

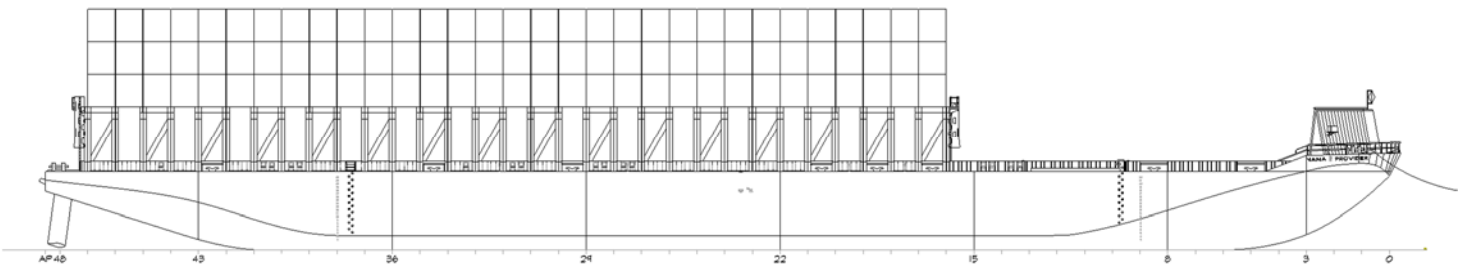
NANA PROVIDER

(O.N. 1197833)

420.0' x 100.0'x 24.0' Deck Barge

DEADWEIGHT TABLES - CL RACK OFF/ON

DATE	DOC NO.	REV
11.16.2016	1235-100-26	A



HOCKEMA & WHALEN ASSOCIATES

NAVAL ARCHITECTS ♦ MARINE ENGINEERS ♦ ELECTRICAL ENGINEERS

SEATTLE WA ♦ BEND OR
TEL: 206 365 0919

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HOCKEMA & WHALEN ASSOCIATES

NAVAL ARCHITECTS ♦ MARINE ENGINEERS ♦ ELECTRICAL ENGINEERS

WASHINGTON OFFICE: 5450 LEARY AVENUE NW #252 ♦ SEATTLE WA 98107
OREGON OFFICE: 61299 BIG EDDY CIRCLE ♦ BEND OR 97702
TEL: 206 365 0919

BY	CHECKED	DATE	DOC NO.	REV
M Whalen	HWA	11.16.2016	1235-100-26	A

REVISIONS				
SYM	PAGE	DESCRIPTION	BY	DATE
-	All	1. Initial issue – Preliminary based on estimated weights	MJW	06.11.2014
A	All	1. Added Tables for barge with CL Racks ON 2. Updated lightship values to agree with approved stability values. 3. Updated allowable cargo height and VCG to agree with approved stability values.	MJW	11-16-2016

REFERENCES	
1. 1235-100-20- Nana Provider Stability Calculations Booklet.	
2. Nana Provider Simplified Stability Cover Letter and Stability Letter Combined HCB 1162015_86914030	

