XBT 7	30091.6	43771.6	24° 18.01' N 82° 12.68' W	MON 2/18	08:20	245m	180°	3	090	10-15	1020.0	65°F	X 1
XBT 7	30116.6	43768.5	24° 22.58' N 82° 11.47' W	MON 2/18	04:01	134m	180°	3	045°	15	1020.0	60°	X 1
XBT 7	30127.2	43769.9	24° 25.02' N 82° 11.43' W	MON 2/18	04:35	75m	180°	3	180	10	1020	65°	X 1
XBT 7	30126.0	43770.9	24° 26.90' N 82° 11.86' W	MON 2/18	04:45	15m	180°	3	180	10	1020	65°	X 1
XBT 7	30052.5	43978.6	24° 37.10' N 82° 46.94' W	MON 2/18	13:33	25m	045°	5	045°	20	1020	70°	X 1
XBT 7	30080.8	43949.8	24° 36.00' N 82° 46.00' W	MON 2/18	14:20	28m	045°	5	045°	20	1020.0	70°	X 1
XBT 7	30071.8	43945.8	24° 41.72' N 82° 46.51' W	MON 2/18	14:27	76 F	045°	5	045°	20	1020.0	70°	X 1
XBT 7	30068.3	43949.9	24° 42.01' N 82° 46.05' W	MON 2/18	15:05	76 F	045°	5	090°	20	1020.0	75°	X 1
XBT 7	30086.3	43918.8	24° 36.62' N 82° 36.62' W	MON 2/18	10:00	22m	045°	5	090°	20	1020	75°	X 1
XBT 7	30371.3	43415.3	24° 58.06' N 82° 18.09' W	TUE 2/19	12:02	320m	270	5	090	20	1020.1	70°	X 1
XBT 7	30319.3	43350.1	24° 45.10' N 82° 15.10' W	WED 2/20	01:37	1000m	090°	1	090	15	1020	75°	X 0
XBT 7	303	435	24° 18.02' N 82° 11.60' W	THUR 2/21			090°	3	090	10	1019	72°	X 1
XBT 7	30339.5	43477.4	24° 34.20' N 81° 17.50' W	FRI 2/21	10:12	13m	270	4	090	15	1019	72°	X 1
XBT 7	30389.5	43477.4	24° 34.20' N 81° 17.50' W	FRI 2/21	18:20	13m	270	4	090	15	1019	72°	X 1
XBT 7	30335.9	43477.0	24° 30.32' N 81° 13.04' W	FRI 2/21	19:15	167m	270	4	090	15	1019	72°	X 1
XBT 7	30338.0	43475.3	24° 30.55' N 81° 12.72' W	FRI 2/21	19:40	167m	270	4	090	15	1019	72°	X 1

DATES: B 2/2/01
E 2/2/01

CRUISE 56910?
XBT/CTD/CURRENT PROFILE LOG

B = Begin
E = End
X = XBT

Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE	LONGITUDE	Day	Local Time	Depth	Wave Dir.	WMO 3700 Sea State code	Wind Dir. | Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
IN	30338.9	43453.6	24 27.4	81 07.87	2/21	2033	190m	270	4	090 17	1019	78	X 1
OUT	30342.7	43450.1	24 27.4	81 07.17	2/21	2056	190m	270	4	090 17	1019	70	X 1
CTD IN	30333.5	43433.2	24 22.73	81 02.46	2/21	2220	210m	270	4	090 17	1019	70	X 7
OUT	30339.1	43429.0	21 01.88		2/21	2240	210m	270	4	090 17	1019	70	X 1
CTD IN	30325.9	43420.3	24 18.86	81 59.31	11	2336	289m	11	11	" "	11	71	X 11
OUT	30334.7	43414.8	24 22.2	81 58.25	2/22	00:14	289m	270	4	090 17	1019	70	X 1
CTD	30331.6	43394.8	24 15.53	81 52.78	2/22	02:17	480m	270	4	090 17	1019	75	X 1
CTD	30336.7	43392.2	24 16	81 52	2/22	02:40	480m	270	4	090 17	1019	75	X 1
CTD	30331.2	43374.2	24 11.89	81 47.08	2/22	03:51	820m	135	4	090 17	1018	75	X 1
CTD	30344.7	43368.5	24 04.77	81 46.02	2/22	05:04	820m	135	4	090 15	1017	75	X 1
CTD	30332.4	43374.2	24 12.22	81 47.12	2/22	05:47	830m	135	4	090 15	1017	75	X 1
CTD	30329.0	43341.2	24 05.11	81 41.11	2/22	12:04	830m	135	3	135 10	1018	78	X 2
CTD	30323.1	43351.4	24 05.82	81 41.79	2/22	12:22	970m	135	3	135 10	1018	78	X 2
CTD	30319.6	43370.3	24 00.95	81 35.77	2/22	14:29	1075m	135	3	135 10	1018	78	X 2
CTD	30322.3	43367.2	24 02.55	81 35.17	2/22	15:43	1075m	135	3	135 10	1018	78	X 2
CTD	30319.6	43370.6	24 01.02	81 35.80	2/22	16:10	1069m	135	3	135 10	1018	78	X 2
CTD	30317.3	43355.0	23 57.97	81 31.60	2/22	16:42	845m	135	3	135 10	1017	78	X 2
CTD	30328.6	43351.6	23 55.89	81 30.86	2/22	17:45	845m	135	3	135 10	1017	78	X 2

