

Fishing Vessel Modification and Alteration Logging Sheet			
Fishing Vessel's Name		Date	
Logging Sheet # (Enter Sequential Numbers - 1, 2, 3, Etc.)			
<b>Step #1 - Enter the Log Sheet Starting Baseline Conditions</b>			
For the 1st log sheet the values must be supplied by the Naval Architect			
For all subsequent log sheets copy the values from the previous log sheet's Box "A", "B", "C", "D", "E", "F", "G", "H", "I", "J", "K", "L", "M", "N", "O", "P", "Q", "R", "S", "T", "U", "V", "W", "X", "Y", "Z", "AA", "AB", "AC", "AD", "AE", "AF", "AG", "AH", "AI", "AJ", "AK", "AL", "AM", "AN", "AO", "AP", "AQ", "AR", "AS", "AT", "AU", "AV", "AW", "AX", "AY", "AZ", "BA", "BB", "BC", "BD", "BE", "BF", "BG", "BH", "BI", "BJ", "BK", "BL", "BM", "BN", "BO", "BP", "BQ", "BR", "BS", "BT", "BU", "BV", "BW", "BX", "BY", "BZ", "CA", "CB", "CC", "CD", "CE", "CF", "CG", "CH", "CI", "CJ", "CK", "CL", "CM", "CN", "CO", "CP", "CQ", "CR", "CS", "CT", "CU", "CV", "CW", "CX", "CY", "CZ", "DA", "DB", "DC", "DD", "DE", "DF", "DG", "DH", "DI", "DJ", "DK", "DL", "DM", "DN", "DO", "DP", "DQ", "DR", "DS", "DT", "DU", "DV", "DW", "DX", "DY", "DZ", "EA", "EB", "EC", "ED", "EE", "EF", "EG", "EH", "EI", "EJ", "EK", "EL", "EM", "EN", "EO", "EP", "EQ", "ER", "ES", "ET", "EU", "EV", "EW", "EX", "EY", "EZ", "FA", "FB", "FC", "FD", "FE", "FF", "FG", "FH", "FI", "FJ", "FK", "FL", "FM", "FN", "FO", "FP", "FQ", "FR", "FS", "FT", "FU", "FV", "FW", "FX", "FY", "FZ", "GA", "GB", "GC", "GD", "GE", "GF", "GG", "GH", "GI", "GJ", "GK", "GL", "GM", "GN", "GO", "GP", "GQ", "GR", "GS", "GT", "GU", "GV", "GW", "GX", "GY", "GZ", "HA", "HB", "HC", "HD", "HE", "HF", "HG", "HH", "HI", "HJ", "HK", "HL", "HM", "HN", "HO", "HP", "HQ", "HR", "HS", "HT", "HU", "HV", "HW", "HX", "HY", "HZ", "IA", "IB", "IC", "ID", "IE", "IF", "IG", "IH", "II", "IJ", "IK", "IL", "IM", "IN", "IO", "IP", "IQ", "IR", "IS", "IT", "IU", "IV", "IW", "IX", "IY", "IZ", "JA", "JB", "JC", "JD", "JE", "JF", "JG", "JH", "JI", "JJ", "JK", "JL", "JM", "JN", "JO", "JP", "JQ", "JR", "JS", "JT", "JU", "JV", "JW", "JX", "JY", "JZ", "KA", "KB", "KC", "KD", "KE", "KF", "KG", "KH", "KI", "KJ", "KK", "KL", "KM", "KN", "KO", "KP", "KQ", "KR", "KS", "KT", "KU", "KV", "KW", "KX", "KY", "KZ", "LA", "LB", "LC", "LD", "LE", "LF", "LG", "LH", "LI", "LJ", "LK", "LL", "LM", "LN", "LO", "LP", "LQ", "LR", "LS", "LT", "LU", "LV", "LW", "LX", "LY", "LZ", "MA", "MB", "MC", "MD", "ME", "MF", "MG", "MH", "MI", "MJ", "MK", "ML", "MM", "MN", "MO", "MP", "MQ", "MR", "MS", "MT", "MU", "MV", "MW", "MX", "MY", "MZ", "NA", "NB", "NC", "ND", "NE", "NF", "NG", "NH", "NI", "NJ", "NK", "NL", "NM", "NN", "NO", "NP", "NQ", "NR", "NS", "NT", "NU", "NV", "NW", "NX", "NY", "NZ", "OA", "OB", "OC", "OD", "OE", "OF", "OG", "OH", "OI", "OJ", "OK", "OL", "OM", "ON", "OO", "OP", "OQ", "OR", "OS", "OT", "OU", "OV", "OW", "OX", "OY", "OZ", "PA", "PB", "PC", "PD", "PE", "PF", "PG", "PH", "PI", "PJ", "PK", "PL", "PM", "PN", "PO", "PP", "PQ", "PR", "PS", "PT", "PU", "PV", "PW", "PX", "PY", "PZ", "QA", "QB", "QC", "QD", "QE", "QF", "QG", "QH", "QI", "QJ", "QK", "QL", "QM", "QN", "QO", "QP", "QQ", "QR", "QS", "QT", "QU", "QV", "QW", "QX", "QY", "QZ", "RA", "RB", "RC", "RD", "RE", "RF", "RG", "RH", "RI", "RJ", "RK", "RL", "RM", "RN", "RO", "RP", "RQ", "RR", "RS", "RT", "RU", "RV", "RW", "RX", "RY", "RZ", "SA", "SB", "SC", "SD", "SE", "SF", "SG", "SH", "SI", "SJ", "SK", "SL", "SM", "SN", "SO", "SP", "SQ", "SR", "SS", "ST", "SU", "SV", "SW", "SX", "SY", "SZ", "TA", "TB", "TC", "TD", "TE", "TF", "TG", "TH", "TI", "TJ", "TK", "TL", "TM", "TN", "TO", "TP", "TQ", "TR", "TS", "TT", "TU", "TV", "TW", "TX", "TY", "TZ", "UA", "UB", "UC", "UD", "UE", "UF", "UG", "UH", "UI", "UJ", "UK", "UL", "UM", "UN", "UO", "UP", "UQ", "UR", "US", "UT", "UU", "UV", "UW", "UX", "UY", "UZ", "VA", "VB", "VC", "VD", "VE", "VF", "VG", "VH", "VI", "VJ", "VK", "VL", "VM", "VN", "VO", "VP", "VQ", "VR", "VS", "VT", "VU", "VV", "VW", "VX", "VY", "VZ", "WA", "WB", "WC", "WD", "WE", "WF", "WG", "WH", "WI", "WJ", "WK", "WL", "WM", "WN", "WO", "WP", "WQ", "WR", "WS", "WT", "WU", "WV", "WW", "WX", "WY", "WZ", "XA", "XB", "XC", "XD", "XE", "XF", "XG", "XH", "XI", "XJ", "XK", "XL", "XM", "XN", "XO", "XP", "XQ", "XR", "XS", "XT", "XU", "XV", "XW", "XX", "XY", "XZ", "YA", "YB", "YC", "YD", "YE", "YF", "YG", "YH", "YI", "YJ", "YK", "YL", "YM", "YN", "YO", "YP", "YQ", "YR", "YS", "YT", "YU", "YV", "YW", "YX", "YZ", "ZA", "ZB", "ZC", "ZD", "ZE", "ZF", "ZG", "ZH", "ZI", "ZJ", "ZK", "ZL", "ZM", "ZN", "ZO", "ZP", "ZQ", "ZR", "ZS", "ZT", "ZU", "ZV", "ZW", "ZX", "ZY", "ZZ"			

