LC0: TIME OF INCIDENT WITH LAZ AND FISH HOLD FLOOD POINTS

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	4.44 (5)
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	4.33 (5)
8.939	0.23a	10.17s	246.27	0.00	0.320	1.57	4.20 (5)
8.727	0.25a	15.17s	246.27	0.00	0.472	3.56	4.04 (5)
8.518	0.26a	20.17s	246.27	0.00	0.525	6.09	3.79 (5)

8.299	0.28a	25.17s	246.27	0.00	0.493	8.67	3.43 (5)
8.058	0.34a	30.00s	246.27	0.00	0.397	10.84	2.99 (5)
8.049	0.34a	30.17s	246.27	0.00	0.393	10.91	2.97 (5)
7.776	0.41a	35.17s	246.27	0.00	0.249	12.53	2.42 (5)
7.494	0.47a	40.00s	246.27	0.00	0.083	13.34	1.86 (5)
7.483	0.47a	40.17s	246.27	0.00	0.077	13.36	1.83 (5)
7.360	0.49a	42.16s	246.27	0.00	0.000	13.43	1.59 (5)
7.161	0.51a	45.17s	246.27	0.00	-0.124	13.25	1.23 (5)
6.802	0.53a	50.17s	246.27	0.00	-0.346	12.08	0.61 (5)
6.410	0.52a	55.17s	246.27	0.00	-0.579	9.78	*-0.00* (5)
5.981	0.50a	60.17s	246.27	0.00	-0.819	6.29	*-0.62* (5)
5.518	0.48a	65.17s	246.27	0.00	-1.062	1.58	*-1.23* (5)
5.024	0.45a	70.17s	246.27	0.00	-1.304	-4.33	*-1.87* (2)
4.502	0.41a	75.17s	246.27	0.00	-1.543	-11.45	*-2.57* (2)
3.963	0.36a	80.17s	246.27	0.00	-1.772	-19.74	*-3.25* (2)
3.411	0.28a	85.17s	246.27	0.00	-1.989	-29.15	*-3.91* (2)
2.851	0.19a	90.17s	246.27	0.00	-2.190	-39.60	*-4.55* (2)

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	FLOOD	46.00a	1.50	14.50
(5)	LAZ HATCH AFT	FLOOD	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***

SAME AS SUBC_INTACT_FLOOD DOCUMENT

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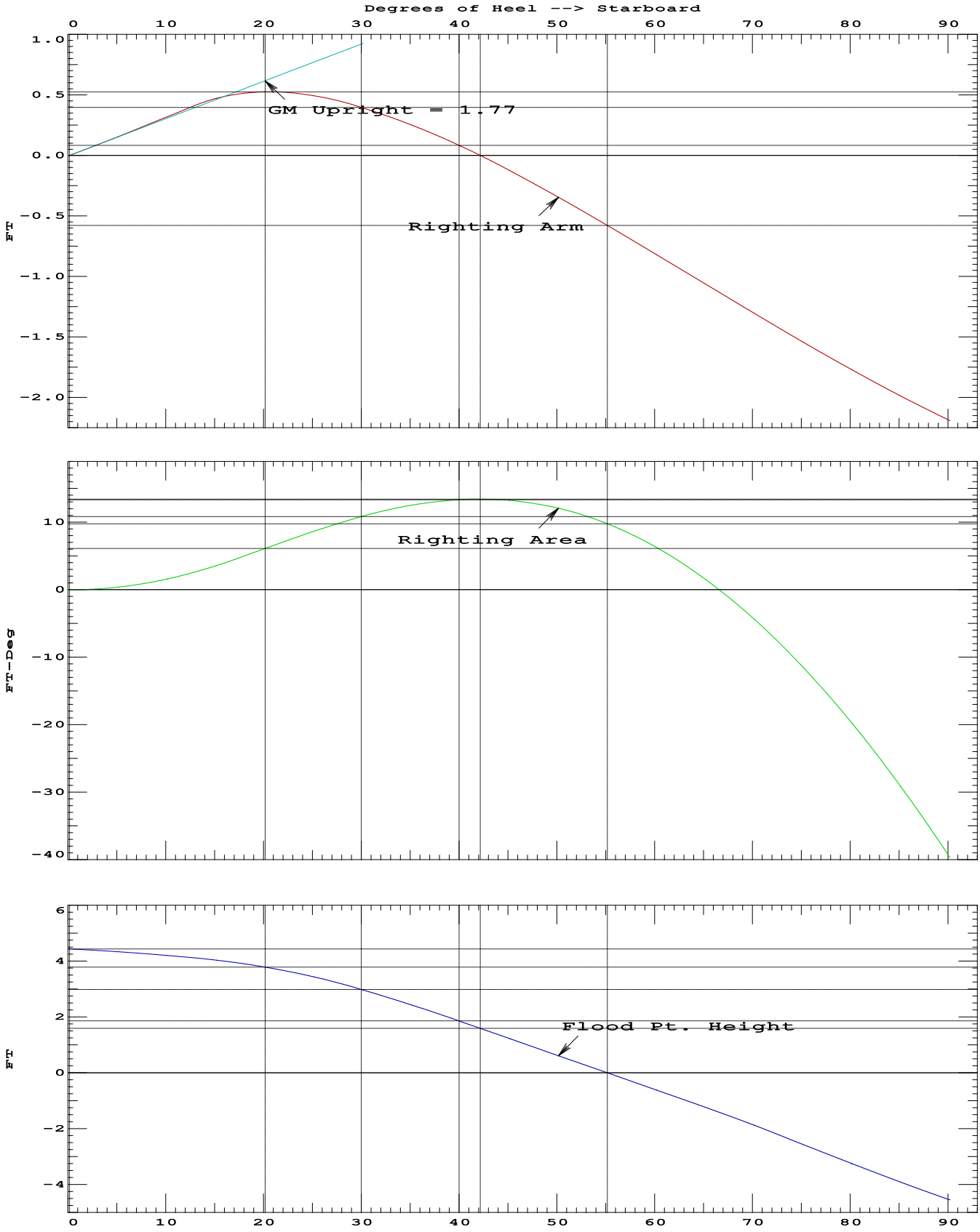