X = XBT

B = Begin
E = End

CRUISE S & 9103

DATES : B 2/23/91

XBT/CTD/CURRENT PROFILE LOG

E 2/25/91

Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	Day	Local Time	Depth	Wave Dir.	WMO 3700 Sea State	Wind Dir. | Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
CTD 25	43114.5	61978.3	22°46.52 78°34.25	2/23	14:09	490m	deg 195°	code 1	deg 135° | 10	1017	75°	X 0
G-1	43112.9	61974.0	22°46.57 78°33.08	2/23	15:20	495m	deg 135°	code 1	deg 135° | 5	1017	75°	X 0
Drifter 2960	43113.3	61974.7	22°46.56 78°32.29	2/23	15:28	495m	deg 135°	code 1	deg 135° | 5	1017	75°	X 0
CTD 26 IN	141296.8	62039.55	23°59.46 79°12.25	2/24	00:05	510m	deg 190°	code 0	deg 190° | 5	1017	75°	X 1
CTD 26 OUT	14129.95	62039.25	23°59.07 79°12.22	2/24	00:39	510m	deg 190°	code 0	deg 190° | 5	1017	75°	X 1
CTD #27 IN	14123.49	62052.43	23°57.53 79°15.07	2/24	01:08	585m	deg 190°	code 0	deg 190° | 5	1017	75°	X 1
CTD #29 OUT	14124.25	62051.20	23°58.19 79°14.54	2/24	02:01	585m	deg 190°	code 0	deg 190° | 5	1017	75°	X 1
CTD #28 IN	14104.72	62001.15	23°55.53 79°26.58	2/24	03:25	583m	deg 190°	code 0	deg 190° | 5	1017	75°	X 1
CTD #28 OUT	14104.23	62102.66	23°55.53 79°27.23	2/24	04:00	583m	deg 190°	code 0	deg 190° | 5	1017	75°	X 1
CTD 29 IN	14086.81	62144.30	23°53.10 79°37.16	2/24	05:20	575m	deg 190°	code 0	deg 190° | 5	1017	75°	X 1
CTD 29 OUT	14086.35	62145.79	23°53.16 79°37.41	2/24	06:04	575m	deg 190°	code 0	deg 190° | 5	1017	75°	X 1
CTD 30 IN	14077.68	62167.26	23°52.28 79°42.55	2/24	0650	390m	deg ?	code 0	deg ? | 0	1017	75°	X 1
CTD 30 OUT	14077.28	62168.00	23°52.25 79°43.06	2/24	0720	390m	deg ?	code 0	deg ? | 0	1017	75°	X 1
F-1	14086.12	62145.82	23°53.13 79°37.39	2/24	0958	550m	deg —	code 0	deg 090° | 1	1017	75°	X 1
F-3	14123.59	62052.30	23°58.05 79°15.02	2/24	16:18	575m	deg 0	code 0	deg 090° | 1	1017	75°	X 1
F-2	14104.45	62102.62	23°56.08 79°27.25	2/24	1932	560m	deg —	code 0	deg 090° | 1	1017	75°	X 1
C-2	14261.84	62014.34	25°49.27 79°39.46	2/25	13:34	565m	deg 090°	code 1	deg 090° | 5	1017	78°	X 1
C-3	14277.23	61946.12	25°48.53 79°25.01	2/25	2253	720m	deg 180°	code 3	deg 180° | 10	1016	78°	X 1

DATES: B 2/26/91
E 2/27/91

CRUISE 550103
XBT/CTD/CURRENT PROFILE LOG

B = Begin
E = End

X = XBT

Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	Day	Local Time	Depth	Wave Dir.	MMO 3700 Sea State code	Wind Dir.	Wind Spd.	Bar. Pres.	Air Temp.	MMO 4501 Weather
C-1	43076.28	61646.15	25° 46.35 79° 58.16	2/26	04:49	320m	deg 090°	2	deg 090	5	1016	65°	X 1
CTD	14325.91	61608.20	26° 27.83 78° 41.17	2/26	1835	533m	deg 110	1	deg 045	5	1016	70°	X 1
CTD	14375.20	61670.22	26° 27.01 78° 41.33	2/26	1909	533m	deg 110	1	deg 045	5	1011	70°	X 1
CTD	4302.20	61692.73	26° 43.33 78° 43.33	2/26	2009	765m	deg 110	1	deg 075	10	1016	70°	X 1
CTD	43011.86	61693.14	26° 20.32 78° 43.28	2/26	2061	765m	deg 110	1	deg 045	10	1016	70°	X 1
E-1	43012.07	61691.09	26° 20.37 78° 43.05	2/26	2021	775m	deg 110	1	deg 045	10	1016	70°	X 1
CTD	43003.73	61720.43	26° 13.78 78° 46.05	2/26	2340	502m	deg 110	1	deg 045	10	1016	70°	X 1
CTD	43003.17	61718.97	26° 11.47 78° 45.03	2/27	00:30	502m	deg 110	1	deg 045	10	1016	70°	X 1
E-2	43004.	61721.90	26° 12.47 78° 46.10	2/27	03:17	510m	deg 110°	1	deg 045	5	1016	70°	X 1
CTD	42999.38	61753.43	26° 48.17 78° 57.28	2/27	04:27	373m	deg 110°	1	deg 045	5	1016	70°	X 1
CTD	42999.27	61751.61	26° 27.25 78° 58.44	2/27	05:05	373m	deg 315°	1	deg 315	5	1016	70°	X 1
E-3	42999.40	61753.00	26° 28.09 78° 59.23	2/27	07:13	395m	deg 225	3	deg 045	12	1018	70°	X 2
CTD	42998.06	61772.00	26° 23.53 79° 01.31	2/27	08:00	265m	deg 225	3	deg 045	12	1018	70°	X 2
CTD	42998.04	61771.64	26° 53.00 78° 53.00	2/27	08:19	265m	deg 225	3	deg 045	12	1018	70°	X 2
XBT	4339.77	62023.54	26° 52.07 80° 01.43	2/27	20:31	23m	deg 045°	4	deg 045	15	1018	70°	X 2
XBT	14341.18	62016.83	26° 22.21 80° 00.30	2/27	20:17	26m	deg 235	3	deg 045	12	1018	70°	X 2
XBT	14342.40	62010.40	26° 52.34 79° 59.23	2/27	21:00	33m	deg 235	3	deg 045	12	1018	70°	X 2
XBT	14343.50	62003.90	26° 51.37 79° 57.49	2/27	21:14	22m	deg 235	3	deg 045	12	1018	70°	X 2