I. DEADWEIGHT TABLES

A. Centerline Container Racks OFF

CENTERLINE CONTAINER RACKS OFF										
Draft Ft - Inches	Freeboard Inches	Vessel in Sea Water			Vessel in Fresh Water			Max. Cargo Height Ft abv. Dk. Note 1	Max. Cargo VCG Ft abv. dk Note 1	
		Vessel Displacement Short Tons	Cargo/Blst Deadweight Short Tons	Tons/inch Short Tons	Vessel Displacement Short Tons	Cargo/Blst Deadweight Short Tons	Tons/inch Short Tons			
19	0	60.69	20,664.84	16,318.44	106.92	20,160.82	15,814.42	104.31	NA	NA
18	11	61.69	20,557.98	16,211.58	106.87	20,056.57	15,710.17	104.26	NA	NA
18	10	62.69	20,451.16	16,104.76	106.81	19,952.35	15,605.95	104.20	NA	NA
18	9	63.69	20,344.41	15,998.01	106.75	19,848.20	15,501.80	104.15	NA	NA
18	8	64.69	20,237.72	15,891.32	106.69	19,744.12	15,397.72	104.09	NA	NA
18	7	65.69	20,131.08	15,784.68	106.62	19,640.08	15,293.68	104.02	NA	NA
18	6	66.69	20,024.52	15,678.12	106.55	19,536.12	15,189.72	103.95	NA	NA
18	5	67.69	19,918.03	15,571.63	106.48	19,432.22	15,085.82	103.88	NA	NA
18	4	68.69	19,811.58	15,465.18	106.41	19,328.37	14,981.97	103.81	NA	NA
18	3	69.69	19,705.24	15,358.84	106.34	19,224.62	14,878.22	103.75	NA	NA
18	2	70.69	19,598.95	15,252.55	106.27	19,120.93	14,774.53	103.68	NA	NA
18	1.06	71.63	19,499.95	15,153.55	106.20	19,024.34	14,677.94	103.61	38.75	19.33
18	1	71.69	19,492.72	15,146.32	106.19	19,017.29	14,670.89	103.60	38.84	19.38
18	0	72.69	19,386.58	15,040.18	106.12	18,913.74	14,567.34	103.53	40.17	20.05
17	11	73.69	19,280.51	14,934.11	106.04	18,810.25	14,463.85	103.45	41.49	20.71
17	10	74.69	19,174.51	14,828.11	105.96	18,706.84	14,360.44	103.38	42.82	21.38
17	9	75.69	19,068.63	14,722.23	105.85	18,603.54	14,257.14	103.27	44.14	22.04
17	8	76.69	18,962.84	14,616.44	105.74	18,500.33	14,153.93	103.16	45.47	22.71
17	7	77.69	18,857.17	14,510.77	105.63	18,397.24	14,050.84	103.05	46.79	23.37
17	6	78.69	18,751.61	14,405.21	105.52	18,294.25	13,947.85	102.95	48.11	24.04
17	5	79.69	18,646.16	14,299.76	105.41	18,191.38	13,844.98	102.84	49.43	24.70
17	4	80.69	18,540.81	14,194.41	105.30	18,088.60	13,742.20	102.73	50.74	25.36
17	3	81.69	18,435.58	14,089.18	105.19	17,985.93	13,639.53	102.62	52.06	26.02
17	2	82.69	18,330.46	13,984.06	105.07	17,883.38	13,536.98	102.51	53.38	26.68
17	1	83.69	18,225.45	13,879.05	104.95	17,780.93	13,434.53	102.39	54.69	27.34
17	0	84.69	18,120.57	13,774.17	104.83	17,678.60	13,332.20	102.27	56.00	28.00
16	11	85.69	18,015.80	13,669.40	104.71	17,576.39	13,229.99	102.16	57.40	28.70
16	10	86.69	17,911.15	13,564.75	104.59	17,474.29	13,127.89	102.04	58.79	29.40
16	9	87.69	17,806.62	13,460.22	104.48	17,372.31	13,025.91	101.93	60.19	30.09
16	8	88.69	17,702.20	13,355.80	104.37	17,270.44	12,924.04	101.82	61.58	30.79
16	7	89.69	17,597.87	13,251.47	104.31	17,168.65	12,822.25	101.77	62.97	31.48
16	6	90.69	17,493.63	13,147.23	104.19	17,066.96	12,720.56	101.65	64.36	32.18
16	5	91.69	17,389.49	13,043.09	104.08	16,965.36	12,618.96	101.54	65.75	32.87
16	4	92.69	17,285.47	12,939.07	103.97	16,863.87	12,517.47	101.43	67.13	33.57
16	3	93.69	17,181.55	12,835.15	103.86	16,762.49	12,416.09	101.33	68.52	34.26
16	2	94.69	17,077.74	12,731.34	103.76	16,661.21	12,314.81	101.23	69.90	34.95
16	1	95.69	16,974.03	12,627.63	103.66	16,560.03	12,213.63	101.13	71.29	35.64
16	0	96.69	16,870.42	12,524.02	103.56	16,458.95	12,112.55	101.03	72.67	36.33

Notes: 1. Cargo heights and VCGs shown are measured above the steel main deck

CENTERLINE CONTAINER RACKS OFF										
			Vessel in Sea Water			Vessel in Fresh Water			Max. Cargo Height	Max. Cargo VCG
Draft	Freeboard		Vessel Displacement	Cargo/Blst Deadweight	Tons/inch	Vessel Displacement	Cargo/Blst Deadweight	Tons/inch	Ft abv. Dk.	Ft abv. dk
Ft - Inches	Inches		Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Note 1	Note 1
16	0	96.69	16,870.42	12,524.02	103.56	16,458.95	12,112.55	101.03	72.67	36.33
15	11	97.69	16,766.92	12,420.52	103.46	16,357.97	12,011.57	100.94	74.12	37.06
15	10	98.69	16,663.51	12,317.11	103.36	16,257.08	11,910.68	100.84	75.57	37.78
15	9	99.69	16,559.69	12,213.29	104.11	16,155.80	11,809.40	101.57	77.03	38.50
15	8	100.69	16,455.96	12,109.56	103.99	16,054.60	11,708.20	101.45	78.49	39.23
15	7	101.69	16,352.33	12,005.93	103.88	15,953.49	11,607.09	101.35	79.94	39.95
15	6	102.69	16,248.83	11,902.43	103.76	15,852.52	11,506.12	101.23	81.40	40.68
15	5	103.69	16,145.44	11,799.04	103.65	15,751.65	11,405.25	101.12	82.85	41.40
15	4	104.69	16,042.16	11,695.76	103.51	15,650.89	11,304.49	100.99	84.30	42.12
15	3	105.69	15,939.01	11,592.61	103.38	15,550.25	11,203.85	100.86	85.75	42.84
15	2	106.69	15,835.98	11,489.58	103.25	15,449.74	11,103.34	100.73	87.19	43.56
15	1	107.69	15,733.10	11,386.70	103.05	15,349.37	11,002.97	100.54	88.64	44.28
15	0	108.69	15,630.16	11,283.76	102.98	15,248.94	10,902.54	100.47	90.08	45.00
14	11	109.69	15,527.37	11,180.97	102.78	15,148.65	10,802.25	100.27	91.18	45.55
14	10	110.69	15,424.75	11,078.35	102.59	15,048.54	10,702.14	100.09	92.28	46.11
14	9	111.69	15,322.30	10,975.90	102.40	14,948.59	10,602.19	99.90	93.38	46.66
14	8	112.69	15,220.00	10,873.60	102.22	14,848.78	10,502.38	99.73	94.47	47.21
14	7	113.69	15,117.87	10,771.47	102.05	14,749.14	10,402.74	99.56	95.56	47.76
14	6	114.69	15,015.88	10,669.48	101.88	14,649.64	10,303.24	99.40	96.65	48.31
14	5	115.69	14,914.04	10,567.64	101.72	14,550.28	10,203.88	99.24	97.74	48.85
14	4	116.69	14,812.35	10,465.95	101.57	14,451.07	10,104.67	99.09	98.83	49.40
14	3	117.69	14,710.81	10,364.41	101.42	14,352.01	10,005.61	98.95	99.92	49.95
14	2	118.69	14,609.41	10,263.01	101.27	14,253.08	9,906.68	98.80	101.00	50.49
14	1	119.69	14,508.13	10,161.73	101.13	14,154.27	9,807.87	98.66	102.08	51.04
14	0	120.69	14,407.00	10,060.60	101.00	14,055.61	9,709.21	98.54	103.17	51.58
13	11	121.69	14,305.99	9,959.59	100.87	13,957.06	9,610.66	98.41	104.16	52.08
13	10	122.69	14,205.11	9,858.71	100.74	13,858.64	9,512.24	98.28	105.15	52.57
13	9	123.69	14,104.36	9,757.96	100.62	13,760.35	9,413.95	98.17	106.14	53.07
13	8	124.69	14,003.73	9,657.33	100.50	13,662.18	9,315.78	98.05	107.13	53.56
13	7	125.69	13,903.22	9,556.82	100.38	13,564.12	9,217.72	97.93	108.11	54.06
13	6	126.69	13,802.82	9,456.42	100.27	13,466.17	9,119.77	97.82	109.10	54.55
13	5	127.69	13,702.55	9,356.15	100.16	13,368.34	9,021.94	97.72	110.08	55.04
13	4	128.69	13,602.38	9,255.98	100.05	13,270.61	8,924.21	97.61	111.07	55.53
13	3	129.69	13,502.32	9,155.92	99.95	13,173.00	8,826.60	97.51	112.05	56.02
13	2	130.69	13,402.36	9,055.96	99.85	13,075.47	8,729.07	97.41	113.03	56.52
13	1	131.69	13,302.10	8,955.70	100.58	12,977.66	8,631.26	98.13	114.02	57.01
13	0	132.69	13,201.84	8,855.44	100.46	12,879.84	8,533.44	98.01	115.00	57.50