Degrees of Heel --> Starboard
GM Upright = 1.77
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
FT

LC1: TIME OF INCIDENT WITH LAZ AND FISH HOLD FLOOD POINTS WITH 25% LAZ FLOOD

HYDROSTATIC PROPERTIES

Trim: Aft 1.03 deg., Heel: Stbd 0.24 deg., VCG = 9.36

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.458	254.07	37.36a	5.92	3.40	39.42a	268.41	60.5	1.25

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: 8.747 @ Origin
Trim: Aft 1.03 deg., Heel: Stbd 0.24 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	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.50a	7.70s	4.85	4.3
FOP	0.500	0.870	11.63	30.50a	7.70p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
LAZ	0.250	1.025	7.80	68.79a	0.07s	7.23	136.9
Total Tanks			**34.36**	**36.62a**	**0.06s**	**5.77**	**150.7**
Total Weight			**254.07**	**37.30a**	**0.01s**	**9.36**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	254.07	37.36a	0.02s	5.92	-8.75
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.747 @ Origin
Trim: Aft 1.03 deg., Heel: Stbd 0.24 deg.
Least freeboard is 2.00 Ft located at 42.90a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 37.30a TCG = 0.01s VCG = 9.36
Free Surface Adjustment: 0.59
Adjusted CG: LCG = 37.29a 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	
8.745	1.03a	0.00	254.04	0.00	-0.005	0.00	3.76	(5)
8.744	1.03a	0.24s	254.04	0.00	0.000	-0.00	3.76	(5)
8.694	1.04a	5.24s	254.07	0.00	0.111	0.28	3.65	(5)
8.550	1.06a	10.24s	254.07	0.00	0.233	1.13	3.52	(5)
8.340	1.10a	15.24s	254.07	0.00	0.319	2.53	3.33	(5)

8.271	1.12a	16.79s	254.07	0.00	0.324	3.03	3.24 (5)
8.108	1.18a	20.24s	254.07	0.00	0.301	4.12	3.01 (5)
7.839	1.33a	25.24s	254.07	0.00	0.197	5.40	2.54 (5)
7.557	1.50a	30.00s	254.09	0.00	0.049	6.01	2.00 (5)
7.542	1.51a	30.24s	254.07	0.00	0.041	6.02	1.97 (5)
7.470	1.55a	31.40s	254.07	0.00	0.000	6.04	1.83 (5)
7.227	1.69a	35.24s	254.08	0.00	-0.144	5.77	1.33 (5)
6.916	1.83a	40.00s	254.07	0.00	-0.337	4.63	0.69 (5)
6.900	1.84a	40.24s	254.07	0.00	-0.346	4.55	0.66 (5)
6.564	1.95a	45.05s	254.03	0.00	-0.558	2.38	0.00 (5)
6.552	1.96a	45.24s	254.07	0.00	-0.567	2.28	*-0.03* (5)
6.164	2.06a	50.24s	254.07	0.00	-0.805	-1.14	*-0.72* (5)
5.733	2.16a	55.24s	254.07	0.00	-1.053	-5.78	*-1.43* (5)
5.262	2.25a	60.24s	254.07	0.00	-1.306	-11.68	*-2.14* (5)
4.761	2.32a	65.24s	254.07	0.00	-1.557	-18.84	*-2.84* (5)
4.235	2.37a	70.24s	254.07	0.00	-1.801	-27.24	*-3.52* (5)
3.691	2.38a	75.24s	254.07	0.00	-2.034	-36.83	*-4.17* (5)
3.137	2.36a	80.24s	254.07	0.00	-2.255	-47.56	*-4.78* (5)
2.578	2.30a	85.24s	254.07	0.00	-2.459	-59.35	*-5.36* (5)
2.018	2.20a	90.24s	254.07	0.00	-2.644	-72.11	*-5.88* (5)