X = XBT

B = Begin
E = EndCRUISE 559103DATES: B 2/27/91

XBT/CTD/CURRENT PROFILE LOG

E 2/28/91

Station#	LORAN TD 1	LORAN TD 2	LATITUDE LONGITUDE	Day	Local Time	Depth	Wave Dir.	WMO 3700 Sea State code	Wind Dir.	Spd.	Bar. Pres.	Air Temp.	WMO 4501 Weather
XBT 40	4344.86	61997.05	26°51'38" 79°56'36"	2/27	2128	179m	deg 235	code 3	deg 045	12	1018	70	X 2
XBT 41	4346.34	61990.07	26°51'46" 79°55'19"	2/27	2159	188m	deg 235	code 3	deg 045	12	1018	70	X 2
42	4347.40	61983.89	26°51'37" 79°54'01"	2/27	2212	212m	deg 235	code 3	deg 045	12	1018	70	X 2
43	4348.74	61978.63	26°51'40" 79°52'43"	2/27	2228	254m	deg 235	code 3	deg 045	12	1018	70	X 2
44	4350.05	61970.09	26°51'44" 79°51'32"	2/27	2242	278m	deg 235	code 11	deg "	"	"	11	X 11
45	4351.30	61963.72	26°51'44" 79°50'17"	"	2255	317m	deg 11	code 11	deg "	"	"	11	X 11
46	4353.46	61951.46	26°51'40" 79°47'56"	"	2323	375m	deg "	code 11	deg "	"	"	"	X "
47	4359.16	61923.97	26°51'31" 79°42'38"	"	2357	471m	deg 235	code 3	deg 045	12	1018	72	X 2
48	4364.01	61890.00	26°51'20" 79°36'53"	2/28	0038	644m	deg "	code 11	deg "	"	"	"	X "
CTD 49 10	4368.88	61861.58	26°50'47" 79°30'22"	"	0148	775m	deg "	code 11	deg "	"	"	"	X "
CTD 49 001	4372.29	61856.96	26°53'00" 79°30'20"	"	02:42	775m	deg "	code 11	deg "	"	"	"	X "
D-2	4369.01	61862.07	26°50'58" 79°30'31"	"	06:03	770m	deg 000	code 3	deg 045	10	1018	65°	X 2
D-1	4350.06	61960.02	26°50'06" 79°49'02"	"	13:09	350m	-aaf- deg 000	code 3	deg 000	5	1019	65°	X 2
XBT 51	4375.42	61825.46	26°57'18" 79°23'28"	"	16:04	(short) 206m	deg 090	code 2	deg 045	5	1019	70	X 2
XBT 52	4376.60	61819.90	26°51'23" 79°22'34"	"	16:15	644m	deg 090	code 2	deg 045	5	1019	70	X 2
XBT 53	4383.84	61778.25	26°51'46" 79°14'30"	"	1820	570m	deg 090	code 2	deg 045	5	1019	70	X 2
54	4387.93	61757.36	26°52'28" 79°10'44"	"	1832	514m	deg 11	code 11	deg "	"	"	"	X "
55	4390.55	61735.68	26°51'43" 79°06'07"	"	1923	311m	deg 11	code 11	deg "	"	"	"	X "
D3	4383.63	61778.30	26°51'37" 79°14'28"	"	2149	630m	"	"	"	"	"	"	"

XBT
*50
missing!

