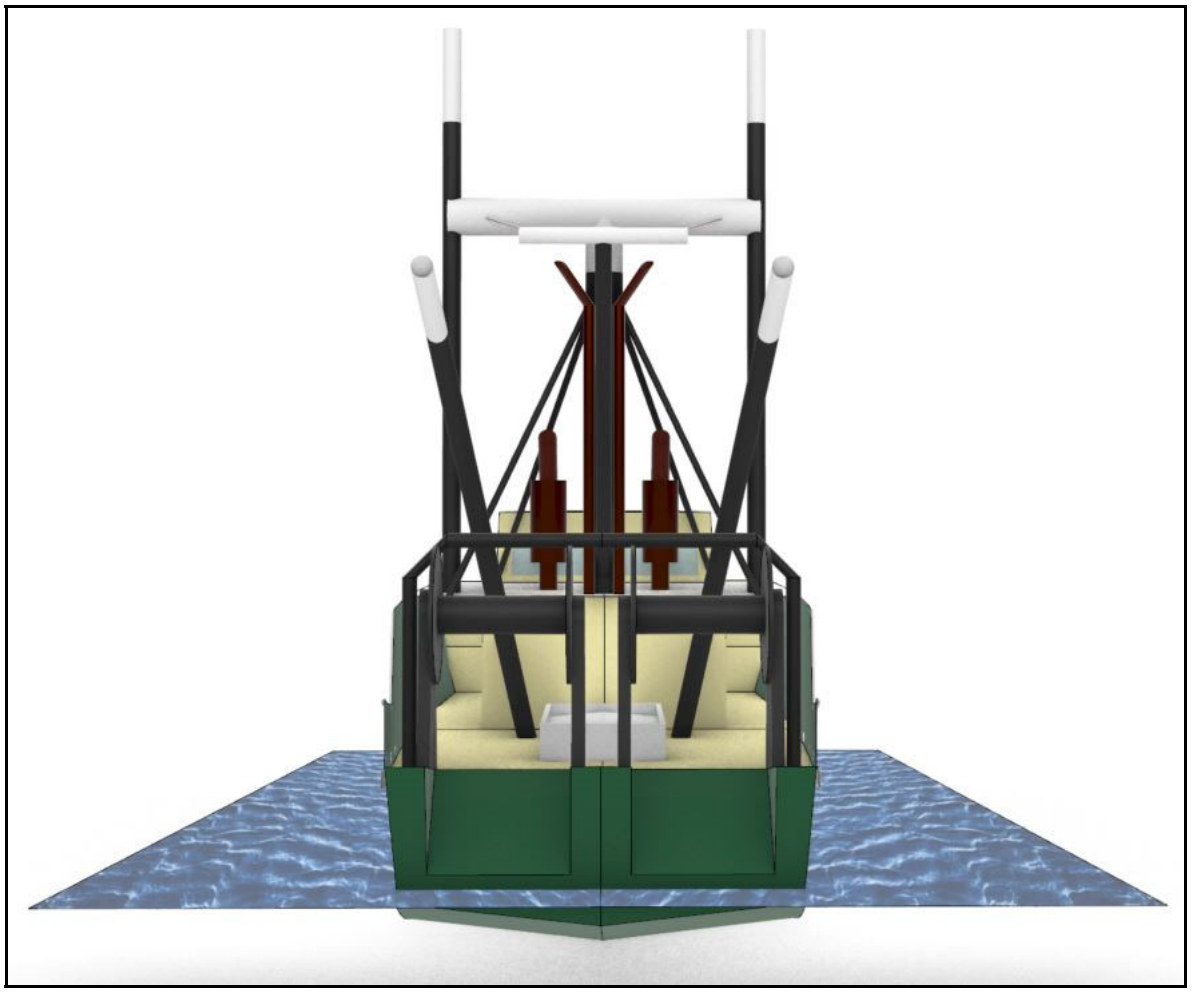
Rhinoceros 3-D Model of F/V EMMY ROSE

Port bow view of F/V EMMY ROSE model

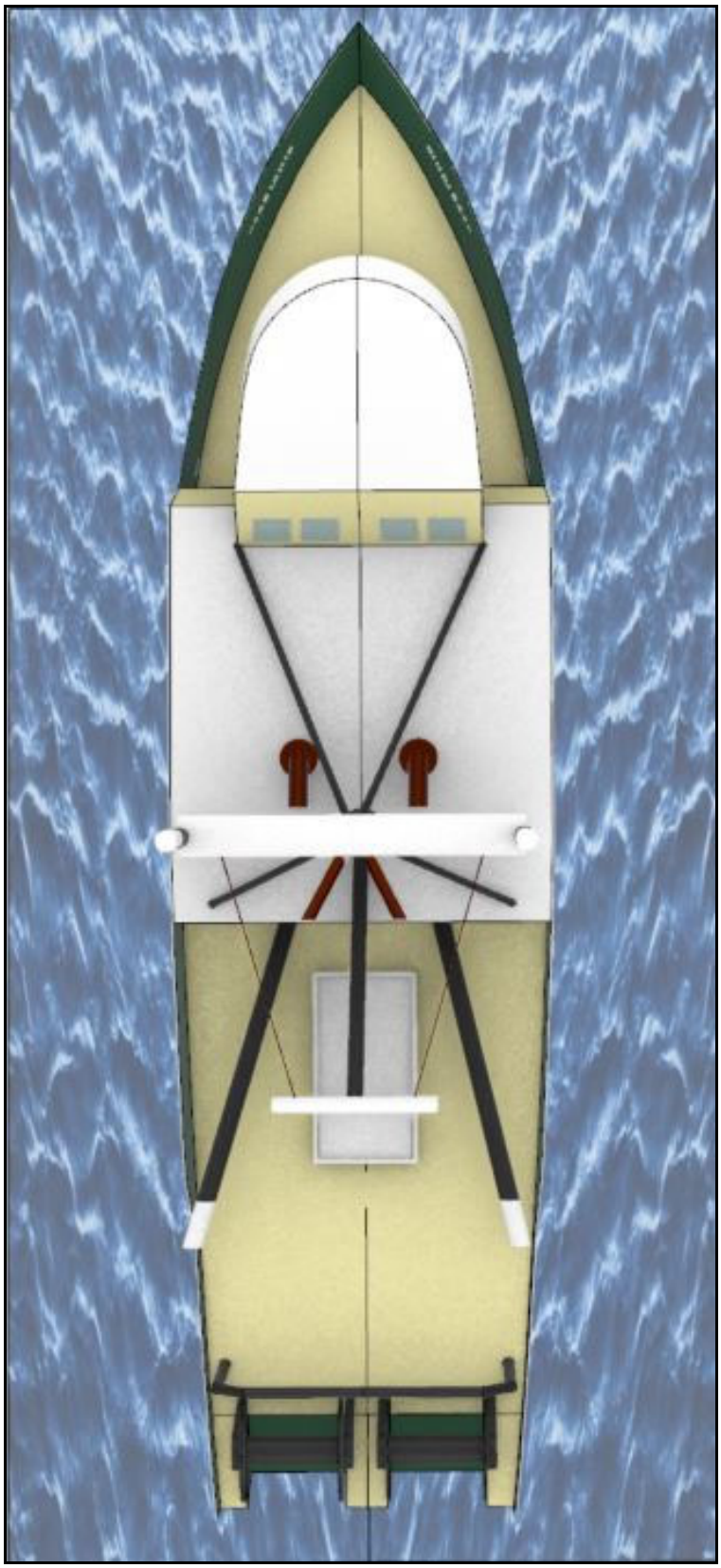
Port side view of F/V EMMY ROSE model

Encl: (2)



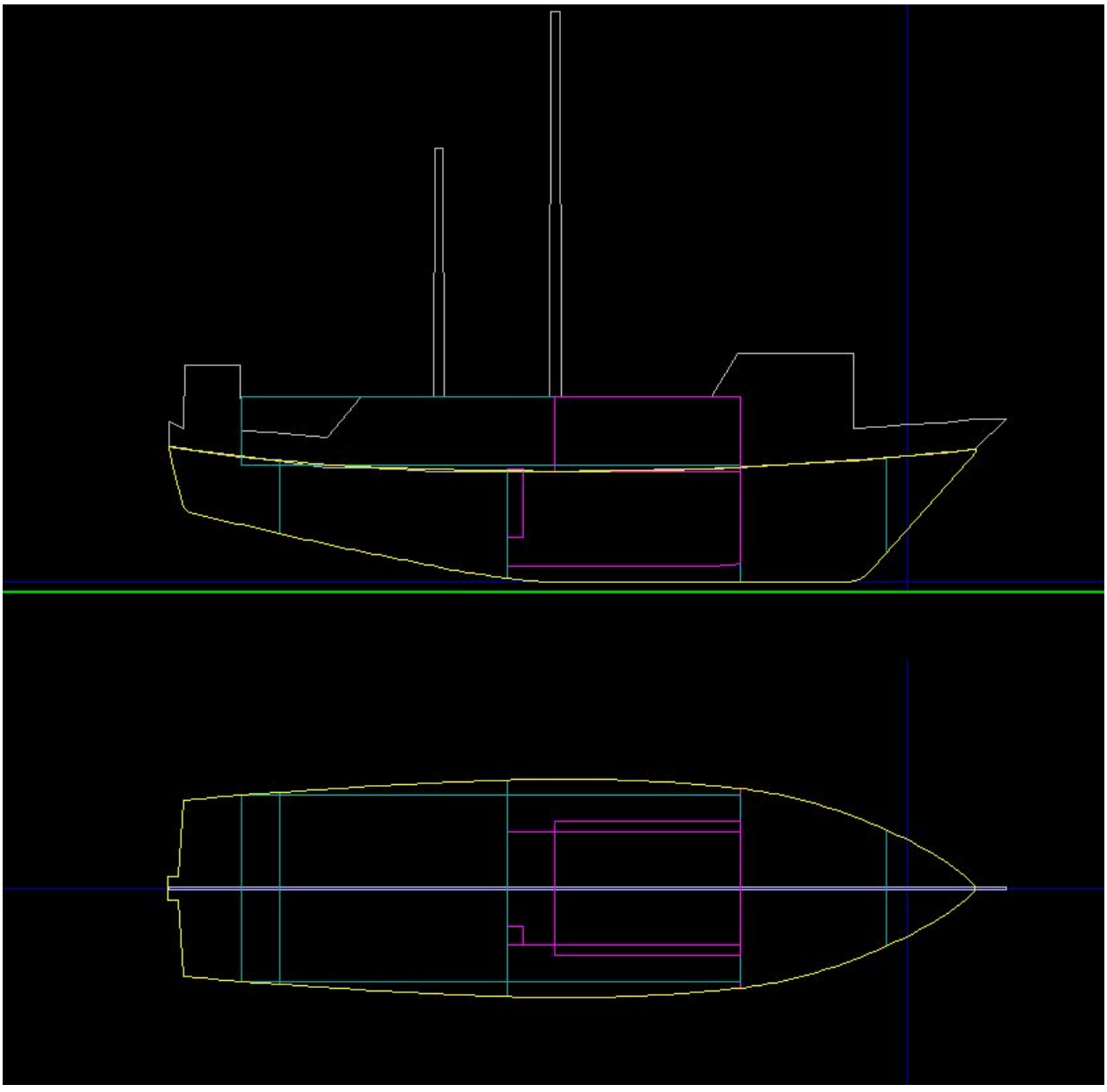
Stern view of F/V EMMY ROSE model

Starboard quarter view of F/V EMMY ROSE model

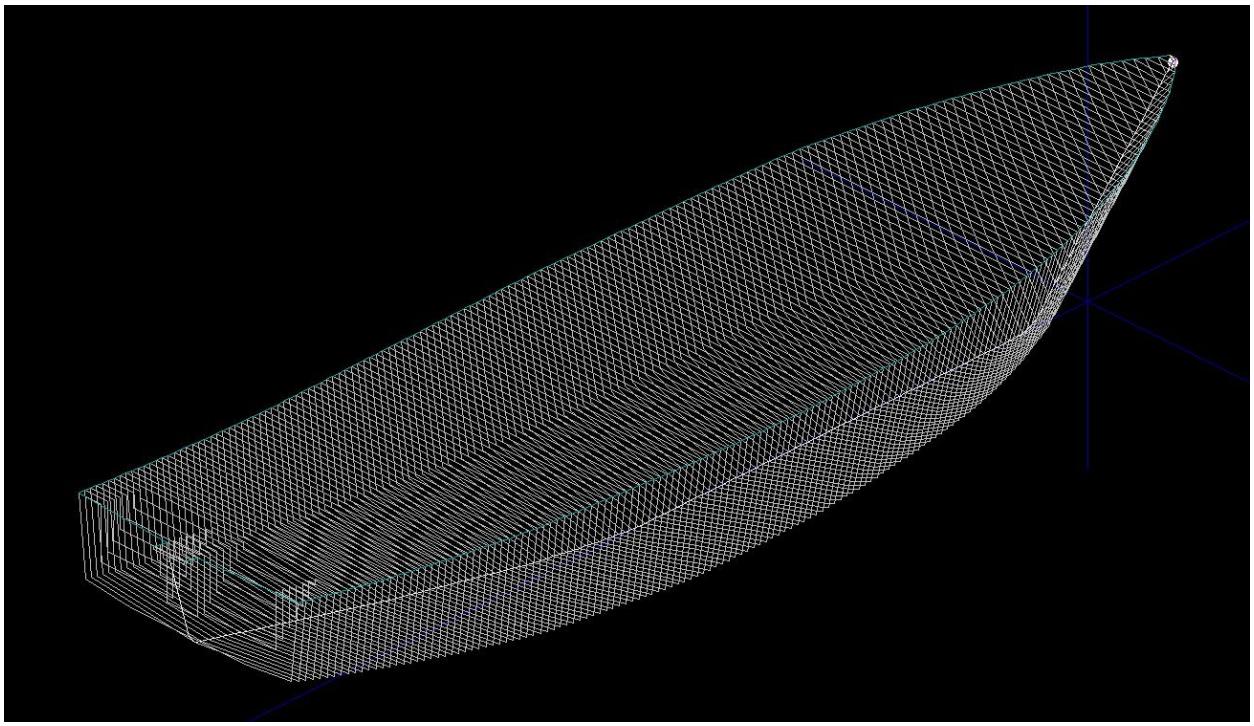


Top view of F/V EMMY ROSE model

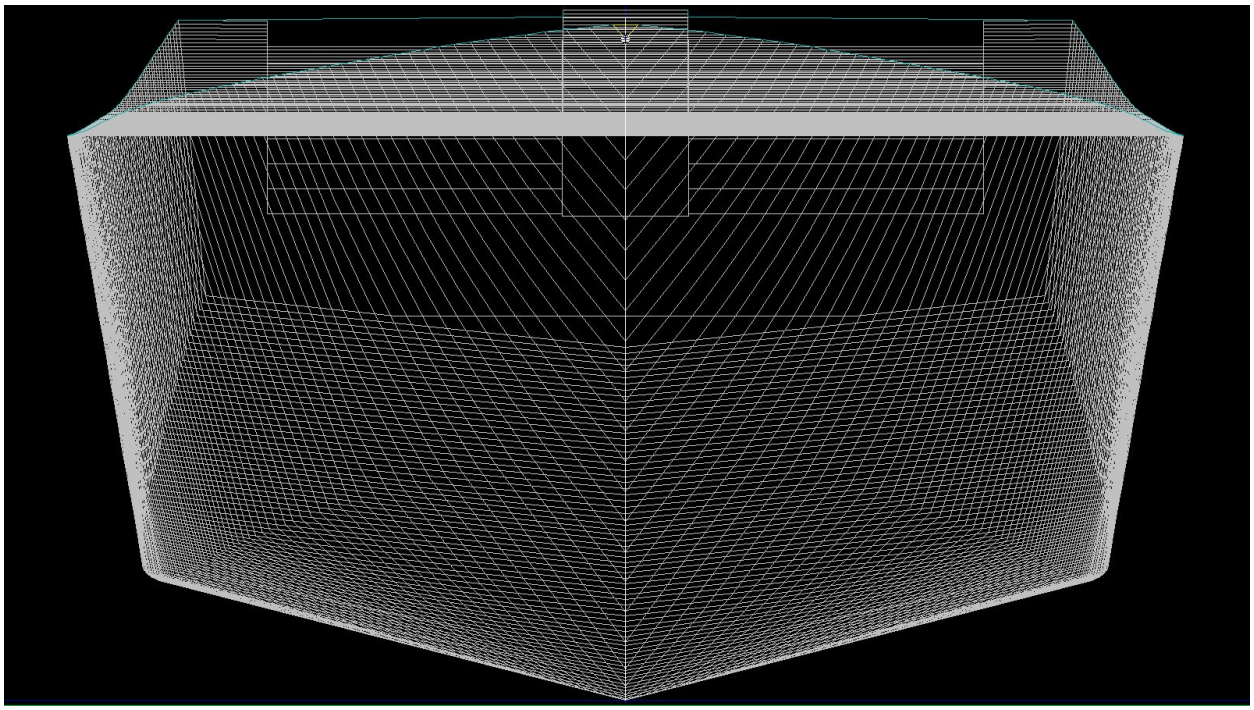
GHS Model of F/V EMMY ROSE



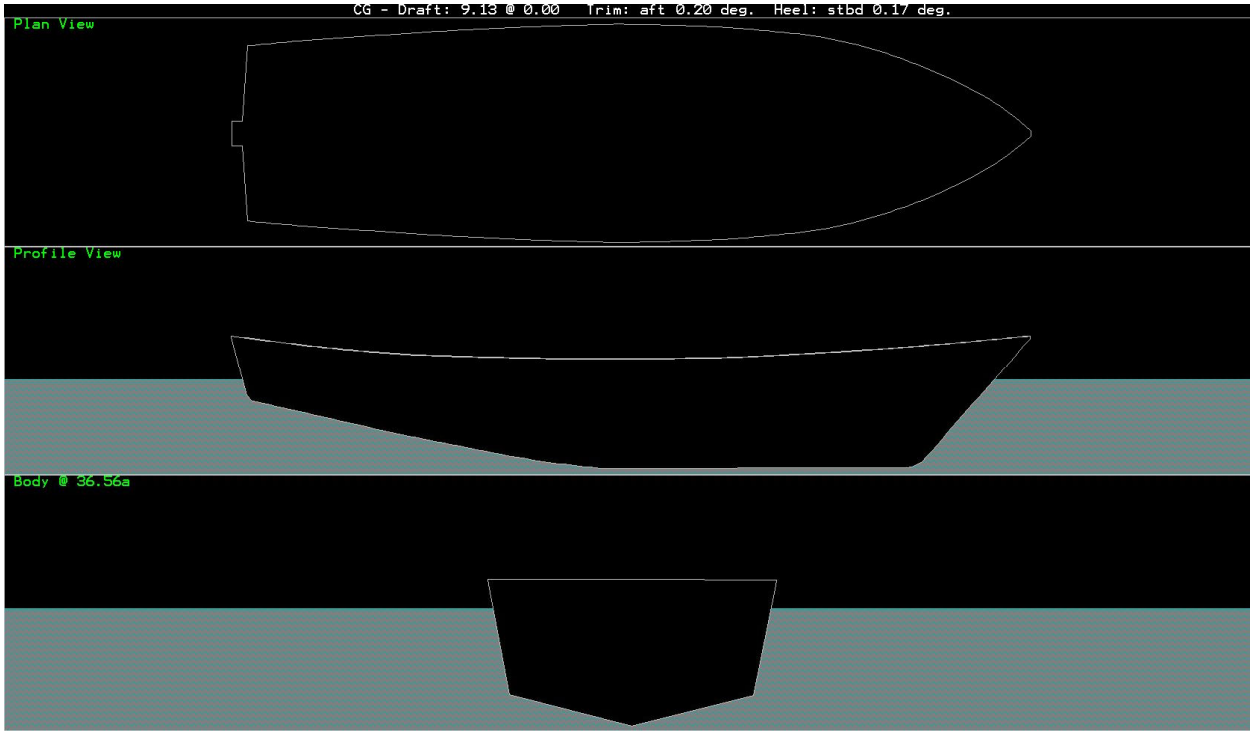
Profile and plan view of GHS model depicting hull, tanks, compartments, and sail area.



Isometric view from starboard quarter of hull displacer



Bow view of hull



Equilibrium condition for time of incident (TOI) load condition.

HYDROSTATIC PROPERTIES

Trim: Aft 0.01 deg., No Heel

Origin Depth	Displacement Weight(LT)	Center of Buoyancy LCB	TCB	VCB	WPA	LCF	BML	BMT
3.250	40.95	29.21a	0.00	2.18	841	32.03a	106.2	15.05
3.500	47.10	29.61a	0.00	2.33	879	32.58a	103.1	14.03
3.750	53.51	30.00a	0.00	2.49	915	33.13a	100.4	13.10
4.000	60.16	30.38a	0.00	2.64	949	33.65a	97.8	12.27
4.250	67.05	30.74a	0.00	2.80	980	34.14a	95.5	11.53
4.500	74.17	31.09a	0.00	2.95	1011	34.63a	93.6	10.89
4.750	81.50	31.43a	0.00	3.10	1041	35.10a	91.8	10.33
5.000	89.04	31.76a	0.00	3.25	1071	35.55a	90.4	9.83
5.250	96.80	32.08a	0.00	3.40	1100	35.98a	89.1	9.37
5.500	104.76	32.39a	0.00	3.55	1129	36.40a	88.0	8.96
5.750	112.93	32.70a	0.00	3.70	1157	36.81a	87.2	8.60
6.000	121.29	33.00a	0.00	3.85	1186	37.22a	86.5	8.26
6.250	129.87	33.29a	0.00	4.00	1214	37.62a	85.9	7.96
6.500	138.64	33.58a	0.00	4.15	1242	38.01a	85.5	7.68
6.750	147.61	33.86a	0.00	4.30	1270	38.40a	85.2	7.42
7.000	156.79	34.13a	0.00	4.46	1298	38.77a	84.9	7.19
7.250	166.16	34.41a	0.00	4.61	1325	39.14a	84.7	6.96
7.500	175.71	34.67a	0.00	4.76	1350	39.42a	84.0	6.76
7.750	185.43	34.93a	0.00	4.91	1371	39.62a	82.7	6.56
8.000	195.28	35.16a	0.00	5.06	1388	39.70a	80.8	6.37
8.250	205.23	35.38a	0.00	5.21	1400	39.68a	78.4	6.17
8.500	215.27	35.58a	0.00	5.36	1410	39.60a	75.8	5.97
8.750	225.37	35.76a	0.00	5.50	1420	39.52a	73.4	5.78
9.000	235.55	35.92a	0.00	5.65	1431	39.44a	71.3	5.61
9.250	245.81	36.06a	0.00	5.79	1441	39.36a	69.3	5.46
9.500	256.13	36.20a	0.00	5.94	1451	39.28a	67.4	5.31
9.750	266.54	36.31a	0.00	6.08	1462	39.20a	65.7	5.18
10.000	276.97	36.42a	0.00	6.23	1461	38.84a	62.6	5.03
10.250	287.44	36.50a	0.00	6.37	1471	38.74a	61.1	4.91
10.500	297.96	36.58a	0.00	6.51	1474	38.47a	58.8	4.79
10.750	308.52	36.64a	0.00	6.65	1483	38.37a	57.5	4.69
11.000	319.14	36.69a	0.00	6.79	1486	38.10a	55.5	4.58
11.250	329.78	36.74a	0.00	6.93	1496	38.00a	54.3	4.49
11.500	340.49	36.77a	0.00	7.07	1487	37.75a	52.5	4.36
11.750	347.93	36.82a	0.00	7.17	845	39.11a	47.7	2.09
12.000	353.02	36.85a	0.00	7.24	590	38.36a	40.7	1.30

Distances in FEET. Specific Gravity = 1.025.

Lightship Characteristics
USCG - MSC, Washington, D.C.
no title

LIGHTSHIP

DRAFTS used to establish Waterline and Deflection

Location	Given	Used	Error
76.50a	8.811	8.821	-0.010
66.50a	8.735	8.753	-0.018
56.50a	8.691	8.665	0.026
46.50a	8.585	8.558	0.027
36.50a	8.481	8.432	0.049
26.50a	8.209	8.286	-0.077
16.50a	8.075	8.121	-0.046
6.50a	7.988	7.937	0.051

Distances in FEET. Drafts from Baseline Deflection overall: 0.183 SAGGING

Deflection removed

HYDROSTATIC PROPERTIES

Trim: Aft 0.74 deg., Heel: Port 0.06 deg., VCG = 9.70

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.438	212.36	36.50a	5.32	3.34	39.91a	264.02	71.2	1.62

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.921 @ Origin
Trim: Aft 0.74 deg., Heel: Port 0.06 deg.

Part	Weight(LT)	LCG	TCG	VCG	FSM
LIGHT SHIP	181.77	38.69a	0.00	10.54	
WE1	1.76	65.05a	0.00	14.34	
WE2	1.76	60.81a	0.00	14.56	
3 PERSONS & GEAR	0.34	39.00a	0.00	10.00	
GALLEY TRASH	0.13	19.00a	0.00	13.76	
BERTH TRASH	0.09	24.00a	0.00	13.75	
WELDING EQUIP	0.34	56.33a	0.00	14.25	
ER BILGE WATER	0.50	34.00a	0.00	1.50	
FW	6.09	2.35f	0.00	10.87	
FUEL PORT	14.96	29.17a	0.00	5.73	
FUEL STBD	15.78	29.15a	0.00	5.90	
REFRIG 1	0.22	36.50a	0.00	9.70	
STOVE 1	0.22	36.50a	0.00	9.70	
BOAT SUPPLIES	-1.79	8.00a	0.00	7.50	
GALLEY EQUIP	-0.45	17.90a	0.00	14.56	
BERTH MISC	-0.22	23.83a	0.00	13.50	
PILOTHOUSE MISC	-0.16	9.96a	0.00	19.92	
TRAWL DOORS	-1.48	67.03a	0.00	15.70	
NETS ON DRUMS	-2.68	69.03a	0.00	19.25	
NETS ON DECK	-1.34	20.75a	0.00	13.79	
CABLES FOR WINCHES	-3.04	36.75a	0.00	14.89	
REFRIG 2	-0.22	30.00a	0.00	9.70	
STOVE 2	-0.22	40.00a	0.00	9.70	

Load	SpGr	Weight(LT)	LCG	TCG	VCG	
Total Weight		**212.37**	**36.44a**	**0.00**	**9.70**	
Total Tanks		**0.00**				**0.0**
		Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL	1.025	212.36	36.50a	0.01p	5.32	-7.92
Righting Arms:			0.00	0.00		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.921 @ Origin
Trim: Aft 0.74 deg., Heel: Port 0.06 deg.
Least freeboard is 3.08 Ft located at 41.27a

```
Baseline Draft @    0.00  =    7.921
Baseline Draft @   36.56a =    8.395
Baseline Draft @   76.00a =    8.906
```

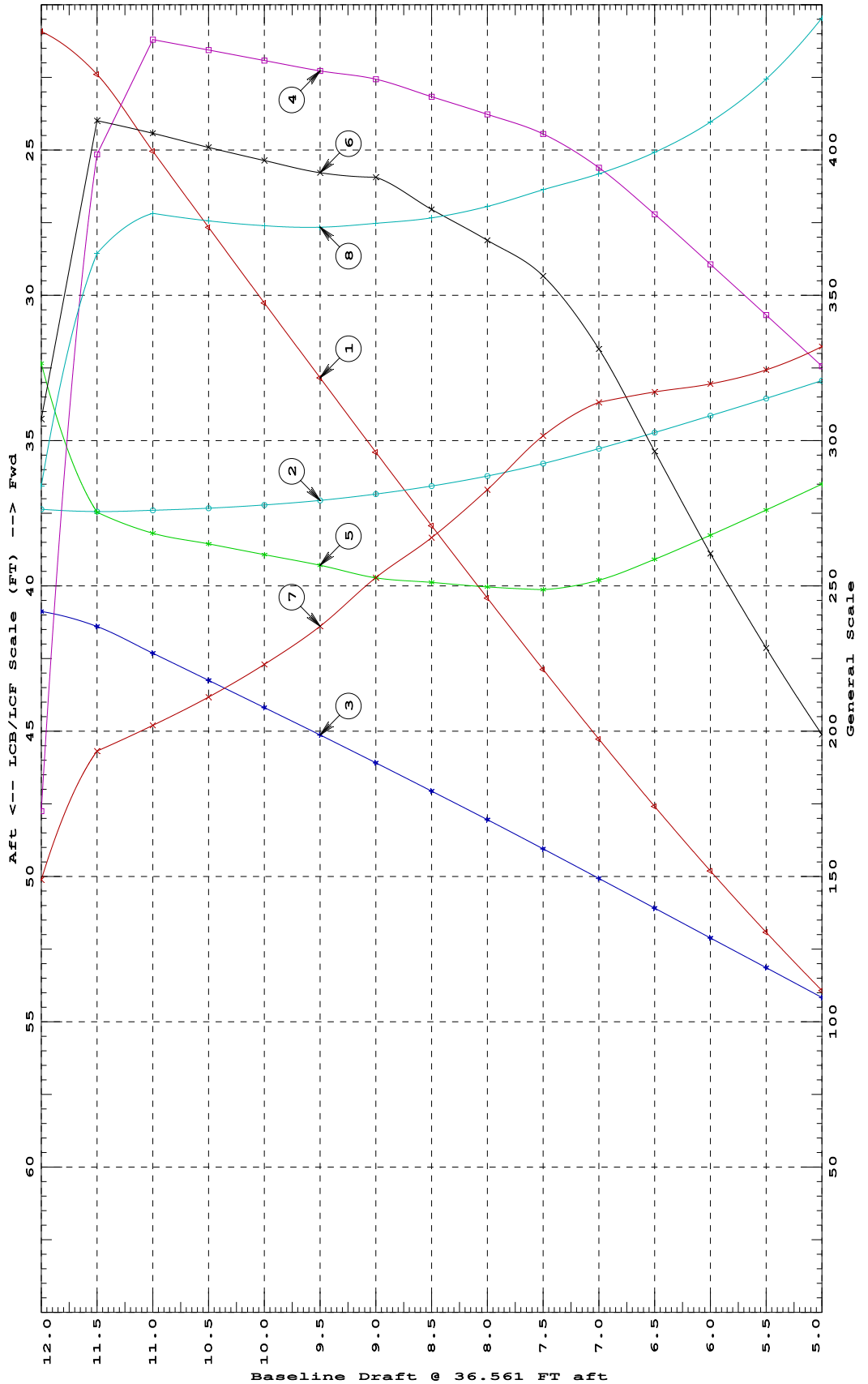
HYDROSTATIC PROPERTIES

Trim: Aft 0.74 deg., No Heel, Fixed VCG = 9.70

Draft@ 36.56a	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	KML	KMT
5.000	88.59	32.93a	3.25	2.60	36.49a	139.21	99.7	13.36
5.500	104.65	33.55a	3.56	2.75	37.39a	160.03	97.3	12.73
6.000	121.54	34.14a	3.87	2.89	38.25a	182.78	95.8	12.29
6.500	139.27	34.72a	4.17	3.02	39.08a	207.42	95.0	11.98
7.000	157.81	35.28a	4.48	3.15	39.80a	232.09	94.0	11.76
7.500	177.01	35.79a	4.79	3.24	40.13a	249.67	90.5	11.59
8.000	196.65	36.22a	5.09	3.30	40.04a	258.28	84.9	11.42
8.500	216.58	36.56a	5.38	3.35	39.88a	265.72	80.0	11.30
9.000	236.80	36.84a	5.67	3.40	39.72a	273.48	75.9	11.24
9.500	257.28	37.06a	5.96	3.42	39.29a	274.54	70.8	11.20
10.000	277.90	37.21a	6.24	3.45	38.92a	277.49	66.9	11.22
10.500	298.71	37.32a	6.53	3.48	38.56a	280.65	63.5	11.27
11.000	319.69	37.40a	6.80	3.50	38.19a	284.04	60.6	11.35
11.500	340.81	37.44a	7.08	3.19	37.46a	287.10	58.0	10.93
12.000	352.64	37.36a	7.24	1.38	32.34a	215.22	44.7	8.53

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline.