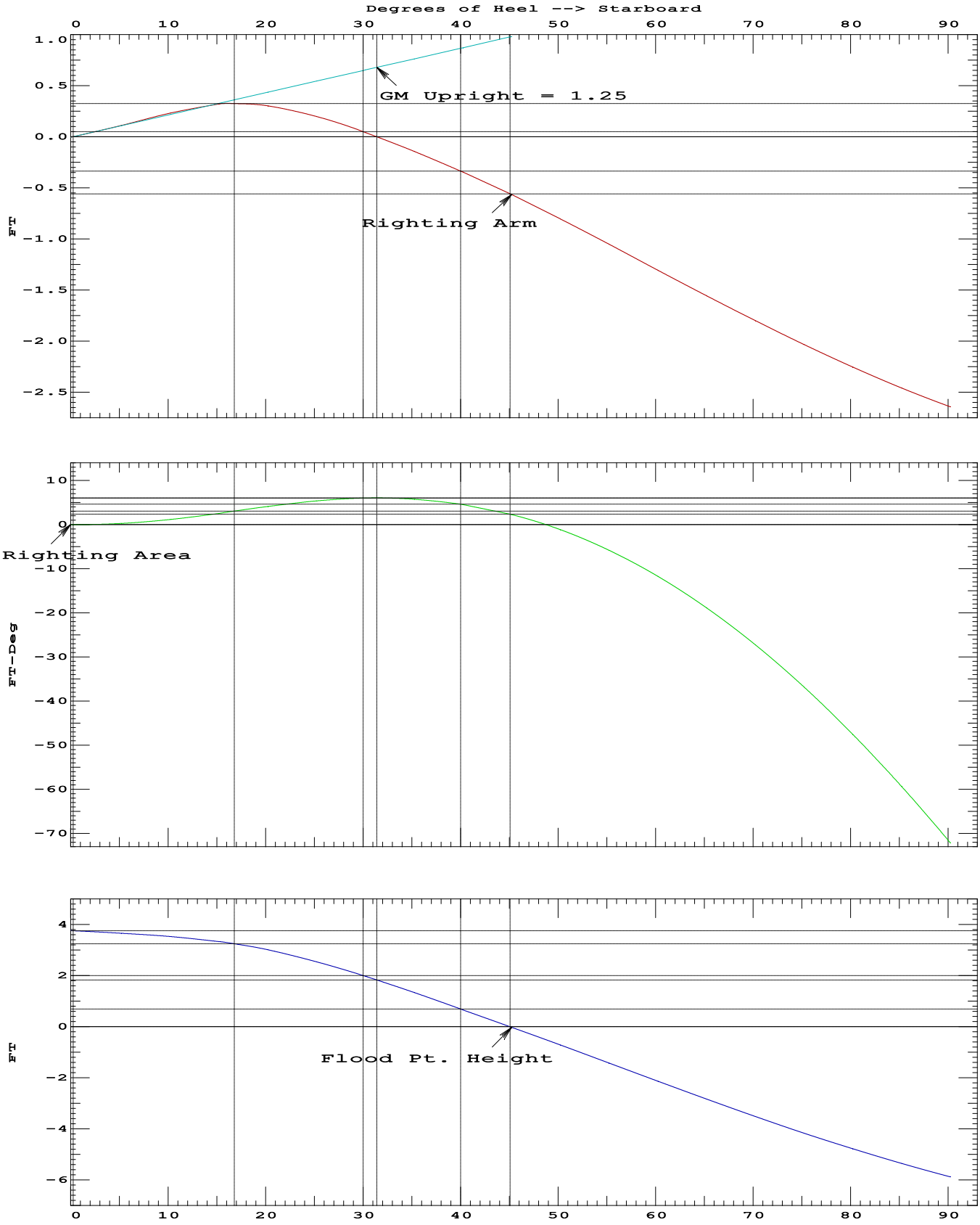
Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

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 150.7 Ft-LT was applied to artificially modify the CG.

	Critical Point		LCP	TCP	VCP
(5)	LAZ HATCH AFT	FLOOD	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.25 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*0.05 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*16.79 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*4.63 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	*6.01 F*
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*-1.37 F*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*31.40 F*

No flood to 25% laz flood:
downflood angle decreased from 55 to 45 degrees
vanishing stability decreased from 42 to 31 degrees
max RA decreased from 20 to 17 degrees


Degrees of Heel --> Starboard
GM Upright = 1.25
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
FT

LC2: TIME OF INCIDENT WITH LAZ AND FISH HOLD FLOOD POINTS WITH 40% LAZ FLOOD

HYDROSTATIC PROPERTIES

Trim: Aft 1.57 deg., Heel: Stbd 0.24 deg., VCG = 9.34

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.572	258.75	37.99a	6.00	3.39	39.39a	262.88	58.2	1.23