X = XBT

B - Begin
E = EndCRUISE SE 9103
XBT/CTD/CURRENT PROFILE LogDATES: B 3/1/91E 3/1/91

Station#	LORAN C TD 1	LORAN C TD 2	LATITUDE LONGITUDE	Day	Local Time	Depth	Wave Dir.	WMO 3700 Sea State code	Wind		Bar. Pres.	Air Temp.	Who 4501 Weather
									Dir.	Spd.			
SLX	14 383.52	61 777.88	26 51 32 79 14 20	2/28	2205	572m	deg 270	2	deg 095	15	020	70°	X 1
CTD 57 IN	14282.15	61 927.54	25 49 35 79 21.11	3/1	0651	600m	deg 270	2	deg 090	8	1019	70	X 1
OUT	14283.06	61 926.71	25 50 07 79 21.15	"	0708	600m	deg "	"	deg "	"	"	"	X "
58 IN	14278.46	61 945.17	25 49 53 79 25 07	"	0808	717m	deg code	deg					X
OUT	14281.19	61 942.64	25 51 39 79 25 11	"	0856	717m	deg code	deg					X
XBT 59	14268.46	61 981.63	25 48 37 79 32 31	"	0954	376	deg code	deg					X
XBT 60	14267.68	61 981.05	25 47 07 79 33 42	"	1013	758m	deg code	deg					X
CTD 60 IN	Renamc 61 14261.09	62 015.74	25 49 20 79 37 59	"	1107	755m	deg code	deg					X
CTD 60 OUT	Renamc 61 14267.27	62 012.53	25 53 46 79 40 43	"	12:25	755m	deg 270	code 2	deg 090°	8	1019	75	X 1
XBT 61	Renamc 62 14264.23	62 014.18	25 51 49 79 40 26	"	12:53	724m	" deg	" code	" deg	"	"	"	X "
XBT 62	Renamc 63 14253.13	62 045.78	25 48 57 79 46 08	"	13:51	724m	" deg	" code	" deg	"	"	"	X
CTD 61 IN	Renamc 64 14245.26	62 079.77	25 49 32 79 53 35	"	14:42	305m	aeg code	code 1	deg -	-	-	-	X
CTD 61 OUT	Renamc 64 14246.42	62 079.65	25 50 09 79 53 44	"	15:07	305m	deg 150°	code "	deg 150°	10	1017	"	X "
CTD 62 IN	Renamc 65 14243.08	62 085.50	25 48 39 79 54 35	"	15:48	300m	deg "	code "	deg "	"	"	"	X "
CTD 62 OUT	Renamc 65 14244.29	62 086.21	25 50 04 79 55 06	"	16:13	300m	deg "	code "	deg "	"	"	"	X "
CTD 63 IN	Renamc 66 14241.53	62 091.02	25 48 50 79 55 46	"	16:28	310m	deg "	code "	deg "	"	"	"	X "
CTD 63 OUT	Renamc 66 14242.57	62 091.94	25 49 52 79 56 14	"	16:58	310m	deg "	code "	deg "	"	"	"	X "
							deg code	code	deg				X

**APPENDIX B
CRUISE ACTIVITY SUMMARY**

(Chief Scientist's Log)

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary**

	<u>EST</u>	
Friday 15 Feb.	0040	<ul style="list-style-type: none"> • Depart Miami Beach, Florida with: <ul style="list-style-type: none"> • Jim Singer • Craig Boyd • Paul Higley • Chris Logan • Mike Mattson • Scott Sharpe
	1530	<ul style="list-style-type: none"> • Arrive B1 mooring site; standby to range on releases and prepare for recovery.
	1700	<ul style="list-style-type: none"> • Range on releases.
	1702	<ul style="list-style-type: none"> • Releases activated; mooring on surface.
	1747	<ul style="list-style-type: none"> • Mooring on board; standing by to begin redeployment.
	2025	<ul style="list-style-type: none"> • Begin mooring deployment.
	2111	<ul style="list-style-type: none"> • Mooring deployed; standby to range on releases.
	2120	<ul style="list-style-type: none"> • Ranging complete. Begin steaming for A1 mooring site instead of A2 as weather too rough offshore.
Saturday 16 Feb.	0600	<ul style="list-style-type: none"> • Weather appears to be improving; plan to steam closer to Marquesas Key to rearrange anchors for A1.
	0805	<ul style="list-style-type: none"> • Anchor repositioned; steaming for A1 site.
	0938	<ul style="list-style-type: none"> • Arrive A1 site; standby to range on releases.
	0941	<ul style="list-style-type: none"> • Release activated; mooring on surface.
	1017	<ul style="list-style-type: none"> • Mooring on board; standing by to begin redeployment.
	1125	<ul style="list-style-type: none"> • Begin mooring deployment.
	1206	<ul style="list-style-type: none"> • Mooring deployed; standby to range on releases.
	1215	<ul style="list-style-type: none"> • Ranging complete; steam for A2 site.
1345	<ul style="list-style-type: none"> • Arrive A2 site; begin bathymetric survey. 	

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary (cont.)**

	<u>EST</u>	
Saturday 16 Feb.	1630	• Bathymetric survey complete; standing by for weather report before moving anchors on deck; weather appears to be improving.
	1720	• Steaming westerly towards "begin deployment" site as weather expected to continue to improve.
	1800	• Turned towards NE.
	2040	• Anchors in position; must now steam back upstream (upwind) SW.
	2200	• Begin ship drift.
	2212	• Complete ship drift; steam to "begin deployment" site.
	2320	• Begin mooring deployment.
Sunday 17 Feb.	0045	• Mooring deployed; standby to range on releases.
	0052	• Ranging complete; steam for A3 site.
	0230	• Arrive A3 area; begin bathymetric survey.
	0500	• Complete bathymetric survey; standby till morning.
	0745	• Begin moving anchors and winding cable on winch.
	0840	• Begin ship drift.
	0900	• Complete ship drift; steam for "begin deployment" site.
	1030	• Release SN 074 not working; must prepare a replacement release.
	1145	• Repairs completed.
	1243	• Begin mooring deployment.
	1600	• Mooring deployed; standby to range on releases.
	1610	• Ranging complete; prepare to launch Argos Drifter 12955.
1618	• Argos Drifter 12955 deployed at 23° 50.29'N, 82° 12.11' W near A3 mooring site.	