Notes: 1. Cargo heights and VCGs shown are measured above the steel main deck

CENTERLINE CONTAINER RACKS OFF										
			Vessel in Sea Water			Vessel in Fresh Water			Max. Cargo Height	Max. Cargo VCG
Draft	Freeboard		Vessel Displacement	Cargo/Blst Deadweight	Tons/inch	Vessel Displacement	Cargo/Blst Deadweight	Tons/inch	Ft abv. Dk.	Ft abv. dk
Ft - Inches	Inches		Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Note 1	Note 1
13	0	132.69	13,201.84	8,855.44	100.46	12,879.84	8,533.44	98.01	115.00	57.50
12	11	133.69	13,101.70	8,755.30	100.34	12,782.15	8,435.75	97.89	115.88	57.94
12	10	134.69	13,001.68	8,655.28	100.22	12,684.57	8,338.17	97.78	116.76	58.38
12	9	135.69	12,901.78	8,555.38	100.08	12,587.10	8,240.70	97.64	117.64	58.82
12	8	136.69	12,802.02	8,455.62	99.95	12,489.78	8,143.38	97.51	118.52	59.26
12	7	137.69	12,702.38	8,355.98	99.82	12,392.57	8,046.17	97.39	119.40	59.70
12	6	138.69	12,602.87	8,256.47	99.68	12,295.48	7,949.08	97.25	120.27	60.14
12	5	139.69	12,503.49	8,157.09	99.50	12,198.53	7,852.13	97.07	121.15	60.57
12	4	140.69	12,404.29	8,057.89	99.29	12,101.75	7,755.35	96.87	122.02	61.01
12	3	141.69	12,305.25	7,958.85	99.09	12,005.12	7,658.72	96.67	122.89	61.45
12	2	142.69	12,206.38	7,859.98	98.90	11,908.66	7,562.26	96.49	123.76	61.88
12	1	143.69	12,107.67	7,761.27	98.72	11,812.36	7,465.96	96.31	124.63	62.32
12	0	144.69	12,009.12	7,662.72	98.54	11,716.21	7,369.81	96.14	125.50	62.75
11	11	145.69	11,910.73	7,564.33	98.37	11,620.22	7,273.82	95.97	126.63	63.32
11	10	146.69	11,812.48	7,466.08	98.20	11,524.37	7,177.97	95.80	127.77	63.88
11	9	147.69	11,714.39	7,367.99	98.04	11,428.67	7,082.27	95.65	128.90	64.45
11	8	148.69	11,616.43	7,270.03	97.89	11,333.10	6,986.70	95.50	130.03	65.01
11	7	149.69	11,518.63	7,172.23	97.74	11,237.69	6,891.29	95.36	131.15	65.58
11	6	150.69	11,420.96	7,074.56	97.59	11,142.40	6,796.00	95.21	132.28	66.14
11	5	151.69	11,323.44	6,977.04	97.45	11,047.26	6,700.86	95.07	133.40	66.70
11	4	152.69	11,226.04	6,879.64	97.31	10,952.23	6,605.83	94.94	134.53	67.26
11	3	153.69	11,128.78	6,782.38	97.18	10,857.35	6,510.95	94.81	135.65	67.82
11	2	154.69	11,031.66	6,685.26	97.05	10,762.60	6,416.20	94.68	136.77	68.38
11	1	155.69	10,934.66	6,588.26	96.92	10,667.96	6,321.56	94.56	137.88	68.94
11	0	156.69	10,837.78	6,491.38	96.80	10,573.44	6,227.04	94.44	139.00	69.50
10	11	157.69	10,741.03	6,394.63	96.68	10,479.05	6,132.65	94.32	140.53	70.27
10	10	158.69	10,644.39	6,297.99	96.57	10,384.77	6,038.37	94.21	142.07	71.03
10	9	159.69	10,547.87	6,201.47	96.46	10,290.60	5,944.20	94.11	143.60	71.80
10	8	160.69	10,451.45	6,105.05	96.35	10,196.54	5,850.14	94.00	145.12	72.56
10	7	161.69	10,355.15	6,008.75	96.24	10,102.59	5,756.19	93.89	146.65	73.33
10	6	162.69	10,258.95	5,912.55	96.14	10,008.73	5,662.33	93.80	148.18	74.09
10	5	163.69	10,162.54	5,816.14	96.86	9,914.67	5,568.27	94.50	149.70	74.85
10	4	164.69	10,066.04	5,719.64	96.74	9,820.53	5,474.13	94.38	151.23	75.62
10	3	165.69	9,969.66	5,623.26	96.61	9,726.50	5,380.10	94.25	152.76	76.38
10	2	166.69	9,873.41	5,527.01	96.48	9,632.60	5,286.20	94.13	154.29	77.14
10	1	167.69	9,777.29	5,430.89	96.34	9,538.82	5,192.42	93.99	155.81	77.91
10	0	168.69	9,681.30	5,334.90	96.21	9,445.17	5,098.77	93.86	157.33	78.67