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: 8.493 @ Origin
Trim: Aft 1.57 deg., Heel: Stbd 0.24 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	0.35a	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.60a	7.71s	4.86	4.3
FOP	0.500	0.870	11.63	30.60a	7.70p	4.86	4.3
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
LAZ	0.400	1.025	12.48	69.28a	0.05s	7.77	143.5
Total Tanks			**39.04**	**40.69a**	**0.05s**	**6.12**	**157.3**
Total Weight			**258.75**	**37.90a**	**0.01s**	**9.34**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	258.75	37.99a	0.02s	6.00	-8.49
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.493 @ Origin
Trim: Aft 1.57 deg., Heel: Stbd 0.24 deg.
Least freeboard is 1.83 Ft located at 48.33a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 37.90a TCG = 0.01s VCG = 9.34
Free Surface Adjustment: 0.61
Adjusted CG: LCG = 37.88a 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	
8.489	1.57a	0.00	258.73	0.00	-0.005	0.00	3.33	(5)
8.489	1.57a	0.24s	258.73	0.00	0.000	-0.00	3.33	(5)
8.438	1.57a	5.24s	258.72	0.00	0.110	0.27	3.23	(5)
8.298	1.59a	10.24s	258.75	0.00	0.229	1.12	3.10	(5)
8.089	1.65a	15.24s	258.77	0.00	0.292	2.44	2.88	(5)

7.836	1.79a	20.24s	258.78	0.00	0.248	3.84	2.50 (5)
7.538	2.02a	25.24s	258.75	0.00	0.126	4.81	1.97 (5)
7.290	2.20a	29.13s	258.75	0.00	0.000	5.06	1.49 (5)
7.233	2.24a	30.00s	258.75	0.00	-0.031	5.05	1.37 (5)
7.218	2.25a	30.24s	258.75	0.00	-0.039	5.04	1.34 (5)
6.883	2.48a	35.24s	258.77	0.00	-0.228	4.38	0.66 (5)
6.565	2.67a	39.83s	258.75	0.00	-0.411	2.92	0.00 (5)
6.553	2.68a	40.00s	258.75	0.00	-0.418	2.85	-0.02 (5)
6.536	2.68a	40.24s	258.75	0.00	-0.428	2.75	-0.06 (5)
6.161	2.88a	45.24s	258.76	0.00	-0.644	0.08	-0.81 (5)
5.742	3.06a	50.24s	258.76	0.00	-0.878	-3.72	-1.58 (5)
5.284	3.23a	55.24s	258.75	0.00	-1.121	-8.72	-2.35 (5)
4.797	3.37a	60.24s	258.75	0.00	-1.365	-14.93	-3.11 (5)
4.287	3.48a	65.24s	258.75	0.00	-1.606	-22.36	-3.84 (5)
3.755	3.55a	70.24s	258.75	0.00	-1.839	-30.97	-4.55 (5)
3.207	3.58a	75.24s	258.75	0.00	-2.061	-40.72	-5.21 (5)
2.647	3.57a	80.24s	258.75	0.00	-2.269	-51.55	-5.84 (5)
2.085	3.52a	85.24s	258.75	0.00	-2.460	-63.38	-6.42 (5)
1.526	3.42a	90.24s	258.75	0.00	-2.633	-76.12	-6.94 (5)

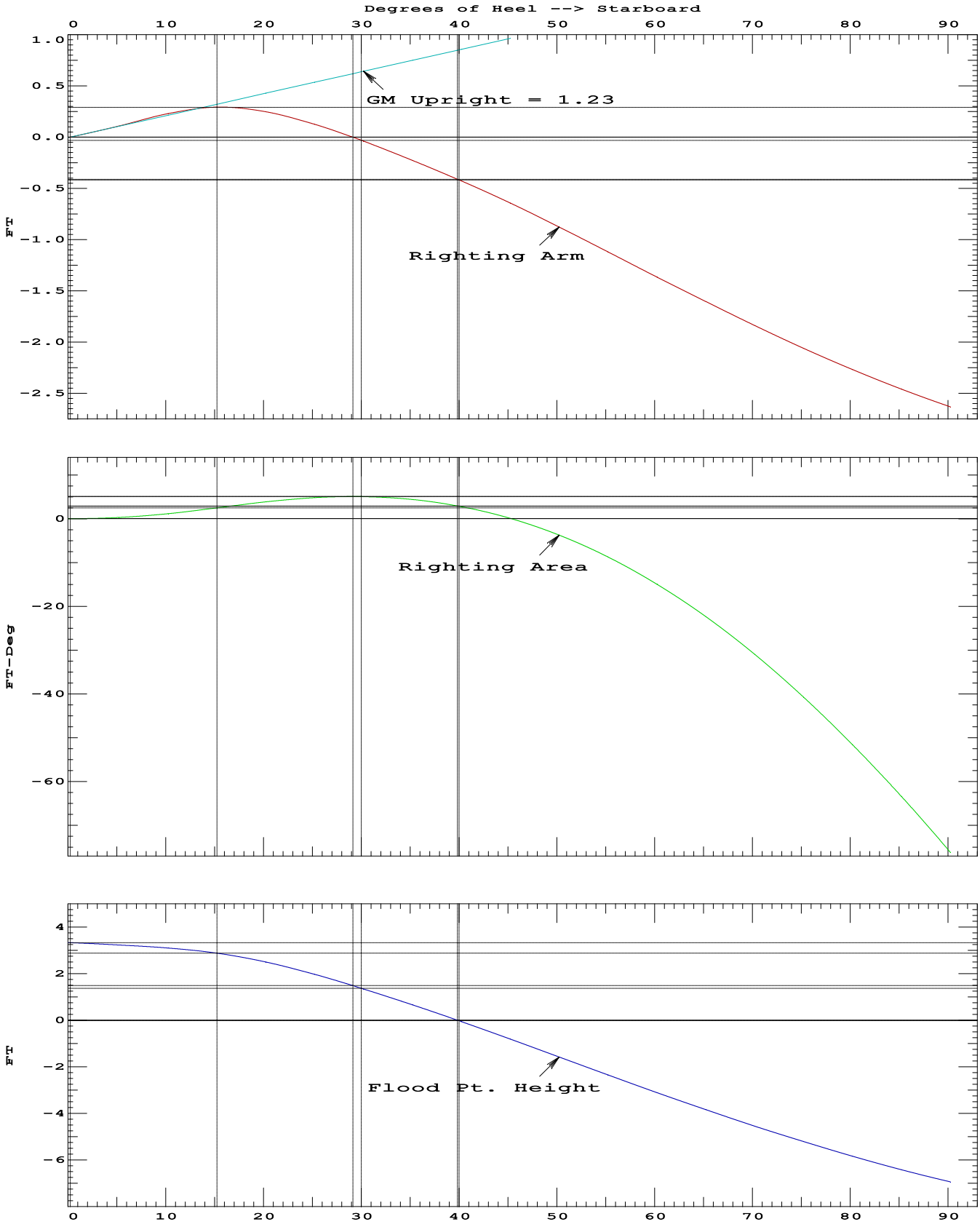
Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