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary (cont.)**

	<u>EST</u>	
Sunday 17 Feb.	1648	• Begin CTD/XBT/surface current section.
	1709	• Encounter problems with CTD cable riding out of CTD block.
	1730	• Unable to resolve CTD block problems so plan to complete section with XBTS and try and get another block while in Key West in a few days.
	1800	• Begin DRCM work.
	1909	• DRCM works in air but not in water; begin troubleshooting.
	1915	• Discover bad Scotch Cast on fish end; plan to replace with backup cable.
	1929	• DRCM operating fine on new cable; begin ship drift at A3.
	1935	• Steam to continue hydrographic section.
	2304	• Argos Drifter 12956 deployed at 24°03.03'N, 82°10.08'W near A2 mooring site.
Monday 18 Feb.	0320	• Argos Drifter 12958 deployed at 24°18.01 'N, 82°12.68'W near A1 mooring site.
	0426	• Argos Drifter 12957 deployed at 24°25.02'N, 82°1 1.43'W in 75 meters depth, inshore of the A1 mooring site between XBT Stations 8 and 9.
	0500	• Complete section at Station 9; steam for H1 mooring site.
	0825	• Arrive H1 mooring site; standby to range on releases and begin recovery.
	0920	• Begin ranging on releases.
	0933	• Release activated; mooring on surface.
	0953	• Mooring on board; some growth on all elements including the instrument rotor; begin cleaning up elements for redeployment; note that experiencing high easterly winds; seas very choppy,

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary (cont.)**

	<u>EST</u>	
Monday 18 Feb.	1245	• Attempted to do CTD cast; wire again came out of block and jammed; plan XBTS along H1 section.
	1335	• Drop XBT at Station 10; too rough for surface current measurement; continue towards H1 site for XBT drop and drifter deployment.
	1427	• Deploy Drifter 12959 near H1 mooring site at 24°37.01 'N, 82°41 .72'W.
	1505	• Mooring H1 deployed; standby to range on releases.
	1515	• Ranging complete; steam for XBT Station 12.
	1600	• Complete XE3T section at Station 12; steam for 62 mooring site.
Tuesday 19 Feb.	0630	• Arrive B2 mooring site; standby to begin mooring recovery; still dark out; begin ship drift.
	0700	• End drift ; underway to mooring site!
	0745	• On site ; ranged on releases and found them to be 1250m away (a navigation error); moved closer.
	0821	• Release activated; mooring on surface.
	0910	• Mooring on board; prepare to move anchors.
	1130	• Begin mooring deployment.
	1202	• Mooring deployed; standby to range on releases.
	1208	• Ranging complete; underway for 64 mooring site.
	1610	• Arrive 64 site; begin ranging on releases.
	1619	• Release activated.
	1620	• Top of mooring on surface.
	1632	• All of mooring sighted on surface; begin recovery.
1650	• Releases on board; line to water level recorder (WLR) had failed; WLR lost.	

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary (cont.)**

	<u>EST</u>	
Tuesday 19 Feb.	1750	• Mooring on board; begin turnaround of instruments.
	2349	• Begin mooring deployment.
Wednesday 20 Feb.	0137	• Mooring deployed; steam for B3 site.
	0720	• Arrive B3 site; begin ranging on releases.
	0735	• Release activated.
	0744	• All of mooring sighted on surface .
	0900	• Mooring on board; steaming for Key West.
	1725 2130	• Arrive Key West. • Phil Bedard arrives with CTD block; begin turnaround of ADCP.
Thursday 21 Feb.	0730	• ADCP prepared for deployment; Phil Bedard departs; begin moving anchors and installing CTD block.
	0815	• During re-assembly of ADCP buoy, discover large, long crack requiring repairs; plan to make fiberglass repairs.
	1400	• Depart Key West steaming to begin hydrographic section along Line B as repairs to ADCP buoy completed.
	1800	• Arrive Station 13 on B Line; begin hydrographic section.
Friday 22 Feb.	0515	• Complete CTD Station 18 and DRCM near surface currents at B3 ; steam back upstream towards B3 .
	0550	• Arrive B3 area; continue upstream to "begin deployment."
	1055	• Begin mooring deployment.
	1205	• Mooring deployed; standby to range on releases.
	1220	• Ranging complete; steam to continue hydrographic section at Station 21.
	1750	• Complete hydrographic section at Station 24; steam for G1 site.

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary (cont.)**

EST

Saturday 23 Feb.	1145	•	Arrive G1 site.
	1200	•	Range on releases.
	1217	•	Release activated.
	1221	•	Top of mooring sighted on surface ; begin mooring recovery.
	1307	•	Mooring on board; standby for CTD cast and near surface current measurements.
	1335	•	Begin CTD cast and surface current drift.
	1415	•	Complete CTD cast and surface current drift; steam to "begin deployment" site.
	1500	•	Begin mooring deployment.
	1520	•	Mooring deployed; standby to range on releases and deploy Argos Drifter 12960.
	1528	•	Deployed Argos Drifter 12960 at 22°46.56'N, 78°33.03'W.
1530	•	Underway for F3 site to begin hydrographic section at Station 26.	
2355	•	Arrive Station 26; begin CTD section.	
Sunday 24 Feb.	0720	•	Complete CTD section at Station 30; steam for F1 site.
	0755	•	Arrive F1 site; standby to range on releases.
	0800	•	Release activated.
	0803	•	Top of mooring on surface; because of no wind or current mooring elements coming up close to one another.
	0807	•	All of mooring on surface; steam to begin recovery.
	0848	•	Mooring on board; standby to redeploy; note that upper instrument had been hit by something, destroying the standoff and allowing instrument to come free from standoff; both wings were broken and wirestop had slipped 13 feet to upper float; fortunate to recover instrument.

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary (cont.)**

EST

Sunday 24 Feb.