Notes: 1. Cargo heights and VCGs shown are measured above the steel main deck

CENTERLINE CONTAINER RACKS OFF										
		Vessel in Sea Water				Vessel in Fresh Water			Max. Cargo Height	Max. Cargo VCG
Draft	Freeboard	Vessel Displacement	Cargo/Blst Deadweight	Tons/inch	Vessel Displacement	Cargo/Blst Deadweight	Tons/inch	Ft abv. Dk.	Ft abv. dk	
Ft - Inches	Inches	Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Note 1	Note 1	
10	0	168.69	9,681.30	5,334.90	96.21	9,445.17	5,098.77	93.86	157.33	78.67
9	11	169.69	9,585.43	5,239.03	96.08	9,351.64	5,005.24	93.74	158.85	79.42
9	10	170.69	9,489.69	5,143.29	95.95	9,258.23	4,911.83	93.61	160.36	80.18
9	9	171.69	9,394.08	5,047.68	95.77	9,164.96	4,818.56	93.43	161.87	80.93
9	8	172.69	9,298.64	4,952.24	95.57	9,071.84	4,725.44	93.24	163.37	81.69
9	7	173.69	9,203.37	4,856.97	95.37	8,978.90	4,632.50	93.04	164.88	82.44
9	6	174.69	9,108.26	4,761.86	95.17	8,886.11	4,539.71	92.85	166.38	83.19
9	5	175.69	9,013.32	4,666.92	94.99	8,793.48	4,447.08	92.67	167.88	83.94
9	4	176.69	8,918.53	4,572.13	94.81	8,701.00	4,354.60	92.50	169.37	84.69
9	3	177.69	8,823.90	4,477.50	94.63	8,608.68	4,262.28	92.32	170.87	85.43
9	2	178.69	8,729.42	4,383.02	94.46	8,516.51	4,170.11	92.16	172.36	86.18
9	1	179.69	8,635.06	4,288.66	94.48	8,424.45	4,078.05	92.18	173.85	86.92
9	0	180.69	8,540.80	4,194.40	94.31	8,332.49	3,986.09	92.01	175.33	87.67
8	11	181.69	8,446.68	4,100.28	94.14	8,240.66	3,894.26	91.84	177.31	88.65
8	10	182.69	8,352.72	4,006.32	93.98	8,149.00	3,802.60	91.69	179.29	89.64
8	9	183.69	8,258.90	3,912.50	93.83	8,057.46	3,711.06	91.54	181.27	90.62
8	8	184.69	8,165.22	3,818.82	93.68	7,966.07	3,619.67	91.40	183.24	91.61
8	7	185.69	8,071.69	3,725.29	93.53	7,874.82	3,528.42	91.25	185.21	92.59
8	6	186.69	7,978.29	3,631.89	93.39	7,783.70	3,437.30	91.11	187.18	93.57
8	5	187.69	7,885.02	3,538.62	93.25	7,692.70	3,346.30	90.98	189.14	94.55
8	4	188.69	7,791.89	3,445.49	93.12	7,601.84	3,255.44	90.85	191.10	95.52
8	3	189.69	7,698.88	3,352.48	92.99	7,511.10	3,164.70	90.72	193.06	96.50
8	2	190.69	7,606.01	3,259.61	92.86	7,420.50	3,074.10	90.60	195.01	97.47
8	1	191.69	7,513.25	3,166.85	92.74	7,330.00	2,983.60	90.48	196.97	98.44
8	0	192.69	7,420.61	3,074.21	92.62	7,239.62	2,893.22	90.36	198.92	99.42
7	11	193.69	7,328.08	2,981.68	92.50	7,149.35	2,802.95	90.24	201.39	100.66
7	10	194.69	7,235.67	2,889.27	92.39	7,059.19	2,712.79	90.14	203.86	101.90
7	9	195.69	7,143.16	2,796.76	93.07	6,968.94	2,622.54	90.80	206.33	103.14
7	8	196.69	7,050.48	2,704.08	92.93	6,878.52	2,532.12	90.66	208.81	104.38
7	7	197.69	6,957.93	2,611.53	92.78	6,788.22	2,441.82	90.52	211.28	105.62
7	6	198.69	6,865.52	2,519.12	92.64	6,698.07	2,351.67	90.38	213.75	106.86
7	5	199.69	6,773.24	2,426.84	92.50	6,608.04	2,261.64	90.24	216.22	108.09
7	4	200.69	6,681.10	2,334.70	92.36	6,518.15	2,171.75	90.11	218.68	109.33
7	3	201.69	6,589.09	2,242.69	92.22	6,428.38	2,081.98	89.97	221.14	110.56
7	2	202.69	6,497.22	2,150.82	92.08	6,338.75	1,992.35	89.83	223.60	111.79
7	1	203.69	6,405.48	2,059.08	91.91	6,249.25	1,902.85	89.67	226.05	113.02
7	0	204.69	6,313.91	1,967.51	91.70	6,159.91	1,813.51	89.46	228.50	114.25