### Manual Logging Program

This is the most basic logging method requiring only the paper logging form, pencils, and a hand held calculator. Conversely this manual logging is also the most labor intensive of the methods available.

Fishing Vessel Lightship Changes Log Sheet			
RV CFV5AC Test Vessel - ON 1234567890			
Caution - Stability Should Be Reviewed			
Percent Changes in Lightship		Weights LCO VCO	
Weights LCO VCO		1.2% 0.2% 0.0%	
Modification Description and General Location			
Initials	Date	Estimated Modification Weight Pounds	Location of Modification Above/Below the Main Deck Feet
Added New Net Head & Foundation All 4' on Mast #1	JW 7/00	2,500	26.0 8.0
Added New Net Head (2'x2'x2')	JW 7/00	500	26.0 8.0
Added New Net on New Net Head	JW 7/00	500	26.0 8.0
Removed Old Net Head & Yarn Post Side of Mast House	JW 7/00	-300	-8.0 8.0
Estimate to the Nearest 10 Pounds			
Estimate to the Nearest 10 Pounds		Estimate to the Nearest 10 Pounds	

### Computer Spreadsheet Logging Program

This is logging method uses a personnel computer based spreadsheet program such as Excel or MS Works to record the changes and check to see if additional stability reviews should be done by a qualified naval Architect. This method is the least labor intensive for the user and minimizes the potential of errors by the user. This logging method does require access to a PC, but the PC does not need to be located onboard your vessel.

### List of Contacts for Additional Information

USCG Commercial Fishing Vessel Safety Coordinator - [www.uscg.mil/hq/g-m/cfvfs/](http://www.uscg.mil/hq/g-m/cfvfs/)  
1-202-372-1251 1-800-368-5647

Transport Canada, Marine Safety, Small Vessels [www.tc.gc.ca/marinesafety](http://www.tc.gc.ca/marinesafety) - 1-613-991-3145

North Pacific Fishing Vessel Owner's Association [www.npfvoa.org](http://www.npfvoa.org) - 1-206-285-3383

Alaska Marine Safety Education Association [www.amsea.org](http://www.amsea.org) - 1-907-747-3287

MODIFICATION WEIGHT & LOCATION SUMMARY TABLE			
ESTIMATE WEIGHTS TO THE NEAREST 50 POUNDS, DISTANCES TO THE NEAREST 6 INCHES	APPROXIMATE WEIGHT	DISTANCE FROM KEEL (BEAMHEAD)	DISTANCE FROM MAIN DECK
WEIGHT DESCRIPTION & LOCATION			
Sketch the approximate location of modification on the sketch below			
F/V CFV5AC TEST CASE - ON 123456789			
MODIFICATION WEIGHT LOCATION WORKSHEET			

### Naval Architect Based Logging Program

This logging method uses a simple paper form to record each change. This form is then forwarded to your naval architect for their analysis of the changes impact on your vessel's stability. This method will provide the highest level of safety, but at a higher dollar cost than the other two methods. This method is best suited for those to whom the basic concepts of stability remain a mystery or who do not wish to take the higher risks present in the other two logging methods.

### Important Reminder

First and foremost for any successful logging method an up-to-date stability analysis of your vessel must be available. A logging program is design to track the change in your vessel's stability from a known safe condition. Just as in dead reckoning, if don't know your starting location, you can not determine if your current location is safe.

Second, a qualified Naval Architect must assist in setting up any logging program and periodically reviewing its results. Stability is very complex and has many hidden and dangerous subtleties that only a qualified Naval Architect can uncover. A logging program can not catch all of these nuances.

### Fishing Vessel Modification and Alteration Logging Sheet

	Fishing Vessel's Name		Date
	Logging Sheet # (Enter Sequential Numbers - 1, 2, 3, Etc.)		

<b>Step #1 - Enter the Log Sheet Starting Baseline Conditions</b>  For the 1st log sheet the values must be supplied by the Naval Architect For all subsequent log sheets copy the values from the previous log sheet's Box "M", "N", & "O"	<b>Starting Lightship Conditions</b>		
	Weight Pounds	LCG Aft of House Bulkhead Feet	VCG Above Main Deck Feet
	Box "A"	Box "B"	Box "C"

<b>Step #2 - Calculate the Horizontal &amp; Vertical Weight Moments for the Starting Baseline Conditions</b>	Multiply Box "A" by Box "B" and Enter the Results in Box "D"	Multiply Box "A" by Box "C" and Enter the Results in Box "E"
	Foot-Pounds	Foot-Pounds
	Box "D"	Box "E"
	Lightship's Horizontal Moment	Lightship's Vertical Moment

<b>Step #3 - Record the Modification or Alteration to the Vessel</b>  Modification Description and General Location	Initials	Date	Estimated Modification Weight Pounds	Location Fwd/Aft of Aft Deckhouse Bulkhead Feet	Location Above/Below the Main Deck Feet
	Box "F"	Box "G"	Box "H"		
	Estimate to the Nearest 50 Pounds	(+ ) Aft of Bhd (- ) Fwd of Bhd Estimate to the Nearest Six (6) Inches	(+ ) Abv Deck (- ) Blw Deck Estimate to the Nearest Six (6) Inches		