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 157.3 Ft-LT was applied to artificially modify the CG.

	Critical Point		LCP	TCP	VCP
(5)	LAZ HATCH AFT	FLOOD	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	1.23 P
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	-0.03 F
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	15.24 F
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	2.92 F
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	5.05 F
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	-2.13 F
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	29.13 F

25% flood to 40% laz flood:
downflood angle decreased from 45 to 40 degrees
vanishing stability decreased from 31 to 29 degrees
max RA decreased from 17 to 15 degrees


Degrees of Heel --> Starboard
GM Upright = 1.23
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
FT

LC3: TIME OF INCIDENT WITH LAZ AND FISH HOLD FLOOD POINTS WITH 20% HOLD FLOODED

HYDROSTATIC PROPERTIES

Trim: Aft 1.02 deg., Heel: Stbd 0.34 deg., VCG = 8.94

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
9.818	269.02	37.45a	6.13	3.42	39.14a	264.62	56.4	0.83

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: 9.124 @ Origin
Trim: Aft 1.02 deg., Heel: Stbd 0.34 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	0.01s	9.01	5.2
FOS	0.500	0.870	11.63	30.50a	7.70s	4.85	4.3
FOP	0.500	0.870	11.63	30.50a	7.70p	4.85	4.2
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
HOLD	0.200	1.025	22.75	49.30a	0.10s	3.67	373.5
Total Tanks			**49.31**	**37.38a**	**0.07s**	**4.57**	**387.2**
Total Weight			**269.02**	**37.40a**	**0.01s**	**8.94**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	269.02	37.45a	0.03s	6.13	-9.12
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 9.124 @ Origin
Trim: Aft 1.02 deg., Heel: Stbd 0.34 deg.
Least freeboard is 1.62 Ft located at 42.35a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 37.40a TCG = 0.01s VCG = 8.94
Free Surface Adjustment: 1.44
Adjusted CG: LCG = 37.37a TCG = 0.00s VCG = 10.38

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height	
9.123	1.02a	0.00	269.02	0.00	-0.005	0.00	3.41	(5)
9.122	1.02a	0.34s	269.02	0.00	0.000	-0.00	3.40	(5)
9.067	1.02a	5.34s	269.02	0.00	0.074	0.19	3.30	(5)
8.918	1.05a	10.34s	269.02	0.00	0.153	0.75	3.17	(5)
8.840	1.07a	12.47s	269.02	0.00	0.164	1.09	3.08	(5)

8.728	1.11a	15.34s	269.02	0.00	0.145	1.54	2.92 (5)
8.507	1.24a	20.34s	269.02	0.00	0.038	2.04	2.52 (5)
8.446	1.29a	21.53s	269.02	0.00	0.000	2.06	2.40 (5)
8.243	1.44a	25.34s	269.04	0.00	-0.140	1.81	1.98 (5)
7.973	1.65a	30.00s	269.05	0.00	-0.338	0.71	1.39 (5)
7.951	1.66a	30.34s	269.02	0.00	-0.353	0.59	1.35 (5)
7.641	1.88a	35.34s	269.04	0.00	-0.583	-1.74	0.66 (5)
7.341	2.05a	39.94s	269.02	0.00	-0.801	-4.92	0.00 (5)
7.336	2.05a	40.00s	269.02	0.00	-0.804	-4.97	-0.01 (5)
7.314	2.06a	40.34s	269.02	0.00	-0.820	-5.24	-0.06 (5)
6.963	2.24a	45.34s	269.03	0.00	-1.062	-9.95	-0.82 (5)
6.570	2.41a	50.34s	269.03	0.00	-1.314	-15.88	-1.60 (5)
6.134	2.58a	55.34s	269.02	0.00	-1.570	-23.09	-2.38 (5)
5.666	2.71a	60.34s	269.02	0.00	-1.823	-31.57	-3.15 (5)
5.169	2.80a	65.34s	269.02	0.00	-2.069	-41.31	-3.89 (5)
4.647	2.87a	70.34s	269.02	0.00	-2.303	-52.24	-4.60 (5)
4.108	2.89a	75.34s	269.02	0.00	-2.523	-64.31	-5.27 (5)
3.559	2.88a	80.34s	269.02	0.00	-2.727	-77.45	-5.89 (5)
3.003	2.81a	85.34s	269.02	0.00	-2.910	-91.54	-6.46 (5)
2.443	2.71a	90.34s	269.02	0.00	-3.071	-106.51	-6.98 (5)