Notes: 1. Cargo heights and VCGs shown are measured above the steel main deck

CENTERLINE CONTAINER RACKS OFF										
			Vessel in Sea Water			Vessel in Fresh Water			Max. Cargo Height	Max. Cargo VCG
Draft	Freeboard		Vessel Displacement	Cargo/Blst Deadweight	Tons/inch	Vessel Displacement	Cargo/Blst Deadweight	Tons/inch	Ft abv. Dk.	Ft abv. dk
Ft - Inches	Inches		Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Note 1	Note 1
7	0	204.69	6,313.91	1,967.51	91.70	6,159.91	1,813.51	89.46	228.50	114.25
6	11	205.69	6,222.51	1,876.11	91.49	6,070.74	1,724.34	89.26	231.19	115.60
6	10	206.69	6,131.30	1,784.90	91.28	5,981.76	1,635.36	89.05	233.88	116.94
6	9	207.69	6,040.25	1,693.85	91.08	5,892.93	1,546.53	88.86	236.57	118.28
6	8	208.69	5,949.38	1,602.98	90.89	5,804.27	1,457.87	88.67	239.24	119.62
6	7	209.69	5,858.68	1,512.28	90.70	5,715.79	1,369.39	88.49	241.92	120.96
6	6	210.69	5,768.14	1,421.74	90.52	5,627.45	1,281.05	88.31	244.59	122.29
6	5	211.69	5,677.77	1,331.37	90.34	5,539.29	1,192.89	88.14	247.25	123.63
6	4	212.69	5,587.56	1,241.16	90.17	5,451.28	1,104.88	87.97	249.91	124.95
6	3	213.69	5,497.51	1,151.11	90.00	5,363.42	1,017.02	87.80	252.56	126.28
6	2	214.69	5,407.61	1,061.21	89.83	5,275.72	929.32	87.64	255.21	127.61
6	1	215.69	5,317.86	971.46	89.72	5,188.16	841.76	87.53	257.86	128.93
6	0	216.69	5,228.25	881.85	89.56	5,100.73	754.33	87.38	260.50	130.25
5	11	217.69	5,138.79	792.39	89.41	5,013.45	667.05	87.23	263.81	131.91
5	10	218.69	5,049.47	703.07	89.26	4,926.31	579.91	87.08	267.12	133.56
5	9	219.69	4,960.31	613.91	89.11	4,839.33	492.93	86.94	270.43	135.21
5	8	220.69	4,871.28	524.88	88.97	4,752.47	406.07	86.80	273.72	136.86
5	7	221.69	4,782.39	435.99	88.83	4,665.75	319.35	86.66	277.02	138.51
5	6	222.69	4,693.64	347.24	88.69	4,579.16	232.76	86.53	280.30	140.15
5	5	223.69	4,605.03	258.63	88.56	4,492.71	146.31	86.40	283.59	141.79
5	4	224.69	4,516.54	170.14	88.42	4,406.38	59.98	86.26	286.86	143.43
5	3	225.69	4,428.20	81.80	88.29	4,320.20	-26.20	86.14	290.14	145.07
5	2.08	226.61	4,346.40	0.00	88.16	4,240.39	-106.01	86.01	293.17	146.58 Light Ship