HYDROSTATIC PROPERTIES at 0.74 degrees AFT TRIM



(1) Displacement 1=.8 LT
(2) LCB (use top scale)
(3) VCB (KB) 1=.03 FT
(4) Immersion 1=.008 LT/IN
(4) WPA 1=3.36 Sq.FT
(5) LCF (use top scale)
(6) Moment/Trim 1=.7 FT-LT/Deg
(7) KML 1=.3 FT
(8) KMT 1=.03 FT

Specific Gravity = 1.025 Assumed KG = 9.70 FT
"K" = Base plane

LC0: LIGHTSHIP

HYDROSTATIC PROPERTIES

Trim: Aft 2.85 deg., No Heel, VCG = 10.55

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
7.694	181.77	38.97a	4.95	3.23	40.98a	242.47	76.4	1.04

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 5.651 @ Origin
Trim: Aft 2.85 deg., Heel: zero

Part	Weight(LT)	LCG	TCG	VCG	FSM
WEIGHT	181.77	38.69a	0.00	10.55	

Load	SpGr	Weight(LT)	LCG	TCG	VCG	
Total Tanks		**0.00**				**0.0**
		Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL	1.025	181.77	38.97a	0.00	4.95	-5.64
Righting Arms:			0.00	0.00		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 5.651 @ Origin
Trim: Aft 2.85 deg., Heel: zero
Least freeboard is 3.48 Ft located at 57.56a

```
Baseline Draft @    0.00  =    5.651
Baseline Draft @   36.56a =    7.474
Baseline Draft @   76.00a =    9.441
```

LC1: READY FOR SEA DEPARTURE

HYDROSTATIC PROPERTIES

Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg., VCG = 9.62

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.343	249.31	36.55a	5.84	3.43	39.47a	275.19	63.2	1.55

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.082 @ Origin
Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.50	19.25a	0.00	14.90
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	13.39	47.75a	0.00	6.99
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**197.24**	**39.10a**	**0.00**	**10.17**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.980	1.000	5.93	0.24f	0.00	10.56	1.7
FOS	0.980	0.870	22.80	30.14a	7.96s	7.12	7.1
FOP	0.980	0.870	22.80	30.14a	7.96p	7.12	7.1
HOT	0.980	0.947	0.52	40.59a	4.90s	8.13	0.0
Total Tanks			**52.06**	**26.78a**	**0.05s**	**7.52**	**15.9**
Total Weight			**249.30**	**36.52a**	**0.01s**	**9.62**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	249.31	36.55a	0.04s	5.84	-9.08
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.082 @ Origin
Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg.
Least freeboard is 2.11 Ft located at 36.38a

```
Baseline Draft @    0.00  =    9.082
Baseline Draft @   36.56a =    9.324
Baseline Draft @   76.00a =    9.585
```

LC2: ARRIVAL AT FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg., VCG = 9.63

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.111	239.68	37.06a	5.72	3.40	39.75a	269.16	64.3	1.52

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 8.489 @ Origin
Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg.

Part	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
LIGHT SHIP			181.77	38.69a	0.00	10.55	
4 CREW			0.33	36.50a	0.00	14.50	
CONSUMABLES			0.40	19.25a	0.00	14.93	
SPARE PARTS			1.25	14.00a	0.00	8.50	
ICE IN HOLD			11.38	47.75a	0.00	6.99	
CATCH ON DECK			2.00	54.00a	0.00	14.50	
PARAVANES UP			-1.99	34.50a	0.00	37.50	
PARAVANES DOWN			1.99	34.50a	0.00	23.50	
Total Fixed			**197.13**	**39.17a**	**0.00**	**10.25**	
FW	0.800	1.000	4.84	0.01a	0.01s	10.05	9.1
FOS	0.800	0.870	18.61	30.28a	7.87s	6.31	6.0
FOP	0.800	0.870	18.61	30.28a	7.87p	6.31	6.0
HOT	0.900	0.947	0.48	40.59a	4.90s	7.85	0.0
Total Tanks			**42.55**	**26.95a**	**0.06s**	**6.75**	**21.1**
Total Weight			**239.68**	**37.00a**	**0.01s**	**9.63**	
			Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL		1.025	239.68	37.06a	0.04s	5.72	-8.49
	Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.489 @ Origin
Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg.
Least freeboard is 2.33 Ft located at 41.81a

```
Baseline Draft @    0.00  =    8.489
Baseline Draft @   36.56a =    9.061
Baseline Draft @   76.00a =    9.679
```

LC3: 50% CATCH AT FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg., VCG = 9.49

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.250	245.47	36.31a	5.79	3.43	39.43a	275.64	64.3	1.68

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.102 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.30	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	9.38	47.75a	0.00	6.99
CATCH IN HOLD	17.86	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**212.89**	**37.79a**	**0.00**	**10.03**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.700	1.000	4.24	0.10a	0.01s	9.73	7.8
FOS	0.600	0.870	13.96	30.30a	7.76s	5.35	4.8
FOP	0.600	0.870	13.96	30.30a	7.76p	5.35	4.8
HOT	0.800	0.947	0.43	40.59a	4.90s	7.50	0.0
Total Tanks			**32.58**	**26.50a**	**0.07s**	**5.95**	**17.4**
Total Weight			**245.47**	**36.29a**	**0.01s**	**9.49**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	245.47	36.31a	0.03s	5.79	-9.10
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.102 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg.
Least freeboard is 2.21 Ft located at 36.38a

```
Baseline Draft @    0.00  =    9.102
Baseline Draft @   36.56a =    9.239
Baseline Draft @   76.00a =    9.387
```

LC4: 100% CATCH LEAVING FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg., VCG = 9.42

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.407	251.92	35.62a	5.88	3.45	39.12a	282.23	64.2	1.78

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.699 @ Origin
Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	8.04	47.75a	0.00	6.99
CATCH IN HOLD	35.71	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**229.30**	**36.63a**	**0.00**	**9.84**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.600	1.000	3.63	0.19a	0.01s	9.39	6.5
FOS	0.400	0.870	9.31	30.30a	7.63s	4.33	3.7
FOP	0.400	0.870	9.31	30.29a	7.63p	4.33	3.7
HOT	0.700	0.947	0.37	40.59a	4.90s	7.14	0.0
Total Tanks			**22.62**	**25.63a**	**0.08s**	**5.19**	**13.9**
Total Weight			**251.92**	**35.65a**	**0.01s**	**9.42**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	251.92	35.62a	0.02s	5.88	-9.70
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.699 @ Origin
Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg.
Least freeboard is 2.01 Ft located at 30.95a

```
Baseline Draft @    0.00  =    9.699
Baseline Draft @   36.56a =    9.426
Baseline Draft @   76.00a =    9.131
```

LC5: 40% CATCH LEAVING FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg., VCG = 9.61

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.886	230.50	36.85a	5.58	3.38	39.79a	266.92	66.3	1.58

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 8.323 @ Origin
Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	8.04	47.75a	0.00	6.99
CATCH IN HOLD	14.29	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**207.88**	**37.98a**	**0.00**	**10.10**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.600	1.000	3.63	0.22a	0.01s	9.39	6.5
FOS	0.400	0.870	9.31	30.56a	7.64s	4.33	3.7
FOP	0.400	0.870	9.31	30.55a	7.63p	4.33	3.7
HOT	0.700	0.947	0.37	40.59a	4.90s	7.14	0.0
Total Tanks			**22.62**	**25.85a**	**0.08s**	**5.19**	**13.9**
Total Weight			**230.50**	**36.79a**	**0.01s**	**9.61**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	230.50	36.85a	0.03s	5.58	-8.32
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.323 @ Origin
Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg.
Least freeboard is 2.58 Ft located at 41.81a

```
Baseline Draft @    0.00  =    8.323
Baseline Draft @   36.56a =    8.841
Baseline Draft @   76.00a =    9.399
```

LC6: ARRIVAL PORT - 100% CATCH

HYDROSTATIC PROPERTIES

Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg., VCG = 9.55

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.050	237.28	35.79a	5.67	3.41	39.37a	274.75	66.3	1.67

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.128 @ Origin
Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.10	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
CATCH IN HOLD	35.71	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**225.23**	**36.39a**	**0.00**	**9.82**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.46a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	30.54a	7.46s	3.22	2.7
FOP	0.200	0.870	4.65	30.53a	7.46p	3.22	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**24.76a**	**0.13s**	**4.39**	**9.4**
Total Weight			**237.28**	**35.80a**	**0.01s**	**9.55**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	237.28	35.79a	0.02s	5.67	-9.13
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.128 @ Origin
Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg.
Least freeboard is 2.40 Ft located at 34.75a

```
Baseline Draft @    0.00  =    9.128
Baseline Draft @   36.56a =    9.056
Baseline Draft @   76.00a =    8.978
```

LC7: ARRIVAL PORT - 40% CATCH

HYDROSTATIC PROPERTIES

Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg., VCG = 9.77

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.530	215.96	37.11a	5.38	3.34	40.05a	259.81	68.9	1.49

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.710 @ Origin
Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
CATCH IN HOLD	14.29	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**203.91**	**37.73a**	**0.00**	**10.08**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.48a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	31.01a	7.48s	3.23	2.7
FOP	0.200	0.870	4.65	31.00a	7.47p	3.23	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**25.13a**	**0.13s**	**4.39**	**9.5**
Total Weight			**215.96**	**37.02a**	**0.01s**	**9.77**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	215.96	37.11a	0.03s	5.38	-7.71
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.710 @ Origin
Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg.
Least freeboard is 2.93 Ft located at 43.98a

```
Baseline Draft @    0.00  =    7.710
Baseline Draft @   36.56a =    8.458
Baseline Draft @   76.00a =    9.266
```

LC8: ARRIVAL PORT - 0% CATCH

HYDROSTATIC PROPERTIES

Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg., VCG = 9.94

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.184	201.67	38.17a	5.21	3.29	40.52a	250.28	71.1	1.40

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 6.690 @ Origin
Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**189.62**	**38.79a**	**0.00**	**10.29**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.50a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	31.35a	7.49s	3.24	2.7
FOP	0.200	0.870	4.65	31.34a	7.49p	3.24	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**25.40a**	**0.13s**	**4.40**	**9.5**
Total Weight			**201.67**	**37.99a**	**0.01s**	**9.94**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	201.67	38.17a	0.03s	5.21	-6.69
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 6.690 @ Origin
Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg.
Least freeboard is 3.13 Ft located at 54.84a

```
Baseline Draft @    0.00  =    6.690
Baseline Draft @   36.56a =    8.038
Baseline Draft @   76.00a =    9.491
```

LC9: TIME OF INCIDENT

HYDROSTATIC PROPERTIES

Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg., VCG = 9.42

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.269	246.27	36.30a	5.80	3.43	39.42a	276.53	64.3	1.76

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.131 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.36a	7.70s	4.85	4.2
FOP	0.500	0.870	11.63	30.36a	7.70p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.04a**	**0.05s**	**5.34**	**13.7**
Total Weight			**246.27**	**36.29a**	**0.01s**	**9.42**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.27	36.30a	0.02s	5.80	-9.13
Righting Arms:			0.00	0.00		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.131 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg.
Least freeboard is 2.22 Ft located at 36.38a

```
Baseline Draft @    0.00  =    9.131
Baseline Draft @   36.56a =    9.259
Baseline Draft @   76.00a =    9.397
```

LC10: TIME OF INCIDENT - FUEL TRANSFER (1/4 TANK DIFF)

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg., VCG = 9.44

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.258	246.26	36.30a	5.83	3.44	39.36a	276.71	64.4	1.85

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.113 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.19s	9.02	5.3
FOS	0.625	0.870	14.54	30.31a	7.81s	5.48	5.2
FOP	0.375	0.870	8.72	30.41a	7.57p	4.20	3.5
HOT	0.500	0.947	0.27	40.59a	4.91s	6.43	0.0
Total Tanks			**26.56**	**27.03a**	**1.86s**	**5.47**	**14.1**
Total Weight			**246.27**	**36.29a**	**0.20s**	**9.44**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.26	36.30a	0.60s	5.83	-9.06
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.113 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg.
Least freeboard is 1.01 Ft located at 36.38a

```
Baseline Draft @    0.00  =    9.113
Baseline Draft @   36.56a =    9.247
Baseline Draft @   76.00a =    9.392
```

LC11: TIME OF INCIDENT - FUEL TRANSFER (1/2 TANK DIFF)

HYDROSTATIC PROPERTIES

Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg., VCG = 9.48

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.228	246.27	36.30a	5.92	3.47	39.20a	277.31	64.5	1.99

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.065 @ Origin
Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.34a	0.37s	9.04	5.7
FOS	0.750	0.870	17.45	30.26a	7.91s	6.08	6.5
FOP	0.250	0.870	5.82	30.47a	7.41p	3.52	2.9
HOT	0.500	0.947	0.27	40.59a	4.92s	6.43	0.0
Total Tanks			**26.56**	**27.00a**	**3.67s**	**5.86**	**15.1**
Total Weight			**246.27**	**36.28a**	**0.40s**	**9.48**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.27	36.30a	1.15s	5.92	-8.87
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.065 @ Origin
Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg.
Least freeboard is -0.11 Ft located at 36.38a

```
Baseline Draft @    0.00  =    9.065
Baseline Draft @   36.56a =    9.217
Baseline Draft @   76.00a =    9.381
```

LC12: TIME OF INCIDENT - BIRDS DEPLOYED

HYDROSTATIC PROPERTIES

Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg., VCG = 9.43

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.271	246.36	36.30a	5.80	3.43	39.42a	276.61	64.3	1.75

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.134 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
STBD PARAVANE WIRE DIFF	0.10	34.50a	46.50s	35.25
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.80**	**37.40a**	**0.02s**	**9.93**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.02s	9.01	5.2
FOS	0.500	0.870	11.63	30.36a	7.70s	4.85	4.3
FOP	0.500	0.870	11.63	30.35a	7.69p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.04a**	**0.06s**	**5.34**	**13.7**
Total Weight			**246.36**	**36.29a**	**0.02s**	**9.43**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.36	36.30a	0.07s	5.80	-9.13
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.134 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg.
Least freeboard is 2.10 Ft located at 36.38a

```
Baseline Draft @    0.00  =    9.134
Baseline Draft @   36.56a =    9.261
Baseline Draft @   76.00a =    9.399
```

LC0: LIGHTSHIP

HYDROSTATIC PROPERTIES

Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg., VCG = 9.89

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.342	208.32	37.35a	5.28	3.31	40.21a	254.81	70.1	1.38

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.338 @ Origin
Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg.

Part	Weight(LT)	LCG	TCG	VCG
FIXED WEIGHT	181.77	38.69a	0.00	10.55

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.35a	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.57a	7.71s	4.86	4.3
FOP	0.500	0.870	11.63	30.57a	7.70p	4.86	4.3
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.23a**	**0.05s**	**5.34**	**13.8**
Total Weight			**208.33**	**37.23a**	**0.01s**	**9.89**	
			Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL		1.025	208.32	37.35a	0.03s	5.28	-7.34
Righting Arms:				0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.338 @ Origin
Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg.
Least freeboard is 3.10 Ft located at 46.70a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max	Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**> 1.000**	**6.770 P**

Relative angles measured from 12.106s

LC1: READY FOR SEA DEPARTURE

HYDROSTATIC PROPERTIES

Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg., VCG = 9.62

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.343	249.30	36.55a	5.84	3.43	39.47a	275.18	63.2	1.55

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.082 @ Origin
Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.50	19.25a	0.00	14.90
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	13.39	47.75a	0.00	6.99
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**197.24**	**39.10a**	**0.00**	**10.17**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.980	1.000	5.93	0.24f	0.00	10.56	1.7
FOS	0.980	0.870	22.80	30.14a	7.96s	7.12	7.1
FOP	0.980	0.870	22.80	30.14a	7.96p	7.12	7.1
HOT	0.980	0.947	0.52	40.59a	4.90s	8.13	0.0
Total Tanks			**52.06**	**26.78a**	**0.05s**	**7.52**	**15.9**
Total Weight			**249.30**	**36.52a**	**0.01s**	**9.62**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	249.30	36.55a	0.04s	5.84	-9.08
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.082 @ Origin
Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg.
Least freeboard is 2.11 Ft located at 36.38a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max	Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**> 1.000**	**2.495 P**

Relative angles measured from 11.514s

LC2: ARRIVAL AT FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg., VCG = 9.63

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.111	239.68	37.06a	5.72	3.40	39.75a	269.16	64.3	1.52

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 8.489 @ Origin
Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg.

Part	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
LIGHT SHIP			181.77	38.69a	0.00	10.55	
4 CREW			0.33	36.50a	0.00	14.50	
CONSUMABLES			0.40	19.25a	0.00	14.93	
SPARE PARTS			1.25	14.00a	0.00	8.50	
ICE IN HOLD			11.38	47.75a	0.00	6.99	
CATCH ON DECK			2.00	54.00a	0.00	14.50	
PARAVANES UP			-1.99	34.50a	0.00	37.50	
PARAVANES DOWN			1.99	34.50a	0.00	23.50	
Total Fixed			**197.13**	**39.17a**	**0.00**	**10.25**	
FW	0.800	1.000	4.84	0.01a	0.01s	10.05	9.1
FOS	0.800	0.870	18.61	30.28a	7.87s	6.31	6.0
FOP	0.800	0.870	18.61	30.28a	7.87p	6.31	6.0
HOT	0.900	0.947	0.48	40.59a	4.90s	7.85	0.0
Total Tanks			**42.55**	**26.95a**	**0.06s**	**6.75**	**21.1**
Total Weight			**239.68**	**37.00a**	**0.01s**	**9.63**	
			Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL		1.025	239.68	37.06a	0.04s	5.72	-8.49
	Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.489 @ Origin
Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg.
Least freeboard is 2.33 Ft located at 41.81a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max	Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**> 1.000**	**4.445 P**

Relative angles measured from 11.369s

LC3: 50% CATCH AT FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg., VCG = 9.49

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.250	245.47	36.31a	5.79	3.43	39.43a	275.64	64.3	1.68

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.102 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.30	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	9.38	47.75a	0.00	6.99
CATCH IN HOLD	17.86	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**212.89**	**37.79a**	**0.00**	**10.03**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.700	1.000	4.24	0.10a	0.01s	9.73	7.8
FOS	0.600	0.870	13.96	30.30a	7.76s	5.35	4.8
FOP	0.600	0.870	13.96	30.30a	7.76p	5.35	4.8
HOT	0.800	0.947	0.43	40.59a	4.90s	7.50	0.0
Total Tanks			**32.58**	**26.50a**	**0.07s**	**5.95**	**17.4**
Total Weight			**245.47**	**36.29a**	**0.01s**	**9.49**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	245.47	36.31a	0.03s	5.79	-9.10
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.102 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg.
Least freeboard is 2.21 Ft located at 36.38a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max	Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**> 1.000**	**5.270 P**

Relative angles measured from 11.459s

LC4: 100% CATCH LEAVING FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg., VCG = 9.42

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.407	251.92	35.62a	5.88	3.45	39.12a	282.23	64.2	1.78

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.699 @ Origin
Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	8.04	47.75a	0.00	6.99
CATCH IN HOLD	35.71	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**229.30**	**36.63a**	**0.00**	**9.84**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.600	1.000	3.63	0.19a	0.01s	9.39	6.5
FOS	0.400	0.870	9.31	30.30a	7.63s	4.33	3.7
FOP	0.400	0.870	9.31	30.29a	7.63p	4.33	3.7
HOT	0.700	0.947	0.37	40.59a	4.90s	7.14	0.0
Total Tanks			**22.62**	**25.63a**	**0.08s**	**5.19**	**13.9**
Total Weight			**251.92**	**35.65a**	**0.01s**	**9.42**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	251.92	35.62a	0.02s	5.88	-9.70
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.699 @ Origin
Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg.
Least freeboard is 2.01 Ft located at 30.95a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max		Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**>**	**1.000**	**3.915 P**

Relative angles measured from 11.854s

LC5: 40% CATCH LEAVING FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg., VCG = 9.61

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.886	230.50	36.85a	5.58	3.38	39.79a	266.92	66.3	1.58

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 8.323 @ Origin
Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	8.04	47.75a	0.00	6.99
CATCH IN HOLD	14.29	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**207.88**	**37.98a**	**0.00**	**10.10**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.600	1.000	3.63	0.22a	0.01s	9.39	6.5
FOS	0.400	0.870	9.31	30.56a	7.64s	4.33	3.7
FOP	0.400	0.870	9.31	30.55a	7.63p	4.33	3.7
HOT	0.700	0.947	0.37	40.59a	4.90s	7.14	0.0
Total Tanks			**22.62**	**25.85a**	**0.08s**	**5.19**	**13.9**
Total Weight			**230.50**	**36.79a**	**0.01s**	**9.61**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	230.50	36.85a	0.03s	5.58	-8.32
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.323 @ Origin
Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg.
Least freeboard is 2.58 Ft located at 41.81a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max	Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**> 1.000**	**6.540 P**

Relative angles measured from 11.729s

LC6: ARRIVAL PORT - 100% CATCH

HYDROSTATIC PROPERTIES

Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg., VCG = 9.55

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.050	237.28	35.79a	5.67	3.41	39.37a	274.75	66.3	1.67

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.128 @ Origin
Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.10	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
CATCH IN HOLD	35.71	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**225.23**	**36.39a**	**0.00**	**9.82**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.46a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	30.54a	7.46s	3.22	2.7
FOP	0.200	0.870	4.65	30.53a	7.46p	3.22	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**24.76a**	**0.13s**	**4.39**	**9.4**
Total Weight			**237.28**	**35.80a**	**0.01s**	**9.55**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	237.28	35.79a	0.02s	5.67	-9.13
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.128 @ Origin
Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg.
Least freeboard is 2.40 Ft located at 34.75a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max	Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**> 1.000**	**3.919 P**

Relative angles measured from 12.644s

LC7: ARRIVAL PORT - 40% CATCH

HYDROSTATIC PROPERTIES

Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg., VCG = 9.77

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.530	215.96	37.11a	5.38	3.34	40.05a	259.81	68.9	1.49

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.710 @ Origin
Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
CATCH IN HOLD	14.29	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**203.91**	**37.73a**	**0.00**	**10.08**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.48a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	31.01a	7.48s	3.23	2.7
FOP	0.200	0.870	4.65	31.00a	7.47p	3.23	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**25.13a**	**0.13s**	**4.39**	**9.5**
Total Weight			**215.96**	**37.02a**	**0.01s**	**9.77**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	215.96	37.11a	0.03s	5.38	-7.71
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.710 @ Origin
Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg.
Least freeboard is 2.93 Ft located at 43.98a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max	Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**> 1.000**	**5.934 P**

Relative angles measured from 12.473s

LC8: ARRIVAL PORT - 0% CATCH

HYDROSTATIC PROPERTIES

Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg., VCG = 9.94

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.184	201.67	38.17a	5.21	3.29	40.52a	250.28	71.1	1.40

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 6.690 @ Origin
Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**189.62**	**38.79a**	**0.00**	**10.29**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.50a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	31.35a	7.49s	3.24	2.7
FOP	0.200	0.870	4.65	31.34a	7.49p	3.24	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**25.40a**	**0.13s**	**4.40**	**9.5**
Total Weight			**201.67**	**37.99a**	**0.01s**	**9.94**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	201.67	38.17a	0.03s	5.21	-6.69
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 6.690 @ Origin
Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg.
Least freeboard is 3.13 Ft located at 54.84a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max	Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**> 1.000**	**7.522 P**

Relative angles measured from 12.239s

LC9: TIME OF INCIDENT

HYDROSTATIC PROPERTIES

Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg., VCG = 9.42

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.269	246.27	36.30a	5.80	3.43	39.42a	276.53	64.3	1.76

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.131 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.36a	7.70s	4.85	4.2
FOP	0.500	0.870	11.63	30.36a	7.70p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.04a**	**0.05s**	**5.34**	**13.7**
Total Weight			**246.27**	**36.29a**	**0.01s**	**9.42**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.27	36.30a	0.02s	5.80	-9.13
Righting Arms:			0.00	0.00		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.131 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg.
Least freeboard is 2.22 Ft located at 36.38a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max	Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**> 1.000**	**7.481 P**

Relative angles measured from 11.190s

LC10: VESSEL FAILED 28.565 WATER ON DECK IN LOAD CONDITION 10

LC11: VESSEL FAILED 28.565 WATER ON DECK IN LOAD CONDITION 11

LC12: TIME OF INCIDENT - BIRDS DEPLOYED

HYDROSTATIC PROPERTIES

Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg., VCG = 9.43

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.271	246.37	36.30a	5.80	3.43	39.42a	276.61	64.3	1.75

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.134 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
STBD PARAVANE WIRE DIFF	0.10	34.50a	46.50s	35.25
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.80**	**37.40a**	**0.02s**	**9.93**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.02s	9.01	5.2
FOS	0.500	0.870	11.63	30.36a	7.70s	4.85	4.3
FOP	0.500	0.870	11.63	30.35a	7.69p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.04a**	**0.06s**	**5.34**	**13.7**
Total Weight			**246.36**	**36.29a**	**0.02s**	**9.43**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.37	36.30a	0.07s	5.80	-9.13
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.134 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg.
Least freeboard is 2.09 Ft located at 36.38a

LIM	46CFR28.565_WATER_ON_DECK CRITERION	Min/Max	Attained
(1)	**Res. Area Ratio from abs 0 deg to 40 or Flood**	**> 1.000**	**5.157 P**

Relative angles measured from 11.508s

LC0: LIGHTSHIP

HYDROSTATIC PROPERTIES

Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg., VCG = 9.89

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.342	208.32	37.35a	5.28	3.31	40.21a	254.81	70.1	1.38

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.338 @ Origin
Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg.