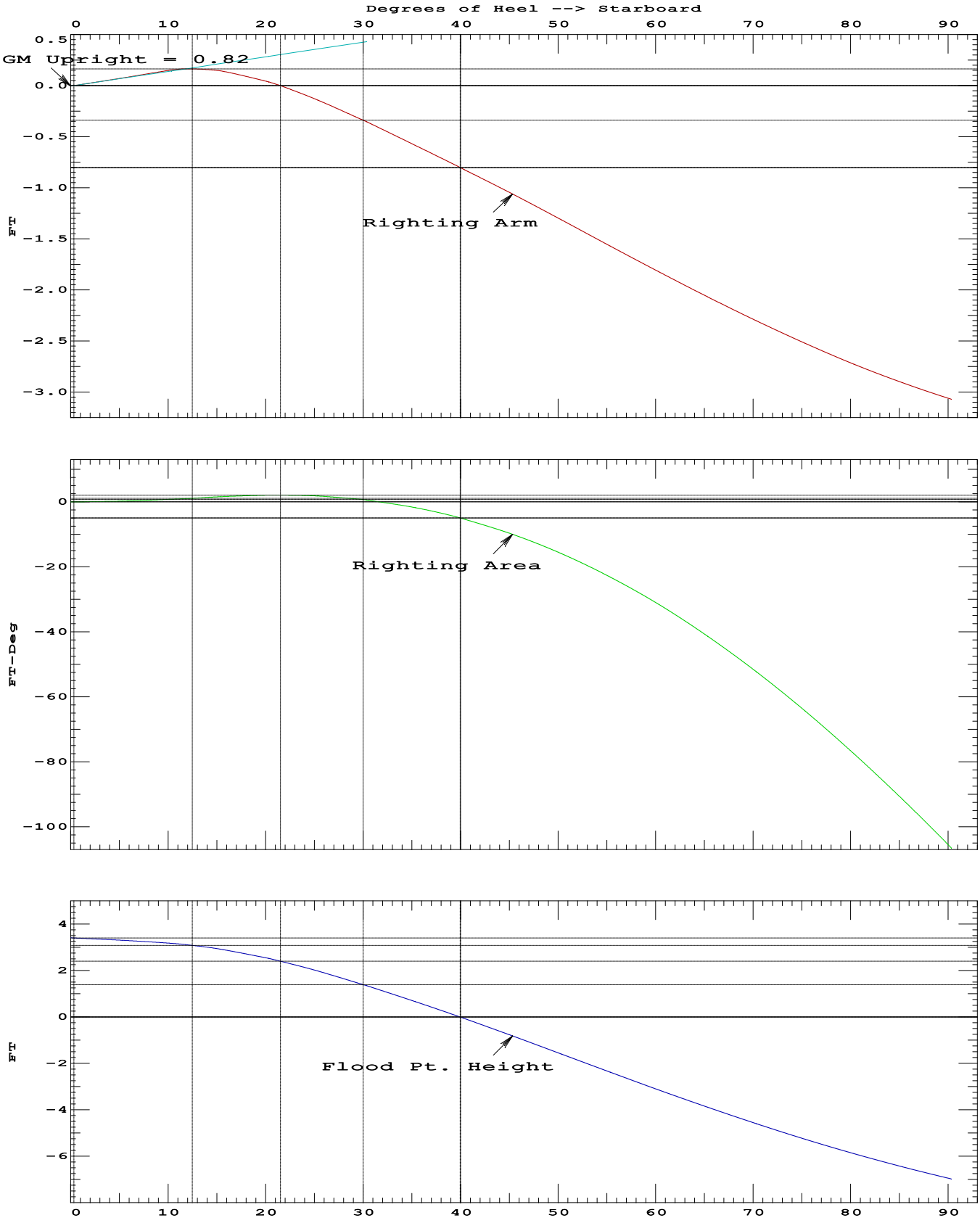
Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

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 387.2 Ft-LT was applied to artificially modify the CG.