Notes: 1. Cargo heights and VCGs shown are measured above the steel main deck

B. Centerline Container Racks ON

CENTERLINE CONTAINER RACKS ON										
Draft Ft - Inches	Freeboard Inches	Vessel in Sea Water			Vessel in Fresh Water			Max. Cargo Height Ft abv. Dk. Note 1	Max. Cargo VCG Ft abv. dk Note 1	
		Vessel Displacement Short Tons	Cargo/Blst Deadweight Short Tons	Tons/inch Short Tons	Vessel Displacement Short Tons	Cargo/Blst Deadweight Short Tons	Tons/inch Short Tons			
19	0	60.69	20,664.84	15,883.00	106.92	20,160.82	15,378.98	104.31	NA	NA
18	11	61.69	20,557.98	15,776.14	106.87	20,056.57	15,274.73	104.26	NA	NA
18	10	62.69	20,451.16	15,669.32	106.81	19,952.35	15,170.51	104.20	NA	NA
18	9	63.69	20,344.41	15,562.57	106.75	19,848.20	15,066.36	104.15	NA	NA
18	8	64.69	20,237.72	15,455.88	106.69	19,744.12	14,962.28	104.09	NA	NA
18	7	65.69	20,131.08	15,349.24	106.62	19,640.08	14,858.24	104.02	NA	NA
18	6	66.69	20,024.52	15,242.68	106.55	19,536.12	14,754.28	103.95	NA	NA
18	5	67.69	19,918.03	15,136.19	106.48	19,432.22	14,650.38	103.88	NA	NA
18	4	68.69	19,811.58	15,029.74	106.41	19,328.37	14,546.53	103.81	NA	NA
18	3	69.69	19,705.24	14,923.40	106.34	19,224.62	14,442.78	103.75	NA	NA
18	2	70.69	19,598.95	14,817.11	106.27	19,120.93	14,339.09	103.68	NA	NA
18	1.06	71.63	19,499.95	14,718.11	106.20	19,024.34	14,242.50	103.61	25.92	12.92
18	1	71.69	19,492.72	14,710.88	106.19	19,017.29	14,235.45	103.60	26.04	12.98
18	0	72.69	19,386.58	14,604.74	106.12	18,913.74	14,131.90	103.53	27.90	13.91
17	11	73.69	19,280.51	14,498.67	106.04	18,810.25	14,028.41	103.45	29.75	14.84
17	10	74.69	19,174.51	14,392.67	105.96	18,706.84	13,925.00	103.38	31.60	15.77
17	9	75.69	19,068.63	14,286.79	105.85	18,603.54	13,821.70	103.27	33.45	16.70
17	8	76.69	18,962.84	14,181.00	105.74	18,500.33	13,718.49	103.16	35.29	17.62
17	7	77.69	18,857.17	14,075.33	105.63	18,397.24	13,615.40	103.05	37.14	18.55
17	6	78.69	18,751.61	13,969.77	105.52	18,294.25	13,512.41	102.95	38.98	19.47
17	5	79.69	18,646.16	13,864.32	105.41	18,191.38	13,409.54	102.84	40.82	20.40
17	4	80.69	18,540.81	13,758.97	105.30	18,088.60	13,306.76	102.73	42.66	21.32
17	3	81.69	18,435.58	13,653.74	105.19	17,985.93	13,204.09	102.62	44.50	22.24
17	2	82.69	18,330.46	13,548.62	105.07	17,883.38	13,101.54	102.51	46.34	23.16
17	1	83.69	18,225.45	13,443.61	104.95	17,780.93	12,999.09	102.39	48.17	24.08
17	0	84.69	18,120.57	13,338.73	104.83	17,678.60	12,896.76	102.27	50.00	25.00
16	11	85.69	18,015.80	13,233.96	104.71	17,576.39	12,794.55	102.16	52.03	26.01
16	10	86.69	17,911.15	13,129.31	104.59	17,474.29	12,692.45	102.04	54.06	27.02
16	9	87.69	17,806.62	13,024.78	104.48	17,372.31	12,590.47	101.93	56.09	28.03
16	8	88.69	17,702.20	12,920.36	104.37	17,270.44	12,488.60	101.82	58.12	29.04
16	7	89.69	17,597.87	12,816.03	104.31	17,168.65	12,386.81	101.77	60.14	30.05
16	6	90.69	17,493.63	12,711.79	104.19	17,066.96	12,285.12	101.65	62.16	31.06
16	5	91.69	17,389.49	12,607.65	104.08	16,965.36	12,183.52	101.54	64.18	32.07
16	4	92.69	17,285.47	12,503.63	103.97	16,863.87	12,082.03	101.43	66.20	33.07
16	3	93.69	17,181.55	12,399.71	103.86	16,762.49	11,980.65	101.33	68.21	34.08
16	2	94.69	17,077.74	12,295.90	103.76	16,661.21	11,879.37	101.23	70.23	35.08
16	1	95.69	16,974.03	12,192.19	103.66	16,560.03	11,778.19	101.13	72.24	36.08
16	0	96.69	16,870.42	12,088.58	103.56	16,458.95	11,677.11	101.03	74.25	37.08