Part			Weight(LT)	LCG	TCG	VCG	
FIXED WEIGHT			181.77	38.69a	0.00	10.55	
	Load	**SpGr**	**Weight(LT)**	**LCG**	**TCG**	**VCG**	**FSM**
FW	0.500	1.000	3.03	0.35a	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.57a	7.71s	4.86	4.3
FOP	0.500	0.870	11.63	30.57a	7.70p	4.86	4.3
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.23a**	**0.05s**	**5.34**	**13.8**
Total Weight			**208.33**	**37.23a**	**0.01s**	**9.89**	
			Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL		1.025	208.32	37.35a	0.03s	5.28	-7.34
	Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.338 @ Origin
Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg.
Least freeboard is 3.10 Ft located at 46.70a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 37.23a TCG = 0.01s VCG = 9.89
Free Surface Adjustment: 0.07
Adjusted CG: LCG = 37.23a TCG = 0.01s VCG = 9.95

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height
7.337	1.43a	0.00	208.32	0.00	-0.006	0.00	8.22 (3)
7.337	1.43a	0.26s	208.32	0.00	0.000	-0.00	4.66 (5)
7.294	1.43a	5.26s	208.32	0.00	0.122	0.30	8.60 (3)
7.174	1.43a	10.26s	208.32	0.00	0.255	1.24	8.92 (3)
6.981	1.42a	15.26s	208.33	0.00	0.407	2.89	9.18 (3)
6.735	1.40a	20.26s	208.33	0.00	0.551	5.29	9.38 (3)
6.472	1.38a	25.26s	208.32	0.00	0.601	8.21	9.46 (3)
6.205	1.38a	30.00s	208.33	0.00	0.562	11.00	9.45 (3)
6.189	1.38a	30.26s	208.33	0.00	0.557	11.14	9.45 (3)
5.869	1.41a	35.26s	208.33	0.00	0.425	13.63	9.34 (3)
5.529	1.43a	40.00s	208.33	0.00	0.235	15.22	9.17 (3)
5.509	1.43a	40.26s	208.33	0.00	0.223	15.28	9.16 (3)
5.151	1.45a	44.81s	208.33	0.00	0.000	15.80	8.93 (3)
5.114	1.45a	45.26s	208.33	0.00	-0.024	15.80	8.90 (3)
4.688	1.46a	50.26s	208.33	0.00	-0.300	15.00	8.57 (3)

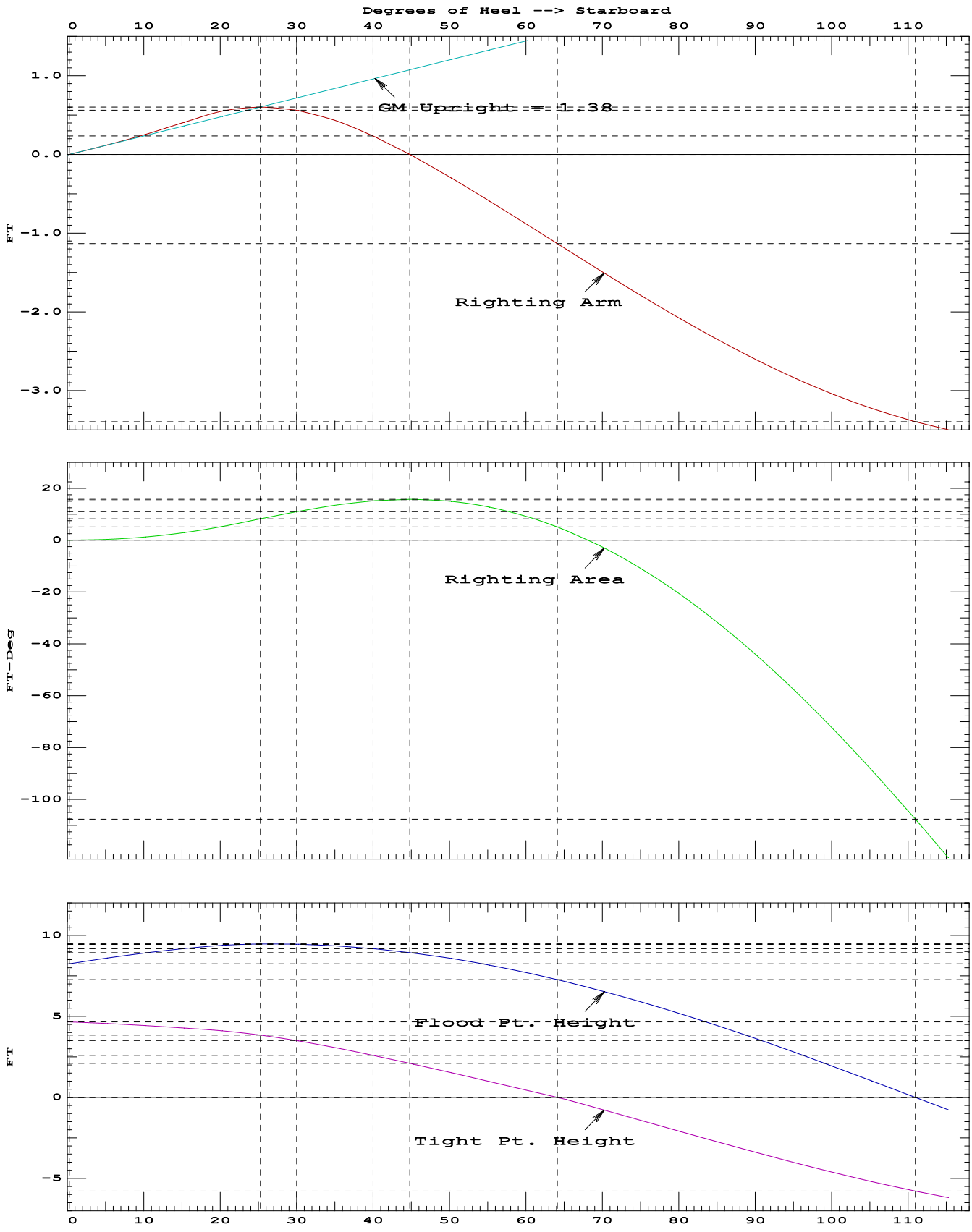
4.237	1.45a	55.26s	208.33	0.00	-0.594	12.78	8.16 (3)
3.764	1.42a	60.26s	208.33	0.00	-0.898	9.05	7.68 (3)
3.389	1.37a	64.10s	208.33	0.00	-1.132	5.15	0.00 (5)
3.274	1.36a	65.26s	208.33	0.00	-1.203	3.80	7.13 (3)
2.766	1.29a	70.26s	208.33	0.00	-1.507	-2.98	6.52 (3)
2.241	1.20a	75.26s	208.33	0.00	-1.804	-11.26	5.86 (3)
1.705	1.11a	80.26s	208.33	0.00	-2.090	-21.00	5.15 (3)
1.156	1.02a	85.26s	208.33	0.00	-2.360	-32.13	4.40 (3)
0.605	0.93a	90.26s	208.33	0.00	-2.613	-44.57	3.60 (3)
0.065	0.81a	95.26s	208.33	0.00	-2.844	-58.23	2.77 (3)
-0.460	0.68a	100.26s	208.33	0.00	-3.048	-72.97	1.90 (3)
-0.982	0.54a	105.26s	208.33	0.00	-3.226	-88.66	1.01 (3)
-1.500	0.40a	110.26s	208.33	0.00	-3.377	-105.18	0.12 (3)
-1.571	0.38a	110.95s	208.33	0.00	-3.395	-107.51	0.00 (3)
-2.010	0.25a	115.26s	208.33	0.00	-3.497	-122.38	*-0.76* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 13.8 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.38 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.56 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	25.26 P
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*15.22 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	11.00 P
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*4.23 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*44.81 F*


Degrees of Heel --> Starboard
0 10 20 30 40 50 60 70 80 90 100 110
FT
1.0
0.0
-1.0
-2.0
-3.0
GM Upright = 1.38
Righting Arm
FT-Deg
20
0
-20
-40
-60
-80
-100
Righting Area
FT
10
5
0
-5
Flood Pt. Height
Tight Pt. Height

LC1: READY FOR SEA DEPARTURE

HYDROSTATIC PROPERTIES

Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg., VCG = 9.62

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.343	249.30	36.55a	5.84	3.43	39.47a	275.18	63.2	1.55

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.082 @ Origin
Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg.

Part	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
LIGHT SHIP			181.77	38.69a	0.00	10.55	
4 CREW			0.33	36.50a	0.00	14.50	
CONSUMABLES			0.50	19.25a	0.00	14.90	
SPARE PARTS			1.25	14.00a	0.00	8.50	
ICE IN HOLD			13.39	47.75a	0.00	6.99	
PARAVANES UP			-1.99	34.50a	0.00	37.50	
PARAVANES DOWN			1.99	34.50a	0.00	23.50	
Total Fixed			**197.24**	**39.10a**	**0.00**	**10.17**	
	Load	**SpGr**	**Weight(LT)**	**LCG**	**TCG**	**VCG**	**FSM**
FW	0.980	1.000	5.93	0.24f	0.00	10.56	1.7
FOS	0.980	0.870	22.80	30.14a	7.96s	7.12	7.1
FOP	0.980	0.870	22.80	30.14a	7.96p	7.12	7.1
HOT	0.980	0.947	0.52	40.59a	4.90s	8.13	0.0
Total Tanks			**52.06**	**26.78a**	**0.05s**	**7.52**	**15.9**
Total Weight			**249.30**	**36.52a**	**0.01s**	**9.62**	
			Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL		1.025	249.30	36.55a	0.04s	5.84	-9.08
	Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.082 @ Origin
Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg.
Least freeboard is 2.11 Ft located at 36.38a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 36.52a TCG = 0.01s VCG = 9.62
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.52a TCG = 0.01s VCG = 9.68

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height	
9.082	0.38a	0.00	249.30	0.00	-0.010	0.00	6.62	(3)
9.082	0.38a	0.38s	249.30	0.00	0.000	-0.00	4.25	(5)
9.028	0.39a	5.38s	249.30	0.00	0.137	0.34	7.01	(3)
8.881	0.41a	10.38s	249.30	0.00	0.284	1.39	7.35	(3)
8.670	0.43a	15.38s	249.30	0.00	0.408	3.13	7.63	(3)
8.513	0.45a	19.07s	249.30	0.00	0.433	4.70	7.75	(3)
8.457	0.46a	20.38s	249.30	0.00	0.430	5.26	7.78	(3)
8.228	0.51a	25.38s	249.30	0.00	0.368	7.29	7.82	(3)

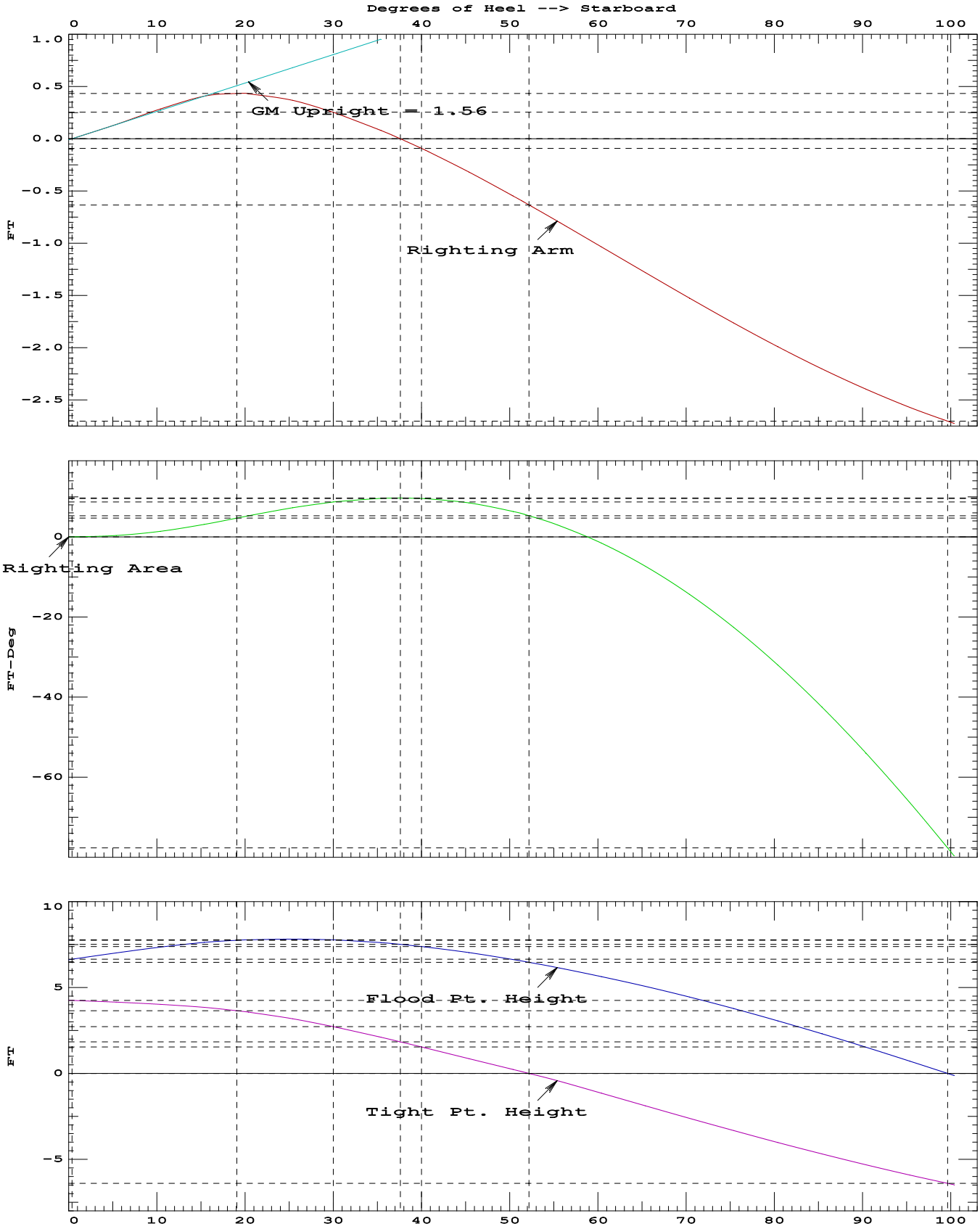
7.986	0.60a	30.00s	249.30	0.00	0.254	8.75	7.77 (3)
7.965	0.61a	30.38s	249.30	0.00	0.243	8.84	7.77 (3)
7.681	0.71a	35.38s	249.30	0.00	0.080	9.67	7.61 (3)
7.550	0.75a	37.59s	249.30	0.00	0.000	9.76	7.51 (3)
7.403	0.79a	40.00s	249.30	0.00	-0.092	9.65	7.39 (3)
7.380	0.79a	40.38s	249.30	0.00	-0.107	9.61	7.36 (3)
7.051	0.85a	45.38s	249.30	0.00	-0.319	8.55	7.03 (3)
6.689	0.89a	50.38s	249.30	0.00	-0.548	6.40	6.63 (3)
6.549	0.89a	52.18s	249.30	0.00	-0.634	5.33	0.00 (5)
6.289	0.90a	55.38s	249.30	0.00	-0.788	3.06	6.16 (3)
5.851	0.91a	60.38s	249.30	0.00	-1.034	-1.49	5.64 (3)
5.377	0.91a	65.38s	249.30	0.00	-1.281	-7.28	5.06 (3)
4.868	0.91a	70.38s	249.30	0.00	-1.526	-14.30	4.45 (3)
4.340	0.89a	75.38s	249.30	0.00	-1.763	-22.52	3.78 (3)
3.796	0.84a	80.38s	249.30	0.00	-1.990	-31.91	3.06 (3)
3.242	0.77a	85.38s	249.30	0.00	-2.202	-42.40	2.31 (3)
2.682	0.68a	90.38s	249.30	0.00	-2.397	-53.90	1.53 (3)
2.119	0.56a	95.38s	249.30	0.00	-2.572	-66.33	0.71 (3)
1.640	0.44a	99.64s	249.30	0.00	-2.703	-77.59	0.00 (3)
1.558	0.42a	100.38s	249.30	0.00	-2.724	-79.58	*-0.12* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 15.9 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.56 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.25 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*19.07 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*9.65 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	*8.75 F*
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*0.90 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*37.59 F*


Degrees of Heel --> Starboard
0
10
20
30
40
50
60
70
80
90
100
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
FT
GM Upright = 1.56
Righting Arm
0
-20
-40
-60
FT-Deg
Righting Area
10
5
0
-5
FT
Flood Pt. Height
Tight Pt. Height

LC2: ARRIVAL AT FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg., VCG = 9.63

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.111	239.68	37.06a	5.72	3.40	39.75a	269.16	64.3	1.52

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 8.489 @ Origin
Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.40	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	11.38	47.75a	0.00	6.99
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**197.13**	**39.17a**	**0.00**	**10.25**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.800	1.000	4.84	0.01a	0.01s	10.05	9.1
FOS	0.800	0.870	18.61	30.28a	7.87s	6.31	6.0
FOP	0.800	0.870	18.61	30.28a	7.87p	6.31	6.0
HOT	0.900	0.947	0.48	40.59a	4.90s	7.85	0.0
Total Tanks			**42.55**	**26.95a**	**0.06s**	**6.75**	**21.1**
Total Weight			**239.68**	**37.00a**	**0.01s**	**9.63**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	239.68	37.06a	0.04s	5.72	-8.49
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.489 @ Origin
Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg.
Least freeboard is 2.33 Ft located at 41.81a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 37.00a TCG = 0.01s VCG = 9.63
Free Surface Adjustment: 0.09
Adjusted CG: LCG = 37.00a TCG = 0.01s VCG = 9.71

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height
8.487	0.90a	0.00	239.65	0.00	-0.010	0.00	7.14 (3)
8.486	0.90a	0.37s	239.65	0.00	0.000	-0.00	4.19 (5)
8.436	0.90a	5.37s	239.65	0.00	0.134	0.33	7.54 (3)
8.296	0.92a	10.37s	239.68	0.00	0.278	1.36	7.87 (3)
8.078	0.94a	15.37s	239.68	0.00	0.423	3.11	8.15 (3)
7.840	0.98a	20.37s	239.68	0.00	0.474	5.39	8.33 (3)
7.582	1.05a	25.37s	239.68	0.00	0.434	7.70	8.39 (3)

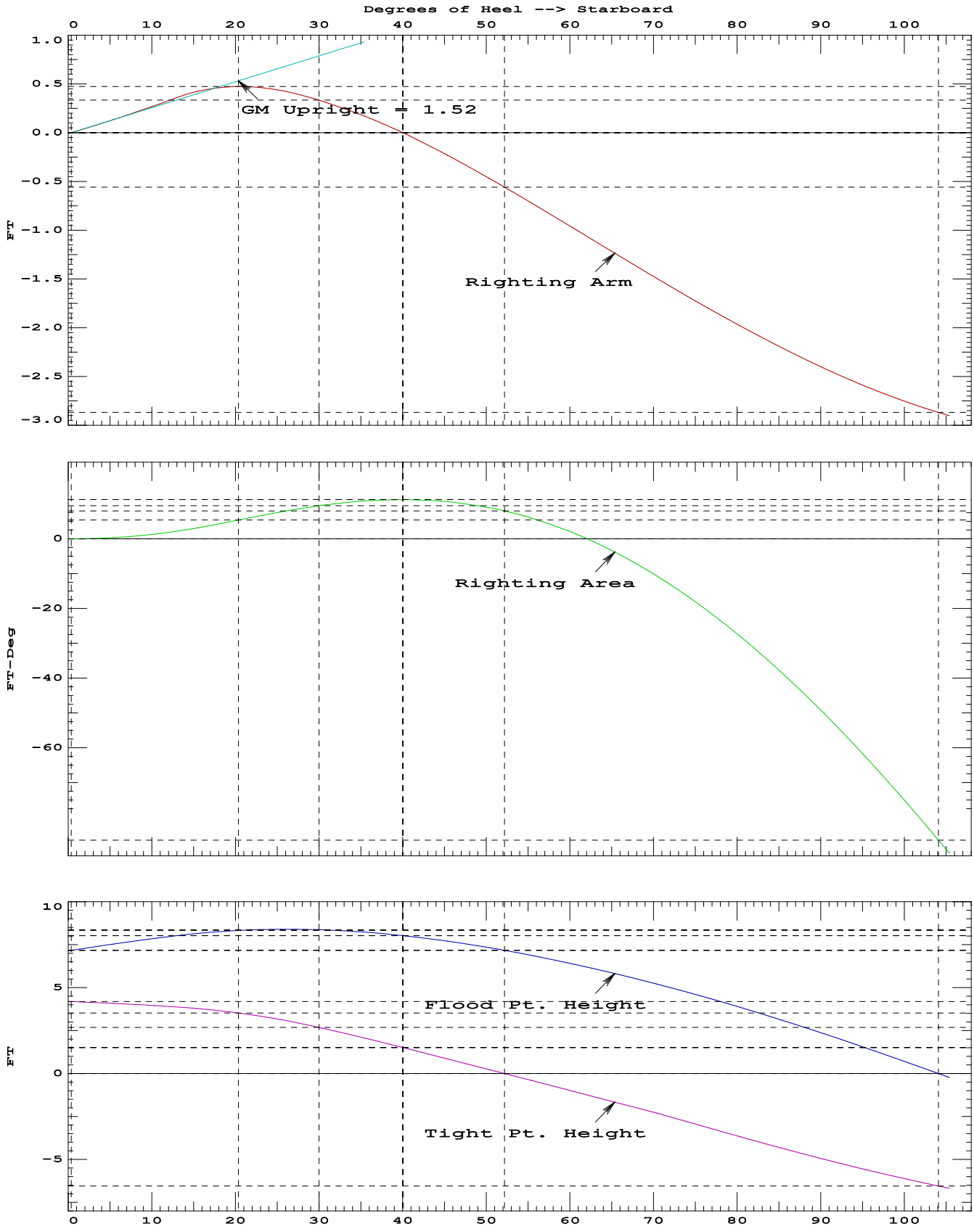
7.313	1.16a	30.00s	239.68	0.00	0.334	9.50	8.37 (3)
7.291	1.17a	30.37s	239.68	0.00	0.324	9.62	8.37 (3)
6.985	1.28a	35.37s	239.68	0.00	0.173	10.88	8.23 (3)
6.685	1.37a	40.00s	239.68	0.00	0.002	11.30	8.02 (3)
6.660	1.38a	40.37s	239.66	0.00	-0.013	11.29	8.01 (3)
6.302	1.45a	45.37s	239.68	0.00	-0.231	10.70	7.70 (3)
5.913	1.50a	50.37s	239.68	0.00	-0.469	8.96	7.32 (3)
5.765	1.51a	52.17s	239.68	0.00	-0.558	8.03	0.00 (5)
5.491	1.52a	55.37s	239.68	0.00	-0.719	5.99	6.88 (3)
5.033	1.54a	60.37s	239.68	0.00	-0.976	1.76	6.37 (3)
4.543	1.55a	65.37s	239.68	0.00	-1.236	-3.77	5.81 (3)
4.020	1.56a	70.37s	239.68	0.00	-1.493	-10.59	5.21 (3)
3.476	1.55a	75.37s	239.68	0.00	-1.743	-18.68	4.55 (3)
2.922	1.52a	80.37s	239.68	0.00	-1.981	-28.00	3.85 (3)
2.363	1.45a	85.37s	239.68	0.00	-2.206	-38.47	3.10 (3)
1.805	1.36a	90.37s	239.68	0.00	-2.414	-50.03	2.31 (3)
1.251	1.24a	95.37s	239.68	0.00	-2.601	-62.57	1.49 (3)
0.705	1.09a	100.37s	239.68	0.00	-2.764	-76.00	0.65 (3)
0.311	0.96a	104.07s	239.68	0.00	-2.868	-86.43	0.00 (3)
0.175	0.91a	105.37s	239.68	0.00	-2.900	-90.17	*-0.23* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 21.1 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.52 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.33 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*20.37 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*11.30 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	*9.50 F*
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*1.80 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*40.00 F*


Degrees of Heel --> Starboard
0
10
20
30
40
50
60
70
80
90
100
1.0
0.5
0.0
-0.5
-1.0
-1.5
-2.0
-2.5
-3.0
FT
GM Upright = 1.52
Righting Arm
0
-20
-40
-60
FT-Deg
Righting Area
10
5
0
-5
FT
Flood Pt. Height
Tight Pt. Height

LC3: 50% CATCH AT FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg., VCG = 9.49

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.250	245.47	36.31a	5.79	3.43	39.43a	275.64	64.3	1.68

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.102 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.30	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	9.38	47.75a	0.00	6.99
CATCH IN HOLD	17.86	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**212.89**	**37.79a**	**0.00**	**10.03**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.700	1.000	4.24	0.10a	0.01s	9.73	7.8
FOS	0.600	0.870	13.96	30.30a	7.76s	5.35	4.8
FOP	0.600	0.870	13.96	30.30a	7.76p	5.35	4.8
HOT	0.800	0.947	0.43	40.59a	4.90s	7.50	0.0
Total Tanks			**32.58**	**26.50a**	**0.07s**	**5.95**	**17.4**
Total Weight			**245.47**	**36.29a**	**0.01s**	**9.49**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	245.47	36.31a	0.03s	5.79	-9.10
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.102 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg.
Least freeboard is 2.21 Ft located at 36.38a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 36.29a TCG = 0.01s VCG = 9.49
Free Surface Adjustment: 0.07
Adjusted CG: LCG = 36.29a TCG = 0.01s VCG = 9.56

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height
9.102	0.21a	0.00	245.47	0.00	-0.009	0.00	6.62 (3)
9.102	0.21a	0.29s	245.47	0.00	0.000	-0.00	4.44 (5)
9.051	0.22a	5.29s	245.47	0.00	0.148	0.37	7.01 (3)
8.906	0.24a	10.29s	245.47	0.00	0.306	1.50	7.35 (3)
8.693	0.26a	15.29s	245.47	0.00	0.451	3.40	7.62 (3)
8.482	0.27a	20.29s	245.47	0.00	0.498	5.81	7.78 (3)

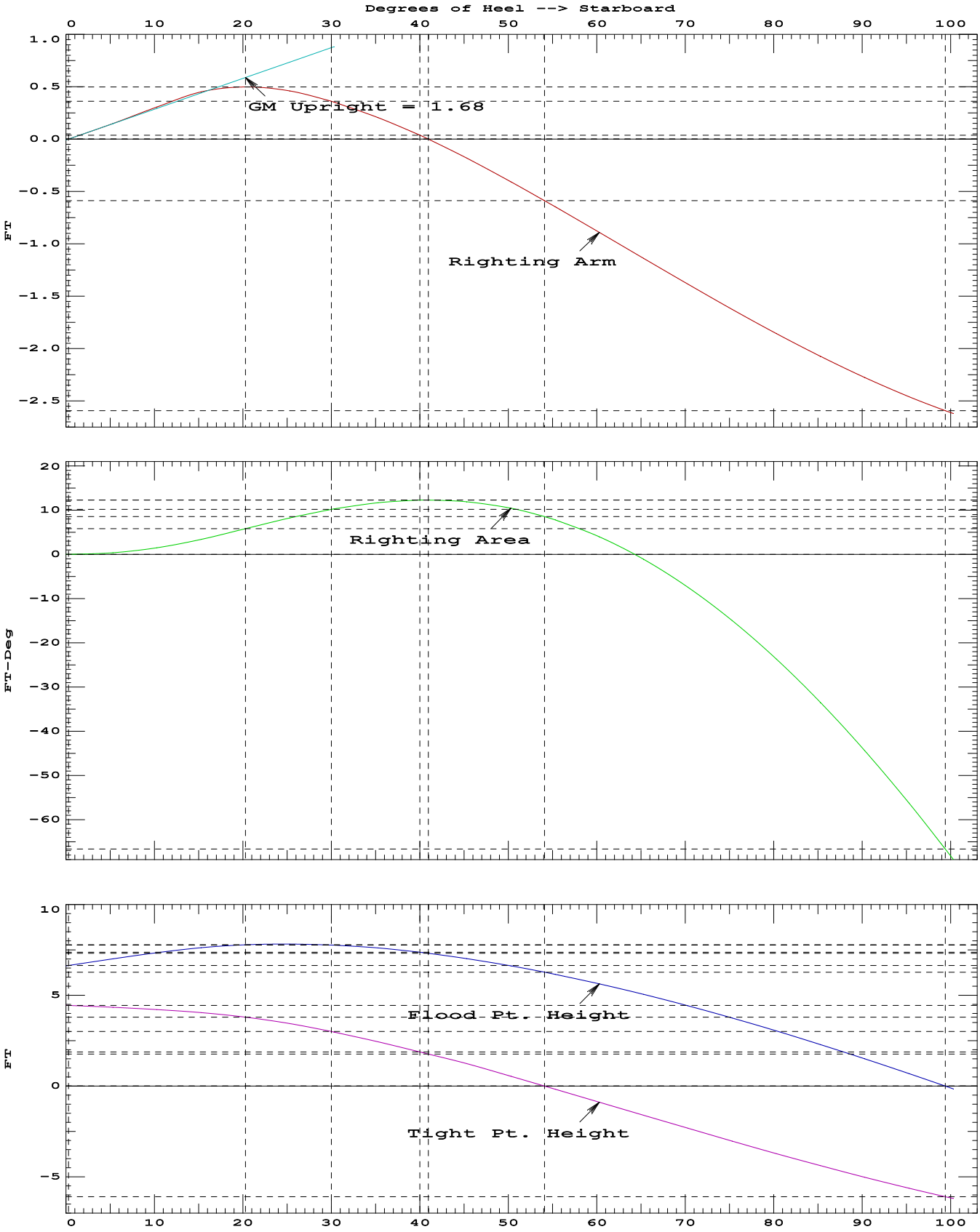
8.262	0.29a	25.29s	245.47	0.00	0.460	8.24	7.82 (3)
8.026	0.35a	30.00s	245.47	0.00	0.361	10.20	7.77 (3)
8.011	0.35a	30.29s	245.47	0.00	0.354	10.30	7.76 (3)
7.736	0.42a	35.29s	245.47	0.00	0.205	11.72	7.61 (3)
7.460	0.48a	40.00s	245.47	0.00	0.037	12.30	7.37 (3)
7.443	0.48a	40.29s	245.47	0.00	0.026	12.31	7.35 (3)
7.402	0.48a	40.96s	245.47	0.00	0.000	12.32	7.31 (3)
7.118	0.52a	45.29s	245.47	0.00	-0.181	11.93	7.02 (3)
6.757	0.53a	50.29s	245.47	0.00	-0.408	10.47	6.62 (3)
6.460	0.53a	54.08s	245.44	0.00	-0.588	8.58	0.00 (2)
6.362	0.53a	55.29s	245.43	0.00	-0.646	7.84	6.15 (3)
5.933	0.51a	60.29s	245.47	0.00	-0.891	4.00	5.63 (3)
5.468	0.48a	65.29s	245.47	0.00	-1.139	-1.08	5.05 (3)
4.973	0.45a	70.29s	245.47	0.00	-1.384	-7.39	4.42 (3)
4.450	0.41a	75.29s	245.47	0.00	-1.625	-14.91	3.75 (3)
3.910	0.36a	80.29s	245.47	0.00	-1.856	-23.62	3.04 (3)
3.358	0.28a	85.29s	245.47	0.00	-2.075	-33.45	2.28 (3)
2.799	0.19a	90.29s	245.47	0.00	-2.277	-44.34	1.50 (3)
2.235	0.08a	95.29s	245.47	0.00	-2.460	-56.19	0.68 (3)
1.774	0.03f	99.39s	245.47	0.00	-2.593	-66.54	0.00 (3)
1.673	0.05f	100.29s	245.47	0.00	-2.620	-68.89	*-0.15* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 17.4 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(2)	HOLD AFT	TIGHT	46.00a	2.00	14.50
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.68 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.36 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*20.29 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*12.30 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	*10.20 F*
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*2.10 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*40.96 F*


Degrees of Heel --> Starboard
GM Upright = 1.68
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
Tight Pt. Height
FT

LC4: 100% CATCH LEAVING FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg., VCG = 9.42

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.407	251.92	35.62a	5.88	3.45	39.12a	282.23	64.2	1.78

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.699 @ Origin
Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	8.04	47.75a	0.00	6.99
CATCH IN HOLD	35.71	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**229.30**	**36.63a**	**0.00**	**9.84**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.600	1.000	3.63	0.19a	0.01s	9.39	6.5
FOS	0.400	0.870	9.31	30.30a	7.63s	4.33	3.7
FOP	0.400	0.870	9.31	30.29a	7.63p	4.33	3.7
HOT	0.700	0.947	0.37	40.59a	4.90s	7.14	0.0
Total Tanks			**22.62**	**25.63a**	**0.08s**	**5.19**	**13.9**
Total Weight			**251.92**	**35.65a**	**0.01s**	**9.42**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	251.92	35.62a	0.02s	5.88	-9.70
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.699 @ Origin
Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg.
Least freeboard is 2.01 Ft located at 30.95a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 35.65a TCG = 0.01s VCG = 9.42
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 35.65a TCG = 0.01s VCG = 9.48

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height
9.699	0.43f	0.00	251.92	0.00	-0.007	0.00	6.11 (3)
9.699	0.43f	0.23s	251.92	0.00	0.000	-0.00	4.65 (4)
9.646	0.42f	5.23s	251.92	0.00	0.157	0.39	6.49 (3)
9.497	0.40f	10.23s	251.92	0.00	0.324	1.59	6.84 (3)
9.301	0.39f	15.23s	251.92	0.00	0.456	3.55	7.10 (3)
9.148	0.41f	19.56s	251.92	0.00	0.488	5.63	7.22 (3)