- | | | |
|-------------|---|---|
| 0908 | • | Begin mooring deployment. |
| 0955 | • | Mooring deployed; stand by to range on releases. |
| 1000 | • | Ranging complete; steam for F2 site. |
| 1107 | • | Arrive F2 site; standby to range on releases. |
| 1108 | • | Release activated. |
| 1109 | • | Top of mooring on surface. |
| 1115 | • | All of mooring sighted on surface; begin mooring recovery. |
| 1149 | • | Some sign of damage to cable coating at 315m depth and broken wing on current meter. |
| 1209 | • | Mooring on board; steaming for F3 site. |
| 1336 | • | Arrive F3 site; standby to range on releases. |
| 1337 | • | Release activated. |
| 1338 | • | Top of mooring on surface. |
| 1343 | • | All of mooring sighted on surface; begin mooring recovery. |
| 1436 | • | Mooring on board; upper instrument fouled in longline gear but no apparent damage. |
| 1536 | • | Begin mooring deployment, |
| 1618 | • | Mooring deployed; standby to range on releases. |
| 1625 | • | Ranging complete; steam for F2 site. |
| 1730 | • | Arrive F2 site; standby to deploy mooring. |
| 1850 | • | Begin mooring deployment. |
| 1932 | • | Mooring deployed; standby to range on releases. |
| 1940 | • | Ranging complete; steam for CI site. |

Monday 25 Feb.

- | | | |
|------|---|--|
| 0655 | • | Arrive CI site, begin ranging on releases. |
| 0705 | • | Release activated. |
| 0706 | • | Top of mooring on surface; begin recovery. |

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary (cont.)**

	<u>EST</u>	
Monday 25 Feb.	0742	• Mooring on board; underway for C2 site.
	0925	• Arrive C2 site; begin ranging on releases.
	0936	• Release activated.
	0938	• Top of mooring on surface .
	0944	• All of mooring sighted on surface; begin mooring recovery.
	1045	• Mooring on board; steam upstream to do ship drift.
	1250	• Begin mooring deployment.
	1333	• Mooring deployed; standby to range on releases.
	1340	• Ranging complete; steam for C3 site.
	1525	• Arrive C3 site; standby to range on releases.
	1555	• Release activated.
	1557	• Top of mooring on surface.
	1601	• All of mooring sighted on surface; begin recovery.
	1730	• Mooring on board; standby to redeploy.
	1930	• Doing ship drift after steaming to planned "begin deployment" site.
	2158	• Begin mooring deployment.
2253	• Mooring deployed; standby to range on releases.	
2304	• Ranging complete; steam for CI site.	
Tuesday 26 Feb.	0222	• Arrive CI site; begin ship drift.
	0245	• Complete ship drift; steam to "begin deployment" site.
	0413	• Begin mooring deployment.
	0448	• Mooring deployed; standby to range on releases.
	0500	• Ranging complete; steam for E3 site.
	1115	• Arrive E3 site; standby to range on releases.
	1128	• Release activated.
	1129	• Top of mooring on surface.

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary (cont.)**

	<u>EST</u>	
Tuesday 26 Feb.	1131	• All of mooring sighted on surface; begin recovery.
	1208	• Mooring on board; steam for E2 site.
	1310	• Arrive E2 site; standby to range on releases.
	1321	• Release activated.
	1322	• Top of mooring on surface .
	1326	• All of mooring sighted on surface; begin recovery.
	1410	• Mooring on board; steam for E1 site.
	1530	• Arrive E1 site; standby to range on releases.
	1600	• Release activated.
	1601	• Top of mooring on surface.
	1607	• All of mooring sighted on surface; begin recovery.
	1655	• Mooring on board; standing by while moving anchors.
	1734	• Steam to begin CTD section at Station 31.
	1834	• Begin CTD section.
	2051	• Interrupt section after Station 32 to deploy E1 mooring; steaming to "begin deployment" site.
2221	• Mooring deployed; standby to range on releases.	
2226	• Ranging complete; steam to continue CTD section.	
Wednesday 27 Feb.	0030	• Interrupt section after Station 33 to deploy E2 mooring; steaming to "begin deployment" site.
	0318	• Mooring deployed; standby to range on releases.
	0325	• Ranging complete; steam to continue CTD section.
	0515	• Interrupt section after Station 34 to deploy E3 mooring; steaming to "begin deployment" site.

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary (cont.)**

EST

Wednesday 27 Feb.	0620	•	Begin mooring deployment.
	0713	•	Mooring deployed; standby to range on releases.
	0717	•	Ranging complete; steam to continue CTD section.
	0730	•	Complete CTD section at Station 35; steam for D2 mooring site.
	1500	•	Arrive D2 mooring site.
	1513	•	Release activated.
	1514	•	Top of mooring on surface.
	1521	•	All of mooring sighted on surface; begin recovery.
	1625	•	Mooring on board; steam for D1 site.
	1815	•	Arrive D1 site; range on releases.
	1825	•	Decide to delay recovery till morning because of darkness; plan to steam west and move anchors and begin XBT section.
	1830	•	Underway towards west.
	2030	•	Begin XBT section after moving anchors.
	Thursday 28 Feb.	0200	•	Interrupt XBT section; do ship drift at D2 site and CTD cast at Station 49.
0300		•	Steam to "begin deployment" site for D2 mooring.
0459		•	Begin mooring deployment.
0602		•	Mooring deployed; standby to range on releases.
0615		•	Ranging complete; steam for D1 site.
0820		•	Arrive D1 site; standby to range on releases.
0825		•	Ranging complete; release activated.
0826		•	Top of mooring on surface.
0830		•	All of mooring sighted on surface; begin mooring recovery.
0901		•	Mooring on board; standby to redeploy.
1030	•	Begin ship drift.	