Notes: 1. Cargo heights and VCGs shown are measured above the steel main deck

CENTERLINE CONTAINER RACKS ON										
			Vessel in Sea Water			Vessel in Fresh Water			Max. Cargo	Max. Cargo
			Displacement	Cargo/Blst	Tons/inch	Displacement	Cargo/Blst	Tons/inch	Height	VCG
Draft	Freeboard		Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Ft abv. Dk.	Ft abv. dk
Ft - Inches	Inches								Note 1	Note 1
16	0	96.69	16,870.42	12,088.58	103.56	16,458.95	11,677.11	101.03	74.25	37.08
15	11	97.69	16,766.92	11,985.08	103.46	16,357.97	11,576.13	100.94	75.77	37.85
15	10	98.69	16,663.51	11,881.67	103.36	16,257.08	11,475.24	100.84	77.29	38.61
15	9	99.69	16,559.69	11,777.85	104.11	16,155.80	11,373.96	101.57	78.82	39.38
15	8	100.69	16,455.96	11,674.12	103.99	16,054.60	11,272.76	101.45	80.35	40.15
15	7	101.69	16,352.33	11,570.49	103.88	15,953.49	11,171.65	101.35	81.87	40.91
15	6	102.69	16,248.83	11,466.99	103.76	15,852.52	11,070.68	101.23	83.40	41.68
15	5	103.69	16,145.44	11,363.60	103.65	15,751.65	10,969.81	101.12	84.92	42.44
15	4	104.69	16,042.16	11,260.32	103.51	15,650.89	10,869.05	100.99	86.44	43.20
15	3	105.69	15,939.01	11,157.17	103.38	15,550.25	10,768.41	100.86	87.96	43.97
15	2	106.69	15,835.98	11,054.14	103.25	15,449.74	10,667.90	100.73	89.47	44.73
15	1	107.69	15,733.10	10,951.26	103.05	15,349.37	10,567.53	100.54	90.99	45.49
15	0	108.69	15,630.16	10,848.32	102.98	15,248.94	10,467.10	100.47	92.50	46.25
14	11	109.69	15,527.37	10,745.53	102.78	15,148.65	10,366.81	100.27	93.56	46.78
14	10	110.69	15,424.75	10,642.91	102.59	15,048.54	10,266.70	100.09	94.63	47.31
14	9	111.69	15,322.30	10,540.46	102.40	14,948.59	10,166.75	99.90	95.69	47.84
14	8	112.69	15,220.00	10,438.16	102.22	14,848.78	10,066.94	99.73	96.75	48.37
14	7	113.69	15,117.87	10,336.03	102.05	14,749.14	9,967.30	99.56	97.81	48.90
14	6	114.69	15,015.88	10,234.04	101.88	14,649.64	9,867.80	99.40	98.86	49.43
14	5	115.69	14,914.04	10,132.20	101.72	14,550.28	9,768.44	99.24	99.92	49.96
14	4	116.69	14,812.35	10,030.51	101.57	14,451.07	9,669.23	99.09	100.97	50.48
14	3	117.69	14,710.81	9,928.97	101.42	14,352.01	9,570.17	98.95	102.02	51.01
14	2	118.69	14,609.41	9,827.57	101.27	14,253.08	9,471.24	98.80	103.07	51.54
14	1	119.69	14,508.13	9,726.29	101.13	14,154.27	9,372.43	98.66	104.12	52.06
14	0	120.69	14,407.00	9,625.16	101.00	14,055.61	9,273.77	98.54	105.17	52.58
13	11	121.69	14,305.99	9,524.15	100.87	13,957.06	9,175.22	98.41	106.20	53.10
13	10	122.69	14,205.11	9,423.27	100.74	13,858.64	9,076.80	98.28	107.23	53.62
13	9	123.69	14,104.36	9,322.52	100.62	13,760.35	8,978.51	98.17	108.26	54.13
13	8	124.69	14,003.73	9,221.89	100.50	13,662.18	8,880.34	98.05	109.29	54.65
13	7	125.69	13,903.22	9,121.38	100.38	13,564.12	8,782.28	97.93	110.32	55.16
13	6	126.69	13,802.82	9,020.98	100.27	13,466.17	8,684.33	97.82	111.35	55.67
13	5	127.69	13,702.55	8,920.71	100.16	13,368.34	8,586.50	97.72	112.38	56.19
13	4	128.69	13,602.38	8,820.54	100.05	13,270.61	8,488.77	97.61	113.40	56.70
13	3	129.69	13,502.32	8,720.48	99.95	13,173.00	8,391.16	97.51	114.42	57.21
13	2	130.69	13,402.36	8,620.52	99.85	13,075.47	8,293.63	97.41	115.45	57.72
13	1	131.69	13,302.10	8,520.26	100.58	12,977.66	8,195.82	98.13	116.47	58.24
13	0	132.69	13,201.84	8,420.00	100.46	12,879.84	8,098.00	98.01	117.50	58.75