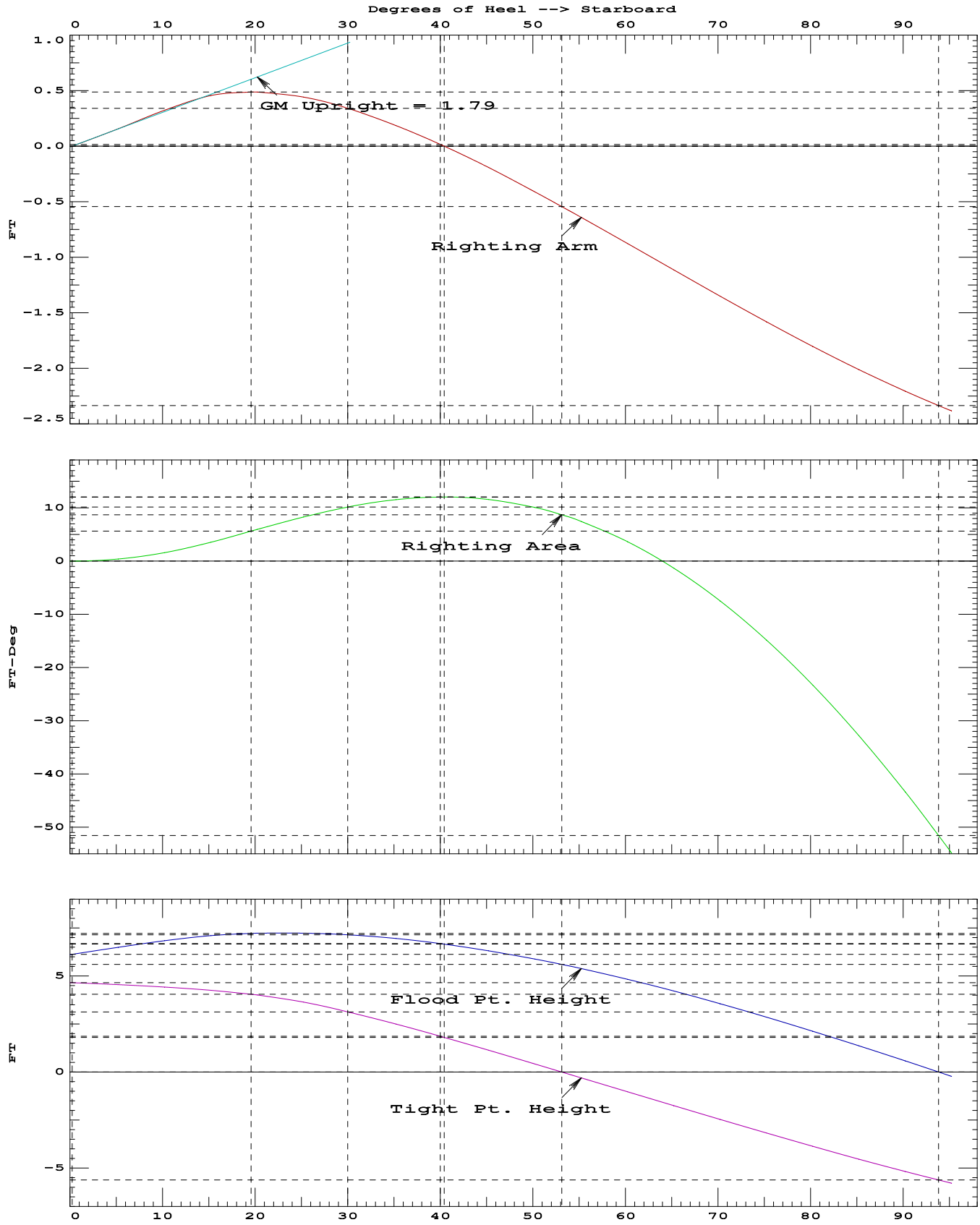
9.125	0.41f	20.23s	251.92	0.00	0.487	5.95	7.23 (3)
8.949	0.44f	25.23s	251.92	0.00	0.442	8.31	7.23 (3)
8.754	0.44f	30.00s	251.92	0.00	0.341	10.20	7.14 (3)
8.743	0.44f	30.23s	251.92	0.00	0.335	10.28	7.14 (3)
8.506	0.42f	35.23s	251.92	0.00	0.185	11.59	6.95 (3)
8.259	0.40f	40.00s	251.92	0.00	0.016	12.08	6.69 (3)
8.246	0.40f	40.23s	251.92	0.00	0.007	12.09	6.67 (3)
8.236	0.40f	40.42s	251.92	0.00	0.000	12.09	6.66 (3)
7.959	0.41f	45.23s	251.92	0.00	-0.193	11.63	6.31 (3)
7.633	0.43f	50.23s	251.92	0.00	-0.412	10.13	5.88 (3)
7.430	0.45f	53.12s	251.92	0.00	-0.544	8.75	0.00 (1)
7.274	0.47f	55.23s	251.92	0.00	-0.642	7.49	5.38 (3)
6.882	0.53f	60.23s	251.92	0.00	-0.877	3.70	4.83 (3)
6.459	0.61f	65.23s	251.92	0.00	-1.115	-1.28	4.21 (3)
6.004	0.70f	70.23s	251.92	0.00	-1.351	-7.44	3.55 (3)
5.519	0.79f	75.23s	251.92	0.00	-1.581	-14.77	2.85 (3)
4.998	0.87f	80.23s	251.92	0.00	-1.803	-23.24	2.12 (3)
4.456	0.96f	85.23s	251.92	0.00	-2.013	-32.78	1.36 (3)
3.896	1.05f	90.23s	251.92	0.00	-2.207	-43.34	0.58 (3)
3.485	1.13f	93.83s	251.92	0.00	-2.335	-51.50	*-0.00* (3)
3.324	1.16f	95.23s	251.92	0.00	-2.382	-54.82	*-0.23* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 13.9 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(1)	HOLD FWD	TIGHT	42.00a	2.00	14.50
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(4)	LAZ HATCH FWD	TIGHT	71.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.79 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.34 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*19.56 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*12.08 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	*10.20 F*
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*1.88 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*40.42 F*


Degrees of Heel --> Starboard
GM Upright = 1.79
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
Tight Pt. Height
FT

LC5: 40% CATCH LEAVING FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg., VCG = 9.61

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.886	230.50	36.85a	5.58	3.38	39.79a	266.92	66.3	1.58

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 8.323 @ Origin
Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	8.04	47.75a	0.00	6.99
CATCH IN HOLD	14.29	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**207.88**	**37.98a**	**0.00**	**10.10**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.600	1.000	3.63	0.22a	0.01s	9.39	6.5
FOS	0.400	0.870	9.31	30.56a	7.64s	4.33	3.7
FOP	0.400	0.870	9.31	30.55a	7.63p	4.33	3.7
HOT	0.700	0.947	0.37	40.59a	4.90s	7.14	0.0
Total Tanks			**22.62**	**25.85a**	**0.08s**	**5.19**	**13.9**
Total Weight			**230.50**	**36.79a**	**0.01s**	**9.61**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	230.50	36.85a	0.03s	5.58	-8.32
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.323 @ Origin
Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg.
Least freeboard is 2.58 Ft located at 41.81a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 36.79a TCG = 0.01s VCG = 9.61
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.79a TCG = 0.01s VCG = 9.68

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height
8.321	0.81a	0.00	230.48	0.00	-0.008	0.00	7.32 (3)
8.321	0.81a	0.29s	230.48	0.00	0.000	-0.00	4.46 (5)
8.274	0.81a	5.29s	230.47	0.00	0.139	0.35	7.71 (3)
8.139	0.83a	10.29s	230.50	0.00	0.289	1.41	8.03 (3)
7.925	0.84a	15.29s	230.50	0.00	0.451	3.25	8.32 (3)
7.684	0.85a	20.29s	230.50	0.00	0.541	5.76	8.50 (3)

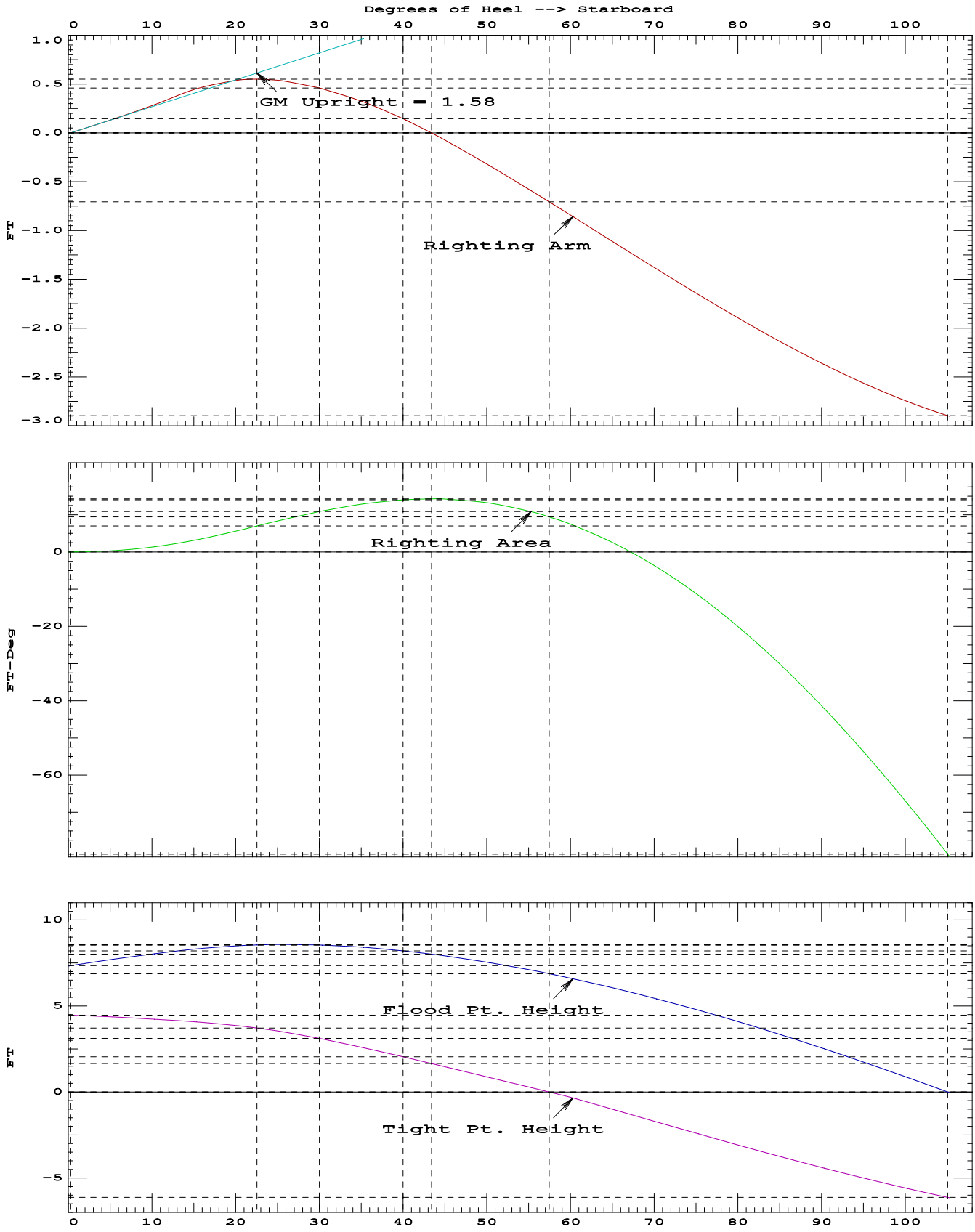
7.573	0.86a	22.54s	230.50	0.00	**0.550**	6.99	8.55 (3)
7.432	0.87a	25.29s	230.50	0.00	0.537	8.49	8.57 (3)
7.170	0.93a	30.00s	230.50	0.00	0.460	10.87	8.55 (3)
7.153	0.94a	30.29s	230.50	0.00	0.454	11.01	8.54 (3)
6.855	1.01a	35.29s	230.50	0.00	0.317	12.96	8.41 (3)
6.550	1.06a	40.00s	230.50	0.00	0.145	14.06	8.20 (3)
6.530	1.06a	40.29s	230.49	0.00	0.134	14.10	8.19 (3)
6.310	1.09a	43.39s	230.49	0.00	0.000	14.31	8.01 (3)
6.169	1.11a	45.29s	230.50	0.00	-0.088	14.23	7.89 (3)
5.773	1.13a	50.29s	230.50	0.00	-0.333	13.19	7.52 (3)
5.349	1.13a	55.29s	230.49	0.00	-0.591	10.89	7.09 (3)
5.157	1.13a	57.45s	230.49	0.00	-0.706	9.48	0.00 (5)
4.896	1.12a	60.29s	230.49	0.00	-0.858	7.27	6.58 (3)
4.413	1.09a	65.29s	230.50	0.00	-1.127	2.31	6.02 (3)
3.903	1.05a	70.29s	230.50	0.00	-1.394	-4.00	5.41 (3)
3.367	1.02a	75.29s	230.50	0.00	-1.656	-11.62	4.75 (3)
2.814	0.97a	80.29s	230.50	0.00	-1.909	-20.54	4.05 (3)
2.257	0.90a	85.29s	230.50	0.00	-2.148	-30.69	3.30 (3)
1.700	0.81a	90.29s	230.50	0.00	-2.371	-41.99	2.51 (3)
1.148	0.70a	95.29s	230.50	0.00	-2.573	-54.36	1.69 (3)
0.605	0.56a	100.29s	230.50	0.00	-2.752	-67.68	0.84 (3)
0.099	0.41a	105.07s	230.50	0.00	-2.897	-81.21	0.00 (3)
0.077	0.40a	105.29s	230.50	0.00	-2.903	-81.83	*-0.04* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 13.9 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained	
(1)	**GM Upright**	>	**1.15**	**Ft**	**1.58**	**P**
(2)	**Righting Arm at abs 30 deg**	>	**0.66**	**Ft**	***0.46***	***F***
(3)	**Absolute Angle at MaxRA**	>	**25.00**	**deg**	***22.54***	***F***
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	**16.90**	**Ft-deg**	***14.06***	***F***
(5)	**Absolute Area from abs 0 deg to abs 30**	>	**10.30**	**Ft-deg**	**10.87**	**P**
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	**5.60**	**Ft-deg**	***3.19***	***F***
(7)	**Angle from abs 0 deg to RAzero**	>	**60.00**	**deg**	***43.39***	***F***


Degrees of Heel --> Starboard
GM Upright = 1.58
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
Tight Pt. Height
FT

LC6: ARRIVAL PORT - 100% CATCH

HYDROSTATIC PROPERTIES

Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg., VCG = 9.55

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.050	237.28	35.79a	5.67	3.41	39.37a	274.75	66.3	1.67

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.128 @ Origin
Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.10	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
CATCH IN HOLD	35.71	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**225.23**	**36.39a**	**0.00**	**9.82**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.46a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	30.54a	7.46s	3.22	2.7
FOP	0.200	0.870	4.65	30.53a	7.46p	3.22	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**24.76a**	**0.13s**	**4.39**	**9.4**
Total Weight			**237.28**	**35.80a**	**0.01s**	**9.55**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	237.28	35.79a	0.02s	5.67	-9.13
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.128 @ Origin
Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg.
Least freeboard is 2.40 Ft located at 34.75a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 35.80a TCG = 0.01s VCG = 9.55
Free Surface Adjustment: 0.04
Adjusted CG: LCG = 35.80a TCG = 0.01s VCG = 9.59

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height	
9.128	0.11f	0.00	237.27	0.00	-0.007	0.00	6.64	(3)
9.127	0.11f	0.23s	237.28	0.00	0.000	-0.00	4.83	(4)
9.078	0.11f	5.23s	237.28	0.00	0.148	0.37	7.02	(3)
8.937	0.09f	10.23s	237.28	0.00	0.305	1.50	7.36	(3)
8.723	0.08f	15.23s	237.28	0.00	0.463	3.42	7.64	(3)
8.510	0.10f	20.23s	237.25	0.00	0.535	5.95	7.80	(3)
8.448	0.11f	21.76s	237.28	0.00	0.539	6.77	7.83	(3)

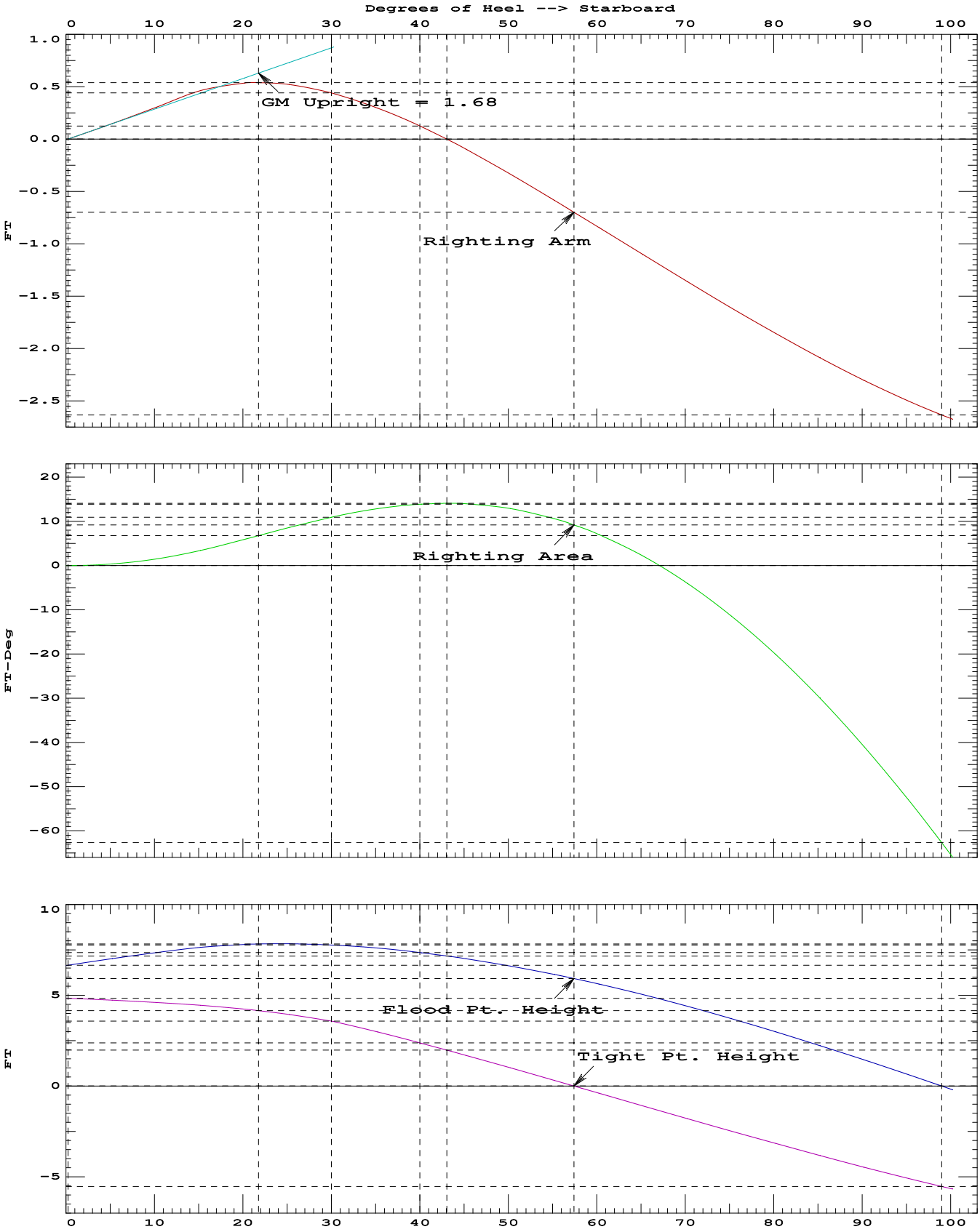
8.303	0.13f	25.23s	237.28	0.00	0.521	8.62	7.84 (3)
8.090	0.16f	30.00s	237.28	0.00	0.441	10.94	7.77 (3)
8.079	0.16f	30.23s	237.28	0.00	0.436	11.04	7.77 (3)
7.824	0.15f	35.23s	237.28	0.00	0.296	12.90	7.60 (3)
7.560	0.16f	40.00s	237.28	0.00	0.125	13.92	7.35 (3)
7.546	0.16f	40.23s	237.28	0.00	0.116	13.94	7.34 (3)
7.372	0.16f	43.04s	237.24	0.00	0.000	14.11	7.16 (3)
7.229	0.17f	45.23s	237.24	0.00	-0.097	14.00	7.01 (3)
6.874	0.19f	50.23s	237.28	0.00	-0.335	12.94	6.61 (3)
6.480	0.22f	55.23s	237.28	0.00	-0.586	10.64	6.15 (3)
6.296	0.24f	57.43s	237.28	0.00	-0.699	9.23	0.00 (1)
6.055	0.27f	60.23s	237.28	0.00	-0.843	7.07	5.62 (3)
5.603	0.34f	65.23s	237.28	0.00	-1.102	2.21	5.04 (3)
5.124	0.42f	70.23s	237.28	0.00	-1.360	-3.95	4.40 (3)
4.624	0.51f	75.23s	237.28	0.00	-1.613	-11.39	3.71 (3)
4.105	0.62f	80.23s	237.28	0.00	-1.856	-20.06	2.99 (3)
3.560	0.70f	85.23s	237.28	0.00	-2.088	-29.93	2.23 (3)
3.002	0.80f	90.23s	237.28	0.00	-2.304	-40.91	1.44 (3)
2.438	0.90f	95.23s	237.28	0.00	-2.501	-52.94	0.63 (3)
2.013	0.98f	98.99s	237.28	0.00	-2.634	-62.60	0.00 (3)
1.874	1.01f	100.23s	237.28	0.00	-2.675	-65.88	*-0.21* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 9.4 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(1)	HOLD FWD	TIGHT	42.00a	2.00	14.50
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(4)	LAZ HATCH FWD	TIGHT	71.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.68 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.44 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*21.76 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*13.92 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	10.94 P
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*2.97 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*43.04 F*


Degrees of Heel --> Starboard
GM Upright = 1.68
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
Tight Pt. Height
FT

LC7: ARRIVAL PORT - 40% CATCH

HYDROSTATIC PROPERTIES

Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg., VCG = 9.77

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.530	215.96	37.11a	5.38	3.34	40.05a	259.81	68.9	1.49

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.710 @ Origin
Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
CATCH IN HOLD	14.29	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**203.91**	**37.73a**	**0.00**	**10.08**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.48a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	31.01a	7.48s	3.23	2.7
FOP	0.200	0.870	4.65	31.00a	7.47p	3.23	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**25.13a**	**0.13s**	**4.39**	**9.5**
Total Weight			**215.96**	**37.02a**	**0.01s**	**9.77**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	215.96	37.11a	0.03s	5.38	-7.71
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.710 @ Origin
Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg.
Least freeboard is 2.93 Ft located at 43.98a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 37.02a TCG = 0.01s VCG = 9.77
Free Surface Adjustment: 0.04
Adjusted CG: LCG = 37.02a TCG = 0.01s VCG = 9.81

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height
7.708	1.17a	0.00	215.95	0.00	-0.007	0.00	7.89 (3)
7.708	1.17a	0.28s	215.95	0.00	0.000	-0.00	4.61 (5)
7.663	1.17a	5.28s	215.95	0.00	0.131	0.33	8.27 (3)
7.537	1.18a	10.28s	215.94	0.00	0.274	1.33	8.59 (3)
7.335	1.18a	15.28s	215.94	0.00	0.434	3.10	8.86 (3)
7.087	1.17a	20.28s	215.96	0.00	0.566	5.61	9.06 (3)
6.861	1.16a	24.63s	215.94	0.00	**0.600**	8.17	9.13 (3)

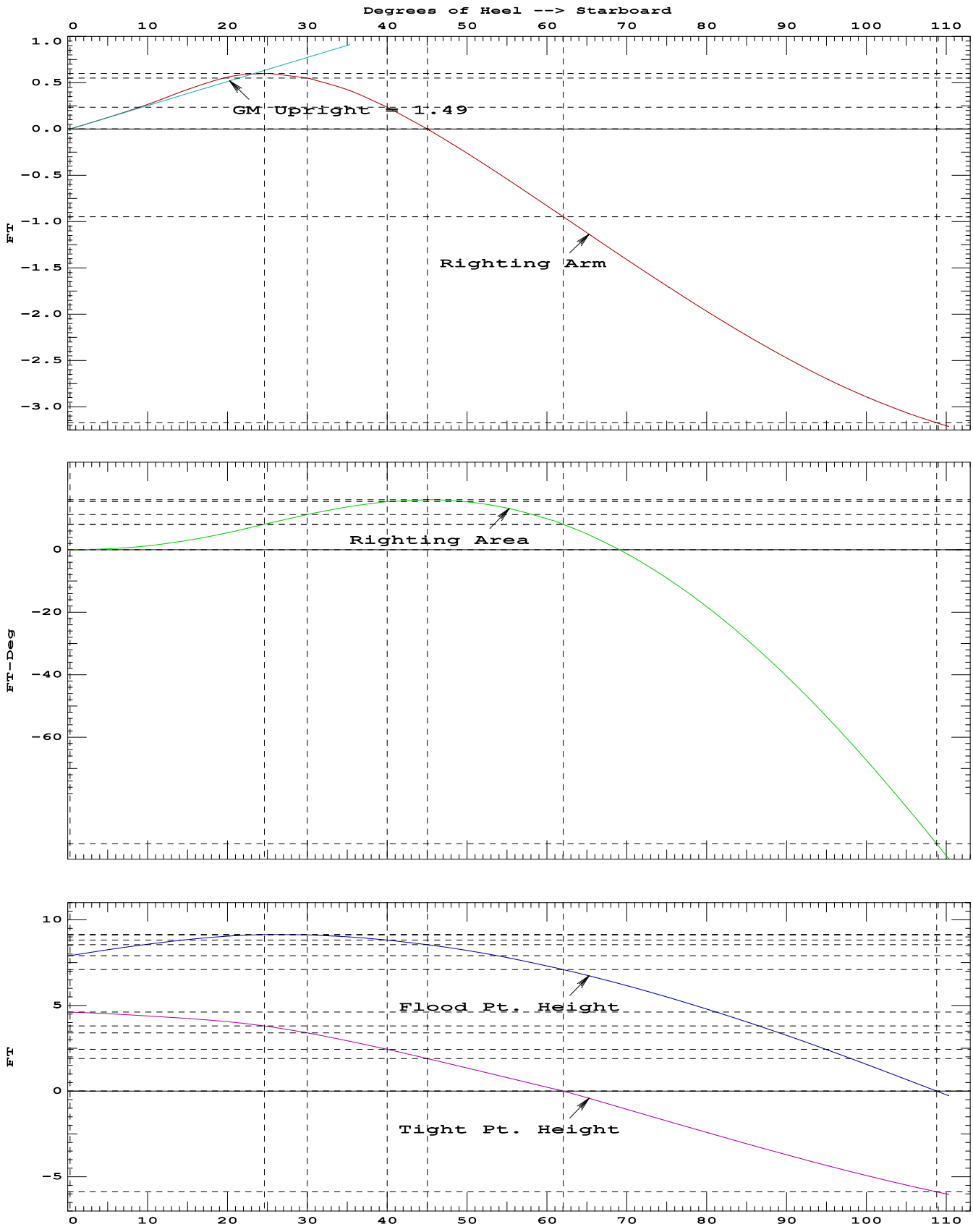
6.826	1.16a	25.28s	215.94	0.00	0.600	8.56	9.14 (3)
6.562	1.18a	30.00s	215.96	0.00	0.550	11.31	9.12 (3)
6.545	1.18a	30.28s	215.95	0.00	0.545	11.46	9.12 (3)
6.236	1.22a	35.28s	215.96	0.00	0.416	13.90	9.00 (3)
5.909	1.25a	40.00s	215.96	0.00	0.235	15.46	8.82 (3)
5.889	1.26a	40.28s	215.95	0.00	0.223	15.52	8.80 (3)
5.525	1.28a	45.03s	215.95	0.00	0.000	16.07	8.55 (3)
5.505	1.28a	45.28s	215.96	0.00	-0.012	16.07	8.53 (3)
5.090	1.30a	50.28s	215.96	0.00	-0.276	15.36	8.19 (3)
4.646	1.29a	55.28s	215.96	0.00	-0.556	13.28	7.77 (3)
4.182	1.26a	60.28s	215.96	0.00	-0.845	9.78	7.28 (3)
4.013	1.24a	62.03s	215.96	0.00	-0.947	8.22	0.00 (5)
3.694	1.21a	65.28s	215.96	0.00	-1.136	4.83	6.73 (3)
3.185	1.15a	70.28s	215.96	0.00	-1.426	-1.57	6.12 (3)
2.657	1.08a	75.28s	215.96	0.00	-1.709	-9.41	5.46 (3)
2.113	1.00a	80.28s	215.96	0.00	-1.982	-18.64	4.75 (3)
1.556	0.93a	85.28s	215.96	0.00	-2.243	-29.21	4.00 (3)
1.003	0.84a	90.28s	215.96	0.00	-2.486	-41.04	3.21 (3)
0.458	0.73a	95.28s	215.96	0.00	-2.707	-54.03	2.38 (3)
-0.072	0.59a	100.28s	215.96	0.00	-2.903	-68.07	1.51 (3)
-0.590	0.44a	105.28s	215.96	0.00	-3.071	-83.01	0.63 (3)
-0.952	0.33a	108.79s	215.96	0.00	-3.173	-93.99	*-0.00* (3)
-1.104	0.28a	110.28s	215.96	0.00	-3.212	-98.73	*-0.26* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 9.5 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.49 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.55 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*24.63 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*15.46 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	11.31 P
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*4.15 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*45.03 F*


Degrees of Heel --> Starboard
GM Upright = 1.49
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
Tight Pt. Height
FT

LC8: ARRIVAL PORT - 0% CATCH

HYDROSTATIC PROPERTIES

Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg., VCG = 9.94

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.184	201.67	38.17a	5.21	3.29	40.52a	250.28	71.1	1.40

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 6.690 @ Origin
Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**189.62**	**38.79a**	**0.00**	**10.29**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.50a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	31.35a	7.49s	3.24	2.7
FOP	0.200	0.870	4.65	31.34a	7.49p	3.24	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**25.40a**	**0.13s**	**4.40**	**9.5**
Total Weight			**201.67**	**37.99a**	**0.01s**	**9.94**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	201.67	38.17a	0.03s	5.21	-6.69
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 6.690 @ Origin
Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg.
Least freeboard is 3.13 Ft located at 54.84a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 37.99a TCG = 0.01s VCG = 9.94
Free Surface Adjustment: 0.05
Adjusted CG: LCG = 37.99a TCG = 0.01s VCG = 9.98