**R/V SEAWARD EXPLORER
(15 February -1 March 1991)
Cruise Activity Summary (cont.)**

	<u>EST</u>	
Thursday 28 Feb.	1115	• End ship drift; steam upstream to "begin deployment" site.
	1244	• Begin mooring deployment.
	1309	• Mooring deployed; standby to range on releases,
	1317	• Ranging complete; steam for D3 site; plan to resume dropping XBTS as pass D2 mooring site.
	1705	• Arrive D3 site; standby to range on releases.
	1709	• Release activated.
	1710	• Top of mooring on surface.
	1714	• All of mooring sighted on surface; begin recovery.
	1806	• Mooring on board; steam to complete XBT section.
	1925	• XBT section completed at Station 55; steam back to D3 to do ship drift followed by mooring deployment.
	2125	• Begin mooring deployment.
	2149	• Mooring deployed; standby to range on releases.
	2200	• Ranging complete; steam for eastern end of Line C to begin CTD section.
Friday 1 March	0637	• Arrive CTD Station 57; begin section towards Miami.
	1823	• Complete CTD section at Station 68; steam for Miami.
	1930	• Arrive Miami; begin unloading vessel.
	2130	• Suspend unloading for the evening.
Saturday 2 March	0700	• Resume unloading and begin equipment and materials inventory.
	1200	• All equipment inventoried and stored.

**APPENDIX C
WEATHER FORECAST**

SCIENCE APPLICATIONS INTERNATIONAL
ATTN: JIM SINGER

WEATHER SERVICES CORPORATION
THURSDAY 14-FEB-91 1000 EST

FAX: 919-851-8358 AND 305-534-2516

FORECAST FOR THE AREA 22-27 N AND 78-83 W:

TIME EST	TEMP	WIND AVR-MAX	WAVE FT/SEC	SWELL DIR FT/SEC	SCS FT	MCS FT	WEA	VIS MLS
THURSDAY 14-FEB-91								
1100	67-72	S W 15-25	3/3	SSW 3/5	4	7		7
1400	69-73	SW 26-25	3/3	SW 4/5	4	8		7
2000	68-72	SW 18-25	3/3	SW 4/5	4	8		7
FRIDAY 15-FEB-91								
0200	65-70	SW 15-20	3/3	SW 4/5	4	8	RW-	3-6
0800	65-70	WSW 15-20	3/3	WSW 3/5	4	7	TRW-	2-4
1400	67-72	WNW 20-25	4/4	W 4/5	5	9	TRW-	2-4
2000	60-65	WNW 20-30	s / 4	WNW 6/6	7	12	TRW-	2-4
SATURDAY 16-FEB-91								
0200	55-60	NNW 30-40	6/3	NW 6/6	8	16	RW-	2-4
0800	54-58	N 30-40	6/6	NNW 7/6	9	17		5
1400	60-65	N 25-35	5/4	N 6/6	8	16		6
SUNDAY 17-FEB-91								
	67-72	NE 18-25	3/3	NE 3/5	5	10		7
MONDAY 18-FEB-91								
	68-74	ESE 12-18	2/2	E 2/5	3	6		7

SUMMARY: COLD FRONT OVER THE FLORIDA PANHANDLE INTO THE GULF OF MEXICO IS PUSHING EAST. A COUPLE OF FRONTS WILL BE MOVING ACROSS WORK AREA DURING THE NEXT 48 HOURS. STRONGEST FRONT WILL BE USHERED THRU AS STRONG UPPER TROUGH MOVES EAST ACROSS THE EASTERN GULF AND ACROSS FLORIDA STRAITS FRIDAY NIGHT/SATURDAY. THIS WILL ALLOW COLD AIR TO FLOW OVER AREA ON STRONG NORTHERLY FLOW. SOME GUSTS IN EXCESS OF 45 POSSIBLE.

SCS = Significant Combined Seas

MCS = Maximum Combined Seas

APPENDIX D
INVENTORY OF EQUIPMENT DEPLOYED AND ON HAND

- Aanderaa Current Meters
- Aanderaa Water Level Recorders
- General Oceanics Current Meters
- RD Instruments ADCP
- Benthos Acoustic Releases
- **EG&G** Acoustic Releases
- ORE Steel Flotation
- Benthos Glass Flotation
- Flotation Technologies Syntactic Foam Buoy

CURRENT METERS AND WATER LEVEL RECORDERS

(12)	<u>Aanderaa RCM5s (MMS Tape Units)</u>	<u>Mooring/Depth (m)</u>
	5465 (0-1000 psi) (with conductivity?)	Spare
	5676 (with conductivity)	Spare
	6536 (with conductivity)	F1/500
	6537 (with conductivity)	F3/500
	6538 (0-3000 psi) (bad conductivity)	B2/200
	6539 (with conductivity)	B1/75
	7364	E3/300
	7402 (0-1000 psi)	F2/500
	7403	A3/1000
	7404	A3/1400
	7583 (with conductivity)	G1/435
	7594 (0-100 psi) (with conductivity)	H1/16
(3)	<u>AanderaaRCM4s (MMS Tape Units)</u>	<u>Mooring/Depth (m)</u>
	7238 (with conductivity)	B1/150
	7239 (with conductivity)	A1/150
	7262 (with conductivity)	A1/75
(1)	<u>AanderaaRCM4 (SAIC DSU Unit)</u>	<u>Mooring/Depth (m)</u>
	6922 (0-3000 psi) (with conductivity)	B2/75
(2)	<u>Aanderaa RCM5 (SAIC DSU Units)</u>	<u>Mooring/Depth (m)</u>
	7528 (0-3000 psi)	B3/785
	7582 (0-3000 psi)	B4/1000
(2)	<u>Aanderaa WLR-7 (MMS)</u>	<u>Mooring/Depth (m)</u>
	1329	C3/719
	1330	LOST AT B4 2/91
(13)	<u>General Oceanics Mkl (MMS)</u>	<u>Mooring/Depth (m)</u>
	075 STD WING	D2/600
	099 LOW SPEED WING	Spare
	156 STD WING	B4/600
	173 STD WING	A2/600
	181 LOW SPEED WIN G	D3/600