	Critical Point		LCP	TCP	VCP
(5)	LAZ HATCH AFT	FLOOD	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	0.82 F
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	-0.34 F
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	12.47 F
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	-4.92 F
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	0.71 F
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	-5.63 F
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	21.53 F

No flood to 20% fish hold flood:
downflood angle decreased from 55 to 40 degrees
vanishing stability decreased from 42 to 21 degrees
max RA decreased from 20 to 12 degrees


Degrees of Heel --> Starboard
GM Upright = 0.82
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
FT

LC4: TIME OF INCIDENT WITH LAZ AND FISH HOLD FLOOD POINTS WITH 35% HOLD FLOODED

HYDROSTATIC PROPERTIES

Trim: Aft 1.91 deg., Heel: Stbd 0.28 deg., VCG = 8.74

LCF Draft	Displacement Weight(LT)	Buoyancy-Ctr. LCB	Buoyancy-Ctr. VCB	Weight/ Inch	LCF	Moment/ Deg trim	GML	GMT
10.232	286.08	38.45a	6.38	3.42	39.07a	259.77	52.0	0.92

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: 8.928 @ Origin
Trim: Aft 1.91 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	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	0.36a	0.01s	9.01	5.3
FOS	0.500	0.870	11.63	30.66a	7.71s	4.86	4.3
FOP	0.500	0.870	11.63	30.65a	7.71p	4.86	4.3
HOT	0.500	0.947	0.27	40.59a	4.90s	6.43	0.0
HOLD	0.350	1.025	39.81	51.08a	0.05s	4.52	430.1
Total Tanks			**66.37**	**41.57a**	**0.05s**	**4.85**	**443.9**
Total Weight			**286.08**	**38.37a**	**0.01s**	**8.74**	

		Displ(LT)	LCB	TCB	VCB	RefHt
HULL	1.025	286.08	38.45a	0.02s	6.38	-8.92
Righting Arms:			0.00	0.00s		

Distances in FEET. Moments in Ft-LT.

FREEBOARD STATUS

Baseline draft: 8.928 @ Origin
Trim: Aft 1.91 deg., Heel: Stbd 0.28 deg.
Least freeboard is 1.09 Ft located at 52.13a

RIGHTING ARMS vs HEEL ANGLE

Total CG: LCG = 38.37a TCG = 0.01s VCG = 8.74
Free Surface Adjustment: 1.55
Adjusted CG: LCG = 38.32a TCG = 0.00s VCG = 10.29

Origin Depth	Degrees of Trim	Degrees of Heel	Displacement Weight(LT)	Righting Arms in Trim	Righting Arms in Heel	Area	Flood Pt Height	
8.923	1.91a	0.00	286.08	0.00	-0.005	0.00	2.46	(5)
8.923	1.91a	0.28s	286.08	0.00	0.000	-0.00	2.45	(5)
8.870	1.91a	5.28s	286.08	0.00	0.082	0.20	2.36	(5)
8.763	1.95a	9.25s	286.08	0.00	0.124	0.62	2.23	(5)
8.728	1.97a	10.28s	286.08	0.00	0.121	0.75	2.18	(5)

8.519	2.17a	15.28s	286.09	0.00	0.037	1.18	1.78 (5)
8.455	2.25a	16.55s	286.07	0.00	0.000	1.21	1.64 (5)
8.257	2.47a	20.28s	286.08	0.00	-0.128	0.98	1.20 (5)
7.967	2.79a	25.28s	286.08	0.00	-0.331	-0.15	0.53 (5)
7.737	3.03a	28.94s	286.06	0.00	-0.493	-1.65	0.00 (5)
7.669	3.10a	30.00s	286.08	0.00	-0.541	-2.20	*-0.16* (5)
7.650	3.12a	30.28s	286.08	0.00	-0.554	-2.35	*-0.20* (5)
7.299	3.45a	35.28s	286.07	0.00	-0.790	-5.71	*-1.01* (5)
6.940	3.77a	40.00s	286.08	0.00	-1.017	-9.97	*-1.82* (5)
6.917	3.79a	40.28s	286.08	0.00	-1.031	-10.26	*-1.87* (5)
6.515	4.11a	45.28s	286.08	0.00	-1.268	-16.01	*-2.75* (5)
6.088	4.40a	50.28s	286.08	0.00	-1.499	-22.93	*-3.65* (5)
5.628	4.67a	55.28s	286.09	0.00	-1.723	-30.99	*-4.55* (5)
5.140	4.90a	60.28s	286.08	0.00	-1.941	-40.15	*-5.41* (5)
4.629	5.07a	65.28s	286.08	0.00	-2.150	-50.38	*-6.23* (5)
4.099	5.19a	70.28s	286.08	0.00	-2.346	-61.63	*-7.00* (5)
3.556	5.25a	75.28s	286.08	0.00	-2.526	-73.81	*-7.70* (5)
3.007	5.24a	80.28s	286.08	0.00	-2.689	-86.86	*-8.33* (5)
2.456	5.17a	85.28s	286.08	0.00	-2.831	-100.67	*-8.89* (5)
1.906	5.04a	90.28s	286.08	0.00	-2.953	-115.14	*-9.38* (5)