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height	
6.686	2.11a	0.00	201.67	0.00	-0.008	0.00	8.78	(3)
6.686	2.11a	0.32s	201.67	0.00	0.000	-0.00	4.44	(5)
6.645	2.11a	5.32s	201.67	0.00	0.123	0.31	9.16	(3)
6.529	2.11a	10.32s	201.66	0.00	0.259	1.26	9.47	(3)
6.345	2.09a	15.32s	201.67	0.00	0.415	2.93	9.72	(3)
6.103	2.06a	20.32s	201.67	0.00	0.573	5.40	9.91	(3)
5.829	2.06a	25.32s	201.67	0.00	0.641	8.47	10.01	(3)
5.776	2.06a	26.23s	201.67	0.00	0.643	9.06	10.02	(3)

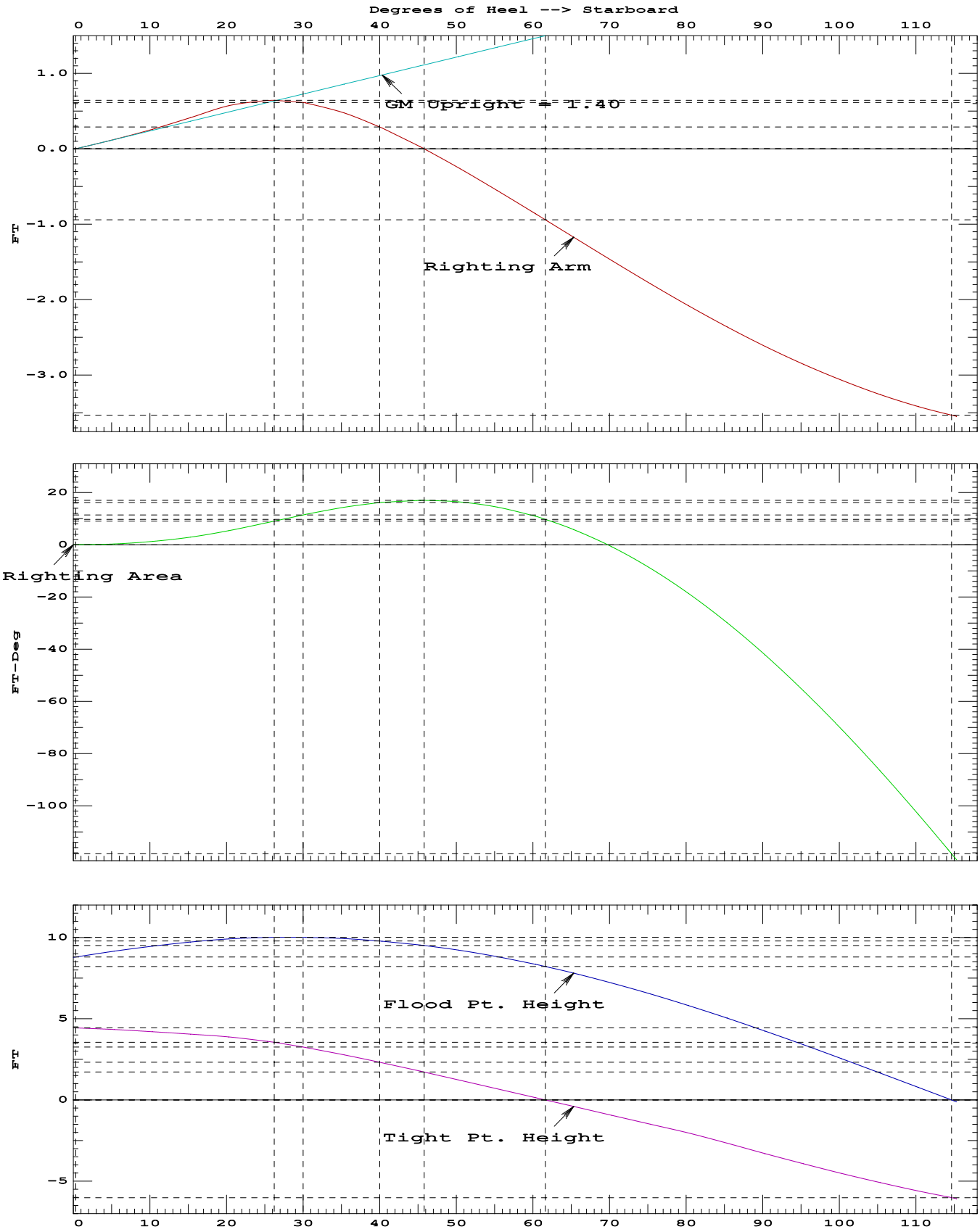
5.542	2.09a	30.00s	201.67	0.00	0.614	11.44	10.01 (3)
5.521	2.10a	30.32s	201.67	0.00	0.609	11.64	10.01 (3)
5.169	2.16a	35.32s	201.67	0.00	0.477	14.39	9.93 (3)
4.806	2.21a	40.00s	201.67	0.00	0.289	16.21	9.79 (3)
4.780	2.21a	40.32s	201.67	0.00	0.275	16.30	9.77 (3)
4.361	2.26a	45.32s	201.67	0.00	0.026	17.07	9.54 (3)
4.319	2.26a	45.80s	201.67	0.00	0.000	17.08	9.51 (3)
3.916	2.28a	50.32s	201.67	0.00	-0.254	16.52	9.22 (3)
3.450	2.28a	55.32s	201.64	0.00	-0.552	14.51	8.82 (3)
2.972	2.24a	60.32s	201.67	0.00	-0.860	10.99	8.35 (3)
2.844	2.23a	61.62s	201.67	0.00	-0.941	9.81	0.00 (5)
2.477	2.19a	65.32s	201.67	0.00	-1.172	5.91	7.80 (3)
1.969	2.11a	70.32s	201.67	0.00	-1.483	-0.73	7.20 (3)
1.450	2.02a	75.32s	201.67	0.00	-1.787	-8.90	6.53 (3)
0.922	1.92a	80.32s	201.67	0.00	-2.081	-18.58	5.81 (3)
0.384	1.83a	85.32s	201.67	0.00	-2.360	-29.69	5.05 (3)
-0.153	1.72a	90.32s	201.67	0.00	-2.620	-42.14	4.24 (3)
-0.690	1.60a	95.32s	201.67	0.00	-2.856	-55.84	3.40 (3)
-1.223	1.48a	100.32s	201.67	0.00	-3.069	-70.66	2.54 (3)
-1.751	1.35a	105.32s	201.67	0.00	-3.257	-86.49	1.66 (3)
-2.270	1.20a	110.32s	201.67	0.00	-3.418	-103.19	0.77 (3)
-2.710	1.08a	114.65s	201.67	0.00	-3.531	-118.24	*-0.00* (3)
-2.777	1.06a	115.32s	201.67	0.00	-3.547	-120.61	*-0.12* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 9.5 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained	
(1)	**GM Upright**	>	1.15	Ft	1.40	P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.61*	*F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	26.23	P
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*16.21*	*F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	11.44	P
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*4.77*	*F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*45.80*	*F*


Degrees of Heel --> Starboard
0 10 20 30 40 50 60 70 80 90 100 110
1.0
0.0
-1.0
-2.0
-3.0
FT
GM Upright = 1.40
Righting Arm
20
0
-20
-40
-60
-80
-100
FT-Deg
Righting Area
10
5
0
-5
FT
Flood Pt. Height
Tight Pt. Height

LC9: TIME OF INCIDENT

HYDROSTATIC PROPERTIES

Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg., VCG = 9.42

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.269	246.27	36.30a	5.80	3.43	39.42a	276.53	64.3	1.76

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.131 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.36a	7.70s	4.85	4.2
FOP	0.500	0.870	11.63	30.36a	7.70p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.04a**	**0.05s**	**5.34**	**13.7**
Total Weight			**246.27**	**36.29a**	**0.01s**	**9.42**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.27	36.30a	0.02s	5.80	-9.13
Righting Arms:			0.00	0.00		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.131 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg.
Least freeboard is 2.22 Ft located at 36.38a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 36.29a TCG = 0.01s VCG = 9.42
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.29a TCG = 0.01s VCG = 9.48

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height
9.131	0.20a	0.00	246.27	0.00	-0.005	0.00	6.59 (3)
9.131	0.20a	0.17s	246.27	0.00	0.000	-0.00	4.43 (5)
9.082	0.21a	5.17s	246.27	0.00	0.155	0.39	6.97 (3)
8.939	0.23a	10.17s	246.27	0.00	0.320	1.57	7.31 (3)
8.727	0.25a	15.17s	246.27	0.00	0.472	3.56	7.59 (3)
8.518	0.26a	20.17s	246.27	0.00	0.525	6.09	7.75 (3)

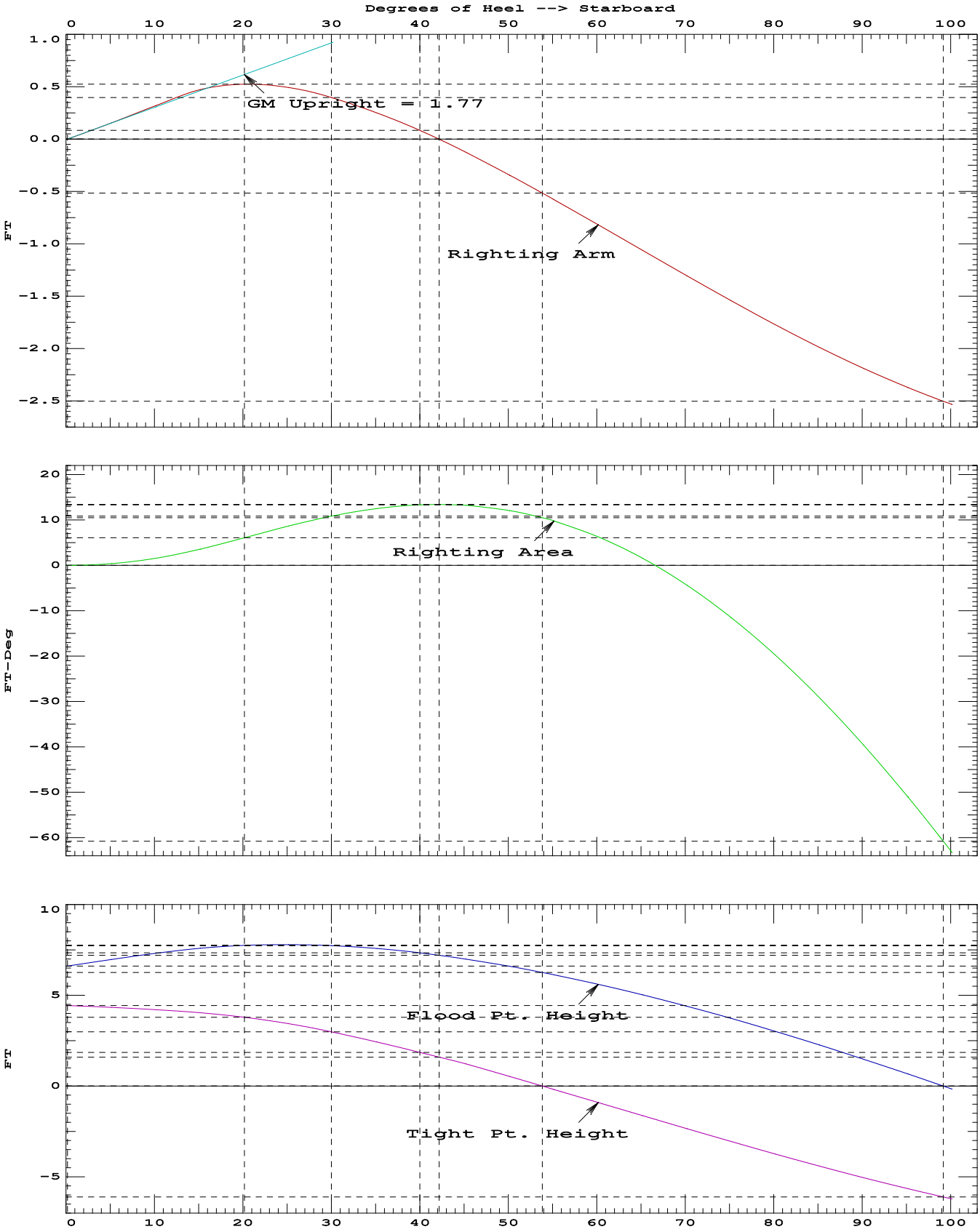
8.299	0.28a	25.17s	246.27	0.00	0.493	8.67	7.79 (3)
8.058	0.34a	30.00s	246.27	0.00	0.397	10.84	7.74 (3)
8.049	0.34a	30.17s	246.27	0.00	0.393	10.91	7.73 (3)
7.776	0.41a	35.17s	246.27	0.00	0.249	12.53	7.58 (3)
7.494	0.47a	40.00s	246.27	0.00	0.083	13.34	7.34 (3)
7.483	0.47a	40.17s	246.27	0.00	0.077	13.36	7.33 (3)
7.360	0.49a	42.16s	246.27	0.00	0.000	13.43	7.20 (3)
7.161	0.51a	45.17s	246.27	0.00	-0.124	13.25	7.00 (3)
6.802	0.53a	50.17s	246.27	0.00	-0.346	12.08	6.59 (3)
6.518	0.53a	53.84s	246.27	0.00	-0.516	10.51	0.00 (2)
6.410	0.52a	55.17s	246.27	0.00	-0.579	9.78	6.13 (3)
5.981	0.50a	60.17s	246.27	0.00	-0.819	6.29	5.60 (3)
5.518	0.48a	65.17s	246.27	0.00	-1.062	1.58	5.03 (3)
5.024	0.45a	70.17s	246.27	0.00	-1.305	-4.33	4.40 (3)
4.502	0.41a	75.17s	246.27	0.00	-1.543	-11.45	3.73 (3)
3.963	0.36a	80.17s	246.27	0.00	-1.772	-19.74	3.01 (3)
3.411	0.28a	85.17s	246.27	0.00	-1.989	-29.15	2.26 (3)
2.851	0.19a	90.17s	246.27	0.00	-2.190	-39.60	1.48 (3)
2.287	0.08a	95.17s	246.27	0.00	-2.373	-51.02	0.66 (3)
1.839	0.02f	99.16s	246.27	0.00	-2.503	-60.74	0.00 (3)
1.725	0.05f	100.17s	246.27	0.00	-2.534	-63.29	*-0.17* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 13.7 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(2)	HOLD AFT	TIGHT	46.00a	2.00	14.50
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.77 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.40 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*20.17 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*13.34 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	10.84 P
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*2.50 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*42.16 F*


Degrees of Heel --> Starboard
GM Upright = 1.77
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
Tight Pt. Height
FT

LC10: TIME OF INCIDENT - FUEL TRANSFER (1/4 TANK DIFF)

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg., VCG = 9.44

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.258	246.26	36.30a	5.83	3.44	39.36a	276.71	64.4	1.85

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.113 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.19s	9.02	5.3
FOS	0.625	0.870	14.54	30.31a	7.81s	5.48	5.2
FOP	0.375	0.870	8.72	30.41a	7.57p	4.20	3.5
HOT	0.500	0.947	0.27	40.59a	4.91s	6.43	0.0
Total Tanks			**26.56**	**27.03a**	**1.86s**	**5.47**	**14.1**
Total Weight			**246.27**	**36.29a**	**0.20s**	**9.44**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.26	36.30a	0.60s	5.83	-9.06
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.113 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg.
Least freeboard is 1.01 Ft located at 36.38a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 36.29a TCG = 0.20s VCG = 9.44
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.29a TCG = 0.19s VCG = 9.49

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height
9.131	0.20a	0.00	246.27	0.00	-0.194	0.00	6.59 (3)
9.114	0.20a	3.13s	246.27	0.00	-0.099	-0.46	6.83 (3)
9.059	0.21a	6.25s	246.27	0.00	0.000	-0.61	4.31 (5)
8.896	0.23a	11.25s	246.27	0.00	0.169	-0.19	7.38 (3)
8.682	0.25a	16.25s	246.27	0.00	0.306	1.01	7.64 (3)
8.473	0.26a	21.25s	246.27	0.00	0.342	2.67	7.77 (3)

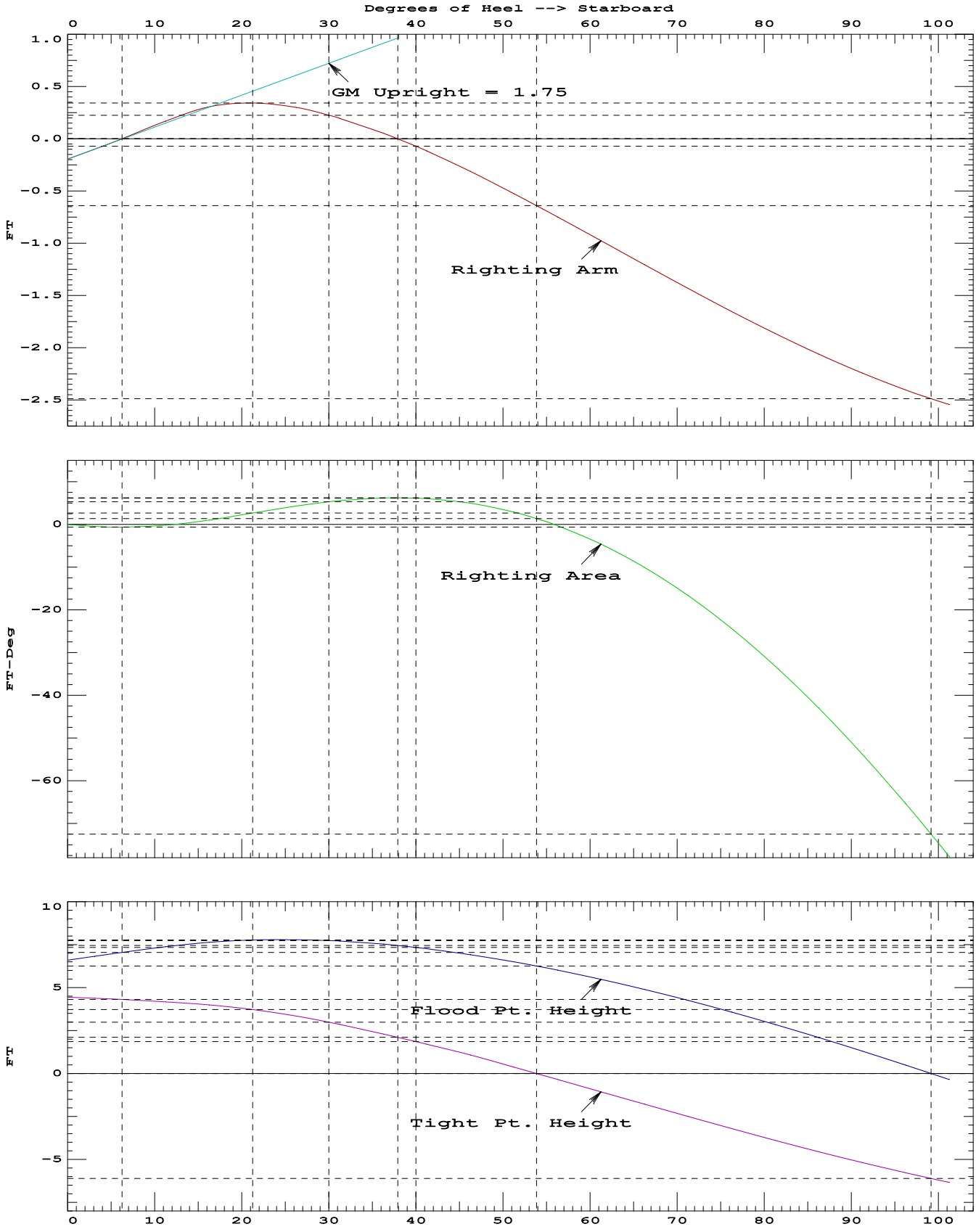
8.249	0.28a	26.25s	246.27	0.00	0.300	4.31	7.79 (3)
8.059	0.33a	30.00s	246.27	0.00	0.225	5.30	7.74 (3)
7.993	0.35a	31.25s	246.27	0.00	0.195	5.57	7.71 (3)
7.715	0.42a	36.25s	246.27	0.00	0.053	6.20	7.53 (3)
7.620	0.44a	37.90s	246.27	0.00	0.000	6.25	7.45 (3)
7.495	0.47a	40.00s	246.27	0.00	-0.071	6.17	7.34 (3)
7.418	0.48a	41.25s	246.27	0.00	-0.117	6.06	7.26 (3)
7.088	0.51a	46.25s	246.27	0.00	-0.312	4.99	6.91 (3)
6.722	0.53a	51.25s	246.27	0.00	-0.525	2.91	6.50 (3)
6.520	0.52a	53.84s	246.27	0.00	-0.640	1.40	0.00 (2)
6.323	0.52a	56.25s	246.27	0.00	-0.748	-0.27	6.02 (3)
5.886	0.50a	61.25s	246.27	0.00	-0.976	-4.58	5.48 (3)
5.416	0.47a	66.25s	246.27	0.00	-1.205	-10.03	4.89 (3)
4.916	0.43a	71.25s	246.27	0.00	-1.432	-16.63	4.26 (3)
4.389	0.40a	76.25s	246.27	0.00	-1.653	-24.34	3.58 (3)
3.847	0.34a	81.25s	246.27	0.00	-1.864	-33.14	2.85 (3)
3.293	0.26a	86.25s	246.27	0.00	-2.061	-42.95	2.09 (3)
2.731	0.17a	91.25s	246.27	0.00	-2.242	-53.72	1.30 (3)
2.167	0.05a	96.25s	246.27	0.00	-2.404	-65.34	0.48 (3)
1.839	0.02f	99.16s	246.27	0.00	-2.488	-72.45	0.00 (3)
1.605	0.08f	101.25s	246.27	0.00	-2.543	-77.72	*-0.35* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 14.1 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(2)	HOLD AFT	TIGHT	46.00a	2.00	14.50
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.75 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.23 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*21.25 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*6.17 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	*5.30 F*
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*0.87 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*37.90 F*


Degrees of Heel --> Starboard
GM Upright = 1.75
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
Tight Pt. Height
FT

LC11: TIME OF INCIDENT - FUEL TRANSFER (1/2 TANK DIFF)

HYDROSTATIC PROPERTIES

Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg., VCG = 9.48

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.228	246.27	36.30a	5.92	3.47	39.20a	277.31	64.5	1.99

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.065 @ Origin
Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.34a	0.37s	9.04	5.7
FOS	0.750	0.870	17.45	30.26a	7.91s	6.08	6.5
FOP	0.250	0.870	5.82	30.47a	7.41p	3.52	2.9
HOT	0.500	0.947	0.27	40.59a	4.92s	6.43	0.0
Total Tanks			**26.56**	**27.00a**	**3.67s**	**5.86**	**15.1**
Total Weight			**246.27**	**36.28a**	**0.40s**	**9.48**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.27	36.30a	1.15s	5.92	-8.87
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.065 @ Origin
Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg.
Least freeboard is -0.11 Ft located at 36.38a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 36.28a TCG = 0.40s VCG = 9.48
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.28a TCG = 0.38s VCG = 9.54

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height
9.133	0.20a	0.00	246.27	0.00	-0.383	0.00	6.59 (3)
9.087	0.20a	5.00s	246.27	0.00	-0.232	-1.54	6.96 (3)
9.000	0.22a	8.47s	246.27	0.00	-0.120	-2.15	7.20 (3)
8.869	0.23a	11.94s	246.27	0.00	0.000	-2.36	4.15 (5)
8.655	0.25a	16.94s	246.27	0.00	0.123	-2.04	7.66 (3)
8.484	0.26a	21.04s	246.27	0.00	**0.150**	-1.46	7.76 (3)

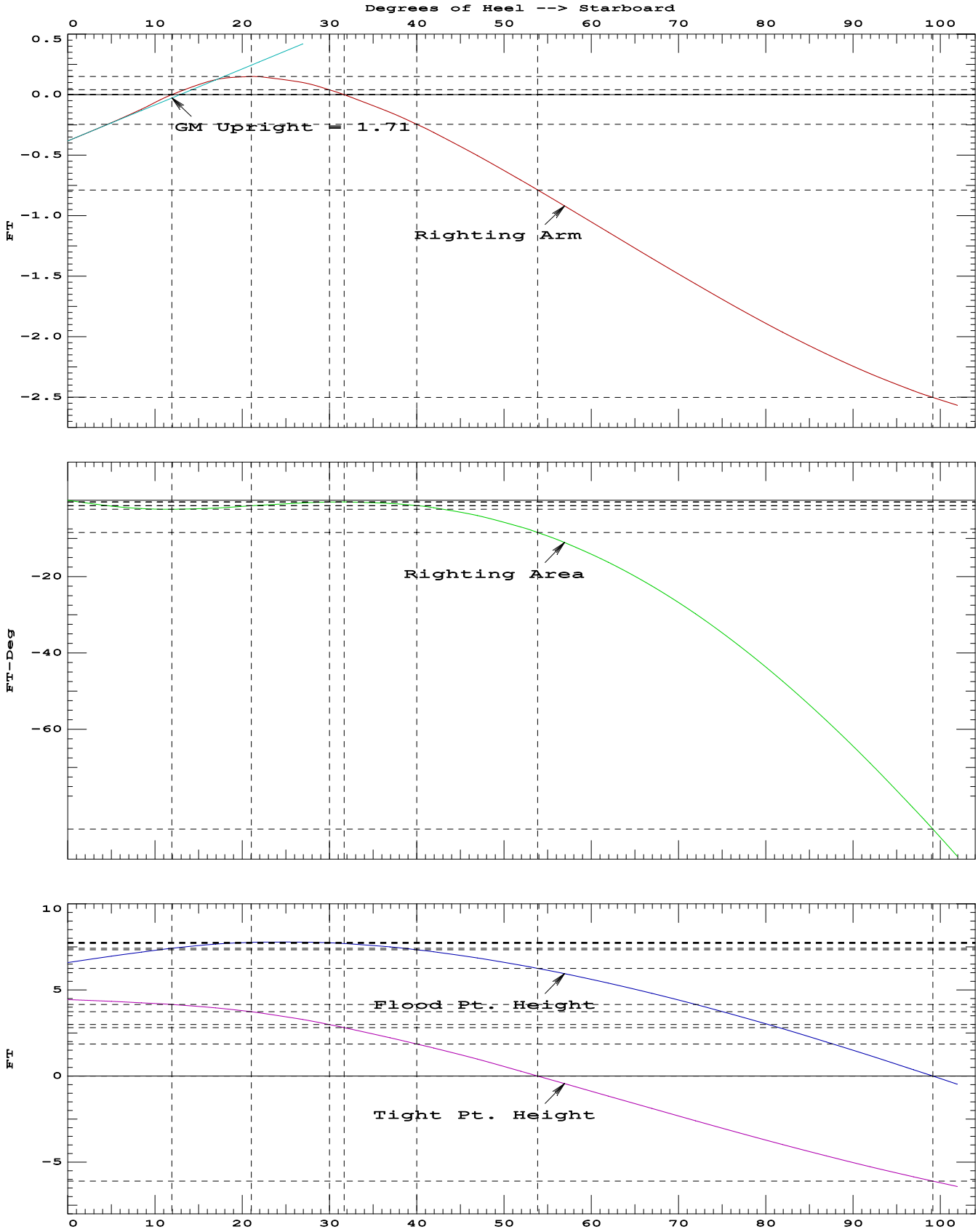
8.446	0.26a	21.94s	246.27	0.00	0.149	-1.33	7.77 (3)
8.218	0.29a	26.94s	246.27	0.00	0.100	-0.67	7.78 (3)
8.062	0.33a	30.00s	246.27	0.00	0.040	-0.45	7.73 (3)
7.972	0.36a	31.68s	246.27	0.00	0.000	-0.41	7.69 (3)
7.958	0.36a	31.94s	246.27	0.00	-0.006	-0.42	7.69 (3)
7.679	0.43a	36.94s	246.27	0.00	-0.146	-0.78	7.50 (3)
7.498	0.46a	40.00s	246.27	0.00	-0.245	-1.38	7.33 (3)
7.379	0.48a	41.94s	246.27	0.00	-0.312	-1.92	7.21 (3)
7.043	0.51a	46.94s	246.27	0.00	-0.502	-3.94	6.86 (3)
6.673	0.52a	51.94s	246.27	0.00	-0.707	-6.96	6.43 (3)
6.523	0.52a	53.85s	246.27	0.00	-0.788	-8.39	0.00 (2)
6.269	0.51a	56.94s	246.27	0.00	-0.920	-11.03	5.94 (3)
5.828	0.49a	61.94s	246.27	0.00	-1.136	-16.16	5.40 (3)
5.354	0.46a	66.94s	246.27	0.00	-1.352	-22.38	4.80 (3)
4.850	0.42a	71.94s	246.27	0.00	-1.564	-29.67	4.16 (3)
4.321	0.38a	76.94s	246.27	0.00	-1.769	-38.01	3.47 (3)
3.776	0.32a	81.94s	246.27	0.00	-1.963	-47.34	2.75 (3)
3.221	0.24a	86.94s	246.27	0.00	-2.142	-57.61	1.98 (3)
2.658	0.15a	91.94s	246.27	0.00	-2.305	-68.74	1.19 (3)
2.093	0.03a	96.94s	246.27	0.00	-2.447	-80.62	0.37 (3)
1.844	0.03f	99.15s	246.27	0.00	-2.502	-86.09	*-0.00* (3)
1.531	0.10f	101.94s	246.27	0.00	-2.566	-93.17	*-0.47* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 15.1 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(2)	HOLD AFT	TIGHT	46.00a	2.00	14.50
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.71 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.04 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*21.04 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*-1.38 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	*-0.45 F*
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*-0.93 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*31.68 F*


Degrees of Heel --> Starboard
GM Upright = 1.71
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
Tight Pt. Height
FT

LC12: TIME OF INCIDENT - BIRDS DEPLOYED

HYDROSTATIC PROPERTIES

Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg., VCG = 9.43

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.271	246.36	36.30a	5.80	3.43	39.42a	276.61	64.3	1.75