CURRENT METERS AND WATER LEVEL RECORDERS (CONTINUED)

185 STD WING	C3/600
190 STD WING	C1/250
191 STD WING	A3/600
192 STD WING	B3/580
198 STD WING	D1/300
200 STD WING	D2/300
204 STD WING	D3/300
222 LOW SPEED WING	E2/450

27) General Oceanics Mk2 (MMS) Mooring/Depth (m)

264 STD WING	Spare
266 STD WING	E1/300
268 STD WING	F3/300
269 STD WING	Spare
271 STD WING	A3/300
272 STD WING	C2/600
274 STD WING	F2/50
275 STD WING	F2/300
276 STD WING	E3/200
280 STD WING (2000 PSI)	E3/100
281 HIGH SPEED WING (2000 PSI)	A2/145
283 HIGH SPEED WING (2000 PSI)	A3/145
284 STD WING (2000 PSI)	B3/280
288 STD WING (2000 PSI)	G1/250
289 HIGH SPEED WING (2000 PSI)	C3/145
290 HIGH SPEED WING (2000 PSI)	C1/100
291 STD WING (2000 PSI)	E2/100
293 STD WING (500 PSI)	E1/100
297 STD WING	F1/300
298 STD WING (500 PSI)	F1/50
299 STD WING (500 PSI)	F3/50
311 STD WING	A2/300
329 STD WING (antique Mk2)	Spare
330 STD WING	C2/300
333 STD WING	B4/300
339 STD WING	E1/600
344 STD WING	E2/300

(7) General Oceanics Mk2 (SAIC) Mooring/Depth (m)

256 HIGH SPEED WING (500 PSI)	C2/145
328 HIGH SPEED WING (5000 PSI) ,	D2/145

CURRENT METERS AND WATER LEVEL RECORDERS (CONTINUED)

331 STDWING(5000 PSI)	D3/145
335 STDWING (5000 PSI)	G1/50
378 STDWING	C3/300
379 STDWING (2000 PSI)	B4/145
380 HIGH SPEED WING (2000 PSI)	D1/145

(1) RD Instruments 150 kHz ADCP (SAIC) Mooring/Depth (m)

322 (with 20° beam angles)	B3/273
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ACOUSTIC RELEASES

(36)	<u>Benthos 865-A Releases (MMS)</u>	<u>Mooring</u>
	011	E1
	034	E1
	043	E2
	093	E2
	095	E3
	099	E3
	100	G1
	102	F1
	103	F1
	104	F2
	105	F2
	108	F3
	109	F3
	110	G1
	111	B4
	112	B3
	117	B2
	118	132
	124	A1
	125	A1
	151	B3
	152	Spare
	159	D1
	160	D1
	161	B1
	162	B1
	164	A2
	165	A2
	167	D2
	193	c1
	195	c1
	210	D2
	220	D3
	227	D3
	230	C3
	238	C3

(6)	<u>Benthos 865-A Releases (SAIC)</u>	<u>Mooring</u>
	061	A3
	074	Spare

ACOUSTIC RELEASES (CONTINUED)

122 A3
154 B4
207 C2
235 C2

(2) EG&G DACS 723A Releases (MMS) Mooring

003705 Spare
200903 H1

STEEL FLOTATION

(25) ORE SS-28 Steel Buoys (MMS) Mooring

M-147	.....	Spare
M-149	.....	H1
M-151	.....	Spare
M-170	.....	G1
M-233	.....	F2
M-308	.....	B1
M-339	.....	B2
M-368	.....	Spare
M-371	.....	Spare
M-387	.....	F2
M-388	.....	D1
M-392	.....	F1
M-545	.....	Spare
M-588	.....	F3
M-697	.....	Spare
M-698	.....	G1
M-700	.....	F1
M-701	.....	Spare
M-702	.....	B4
M-703	.....	Spare
M-706	.....	E3
M-802	.....	F3
2404	.....	Spare
2406	.....	Spare
2408	.....	C1

(17) ORE SS-37 Steel Buoys (MMS) Mooring

M-307	.....	B1
553(Woods Hole Hydrospheres)	.....	A1
554(Woods Hole Hydrospheres)	.....	Spare
557(Woods Hole Hydrospheres)	.....	Spare
M-646	.....	c 1
M-649	.....	B2
M-650	.....	B1
M-652	.....	C3
M-655	.....	A1
M-685	.....	E3
M-687	.....	D3
M-691	.....	E1
2363	.....	D1

STEEL FLOTATION (CONTINUED)

	2367	B4
	2376	B2
	2549	E2
	2556	E2
(6)	<u>ORE SS-41 Steel Buoys (MMS)</u>	<u>Mooring</u>
	M-52	C2
	M-106	E1
	573 (Woods Hole Hydrospheres)	Spare
	576 (Woods Hole Hydrospheres)	D2
	2402	A2
	2403	Spare
(10)	<u>ORE SS-48 Steel Buoys (MMS)</u>	<u>Mooring</u>
	M-111	A2
	M-531	C3
	M-538	Spare
	M-668	D3
	M-669	C2
	M-678	A3
	M-724	B4
	M-725 (M-752?)	A3
	M-895	Spare
	2461	D2

GLASS AND SYNTACTIC FOAM FLOTATION

(210)	<u>Benthos 204HR-17 17" glass floats in hardhats (MMS)</u>	
	<u>Qty.</u>	<u>Mooring</u>
	19	Spares
	191	Deployed
(1)	<u>Flotation Technologies 56" Syntactic Foam Buoy (SAIC)</u>	<u>Mooring</u>
	N/A	B3