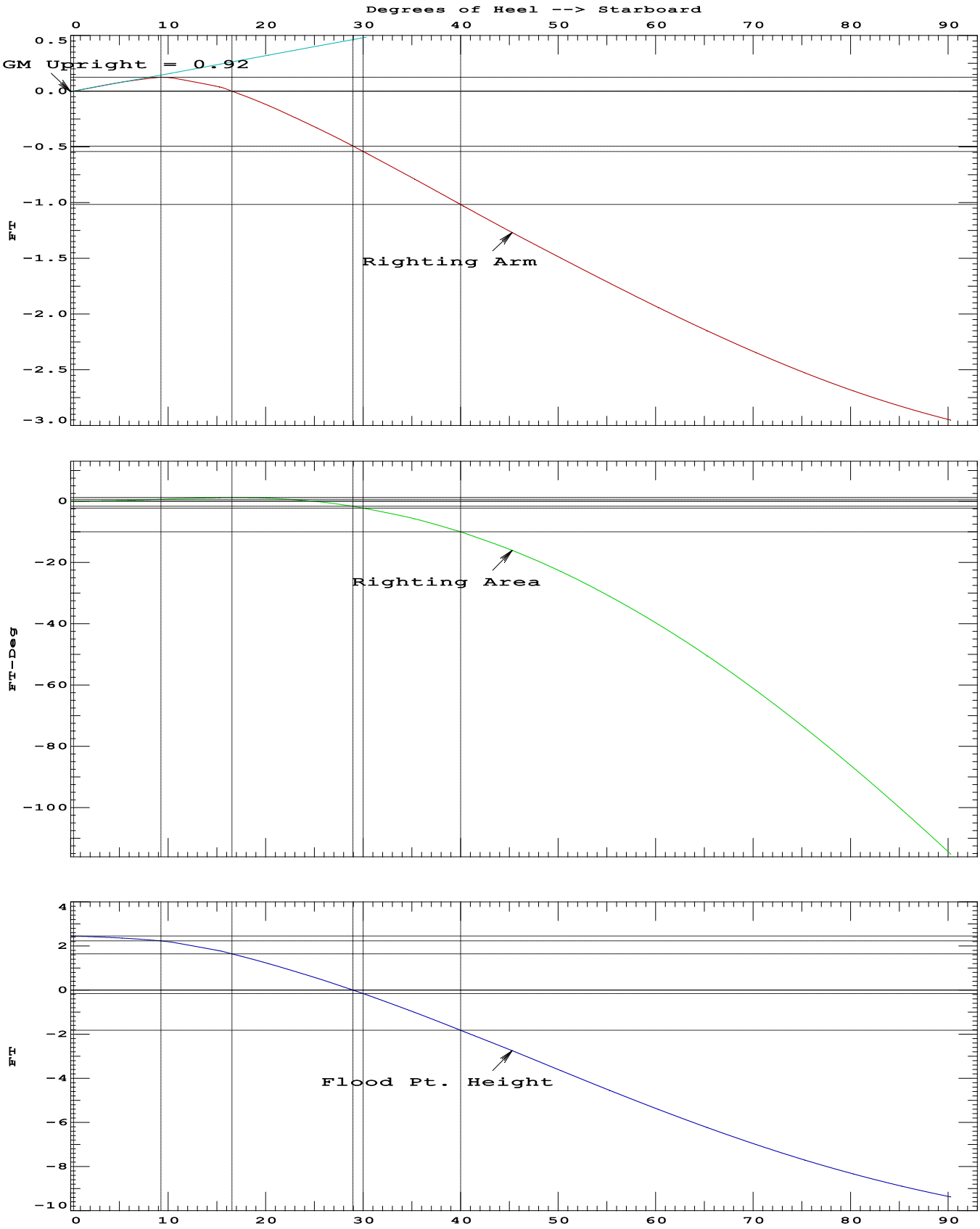
Distances in FEET. Specific Gravity = 1.025. Area in Ft-Deg.

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 443.9 Ft-LT was applied to artificially modify the CG.

	Critical Point		LCP	TCP	VCP
(5)	LAZ HATCH AFT	FLOOD	73.00a	1.00	13.82

LIM	46CFR28.570_INTACT_RIGHTING_ENERGY	Min/Max			Attained
(1)	**GM Upright**	>	1.15	Ft	*0.92 F*
(2)	**Righting Arm at abs 30 deg**	>	0.66	Ft	*-0.54 F*
(3)	**Absolute Angle at MaxRA**	>	25.00	deg	*9.25 F*
(4)	**Abs Area from abs 0 deg to abs 40 or Flood**	>	16.90	Ft-deg	*-1.65 F*
(5)	**Absolute Area from abs 0 deg to abs 30**	>	10.30	Ft-deg	*-2.20 F*
(6)	**Abs Area from abs 30 deg to abs 40 or Flood**	>	5.60	Ft-deg	*UNDEF*
(7)	**Angle from abs 0 deg to RAzero**	>	60.00	deg	*16.55 F*

20% fish hold flood to 35% fish hold flood:
downflood angle decreased from 40 to 29 degrees
vanishing stability decreased from 21 to 16 degrees
max RA decreased from 12 to 9 degrees


Degrees of Heel --> Starboard
GM Upright = 0.92
Righting Arm
FT
Righting Area
FT-Deg
Flood Pt. Height
FT