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.134 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
STBD PARAVANE WIRE DIFF	0.10	34.50a	46.50s	35.25
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.80**	**37.40a**	**0.02s**	**9.93**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.02s	9.01	5.2
FOS	0.500	0.870	11.63	30.36a	7.70s	4.85	4.3
FOP	0.500	0.870	11.63	30.35a	7.69p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.04a**	**0.06s**	**5.34**	**13.7**
Total Weight			**246.36**	**36.29a**	**0.02s**	**9.43**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.36	36.30a	0.07s	5.80	-9.13
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.134 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg.
Least freeboard is 2.10 Ft located at 36.38a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 36.29a TCG = 0.02s VCG = 9.43
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.29a TCG = 0.02s VCG = 9.49

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height
9.134	0.20a	0.00	246.36	0.00	-0.023	0.00	6.59 (3)
9.133	0.20a	0.77s	246.36	0.00	0.000	-0.01	4.42 (5)
9.073	0.21a	5.77s	246.36	0.00	0.155	0.38	7.01 (3)
8.919	0.23a	10.77s	246.36	0.00	0.321	1.56	7.35 (3)
8.706	0.25a	15.77s	246.36	0.00	0.463	3.53	7.61 (3)

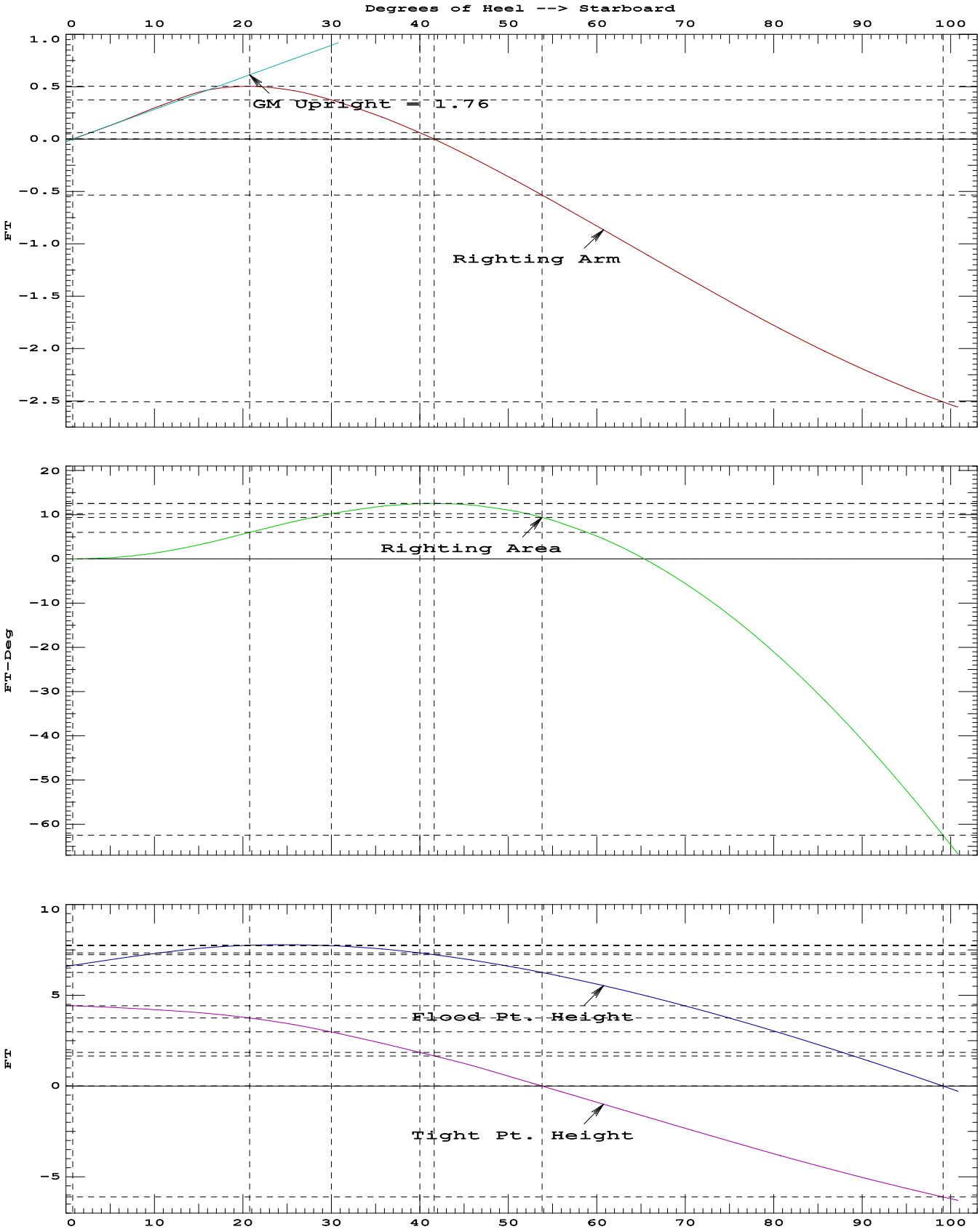
8.496	0.26a	20.77s	246.36	0.00	**0.504**	5.99	7.76 (3)
8.275	0.28a	25.77s	246.36	0.00	0.462	8.44	7.78 (3)
8.062	0.33a	30.00s	246.36	0.00	0.375	10.23	7.73 (3)
8.022	0.35a	30.77s	246.36	0.00	0.356	10.51	7.72 (3)
7.746	0.42a	35.77s	246.36	0.00	0.209	11.94	7.55 (3)
7.498	0.47a	40.00s	246.36	0.00	0.062	12.52	7.33 (3)
7.451	0.48a	40.77s	246.36	0.00	0.033	12.56	7.29 (3)
7.398	0.48a	41.61s	246.36	0.00	0.000	12.57	7.24 (3)
7.124	0.51a	45.77s	246.36	0.00	-0.171	12.22	6.95 (3)
6.762	0.53a	50.77s	246.36	0.00	-0.393	10.82	6.54 (3)
6.525	0.52a	53.81s	246.36	0.00	-0.534	9.41	0.00 (2)
6.366	0.52a	55.77s	246.36	0.00	-0.626	8.28	6.06 (3)
5.933	0.50a	60.77s	246.36	0.00	-0.867	4.55	5.53 (3)
5.466	0.47a	65.77s	246.36	0.00	-1.109	-0.39	4.95 (3)
4.969	0.44a	70.77s	246.36	0.00	-1.349	-6.54	4.32 (3)
4.444	0.40a	75.77s	246.36	0.00	-1.585	-13.87	3.64 (3)
3.903	0.35a	80.77s	246.36	0.00	-1.812	-22.37	2.92 (3)
3.350	0.27a	85.77s	246.36	0.00	-2.025	-31.97	2.16 (3)
2.789	0.18a	90.77s	246.36	0.00	-2.223	-42.59	1.38 (3)
2.225	0.07a	95.77s	246.36	0.00	-2.401	-54.16	0.56 (3)
1.845	0.02f	99.14s	246.36	0.00	-2.509	-62.44	0.00 (3)
1.663	0.06f	100.77s	246.36	0.00	-2.558	-66.57	*-0.27* (3)

Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 13.7 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(2)	HOLD AFT	TIGHT	46.00a	2.00	14.50
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	**1.15**	**Ft**	**1.76 P**
(2)	**Righting Arm at abs 30 deg**	>	**0.66**	**Ft**	***0.38 F***
(3)	**Absolute Angle at MaxRA**	>	**25.00**	**deg**	***20.77 F***
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	**16.90**	**Ft-deg**	***12.52 F***
(5)	**Absolute Area from abs 0 deg to abs 30**	>	**10.30**	**Ft-deg**	***10.23 F***
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	**5.60**	**Ft-deg**	***2.29 F***
(7)	**Angle from abs 0 deg to RAzero**	>	**60.00**	**deg**	***41.61 F***


Degrees of Heel --> Starboard
GM Upright = 1.76
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
Tight Pt. Height
FT

LC0: LIGHTSHIP

HYDROSTATIC PROPERTIES

Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg., VCG = 9.89

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.342	208.32	37.35a	5.28	3.31	40.21a	254.81	70.1	1.38

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.338 @ Origin
Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg.

Part	Weight(LT)	LCG	TCG	VCG
FIXED WEIGHT	181.77	38.69a	0.00	10.55

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.35a	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.57a	7.71s	4.86	4.3
FOP	0.500	0.870	11.63	30.57a	7.70p	4.86	4.3
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.23a**	**0.05s**	**5.34**	**13.8**
Total Weight			**208.33**	**37.23a**	**0.01s**	**9.89**	
			Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL		1.025	208.32	37.35a	0.03s	5.28	-7.34
	Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.338 @ Origin
Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg.
Least freeboard is 3.10 Ft located at 46.70a

LC0: LIGHTSHIP

HYDROSTATIC PROPERTIES

Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg., VCG = 9.89

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.342	208.32	37.35a	5.28	3.31	40.21a	254.81	70.1	1.38

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.338 @ Origin
Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg.

Part			Weight(LT)	LCG	TCG	VCG	
FIXED WEIGHT			181.77	38.69a	0.00	10.55	
	Load	**SpGr**	**Weight(LT)**	**LCG**	**TCG**	**VCG**	**FSM**
FW	0.500	1.000	3.03	0.35a	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.57a	7.71s	4.86	4.3
FOP	0.500	0.870	11.63	30.57a	7.70p	4.86	4.3
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.23a**	**0.05s**	**5.34**	**13.8**
Total Weight			**208.33**	**37.23a**	**0.01s**	**9.89**	
			Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL		1.025	208.32	37.35a	0.03s	5.28	-7.34
	Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.338 @ Origin
Trim: Aft 1.43 deg., Heel: Stbd 0.26 deg.
Least freeboard is 3.10 Ft located at 46.70a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max			Attained	
(1)	**Absolute Angle at Equilibrium**	<	14.00	deg	9.35	P
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	>	1.000		1.367	P
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	>	1.000		2.173	P

Roll angle = 16.03 degrees.

IMO parameters:

K = 0.700	X1 = 0.932	X2 = 0.839	Cb = 0.510
L = 76.93	B = 22.75	D = 8.17	BDR = 2.787
VCG = 9.89	Draft = 8.34	WG = 1.62	R = 0.849
T = 9.1	C = 0.471	GM = 1.38	S = 0.085

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 37.23a TCG = 0.02s VCG = 9.89
Free Surface Adjustment: 0.07
Adjusted CG: LCG = 37.23a TCG = 0.01s VCG = 9.96

Origin	Degrees of		Displacement	Residual Arms		Flood Pt	
Depth	Trim	Heel	Weight(LT)	in Trim	in Heel	Height	
7.268	1.43a	6.68p	208.32	0.00	-0.400	4.52	(5)
7.333	1.43a	1.68p	208.32	0.00	-0.276	4.63	(5)
7.320	1.43a	3.32s	208.32	0.00	-0.156	4.60	(5)
7.229	1.43a	8.32s	208.32	0.00	-0.028	4.48	(5)
7.201	1.43a	9.35s	208.32	0.00	0.000	4.45	(5)
7.063	1.43a	13.32s	208.32	0.00	0.115	9.08	(3)
6.834	1.41a	18.32s	208.33	0.00	0.274	9.31	(3)
6.576	1.39a	23.32s	208.33	0.00	0.362	9.44	(3)
6.465	1.38a	25.38s	208.32	0.00	**0.370**	9.47	(3)
6.302	1.38a	28.32s	208.32	0.00	0.354	9.47	(3)
5.998	1.40a	33.32s	208.33	0.00	0.255	9.39	(3)
5.653	1.42a	38.32s	208.33	0.00	0.076	9.24	(3)

5.522	1.43a	40.08s	208.33	0.00	0.000	9.17	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 14.4 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 47.86 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 1067.698 SQFT WIND LEVER ARM = 10.632 FT

LC1: READY FOR SEA DEPARTURE

HYDROSTATIC PROPERTIES

Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg., VCG = 9.62

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.343	249.30	36.55a	5.84	3.43	39.47a	275.18	63.2	1.55

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.082 @ Origin
Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.50	19.25a	0.00	14.90
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	13.39	47.75a	0.00	6.99
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**197.24**	**39.10a**	**0.00**	**10.17**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.980	1.000	5.93	0.24f	0.00	10.56	1.7
FOS	0.980	0.870	22.80	30.14a	7.96s	7.12	7.1
FOP	0.980	0.870	22.80	30.14a	7.96p	7.12	7.1
HOT	0.980	0.947	0.52	40.59a	4.90s	8.13	0.0
Total Tanks			**52.06**	**26.78a**	**0.05s**	**7.52**	**15.9**
Total Weight			**249.30**	**36.52a**	**0.01s**	**9.62**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	249.30	36.55a	0.04s	5.84	-9.08
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.082 @ Origin
Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg.
Least freeboard is 2.11 Ft located at 36.38a

LC1: READY FOR SEA DEPARTURE

HYDROSTATIC PROPERTIES

Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg., VCG = 9.62

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.343	249.30	36.55a	5.84	3.43	39.47a	275.18	63.2	1.55

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.082 @ Origin
Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.50	19.25a	0.00	14.90
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	13.39	47.75a	0.00	6.99
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**197.24**	**39.10a**	**0.00**	**10.17**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.980	1.000	5.93	0.24f	0.00	10.56	1.7
FOS	0.980	0.870	22.80	30.14a	7.96s	7.12	7.1
FOP	0.980	0.870	22.80	30.14a	7.96p	7.12	7.1
HOT	0.980	0.947	0.52	40.59a	4.90s	8.13	0.0
Total Tanks			**52.06**	**26.78a**	**0.05s**	**7.52**	**15.9**
Total Weight			**249.30**	**36.52a**	**0.01s**	**9.62**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	249.30	36.55a	0.04s	5.84	-9.08
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.082 @ Origin
Trim: Aft 0.38 deg., Heel: Stbd 0.38 deg.
Least freeboard is 2.11 Ft located at 36.38a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max		Attained
(1)	**Absolute Angle at Equilibrium**	**< 14.00**	**deg**	**6.51 P**
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	**> 1.000**		***-0.105 F***
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	**> 1.000**		**1.198 P**

Roll angle = 16.77 degrees.

IMO parameters:

K = 0.700	X1 = 0.990	X2 = 0.858	Cb = 0.525
L = 78.57	B = 22.75	D = 9.30	BDR = 2.446
VCG = 9.62	Draft = 9.34	WG = 0.29	R = 0.749
T = 8.4	C = 0.463	GM = 1.56	S = 0.089

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 36.52a TCG = 0.02s VCG = 9.62
Free Surface Adjustment: 0.03
Adjusted CG: LCG = 36.52a TCG = 0.01s VCG = 9.65

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	Flood Pt Height	
8.889	0.40a	10.26p	249.30	0.00	-0.479	4.03	(5)
9.035	0.38a	5.26p	249.30	0.00	-0.329	4.16	(5)
9.086	0.37a	0.26p	249.30	0.00	-0.190	6.60	(3)
9.044	0.38a	4.74s	249.30	0.00	-0.051	4.17	(5)
9.007	0.38a	6.51s	249.30	0.00	0.000	4.13	(5)

8.908	0.40a	9.74s	249.30	0.00	0.097	7.31	(3)
8.701	0.42a	14.74s	249.30	0.00	0.234	7.59	(3)
8.512	0.45a	19.20s	249.30	0.00	**0.271**	7.75	(3)
8.489	0.45a	19.74s	249.30	0.00	0.270	7.76	(3)
8.264	0.49a	24.74s	249.30	0.00	0.221	7.82	(3)
8.005	0.59a	29.74s	249.30	0.00	0.104	7.78	(3)
7.812	0.66a	33.19s	249.30	0.00	0.000	7.69	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 8.0 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 42.65 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 1013.977 SQFT WIND LEVER ARM = 10.434 FT

LC2: ARRIVAL AT FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg., VCG = 9.63

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.111	239.68	37.06a	5.72	3.40	39.75a	269.16	64.3	1.52

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 8.489 @ Origin
Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.40	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	11.38	47.75a	0.00	6.99
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**197.13**	**39.17a**	**0.00**	**10.25**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.800	1.000	4.84	0.01a	0.01s	10.05	9.1
FOS	0.800	0.870	18.61	30.28a	7.87s	6.31	6.0
FOP	0.800	0.870	18.61	30.28a	7.87p	6.31	6.0
HOT	0.900	0.947	0.48	40.59a	4.90s	7.85	0.0
Total Tanks			**42.55**	**26.95a**	**0.06s**	**6.75**	**21.1**
Total Weight			**239.68**	**37.00a**	**0.01s**	**9.63**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	239.68	37.06a	0.04s	5.72	-8.49
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.489 @ Origin
Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg.
Least freeboard is 2.33 Ft located at 41.81a

LC2: ARRIVAL AT FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg., VCG = 9.63

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.111	239.68	37.06a	5.72	3.40	39.75a	269.16	64.3	1.52

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 8.488 @ Origin
Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.40	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	11.38	47.75a	0.00	6.99
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**197.13**	**39.17a**	**0.00**	**10.25**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.800	1.000	4.84	0.01a	0.01s	10.05	9.1
FOS	0.800	0.870	18.61	30.28a	7.87s	6.31	6.0
FOP	0.800	0.870	18.61	30.28a	7.87p	6.31	6.0
HOT	0.900	0.947	0.48	40.59a	4.90s	7.85	0.0
Total Tanks			**42.55**	**26.95a**	**0.06s**	**6.75**	**21.1**
Total Weight			**239.68**	**37.00a**	**0.01s**	**9.63**	
			Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL		1.025	239.68	37.06a	0.04s	5.72	-8.49
	Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.488 @ Origin
Trim: Aft 0.90 deg., Heel: Stbd 0.37 deg.
Least freeboard is 2.33 Ft located at 41.81a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	14.00	deg	7.12 P
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	>	1.000		*0.230 F*
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	>	1.000		1.386 P

Roll angle = 16.64 degrees.

IMO parameters:

K = 0.700	X1 = 0.976	X2 = 0.858	Cb = 0.524
L = 78.05	B = 22.75	D = 9.01	BDR = 2.526
VCG = 9.63	Draft = 9.11	WG = 0.56	R = 0.767
T = 8.6	C = 0.465	GM = 1.52	S = 0.088

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 37.00a TCG = 0.02s VCG = 9.63
Free Surface Adjustment: 0.08
Adjusted CG: LCG = 37.00a TCG = 0.01s VCG = 9.71

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	Flood Pt Height	
8.326	0.92a	9.53p	239.68	0.00	-0.456	3.98	(5)
8.452	0.90a	4.53p	239.68	0.00	-0.314	4.10	(5)
8.486	0.90a	0.47s	239.65	0.00	-0.180	4.18	(5)
8.434	0.90a	5.47s	239.65	0.00	-0.046	4.08	(5)
8.397	0.91a	7.12s	239.65	0.00	0.000	4.04	(5)
8.292	0.92a	10.47s	239.68	0.00	0.099	7.87	(3)
8.073	0.94a	15.47s	239.68	0.00	0.243	8.15	(3)
7.835	0.98a	20.47s	239.68	0.00	0.293	8.33	(3)
7.576	1.05a	25.47s	239.68	0.00	0.251	8.40	(3)
7.285	1.17a	30.47s	239.68	0.00	0.141	8.36	(3)
6.997	1.28a	35.15s	239.65	0.00	0.000	8.24	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 19.9 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 43.76 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 1029.180 SQFT WIND LEVER ARM = 10.475 FT

LC3: 50% CATCH AT FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg., VCG = 9.49

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.250	245.47	36.31a	5.79	3.43	39.43a	275.64	64.3	1.68

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.102 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.30	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	9.38	47.75a	0.00	6.99
CATCH IN HOLD	17.86	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**212.89**	**37.79a**	**0.00**	**10.03**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.700	1.000	4.24	0.10a	0.01s	9.73	7.8
FOS	0.600	0.870	13.96	30.30a	7.76s	5.35	4.8
FOP	0.600	0.870	13.96	30.30a	7.76p	5.35	4.8
HOT	0.800	0.947	0.43	40.59a	4.90s	7.50	0.0
Total Tanks			**32.58**	**26.50a**	**0.07s**	**5.95**	**17.4**
Total Weight			**245.47**	**36.29a**	**0.01s**	**9.49**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	245.47	36.31a	0.03s	5.79	-9.10
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.102 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg.
Least freeboard is 2.21 Ft located at 36.38a

LC3: 50% CATCH AT FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg., VCG = 9.49

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.250	245.47	36.31a	5.79	3.43	39.43a	275.64	64.3	1.68

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.102 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.30	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	9.38	47.75a	0.00	6.99
CATCH IN HOLD	17.86	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**212.89**	**37.79a**	**0.00**	**10.03**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.700	1.000	4.24	0.10a	0.01s	9.73	7.8
FOS	0.600	0.870	13.96	30.30a	7.76s	5.35	4.8
FOP	0.600	0.870	13.96	30.30a	7.76p	5.35	4.8
HOT	0.800	0.947	0.43	40.59a	4.90s	7.50	0.0
Total Tanks			**32.58**	**26.50a**	**0.07s**	**5.95**	**17.4**
Total Weight			**245.47**	**36.29a**	**0.01s**	**9.49**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	245.47	36.31a	0.03s	5.79	-9.10
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.102 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.29 deg.
Least freeboard is 2.21 Ft located at 36.38a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	14.00	deg	6.14 P
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	>	1.000		*0.566 F*
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	>	1.000		1.472 P

Roll angle = 16.75 degrees.

IMO parameters:

K = 0.700	X1 = 0.987	X2 = 0.854	Cb = 0.521
L = 78.54	B = 22.75	D = 9.23	BDR = 2.466
VCG = 9.49	Draft = 9.25	WG = 0.25	R = 0.746
T = 8.1	C = 0.463	GM = 1.68	S = 0.091

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 36.29a TCG = 0.02s VCG = 9.49
Free Surface Adjustment: 0.07
Adjusted CG: LCG = 36.29a TCG = 0.01s VCG = 9.56

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	Flood Pt Height	
8.893	0.24a	10.61p	245.47	0.00	-0.507	4.20	(5)
9.044	0.22a	5.61p	245.47	0.00	-0.348	4.33	(5)
9.101	0.21a	0.61p	245.47	0.00	-0.200	4.44	(5)
9.067	0.22a	4.39s	245.47	0.00	-0.053	4.36	(5)
9.033	0.22a	6.14s	245.47	0.00	0.000	4.32	(5)
8.939	0.24a	9.39s	245.47	0.00	0.103	7.29	(3)
8.732	0.26a	14.39s	245.47	0.00	0.258	7.58	(3)
8.520	0.27a	19.39s	245.47	0.00	0.322	7.76	(3)
8.479	0.27a	20.35s	245.47	0.00	**0.323**	7.78	(3)
8.303	0.28a	24.39s	245.47	0.00	0.298	7.82	(3)
8.058	0.34a	29.39s	245.47	0.00	0.202	7.78	(3)
7.787	0.41a	34.39s	245.47	0.00	0.059	7.64	(3)
7.684	0.43a	36.19s	245.47	0.00	0.000	7.57	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 17.7 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 42.70 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 1022.939 SQFT WIND LEVER ARM = 10.425 FT

LC4: 100% CATCH LEAVING FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg., VCG = 9.42

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.407	251.92	35.62a	5.88	3.45	39.12a	282.23	64.2	1.78

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.699 @ Origin
Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	8.04	47.75a	0.00	6.99
CATCH IN HOLD	35.71	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**229.30**	**36.63a**	**0.00**	**9.84**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.600	1.000	3.63	0.19a	0.01s	9.39	6.5
FOS	0.400	0.870	9.31	30.30a	7.63s	4.33	3.7
FOP	0.400	0.870	9.31	30.29a	7.63p	4.33	3.7
HOT	0.700	0.947	0.37	40.59a	4.90s	7.14	0.0
Total Tanks			**22.62**	**25.63a**	**0.08s**	**5.19**	**13.9**
Total Weight			**251.92**	**35.65a**	**0.01s**	**9.42**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	251.92	35.62a	0.02s	5.88	-9.70
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.699 @ Origin
Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg.
Least freeboard is 2.01 Ft located at 30.95a

LC4: 100% CATCH LEAVING FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg., VCG = 9.42

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.407	251.92	35.62a	5.88	3.45	39.12a	282.23	64.2	1.78

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.699 @ Origin
Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	8.04	47.75a	0.00	6.99
CATCH IN HOLD	35.71	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**229.30**	**36.63a**	**0.00**	**9.84**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.600	1.000	3.63	0.19a	0.01s	9.39	6.5
FOS	0.400	0.870	9.31	30.30a	7.63s	4.33	3.7
FOP	0.400	0.870	9.31	30.29a	7.63p	4.33	3.7
HOT	0.700	0.947	0.37	40.59a	4.90s	7.14	0.0
Total Tanks			**22.62**	**25.63a**	**0.08s**	**5.19**	**13.9**
Total Weight			**251.92**	**35.65a**	**0.01s**	**9.42**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	251.92	35.62a	0.02s	5.88	-9.70
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.699 @ Origin
Trim: Fwd 0.43 deg., Heel: Stbd 0.23 deg.
Least freeboard is 2.01 Ft located at 30.95a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	14.00	deg	5.54 P
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	>	1.000		*0.496 F*
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	>	1.000		1.380 P

Roll angle = 16.81 degrees.

IMO parameters:

K = 0.700	X1 = 0.997	X2 = 0.850	Cb = 0.519
L = 79.04	B = 22.75	D = 9.45	BDR = 2.407
VCG = 9.42	Draft = 9.41	WG = -0.01	R = 0.729
T = 7.9	C = 0.462	GM = 1.79	S = 0.092

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 35.65a TCG = 0.01s VCG = 9.42
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 35.65a TCG = 0.01s VCG = 9.48

Origin Depth	Degrees of Trim	Heel	Displacement Weight(LT)	Residual Arms in Trim	in Heel	Flood Pt Height	
9.455	0.39f	11.27p	251.92	0.00	-0.540	4.39	(4)
9.623	0.42f	6.27p	251.92	0.00	-0.372	4.53	(4)
9.696	0.43f	1.27p	251.92	0.00	-0.214	4.63	(4)
9.672	0.42f	3.73s	251.92	0.00	-0.058	4.58	(4)
9.641	0.42f	5.54s	251.95	0.00	0.000	4.54	(4)
9.552	0.40f	8.73s	251.92	0.00	0.105	6.74	(3)
9.358	0.38f	13.73s	251.92	0.00	0.260	7.04	(3)
9.176	0.40f	18.73s	251.89	0.00	0.320	7.20	(3)
9.149	0.41f	19.54s	251.92	0.00	**0.321**	7.22	(3)
9.003	0.44f	23.73s	251.92	0.00	0.295	7.24	(3)
8.809	0.45f	28.73s	251.92	0.00	0.205	7.18	(3)
8.580	0.43f	33.73s	251.92	0.00	0.066	7.02	(3)
8.481	0.42f	35.75s	251.92	0.00	0.000	6.93	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 14.1 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 42.07 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(4)	LAZ HATCH FWD	TIGHT	71.00a	1.00	13.82

WIND AREA = 1012.183 SQFT WIND LEVER ARM = 10.401 FT

LC5: 40% CATCH LEAVING FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg., VCG = 9.61

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.886	230.50	36.85a	5.58	3.38	39.79a	266.92	66.3	1.58

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 8.323 @ Origin
Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	8.04	47.75a	0.00	6.99
CATCH IN HOLD	14.29	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**207.88**	**37.98a**	**0.00**	**10.10**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.600	1.000	3.63	0.22a	0.01s	9.39	6.5
FOS	0.400	0.870	9.31	30.56a	7.64s	4.33	3.7
FOP	0.400	0.870	9.31	30.55a	7.63p	4.33	3.7
HOT	0.700	0.947	0.37	40.59a	4.90s	7.14	0.0
Total Tanks			**22.62**	**25.85a**	**0.08s**	**5.19**	**13.9**
Total Weight			**230.50**	**36.79a**	**0.01s**	**9.61**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	230.50	36.85a	0.03s	5.58	-8.32
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.323 @ Origin
Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg.
Least freeboard is 2.58 Ft located at 41.81a

LC5: 40% CATCH LEAVING FISHING GROUNDS

HYDROSTATIC PROPERTIES

Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg., VCG = 9.61

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.886	230.50	36.85a	5.58	3.38	39.79a	266.92	66.3	1.58

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 8.323 @ Origin
Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	8.04	47.75a	0.00	6.99
CATCH IN HOLD	14.29	23.58a	0.00	7.37
CATCH ON DECK	2.00	54.00a	0.00	14.50
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**207.88**	**37.98a**	**0.00**	**10.10**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.600	1.000	3.63	0.22a	0.01s	9.39	6.5
FOS	0.400	0.870	9.31	30.56a	7.64s	4.33	3.7
FOP	0.400	0.870	9.31	30.55a	7.63p	4.33	3.7
HOT	0.700	0.947	0.37	40.59a	4.90s	7.14	0.0
Total Tanks			**22.62**	**25.85a**	**0.08s**	**5.19**	**13.9**
Total Weight			**230.50**	**36.79a**	**0.01s**	**9.61**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	230.50	36.85a	0.03s	5.58	-8.32
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.323 @ Origin
Trim: Aft 0.81 deg., Heel: Stbd 0.29 deg.
Least freeboard is 2.58 Ft located at 41.81a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	14.00	deg	7.18 P
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	>	1.000		1.090 P
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	>	1.000		1.832 P

Roll angle = 16.53 degrees.