<b>Step #4 - Calculate the Weight Moments for the Modification or Alteration</b>	Multiply Box "F" by Box "G" and Enter the Results in Box "I"	Multiply Box "F" by Box "H" and Enter the Results in Box "J"	<b>Step #5 - Calculate the Combined Weight Moments for the Modification or Alteration and the Old Lightship</b>	Add Box "D" and Box "I" and Enter the Results in Box "K"	Add Box "E" and Box "J" and Enter the Results in Box "L"
	Foot-Pounds	Foot-Pounds		Foot-Pounds	Foot-Pounds
	Box "I"	Box "J"		Box "K"	Box "L"
	Modification's Horizontal Moment	Modification's Vertical Moment		Revised Horizontal Moment	Revised Vertical Moment

<b>Step #6 - Calculate the New Baseline Conditions with the Modification or Alteration Included</b>	<b>Current Lightship Conditions</b>		
	Weight	LCG Aft of House Bulkhead	VCG Above Main Deck
	Add Box "A" and Box "F" and Enter the Results in Box "M"	Divide Box "K" by Box "M" and Enter the Results in Box "N"	Divide Box "L" by Box "M" and Enter the Results in Box "O"
	Pounds	Feet	Feet
Box "M"	Box "N"	Box "O"	

<b>Step #7 - Enter the Starting Baseline Conditions Supplied by the Naval Architect from Log Sheet #1</b>	<b>Starting Lightship Conditions from Log Sheet #1</b>		
	Weight	LCG Aft of House Bulkhead	VCG Above Main Deck
	Enter the Value in Box "A" from Log Sheet #1 (Values from the NA)	Enter the Value in Box "B" from Log Sheet #1 (Values from the NA)	Enter the Value in Box "C" from Log Sheet #1 (Values from the NA)
	Pounds	Feet	Feet
Box "P"	Box "Q"	Box "R"	

<b>Step #8 - Calculate the Cumulative Change in the Vessels Baseline Conditions From the Starting Baseline Supplied by the Naval Architect</b>	<b>Change in Lightship Conditions From Log Sheet #1</b>		
	Weight	LCG Aft of House Bulkhead	VCG Above Main Deck
	Subtract Box "M" from Box "P" and Enter the Results in Box "R"	Subtract Box "N" from Box "Q" and Enter the Results in Box "S"	Subtract Box "O" from Box "R" and Enter the Results in Box "T"
	Pounds	Feet	Feet
Box "R"	Box "S"	Box "T"	

<b>Step #9 - Calculate the Cumulative Change in the Vessels Baseline Conditions From the Starting Baseline Supplied by the Naval Architect from Log Sheet #1 Substantial Alterations Checks as Required by 46 CFR 25.501 (c)</b>	<b>Change in Lightship Conditions From Log Sheet #1</b>		
	Weight	LCG Aft of House Bulkhead	VCG Above Main Deck
	Divide Box "R" by Box "P" and Enter the Results in Box "V" as a Percent (%)	Divide Box "S" by Box "U" and Enter the Results in Box "W" as a Percent (%)	Multiply Box "T" by 12 and Enter the Results in Box "X"
	Pounds	Feet	Inches
Box "V"	Box "W"	Box "X"	

<b>Step #10 - Check if the Alterations and/or Modifications to Date have Adversely Affect the Vessel's Stability as per 46 CFR 28.501(c)</b> Part A - If the Value in Box "V" is Greater Than "3.0%" or Less Than "-3.0%" the Vessel's Stability has been Adversely Affected Part B - If the Value in Box "W" is Greater Than "1.0%" or Less Than "-1.0%" the Vessel's Stability has been Adversely Affected Part C - If the Value in Box "X" is Greater Than 2.0 Inches the Vessel's Stability has been Adversely Affected Note - If any one of the Checks are Meet the Vessel's Stability has been Adversely Affected	Vessel's Length From the Vessel's Certificate of Documentation (Feet) Box "U"
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