IMO parameters:

K = 0.700	X1 = 0.965	X2 = 0.850	Cb = 0.518
L = 77.84	B = 22.75	D = 8.79	BDR = 2.588
VCG = 9.61	Draft = 8.89	WG = 0.77	R = 0.783
T = 8.4	C = 0.466	GM = 1.58	S = 0.089

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 36.79a TCG = 0.02s VCG = 9.62
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.79a TCG = 0.01s VCG = 9.68

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	Flood Pt Height	
8.170	0.82a	9.36p	230.47	0.00	-0.468	4.26	(5)
8.290	0.81a	4.36p	230.50	0.00	-0.322	4.38	(5)
8.321	0.81a	0.64s	230.48	0.00	-0.184	4.46	(5)
8.267	0.81a	5.64s	230.47	0.00	-0.044	4.35	(5)
8.233	0.82a	7.17s	230.47	0.00	0.000	4.32	(5)
8.126	0.83a	10.64s	230.50	0.00	0.106	8.06	(3)
7.908	0.84a	15.64s	230.50	0.00	0.267	8.33	(3)
7.666	0.85a	20.64s	230.50	0.00	0.350	8.51	(3)
7.574	0.86a	22.52s	230.50	0.00	**0.356**	8.55	(3)
7.413	0.88a	25.64s	230.50	0.00	0.339	8.57	(3)
7.132	0.94a	30.64s	230.50	0.00	0.252	8.54	(3)
6.833	1.01a	35.64s	230.50	0.00	0.111	8.40	(3)
6.633	1.05a	38.76s	230.49	0.00	0.000	8.26	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 14.3 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 44.59 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 1044.808 SQFT WIND LEVER ARM = 10.494 FT

LC6: ARRIVAL PORT - 100% CATCH

HYDROSTATIC PROPERTIES

Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg., VCG = 9.55

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.050	237.28	35.79a	5.67	3.41	39.37a	274.75	66.3	1.67

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.128 @ Origin
Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.10	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
CATCH IN HOLD	35.71	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**225.23**	**36.39a**	**0.00**	**9.82**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.46a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	30.54a	7.46s	3.22	2.7
FOP	0.200	0.870	4.65	30.53a	7.46p	3.22	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**24.76a**	**0.13s**	**4.39**	**9.4**
Total Weight			**237.28**	**35.80a**	**0.01s**	**9.55**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	237.28	35.79a	0.02s	5.67	-9.13
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.128 @ Origin
Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg.
Least freeboard is 2.40 Ft located at 34.75a

LC6: ARRIVAL PORT - 100% CATCH

HYDROSTATIC PROPERTIES

Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg., VCG = 9.55

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.050	237.28	35.79a	5.67	3.41	39.37a	274.75	66.3	1.67

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.128 @ Origin
Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.10	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
CATCH IN HOLD	35.71	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**225.23**	**36.39a**	**0.00**	**9.82**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.46a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	30.54a	7.46s	3.22	2.7
FOP	0.200	0.870	4.65	30.53a	7.46p	3.22	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**24.76a**	**0.13s**	**4.39**	**9.4**
Total Weight			**237.28**	**35.80a**	**0.01s**	**9.55**	
			Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL		1.025	237.28	35.79a	0.02s	5.67	-9.13
	Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.128 @ Origin
Trim: Fwd 0.11 deg., Heel: Stbd 0.23 deg.
Least freeboard is 2.40 Ft located at 34.75a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	14.00	deg	6.29 P
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	>	1.000		1.077 P
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	>	1.000		1.782 P

Roll angle = 16.57 degrees.

IMO parameters:

K = 0.700	X1 = 0.979	X2 = 0.843	Cb = 0.513
L = 78.47	B = 22.75	D = 9.06	BDR = 2.511
VCG = 9.55	Draft = 9.05	WG = 0.49	R = 0.762
T = 8.2	C = 0.464	GM = 1.68	S = 0.091

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 35.80a TCG = 0.01s VCG = 9.55
Free Surface Adjustment: 0.04
Adjusted CG: LCG = 35.80a TCG = 0.01s VCG = 9.59

Origin Depth	Degrees of Trim	Heel	Displacement Weight(LT)	Residual Arms in Trim	in Heel	Flood Pt Height	
8.935	0.09f	10.28p	237.28	0.00	-0.500	4.60	(4)
9.077	0.11f	5.28p	237.28	0.00	-0.342	4.73	(4)
9.127	0.11f	0.28p	237.28	0.00	-0.195	4.83	(4)
9.087	0.11f	4.72s	237.27	0.00	-0.048	4.74	(4)
9.057	0.10f	6.28s	237.31	0.00	0.000	4.70	(4)
8.955	0.09f	9.72s	237.28	0.00	0.108	7.32	(3)
8.746	0.08f	14.72s	237.28	0.00	0.270	7.62	(3)
8.532	0.09f	19.72s	237.28	0.00	0.352	7.79	(3)
8.447	0.11f	21.77s	237.28	0.00	**0.359**	7.83	(3)
8.325	0.13f	24.72s	237.28	0.00	0.345	7.84	(3)
8.103	0.16f	29.72s	237.28	0.00	0.267	7.78	(3)
7.851	0.15f	34.72s	237.28	0.00	0.132	7.62	(3)
7.643	0.15f	38.56s	237.28	0.00	0.000	7.44	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 9.6 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 42.70 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(4)	LAZ HATCH FWD	TIGHT	71.00a	1.00	13.82

WIND AREA = 1034.393 SQFT WIND LEVER ARM = 10.459 FT

LC7: ARRIVAL PORT - 40% CATCH

HYDROSTATIC PROPERTIES

Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg., VCG = 9.77

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.530	215.96	37.11a	5.38	3.34	40.05a	259.81	68.9	1.49

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.710 @ Origin
Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
CATCH IN HOLD	14.29	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**203.91**	**37.73a**	**0.00**	**10.08**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.48a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	31.01a	7.48s	3.23	2.7
FOP	0.200	0.870	4.65	31.00a	7.47p	3.23	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**25.13a**	**0.13s**	**4.39**	**9.5**
Total Weight			**215.96**	**37.02a**	**0.01s**	**9.77**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	215.96	37.11a	0.03s	5.38	-7.71
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.710 @ Origin
Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg.
Least freeboard is 2.93 Ft located at 43.98a

LC7: ARRIVAL PORT - 40% CATCH

HYDROSTATIC PROPERTIES

Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg., VCG = 9.77

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.530	215.96	37.11a	5.38	3.34	40.05a	259.81	68.9	1.49

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.710 @ Origin
Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
CATCH IN HOLD	14.29	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**203.91**	**37.73a**	**0.00**	**10.08**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.48a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	31.01a	7.48s	3.23	2.7
FOP	0.200	0.870	4.65	31.00a	7.47p	3.23	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**25.13a**	**0.13s**	**4.39**	**9.5**
Total Weight			**215.96**	**37.02a**	**0.01s**	**9.77**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	215.96	37.11a	0.03s	5.38	-7.71
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.710 @ Origin
Trim: Aft 1.17 deg., Heel: Stbd 0.28 deg.
Least freeboard is 2.93 Ft located at 43.98a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	14.00	deg	8.30 P
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	>	1.000		1.516 P
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	>	1.000		2.171 P

Roll angle = 16.26 degrees.

IMO parameters:

K = 0.700	X1 = 0.944	X2 = 0.842	Cb = 0.513
L = 77.26	B = 22.75	D = 8.39	BDR = 2.713
VCG = 9.77	Draft = 8.53	WG = 1.30	R = 0.823
T = 8.8	C = 0.470	GM = 1.49	S = 0.087

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 37.02a TCG = 0.01s VCG = 9.77
Free Surface Adjustment: 0.05
Adjusted CG: LCG = 37.02a TCG = 0.01s VCG = 9.81

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	Flood Pt Height	
7.605	1.18a	7.96p	215.94	0.00	-0.435	4.45	(5)
7.694	1.17a	2.96p	215.95	0.00	-0.299	4.56	(5)
7.701	1.17a	2.04s	215.95	0.00	-0.170	4.58	(5)
7.628	1.18a	7.04s	215.94	0.00	-0.036	4.47	(5)
7.596	1.18a	8.30s	215.94	0.00	0.000	4.44	(5)
7.474	1.18a	12.04s	215.94	0.00	0.112	8.69	(3)
7.250	1.18a	17.04s	215.96	0.00	0.276	8.94	(3)
6.997	1.17a	22.04s	215.96	0.00	0.372	9.10	(3)
6.861	1.16a	24.64s	215.94	0.00	**0.384**	9.13	(3)
6.730	1.17a	27.04s	215.94	0.00	0.374	9.14	(3)
6.440	1.20a	32.04s	215.96	0.00	0.292	9.09	(3)
6.118	1.23a	37.04s	215.96	0.00	0.138	8.94	(3)
5.876	1.26a	40.44s	215.95	0.00	0.000	8.80	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 9.8 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 46.51 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 1062.942 SQFT WIND LEVER ARM = 10.569 FT

LC8: ARRIVAL PORT - 0% CATCH

HYDROSTATIC PROPERTIES

Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg., VCG = 9.94

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.184	201.67	38.17a	5.21	3.29	40.52a	250.28	71.1	1.40

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 6.690 @ Origin
Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg.

Part	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
LIGHT SHIP			181.77	38.69a	0.00	10.55	
4 CREW			0.33	36.50a	0.00	14.50	
CONSUMABLES			0.20	19.25a	0.00	14.93	
SPARE PARTS			1.25	14.00a	0.00	8.50	
ICE IN HOLD			6.07	47.75a	0.00	6.99	
PARAVANES UP			-1.99	34.50a	0.00	37.50	
PARAVANES DOWN			1.99	34.50a	0.00	23.50	
Total Fixed			**189.62**	**38.79a**	**0.00**	**10.29**	
	Load	**SpGr**	**Weight(LT)**	**LCG**	**TCG**	**VCG**	**FSM**
FW	0.400	1.000	2.42	0.50a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	31.35a	7.49s	3.24	2.7
FOP	0.200	0.870	4.65	31.34a	7.49p	3.24	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**25.40a**	**0.13s**	**4.40**	**9.5**
Total Weight			**201.67**	**37.99a**	**0.01s**	**9.94**	
			Displ(LT)	**LCB**	**TCB**	**VCB**	**RefHt**
HULL		1.025	201.67	38.17a	0.03s	5.21	-6.69
	Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 6.690 @ Origin
Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg.
Least freeboard is 3.13 Ft located at 54.84a

LC8: ARRIVAL PORT - 0% CATCH

HYDROSTATIC PROPERTIES

Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg., VCG = 9.94

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
8.184	201.67	38.17a	5.21	3.29	40.52a	250.28	71.1	1.40

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 6.690 @ Origin
Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	6.07	47.75a	0.00	6.99
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
Total Fixed	**189.62**	**38.79a**	**0.00**	**10.29**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.400	1.000	2.42	0.50a	0.01s	8.57	4.0
FOS	0.200	0.870	4.65	31.35a	7.49s	3.24	2.7
FOP	0.200	0.870	4.65	31.34a	7.49p	3.24	2.7
HOT	0.600	0.947	0.32	40.59a	4.90s	6.79	0.0
Total Tanks			**12.05**	**25.40a**	**0.13s**	**4.40**	**9.5**
Total Weight			**201.67**	**37.99a**	**0.01s**	**9.94**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	201.67	38.17a	0.03s	5.21	-6.69
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 6.690 @ Origin
Trim: Aft 2.11 deg., Heel: Stbd 0.32 deg.
Least freeboard is 3.13 Ft located at 54.84a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max		Attained
(1)	**Absolute Angle at Equilibrium**	**< 14.00**	**deg**	**9.71 P**
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	**> 1.000**		**1.674 P**
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	**> 1.000**		**2.338 P**

Roll angle = 16.05 degrees.

IMO parameters:

K = 0.700	X1 = 0.917	X2 = 0.843	Cb = 0.513
L = 76.46	B = 22.75	D = 7.91	BDR = 2.876
VCG = 9.94	Draft = 8.18	WG = 1.84	R = 0.870
T = 9.1	C = 0.474	GM = 1.40	S = 0.085

RESIDUAL RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 37.99a TCG = 0.02s VCG = 9.94
Free Surface Adjustment: 0.05
Adjusted CG: LCG = 37.99a TCG = 0.01s VCG = 9.99

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	Flood Pt Height	
6.627	2.11a	6.34p	201.67	0.00	-0.406	4.31	(5)
6.683	2.11a	1.34p	201.67	0.00	-0.281	4.42	(5)
6.666	2.11a	3.66s	201.67	0.00	-0.159	4.37	(5)
6.576	2.11a	8.66s	201.67	0.00	-0.029	4.25	(5)
6.547	2.11a	9.70s	201.67	0.00	0.000	4.22	(5)

6.413	2.10a	13.66s	201.67	0.00	0.119	9.65	(3)
6.188	2.07a	18.66s	201.67	0.00	0.286	9.86	(3)
5.923	2.06a	23.66s	201.67	0.00	0.388	9.99	(3)
5.776	2.06a	26.22s	201.67	0.00	**0.401**	10.02	(3)
5.628	2.08a	28.66s	201.67	0.00	0.389	10.02	(3)
5.290	2.14a	33.66s	201.67	0.00	0.288	9.97	(3)
4.913	2.20a	38.66s	201.67	0.00	0.106	9.84	(3)
4.722	2.22a	41.02s	201.67	0.00	0.000	9.75	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 10.0 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 48.56 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 1080.568 SQFT WIND LEVER ARM = 10.653 FT

LC9: TIME OF INCIDENT

HYDROSTATIC PROPERTIES

Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg., VCG = 9.42

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.269	246.27	36.30a	5.80	3.43	39.42a	276.53	64.3	1.76

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.131 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.36a	7.70s	4.85	4.2
FOP	0.500	0.870	11.63	30.36a	7.70p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.04a**	**0.05s**	**5.34**	**13.7**
Total Weight			**246.27**	**36.29a**	**0.01s**	**9.42**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.27	36.30a	0.02s	5.80	-9.13
Righting Arms:			0.00	0.00		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.131 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg.
Least freeboard is 2.22 Ft located at 36.38a

LC9: TIME OF INCIDENT

HYDROSTATIC PROPERTIES

Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg., VCG = 9.42

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.269	246.27	36.30a	5.80	3.43	39.42a	276.53	64.3	1.76

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.131 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.36a	7.70s	4.85	4.2
FOP	0.500	0.870	11.63	30.36a	7.70p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.04a**	**0.05s**	**5.34**	**13.7**
Total Weight			**246.27**	**36.29a**	**0.01s**	**9.42**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.27	36.30a	0.02s	5.80	-9.13
Righting Arms:			0.00	0.00		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.131 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.17 deg.
Least freeboard is 2.22 Ft located at 36.38a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	14.00	deg	5.77 P
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	>	1.000		*0.841 F*
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	>	1.000		1.571 P

Roll angle = 16.81 degrees.

IMO parameters:

K = 0.700	X1 = 0.988	X2 = 0.854	Cb = 0.521
L = 78.57	B = 22.75	D = 9.25	BDR = 2.461
VCG = 9.42	Draft = 9.27	WG = 0.17	R = 0.741
T = 7.9	C = 0.463	GM = 1.77	S = 0.092

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 36.29a TCG = 0.01s VCG = 9.42
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.29a TCG = 0.01s VCG = 9.48

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	Flood Pt Height	
8.904	0.23a	11.04p	246.27	0.00	-0.535	4.18	(5)
9.064	0.21a	6.04p	246.27	0.00	-0.367	4.31	(5)
9.129	0.20a	1.04p	246.27	0.00	-0.211	4.42	(5)
9.102	0.20a	3.96s	246.27	0.00	-0.057	4.36	(5)
9.069	0.21a	5.77s	246.27	0.00	0.000	4.32	(5)
8.981	0.22a	8.96s	246.27	0.00	0.104	7.23	(3)
8.779	0.25a	13.96s	246.27	0.00	0.269	7.54	(3)
8.567	0.26a	18.96s	246.24	0.00	0.346	7.72	(3)
8.499	0.26a	20.60s	246.27	0.00	**0.350**	7.76	(3)
8.354	0.27a	23.96s	246.27	0.00	0.333	7.79	(3)
8.112	0.32a	28.96s	246.27	0.00	0.247	7.76	(3)
7.843	0.40a	33.96s	246.27	0.00	0.112	7.63	(3)
7.646	0.44a	37.43s	246.27	0.00	0.000	7.48	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 14.0 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 42.90 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 1024.365 SQFT WIND LEVER ARM = 10.405 FT

LC10: TIME OF INCIDENT - FUEL TRANSFER (1/4 TANK DIFF)

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg., VCG = 9.44

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.258	246.26	36.30a	5.83	3.44	39.36a	276.71	64.4	1.85

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.113 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.19s	9.02	5.3
FOS	0.625	0.870	14.54	30.31a	7.81s	5.48	5.2
FOP	0.375	0.870	8.72	30.41a	7.57p	4.20	3.5
HOT	0.500	0.947	0.27	40.59a	4.91s	6.43	0.0
Total Tanks			**26.56**	**27.03a**	**1.86s**	**5.47**	**14.1**
Total Weight			**246.27**	**36.29a**	**0.20s**	**9.44**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.26	36.30a	0.60s	5.83	-9.06
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.113 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg.
Least freeboard is 1.01 Ft located at 36.38a

LC10: TIME OF INCIDENT - FUEL TRANSFER (1/4 TANK DIFF)

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg., VCG = 9.44

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.258	246.27	36.30a	5.83	3.44	39.36a	276.71	64.4	1.85

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.114 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.19s	9.02	5.3
FOS	0.625	0.870	14.54	30.31a	7.81s	5.48	5.2
FOP	0.375	0.870	8.72	30.41a	7.57p	4.20	3.5
HOT	0.500	0.947	0.27	40.59a	4.91s	6.43	0.0
Total Tanks			**26.56**	**27.03a**	**1.86s**	**5.47**	**14.1**
Total Weight			**246.27**	**36.29a**	**0.20s**	**9.44**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.27	36.30a	0.60s	5.83	-9.06
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.114 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 6.25 deg.
Least freeboard is 1.01 Ft located at 36.38a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	14.00	deg	11.39 P
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	>	1.000		*-0.706 F*
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	>	1.000		*0.492 F*

Roll angle = 16.81 degrees.

IMO parameters:

K = 0.700	X1 = 0.988	X2 = 0.854	Cb = 0.521
L = 78.57	B = 22.75	D = 9.25	BDR = 2.461
VCG = 9.44	Draft = 9.27	WG = 0.18	R = 0.742
T = 8.0	C = 0.463	GM = 1.75	S = 0.092

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 36.29a TCG = 0.21s VCG = 9.44
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.29a TCG = 0.19s VCG = 9.50

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	Flood Pt Height	
9.077	0.21a	5.41p	246.27	0.00	-0.534	6.16	(3)
9.131	0.20a	0.41p	246.27	0.00	-0.381	6.56	(3)
9.093	0.20a	4.59s	246.27	0.00	-0.227	6.93	(3)
8.960	0.22a	9.59s	246.27	0.00	-0.063	4.22	(5)
8.890	0.23a	11.39s	246.27	0.00	0.000	4.17	(5)
8.753	0.25a	14.59s	246.27	0.00	0.098	7.57	(3)
8.543	0.26a	19.59s	246.27	0.00	0.165	7.74	(3)
8.488	0.26a	20.89s	246.27	0.00	**0.168**	7.76	(3)
8.326	0.27a	24.59s	246.27	0.00	0.147	7.79	(3)
8.081	0.33a	29.59s	246.27	0.00	0.060	7.74	(3)
7.951	0.37a	32.02s	246.27	0.00	0.000	7.69	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 14.8 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 42.90 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 982.187 SQFT WIND LEVER ARM = 10.697 FT

LC11: TIME OF INCIDENT - FUEL TRANSFER (1/2 TANK DIFF)

HYDROSTATIC PROPERTIES

Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg., VCG = 9.48

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.228	246.27	36.30a	5.92	3.47	39.20a	277.31	64.5	1.99

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.065 @ Origin
Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.34a	0.37s	9.04	5.7
FOS	0.750	0.870	17.45	30.26a	7.91s	6.08	6.5
FOP	0.250	0.870	5.82	30.47a	7.41p	3.52	2.9
HOT	0.500	0.947	0.27	40.59a	4.92s	6.43	0.0
Total Tanks			**26.56**	**27.00a**	**3.67s**	**5.86**	**15.1**
Total Weight			**246.27**	**36.28a**	**0.40s**	**9.48**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.27	36.30a	1.15s	5.92	-8.87
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.065 @ Origin
Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg.
Least freeboard is -0.11 Ft located at 36.38a

LC11: TIME OF INCIDENT - FUEL TRANSFER (1/2 TANK DIFF)

HYDROSTATIC PROPERTIES

Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg., VCG = 9.48

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.228	246.27	36.30a	5.92	3.47	39.20a	277.31	64.5	1.99

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.065 @ Origin
Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.40a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.34a	0.37s	9.04	5.7
FOS	0.750	0.870	17.45	30.26a	7.91s	6.08	6.5
FOP	0.250	0.870	5.82	30.47a	7.41p	3.52	2.9
HOT	0.500	0.947	0.27	40.59a	4.92s	6.43	0.0
Total Tanks			**26.56**	**27.00a**	**3.67s**	**5.86**	**15.1**
Total Weight			**246.27**	**36.28a**	**0.40s**	**9.48**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.27	36.30a	1.15s	5.92	-8.87
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.065 @ Origin
Trim: Aft 0.23 deg., Heel: Stbd 11.94 deg.
Least freeboard is -0.11 Ft located at 36.38a

46CFR28.575: CAPSIZES WITH WIND AT 55.500 KNOTS

Roll angle = 16.79 degrees.

IMO parameters:

K = 0.700	X1 = 0.988	X2 = 0.854	Cb = 0.521
L = 78.57	B = 22.75	D = 9.25	BDR = 2.461
VCG = 9.48	Draft = 9.27	WG = 0.22	R = 0.744
T = 8.1	C = 0.463	GM = 1.71	S = 0.091

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 36.16a TCG = 0.39s VCG = 9.86
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.16a TCG = 0.38s VCG = 9.80

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	Flood Pt Height	
8.603	0.14a	20.00p	246.27	0.00	-0.955	3.87	(5)
8.809	0.14a	15.00p	246.27	0.00	-0.935	4.11	(5)
9.019	0.12a	10.00p	246.27	0.00	-0.816	5.71	(3)
9.160	0.10a	5.00p	246.27	0.00	-0.684	6.13	(3)
9.206	0.09a	0.00	246.27	0.00	-0.558	6.53	(3)
9.160	0.10a	5.00s	246.27	0.00	-0.429	6.90	(3)

9.019	0.12a	10.00s	246.27	0.00	-0.287	7.24	(3)
8.810	0.14a	15.00s	246.27	0.00	-0.154	4.11	(5)
8.604	0.14a	20.00s	246.27	0.00	**-0.114**	3.87	(5)
8.392	0.15a	25.00s	246.27	0.00	-0.156	3.53	(5)
8.151	0.19a	30.00s	246.27	0.00	-0.263	3.07	(5)
7.884	0.26a	35.00s	246.27	0.00	-0.411	2.54	(5)
7.597	0.31a	40.00s	246.27	0.00	-0.585	1.96	(5)
7.281	0.34a	45.00s	246.27	0.00	-0.784	1.29	(2)
6.928	0.35a	50.00s	246.27	0.00	-1.000	0.58	(2)
6.615	0.34a	54.07s	246.27	0.00	-1.182	0.00	(2)
6.541	0.34a	55.00s	246.27	0.00	-1.224	*-0.13*	(2)
6.119	0.31a	60.00s	246.27	0.00	-1.451	*-0.85*	(2)
5.662	0.27a	65.00s	246.27	0.00	-1.678	*-1.57*	(2)
5.177	0.23a	70.00s	246.27	0.00	-1.901	*-2.28*	(2)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 14.1 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 42.87 (constant)

	Critical Points		LCP	TCP	VCP
(2)	HOLD AFT	TIGHT	46.00a	2.00	14.50
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 1739.735 SQFT WIND LEVER ARM = FT

LC12: TIME OF INCIDENT - BIRDS DEPLOYED

HYDROSTATIC PROPERTIES

Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg., VCG = 9.43

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.271	246.36	36.30a	5.80	3.43	39.42a	276.61	64.3	1.75

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.134 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
STBD PARAVANE WIRE DIFF	0.10	34.50a	46.50s	35.25
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.80**	**37.40a**	**0.02s**	**9.93**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.02s	9.01	5.2
FOS	0.500	0.870	11.63	30.36a	7.70s	4.85	4.3
FOP	0.500	0.870	11.63	30.35a	7.69p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.04a**	**0.06s**	**5.34**	**13.7**
Total Weight			**246.36**	**36.29a**	**0.02s**	**9.43**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.36	36.30a	0.07s	5.80	-9.13
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.134 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg.
Least freeboard is 2.10 Ft located at 36.38a

LC12: TIME OF INCIDENT - BIRDS DEPLOYED

HYDROSTATIC PROPERTIES

Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg., VCG = 9.43

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.271	246.37	36.30a	5.80	3.43	39.42a	276.61	64.3	1.75

Distances in FEET. Specific Gravity = 1.025. Moment in Ft-LT.
Draft is from Baseline. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.134 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.69a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
STBD PARAVANE WIRE DIFF	0.10	34.50a	46.50s	35.25
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.80**	**37.40a**	**0.02s**	**9.93**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.000	3.03	0.33a	0.02s	9.01	5.2
FOS	0.500	0.870	11.63	30.36a	7.70s	4.85	4.3
FOP	0.500	0.870	11.63	30.35a	7.69p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
Total Tanks			**26.56**	**27.04a**	**0.06s**	**5.34**	**13.7**
Total Weight			**246.36**	**36.29a**	**0.02s**	**9.43**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	246.37	36.30a	0.07s	5.80	-9.13
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.134 @ Origin
Trim: Aft 0.20 deg., Heel: Stbd 0.77 deg.
Least freeboard is 2.09 Ft located at 36.38a

LIM	46CFR28.575_SEVERE_WIND_&_ROLL	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	14.00	deg	6.37 P
(2)	**Res. Ratio from Roll to abs 50 deg or Flood**	>	1.000		*0.637 F*
(3)	**Res. Area Ratio from Roll to RAzero or Flood**	>	1.000		1.434 P

Roll angle = 16.81 degrees.

IMO parameters:

K = 0.700	X1 = 0.988	X2 = 0.854	Cb = 0.522
L = 78.57	B = 22.75	D = 9.25	BDR = 2.460
VCG = 9.43	Draft = 9.27	WG = 0.17	R = 0.741
T = 7.9	C = 0.463	GM = 1.76	S = 0.092

RESIDUAL Rrighting ARMS vs HEEL ANGLE

Total CG: LCG = 36.29a TCG = 0.03s VCG = 9.43
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.29a TCG = 0.02s VCG = 9.49

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Residual Arms in Trim	Residual Arms in Heel	Flood Pt Height	
8.931	0.23a	10.44p	246.36	0.00	-0.530	4.19	(5)
9.080	0.21a	5.44p	246.36	0.00	-0.365	4.33	(5)
9.134	0.20a	0.44p	246.36	0.00	-0.211	6.56	(3)
9.096	0.20a	4.56s	246.36	0.00	-0.057	4.35	(5)
9.059	0.21a	6.37s	246.36	0.00	0.000	4.30	(5)
8.964	0.22a	9.56s	246.36	0.00	0.105	7.27	(3)
8.757	0.25a	14.56s	246.36	0.00	0.264	7.56	(3)
8.547	0.26a	19.56s	246.36	0.00	0.328	7.73	(3)
8.504	0.26a	20.57s	246.36	0.00	**0.329**	7.75	(3)
8.331	0.27a	24.56s	246.36	0.00	0.305	7.79	(3)
8.085	0.33a	29.56s	246.36	0.00	0.211	7.74	(3)
7.814	0.40a	34.56s	246.36	0.00	0.072	7.60	(3)
7.687	0.43a	36.79s	246.36	0.00	0.000	7.50	(3)

Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 14.0 Ft-LT was applied to artificially modify the CG.

Note: The Residual Righting Arms shown above are in excess of the wind heeling arms derived from these moments (in Ft-LT):
Stbd heeling moment = 42.89 (constant)

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

WIND AREA = 1020.109 SQFT WIND LEVER ARM = 10.433 FT

Freeing Ports

Requirement 46 CFR 28.555 Freeing Ports		
Length of vessel	80	ft
Length of bulwark	80	ft
Reg length of bulwark (0.7*L)	56	ft
Freeing Port Area	48.94	sqft
For Bulwark >4ft		
Bulwark Height	7.75	ft
Length of higher bulwark	44	ft
Increase in freeing port area	6.6	sqft
For Bulwark <3ft		
Bulwark Height	3	ft
Length of lower bulwark	20	ft
Decrease in freeing port area	0	sqft
Total Freeing Port Area Req	**55.54**	**sqft**

Actual Freeing Ports		
Freeing Port Length	1.75	ft
Freeing Port Height	1.25	ft
Freeing Port Area	2.1875	sqft
Number of Freeing Ports	12	
Total Actual Freeing Port Area	**26.25**	**sqft**
Restricter Plates		
Hole Radius (4" hole)	0.167	ft
Area of Half Hole	0.044	sqft
Number of Holes per Plate	3	
Number of plates	12	
Total Freeing Port Area w/ Plates	**1.57**	**sqft**
Required Freeing Port Area	55.54	sqft
Difference w/o plates	-29.29	sqft
Difference w/ restrictor plates	-53.97	sqft

DC0: DAMAGE AUX COMPARTMENT
TIME OF INCIDENT

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 0.17 deg.

Origin Depth	Displacement Weight(LT)	Center of Buoyancy LCB	TCB	VCB	WPA	LCF	BML	BMT
9.226	250.51	36.37a	0.02s	5.86	1444	39.39a	67.0	5.32

Distances in FEET. Specific Gravity = 1.025. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.226 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.17 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.93a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.60a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.025	3.10	0.33a	0.01s	9.01	5.4
FOS	0.500	1.025	13.70	30.36a	7.70s	4.85	5.0
FOP	0.500	1.025	13.70	30.36a	7.70p	4.85	5.0
HOT	0.500	1.025	0.29	40.59a	4.90s	6.43	0.0
Total Tanks			**30.80**	**27.43a**	**0.05s**	**5.29**	**15.4**
Total Weight			**250.51**	**36.35a**	**0.01s**	**9.35**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	250.51	36.37a	0.02s	5.86	-9.23
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.226 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.17 deg.
Least freeboard is 2.11 Ft located at 36.38a

HYDROSTATIC PROPERTIES with FLOODING

Trim: Fwd 26.80 deg., Heel: Stbd 179.92 deg.

Origin Depth	Displacement Weight(LT)	Center of Buoyancy LCB	TCB	VCB	Effective WPA	LCF	BML	BMT
19.890	250.53	37.05a	0.00	7.27	476	59.33a	2.04	1.59

Distances in FEET. Specific Gravity = 1.025. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Origin Depth: 19.890
Trim: Fwd 26.80 deg., Heel: Stbd 179.92 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.93a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.60a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.025	3.10	1.36f	0.00	12.13	6.4
FOS	0.500	1.025	13.71	25.28a	8.00s	8.55	4.7
FOP	0.500	1.025	13.71	25.28a	8.00p	8.55	4.7
HOT	0.500	1.025	0.29	40.56a	4.90s	9.97	0.0
Total Tanks			**30.82**	**22.74a**	**0.05s**	**8.92**	**15.9**
Total Weight			**250.53**	**35.78a**	**0.01s**	**9.79**	

			Displ(LT)	LCB	TCB	VCB	RefHt
HULL		1.025	309.59	32.04a	0.00	7.30	-19.89
AUX	Flooded	1.025	-59.06	10.82a	0.00	7.41	-19.89
Total Displacement		**1.025**	**250.53**	**37.05a**	**0.00**	**7.27**	
Righting Arms:				0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Origin Depth: 19.890
Trim: Fwd 26.80 deg., Heel: Stbd 179.92 deg.
Least freeboard is -35.36 Ft located at 7.06f

RIGHTING ARMS vs HEEL ANGLE with FLOODING

Total CG: LCG = 35.78a TCG = 0.01s VCG = 9.79
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 35.80a TCG = 0.01s VCG = 9.74

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Flood Pt Height	
19.896	26.81f	179.92s	250.53	0.00	0.000	*-13.90*	(1)
20.112	27.00f	184.92s	250.53	0.00	0.305	*-31.03*	(3)
20.773	27.58f	189.92s	250.56	0.00	0.595	*-31.72*	(3)
21.757	28.43f	194.92s	250.53	0.00	0.862	*-32.56*	(3)
23.135	29.64f	199.92s	250.53	0.00	1.096	*-33.60*	(3)
24.752	31.05f	204.92s	250.53	0.00	1.296	*-34.71*	(3)
26.638	32.72f	209.92s	250.53	0.00	1.461	*-35.91*	(3)
28.734	34.61f	214.92s	250.53	0.00	1.591	*-37.18*	(3)
31.035	36.72f	219.92s	250.52	0.00	1.687	*-38.50*	(3)
33.538	39.10f	224.92s	250.52	0.00	1.748	*-39.87*	(3)
36.279	41.83f	229.92s	250.53	0.00	1.771	*-41.34*	(3)
36.643	42.20f	230.57s	250.53	0.00	**1.772**	*-41.53*	(3)
39.234	44.95f	234.92s	250.51	0.00	1.757	*-42.89*	(3)
42.460	48.62f	239.92s	250.51	0.00	1.697	*-44.57*	(3)

45.934	52.98f	244.92s	250.50	0.00	1.586	*-46.36*	(3)
49.591	58.21f	249.92s	250.50	0.00	1.415	*-48.24*	(3)
53.281	64.55f	254.92s	250.49	0.00	1.171	*-50.10*	(3)
56.633	72.10f	259.92s	250.53	0.00	0.845	*-51.68*	(3)
59.046	80.74f	264.92s	250.53	0.00	0.445	*-52.57*	(3)
59.883	90.00f	269.92s	250.55	13.50a	0.000	*-52.38*	(3)

Distances in FEET. Specific Gravity = 1.025.

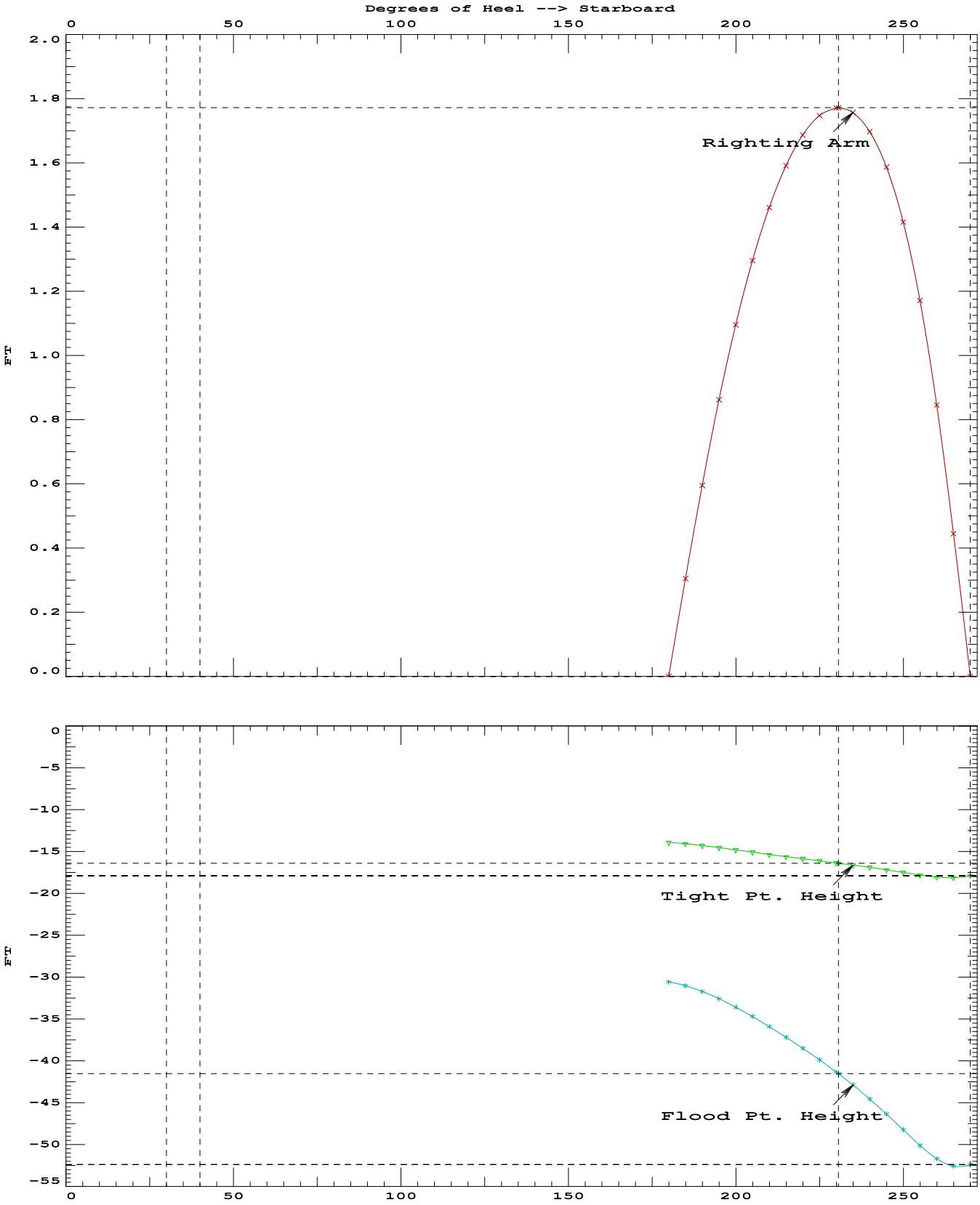
Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 15.9 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(1)	HOLD FWD	TIGHT	42.00a	2.00	14.50
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75

LIM	46 CFR 28.580 CRITERION	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	**25.00**	**deg**	***179.92 F***
(2)	**Angle from Equilibrium to RAzero**	>	**20.00**	**deg**	**90.00 P**
(3)	**Righting Arm at MaxRA**	>	**0.33**	**Ft**	**1.77 P**

46CFR28.580: CAPSIZES WITH AUX COMPARTMENT FLOODED

46CFR28.580: SANK WITH AUX COMPARTMENT FLOODED


Degrees of Heel --> Starboard
0
50
100
150
200
250
2.0
1.8
1.6
1.4
1.2
1.0
0.8
0.6
0.4
0.2
0.0
FT
Righting Arm
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
-55
FT
Tight Pt. Height
Flood Pt. Height

DC1: DAMAGE ENGINE ROOM COMPARTMENT
TIME OF INCIDENT

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 0.17 deg.

Origin Depth	Displacement Weight(LT)	Center of Buoyancy LCB	TCB	VCB	WPA	LCF	BML	BMT
9.226	250.51	36.37a	0.02s	5.86	1444	39.39a	67.0	5.32

Distances in FEET. Specific Gravity = 1.025. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.226 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.17 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.93a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.60a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.025	3.10	0.33a	0.01s	9.01	5.4
FOS	0.500	1.025	13.70	30.36a	7.70s	4.85	5.0
FOP	0.500	1.025	13.70	30.36a	7.70p	4.85	5.0
HOT	0.500	1.025	0.29	40.59a	4.90s	6.43	0.0
Total Tanks			**30.80**	**27.43a**	**0.05s**	**5.29**	**15.4**
Total Weight			**250.51**	**36.35a**	**0.01s**	**9.35**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	250.51	36.37a	0.02s	5.86	-9.23
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.226 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.17 deg.
Least freeboard is 2.11 Ft located at 36.38a

HYDROSTATIC PROPERTIES with FLOODING

Trim: Fwd 2.04 deg., Heel: Port 0.05 deg.

Origin Depth	Displacement Weight(LT)	Center of Buoyancy LCB	TCB	VCB	Effective WPA	LCF	BML	BMT
12.425	250.50	36.23a	0.00s	7.10	1300	39.45a	73.1	5.65

Distances in FEET. Specific Gravity = 1.025. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 12.432 @ Origin
Trim: Fwd 2.04 deg., Heel: Port 0.05 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.93a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.60a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.025	3.10	0.29a	0.00	9.01	5.3
FOS	0.500	1.025	13.70	29.96a	7.69s	4.86	5.0
FOP	0.500	1.025	13.70	29.96a	7.69p	4.86	5.0
HOT	0.500	1.025	0.29	40.59a	4.90s	6.43	0.0
Total Tanks			**30.80**	**27.07a**	**0.05s**	**5.29**	**15.3**
Total Weight			**250.51**	**36.31a**	**0.01s**	**9.35**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	322.23	34.65a	0.00p	6.87	-12.42
ER Flooded	1.025	-71.74	29.12a	0.03p	6.06	-12.42
Total Displacement	**1.025**	**250.50**	**36.23a**	**0.00s**	**7.10**	
Righting Arms:			0.00	0.00		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 12.432 @ Origin
Trim: Fwd 2.04 deg., Heel: Port 0.05 deg.
Least freeboard is 0.03 Ft located at 23.89a

```
Baseline Draft @    0.00  =   12.432
Baseline Draft @   36.56a =   11.130
Baseline Draft @   76.00a =    9.725
```

RIGHTING ARMS vs HEEL ANGLE with FLOODING

Total CG: LCG = 36.31a TCG = 0.01s VCG = 9.35
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.31a TCG = 0.01s VCG = 9.41

Origin Depth	Degrees of Trim	Heel	Displacement Weight(LT)	Righting Arms in Trim	in Heel	Flood Pt Height	
12.424	2.04f	0.05p	250.50	0.00	0.000	3.56	(1)
12.598	2.22f	5.05p	250.51	0.00	0.177	2.98	(3)
12.977	2.61f	10.05p	250.51	0.00	**0.218**	2.09	(3)
13.517	3.18f	15.05p	250.50	0.00	0.178	0.94	(3)
13.975	3.67f	18.60p	250.51	0.00	0.116	0.00	(3)
14.168	3.88f	20.05p	250.51	0.00	0.085	*-0.40*	(3)
14.626	4.39f	23.51p	250.50	0.00	0.000	*-1.40*	(3)
14.819	4.61f	25.05p	250.51	0.00	-0.042	*-1.85*	(3)
15.379	5.27f	29.93p	250.51	0.00	-0.188	*0.00*	(1)
15.392	5.29f	30.05p	250.51	0.00	-0.192	*-3.32*	(3)
15.899	5.95f	35.05p	250.51	0.00	-0.351	*-4.81*	(3)

16.329	6.58f	40.05p	250.51	0.00	-0.514	*-6.30*	(3)
16.663	7.17f	45.05p	250.47	0.00	-0.675	*-7.78*	(3)
16.940	7.77f	50.05p	250.50	0.00	-0.834	*-9.25*	(3)
17.132	8.34f	55.05p	250.52	0.00	-0.988	*-10.69*	(3)
17.238	8.88f	60.05p	250.53	0.00	-1.134	*-12.08*	(3)
17.248	9.38f	65.05p	250.54	0.00	-1.272	*-13.41*	(3)
17.139	9.81f	70.05p	250.54	0.00	-1.400	*-14.64*	(3)
16.885	10.14f	75.05p	250.51	0.00	-1.519	*-15.75*	(3)
16.535	10.40f	80.05p	250.51	0.00	-1.626	*-16.77*	(3)
16.065	10.58f	85.05p	250.52	0.00	-1.722	*-17.66*	(3)
15.432	10.61f	90.05p	250.50	0.00	-1.807	*-18.39*	(3)

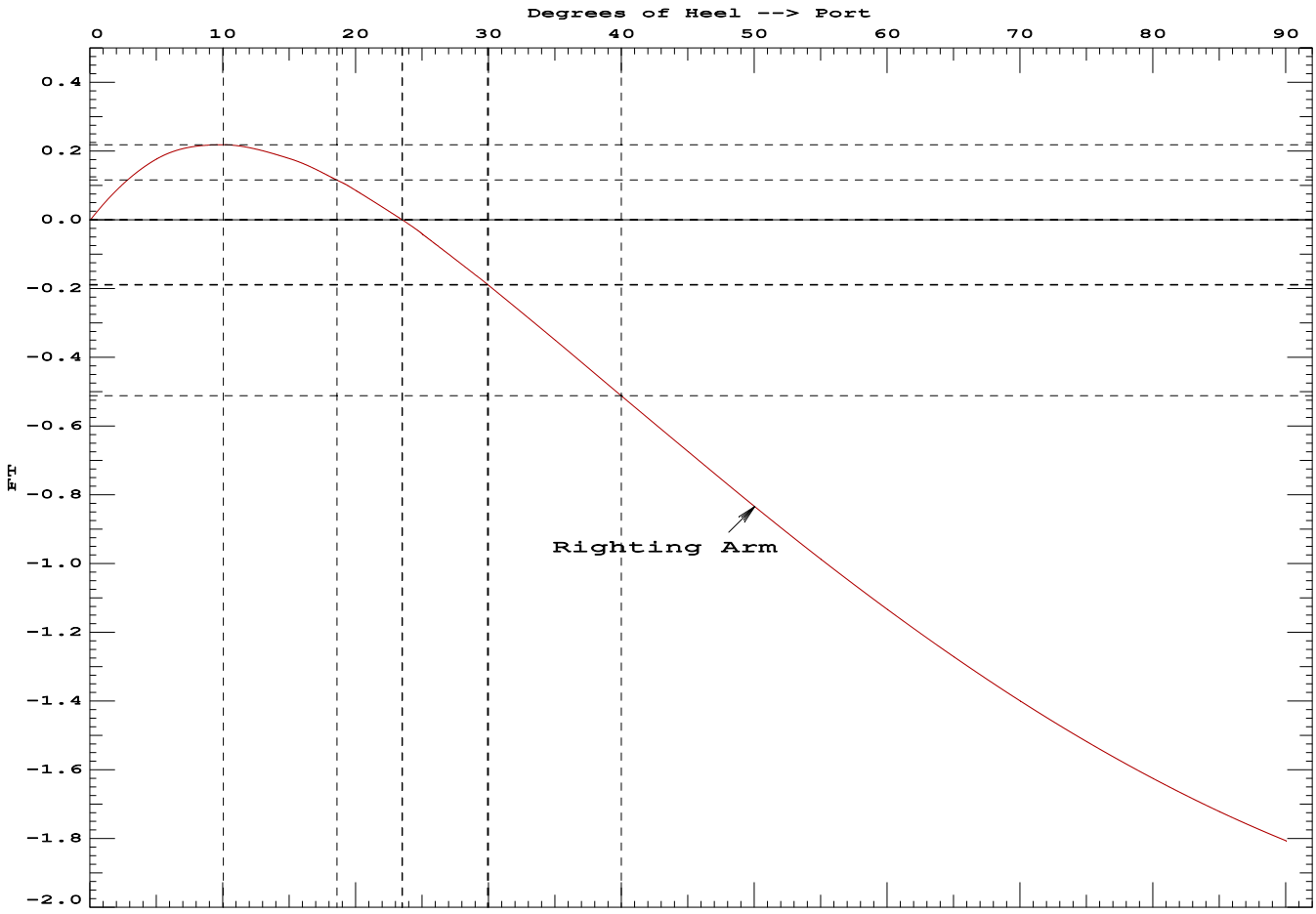
Distances in FEET. Specific Gravity = 1.025.

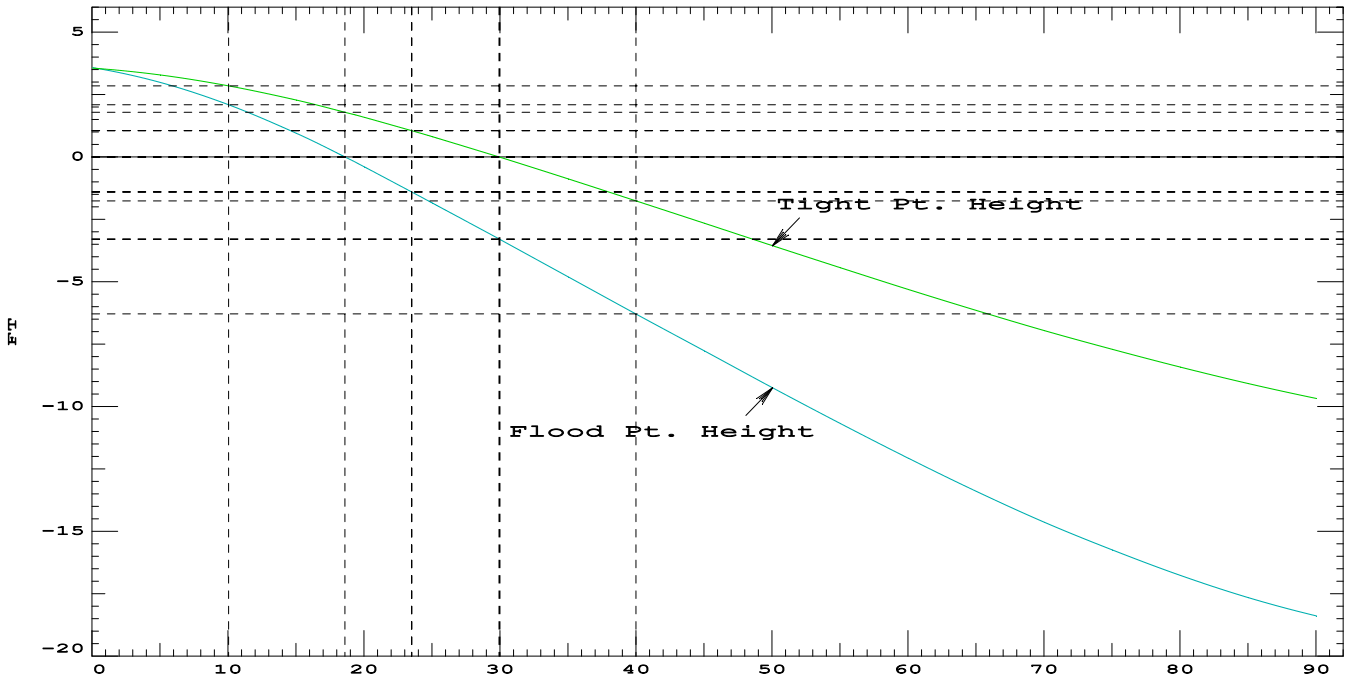
Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 15.3 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(1)	HOLD FWD	TIGHT	42.00a	2.00	14.50
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75

LIM	46 CFR 28.580 CRITERION	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	**25.00**	**deg**	**0.05 P**
(2)	**Angle from Equilibrium to RAzero**	>	**20.00**	**deg**	**23.46 P**
(3)	**Righting Arm at MaxRA**	>	**0.33**	**Ft**	***0.22 F***

FAILS 46CFR28.580


Degrees of Heel --> Port
0
10
20
30
40
50
60
70
80
90
0.4
0.2
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
-1.4
-1.6
-1.8
-2.0
FT
Righting Arm


5
0
-5
-10
-15
-20
FT
0
10
20
30
40
50
60
70
80
90
Tight Pt. Height
Flood Pt. Height

DC: DAMAGE AUX AND ENGINE ROOM COMPARTMENT

46CFR28.580: SANK WITH AUX AND ENGINE ROOM COMPARTMENT FLOODED

DC3: DAMAGE FISH HOLD COMPARTMENT

46CFR28.580: SANK WITH FISH HOLD COMPARTMENT FLOODED

DC4: DAMAGE LAZ COMPARTMENT
TIME OF INCIDENT

HYDROSTATIC PROPERTIES

Trim: Aft 0.21 deg., Heel: Stbd 0.17 deg.

Origin Depth	Displacement Weight(LT)	Center of Buoyancy LCB	TCB	VCB	WPA	LCF	BML	BMT
9.226	250.51	36.37a	0.02s	5.86	1444	39.39a	67.0	5.32

Distances in FEET. Specific Gravity = 1.025. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 9.226 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.17 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.93a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.60a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.025	3.10	0.33a	0.01s	9.01	5.4
FOS	0.500	1.025	13.70	30.36a	7.70s	4.85	5.0
FOP	0.500	1.025	13.70	30.36a	7.70p	4.85	5.0
HOT	0.500	1.025	0.29	40.59a	4.90s	6.43	0.0
Total Tanks			**30.80**	**27.43a**	**0.05s**	**5.29**	**15.4**
Total Weight			**250.51**	**36.35a**	**0.01s**	**9.35**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	250.51	36.37a	0.02s	5.86	-9.23
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.226 @ Origin
Trim: Aft 0.21 deg., Heel: Stbd 0.17 deg.
Least freeboard is 2.11 Ft located at 36.38a

HYDROSTATIC PROPERTIES with FLOODING

Trim: Aft 2.99 deg., Heel: Stbd 0.23 deg.

Origin Depth	Displacement Weight(LT)	Center of Buoyancy LCB	TCB	VCB	Effective WPA	LCF	BML	BMT
7.905	250.51	36.58a	0.02s	6.01	1252	35.55a	42.7	4.78

Distances in FEET. Specific Gravity = 1.025. True Free Surface included.

WEIGHT and DISPLACEMENT STATUS

Baseline draft: 7.916 @ Origin
Trim: Aft 2.99 deg., Heel: Stbd 0.23 deg.

Part	Weight(LT)	LCG	TCG	VCG
LIGHT SHIP	181.77	38.93a	0.00	10.55
4 CREW	0.33	36.50a	0.00	14.50
CONSUMABLES	0.20	19.25a	0.00	14.93
SPARE PARTS	1.25	14.00a	0.00	8.50
ICE IN HOLD	10.63	47.75a	0.00	6.99
CATCH IN HOLD	24.55	23.58a	0.00	7.37
PARAVANES UP	-1.99	34.50a	0.00	37.50
PARAVANES DOWN	1.99	34.50a	0.00	23.50
LARGER TRAWLER DOORS	0.98	67.03a	0.00	15.70
Total Fixed	**219.71**	**37.60a**	**0.00**	**9.92**

	Load	SpGr	Weight(LT)	LCG	TCG	VCG	FSM
FW	0.500	1.025	3.10	0.38a	0.01s	9.01	5.4
FOS	0.500	1.025	13.71	30.85a	7.72s	4.87	5.1
FOP	0.500	1.025	13.71	30.84a	7.71p	4.87	5.0
HOT	0.500	1.025	0.29	40.59a	4.90s	6.43	0.0
Total Tanks			**30.80**	**27.87a**	**0.05s**	**5.30**	**15.5**
Total Weight			**250.51**	**36.41a**	**0.01s**	**9.35**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	274.92	39.51a	0.02s	6.28	-7.90
LAZ Flooded	1.025	-24.41	69.57a	0.02s	9.01	-7.90
Total Displacement	**1.025**	**250.51**	**36.58a**	**0.02s**	**6.01**	
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 7.916 @ Origin
Trim: Aft 2.99 deg., Heel: Stbd 0.23 deg.
Least freeboard is 1.05 Ft located at 57.56a

```
Baseline Draft @    0.00  =    7.916
Baseline Draft @   36.56a =    9.824
Baseline Draft @   76.00a =   11.882
```

RIGHTING ARMS vs HEEL ANGLE with FLOODING

Total CG: LCG = 36.41a TCG = 0.01s VCG = 9.35
Free Surface Adjustment: 0.06
Adjusted CG: LCG = 36.40a TCG = 0.01s VCG = 9.41

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Flood Pt Height	
7.905	2.99a	0.23s	250.51	0.00	0.000	2.09	(5)
7.859	2.98a	5.23s	250.51	0.00	0.127	7.81	(3)
7.694	3.08a	10.23s	250.53	0.00	0.219	8.16	(3)
7.623	3.16a	11.53s	250.52	0.00	**0.223**	8.25	(3)
7.388	3.44a	15.23s	250.51	0.00	0.195	8.48	(3)
7.012	3.94a	20.23s	250.53	0.00	0.095	8.73	(3)
6.731	4.31a	23.65s	250.50	0.00	0.000	8.85	(3)
6.727	4.32a	23.72s	250.54	0.00	-0.002	-0.00	(5)
6.599	4.48a	25.23s	250.53	0.00	-0.049	8.89	(3)
6.157	5.04a	30.23s	250.50	0.00	-0.220	8.95	(3)
5.698	5.59a	35.23s	250.50	0.00	-0.406	8.90	(3)

5.222	6.12a	40.23s	250.51	0.00	-0.598	8.76	(3)
4.726	6.62a	45.23s	250.51	0.00	-0.794	8.53	(3)
4.208	7.09a	50.23s	250.51	0.00	-0.992	8.22	(3)
3.670	7.51a	55.23s	250.51	0.00	-1.187	7.84	(3)
3.119	7.88a	60.23s	250.51	0.00	-1.380	7.38	(3)
2.558	8.18a	65.23s	250.54	0.00	-1.566	6.86	(3)
1.992	8.40a	70.23s	250.52	0.00	-1.743	6.28	(3)
1.425	8.55a	75.23s	250.51	0.00	-1.910	5.64	(3)
0.861	8.62a	80.23s	250.51	0.00	-2.063	4.95	(3)
0.303	8.62a	85.23s	250.51	0.00	-2.201	4.20	(3)
-0.247	8.53a	90.23s	250.51	0.00	-2.322	3.42	(3)

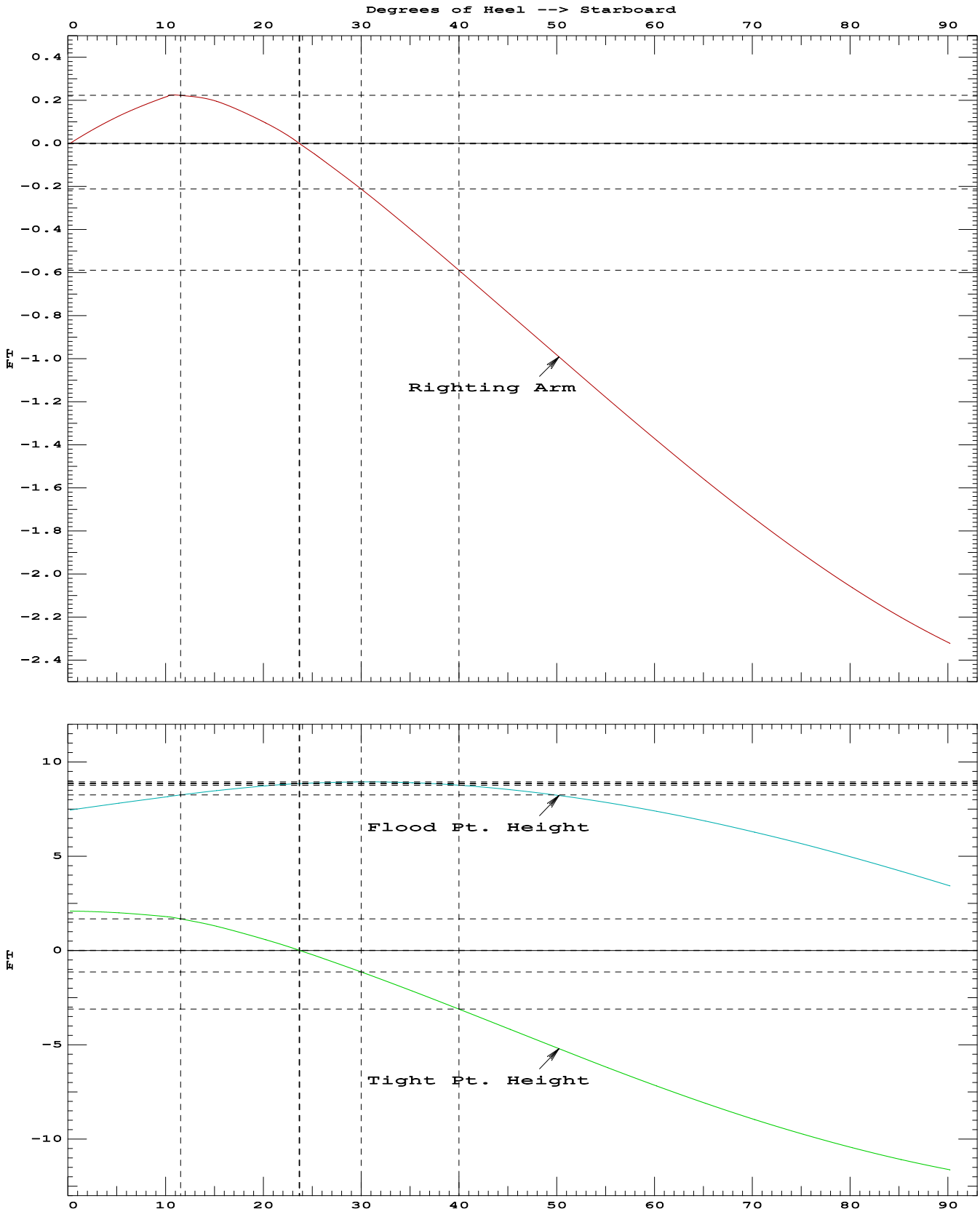
Distances in FEET. Specific Gravity = 1.025.

Note: The Weight and Center of Gravity used for the righting arms above include tank loads. However, the tank load centers were NOT ALLOWED TO SHIFT with heel and trim changes. Rather, a constant Free Surface Moment of 15.5 Ft-LT was applied to artificially modify the CG.

	Critical Points		LCP	TCP	VCP
(3)	BLOWER VENT PORT	FLOOD	7.50a	4.40p	15.75
(5)	LAZ HATCH AFT	TIGHT	73.00a	1.00	13.82

LIM	46 CFR 28.580 CRITERION	Min/Max			Attained
(1)	**Absolute Angle at Equilibrium**	<	25.00	deg	0.23 P
(2)	**Angle from Equilibrium to RAzero**	>	20.00	deg	23.43 P
(3)	**Righting Arm at MaxRA**	>	0.33	Ft	*0.22 F*

FAILS 46CFR28.580


Degrees of Heel --> Starboard
0
10
20
30
40
50
60
70
80
90
0.4
0.2
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
-1.4
-1.6
-1.8
-2.0
-2.2
-2.4
FT
Righting Arm
10
5
0
-5
-10
FT
Flood Pt. Height
Tight Pt. Height