Notes: 1. Cargo heights and VCGs shown are measured above the steel main deck

CENTERLINE CONTAINER RACKS ON										
		Vessel in Sea Water				Vessel in Fresh Water			Max. Cargo Height	Max. Cargo VCG
Draft	Freeboard	Vessel Displacement	Cargo/Blst Deadweight	Tons/inch	Vessel Displacement	Cargo/Blst Deadweight	Tons/inch	Ft abv. Dk.	Ft abv. dk	
Ft - Inches	Inches	Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Short Tons	Note 1	Note 1	
13	0	132.69	13,201.84	8,420.00	100.46	12,879.84	8,098.00	98.01	117.50	58.75
12	11	133.69	13,101.70	8,319.86	100.34	12,782.15	8,000.31	97.89	118.43	59.21
12	10	134.69	13,001.68	8,219.84	100.22	12,684.57	7,902.73	97.78	119.36	59.67
12	9	135.69	12,901.78	8,119.94	100.08	12,587.10	7,805.26	97.64	120.29	60.13
12	8	136.69	12,802.02	8,020.18	99.95	12,489.78	7,707.94	97.51	121.22	60.59
12	7	137.69	12,702.38	7,920.54	99.82	12,392.57	7,610.73	97.39	122.14	61.05
12	6	138.69	12,602.87	7,821.03	99.68	12,295.48	7,513.64	97.25	123.07	61.51
12	5	139.69	12,503.49	7,721.65	99.50	12,198.53	7,416.69	97.07	123.99	61.97
12	4	140.69	12,404.29	7,622.45	99.29	12,101.75	7,319.91	96.87	124.91	62.43
12	3	141.69	12,305.25	7,523.41	99.09	12,005.12	7,223.28	96.67	125.83	62.88
12	2	142.69	12,206.38	7,424.54	98.90	11,908.66	7,126.82	96.49	126.75	63.34
12	1	143.69	12,107.67	7,325.83	98.72	11,812.36	7,030.52	96.31	127.67	63.80
12	0	144.69	12,009.12	7,227.28	98.54	11,716.21	6,934.37	96.14	128.58	64.25
11	11	145.69	11,910.73	7,128.89	98.37	11,620.22	6,838.38	95.97	129.78	64.85
11	10	146.69	11,812.48	7,030.64	98.20	11,524.37	6,742.53	95.80	130.98	65.45
11	9	147.69	11,714.39	6,932.55	98.04	11,428.67	6,646.83	95.65	132.17	66.05
11	8	148.69	11,616.43	6,834.59	97.89	11,333.10	6,551.26	95.50	133.36	66.65
11	7	149.69	11,518.63	6,736.79	97.74	11,237.69	6,455.85	95.36	134.55	67.25
11	6	150.69	11,420.96	6,639.12	97.59	11,142.40	6,360.56	95.21	135.74	67.85
11	5	151.69	11,323.44	6,541.60	97.45	11,047.26	6,265.42	95.07	136.93	68.45
11	4	152.69	11,226.04	6,444.20	97.31	10,952.23	6,170.39	94.94	138.11	69.04
11	3	153.69	11,128.78	6,346.94	97.18	10,857.35	6,075.51	94.81	139.29	69.64
11	2	154.69	11,031.66	6,249.82	97.05	10,762.60	5,980.76	94.68	140.47	70.23
11	1	155.69	10,934.66	6,152.82	96.92	10,667.96	5,886.12	94.56	141.65	70.82
11	0	156.69	10,837.78	6,055.94	96.80	10,573.44	5,791.60	94.44	142.83	71.42
10	11	157.69	10,741.03	5,959.19	96.68	10,479.05	5,697.21	94.32	144.44	72.22
10	10	158.69	10,644.39	5,862.55	96.57	10,384.77	5,602.93	94.21	146.05	73.02
10	9	159.69	10,547.87	5,766.03	96.46	10,290.60	5,508.76	94.11	147.66	73.82
10	8	160.69	10,451.45	5,669.61	96.35	10,196.54	5,414.70	94.00	149.26	74.62
10	7	161.69	10,355.15	5,573.31	96.24	10,102.59	5,320.75	93.89	150.87	75.42
10	6	162.69	10,258.95	5,477.11	96.14	10,008.73	5,226.89	93.80	152.47	76.21
10	5	163.69	10,162.54	5,380.70	96.06	9,914.67	5,132.83	94.50	154.07	77.01
10	4	164.69	10,066.04	5,284.20	96.74	9,820.53	5,038.69	94.38	155.68	77.81
10	3	165.69	9,969.66	5,187.82	96.61	9,726.50	4,944.66	94.25	157.28	78.61
10	2	166.69	9,873.41	5,091.57	96.48	9,632.60	4,850.76	94.13	158.89	79.41
10	1	167.69	9,777.29	4,995.45	96.34	9,538.82	4,756.98	93.99	160.49	80.20
10	0	168.69	9,681.30	4,899.46	96.21	9,445.17	4,663.33	93.86	162.08	81.00

Notes: 1. Cargo heights and VCGs shown are measured above the steel main deck

CENTERLINE CONTAINER RACKS ON										
Draft Ft - Inches	Freeboard Inches	Vessel in Sea Water			Vessel in Fresh Water			Max. Cargo Height Ft abv. Dk. Note 1	Max. Cargo VCG Ft abv. dk Note 1	
		Vessel Displacement Short Tons	Cargo/Blst Deadweight Short Tons	Tons/inch Short Tons	Vessel Displacement Short Tons	Cargo/Blst Deadweight Short Tons	Tons/inch Short Tons			
		10	0	168.69	9,681.30	4,899.46	96.21			9,445.17
9	11	169.69	9,585.43	4,803.59	96.08	9,351.64	4,569.80	93.74	163.69	81.81
9	10	170.69	9,489.69	4,707.85	95.95	9,258.23	4,476.39	93.61	165.29	82.61
9	9	171.69	9,394.08	4,612.24	95.77	9,164.96	4,383.12	93.43	166.89	83.41
9	8	172.69	9,298.64	4,516.80	95.57	9,071.84	4,290.00	93.24	168.49	84.22
9	7	173.69	9,203.37	4,421.53	95.37	8,978.90	4,197.06	93.04	170.08	85.02
9	6	174.69	9,108.26	4,326.42	95.17	8,886.11	4,104.27	92.85	171.67	85.82
9	5	175.69	9,013.32	4,231.48	94.99	8,793.48	4,011.64	92.67	173.26	86.61
9	4	176.69	8,918.53	4,136.69	94.81	8,701.00	3,919.16	92.50	174.85	87.41
9	3	177.69	8,823.90	4,042.06	94.63	8,608.68	3,826.84	92.32	176.43	88.20
9	2	178.69	8,729.42	3,947.58	94.46	8,516.51	3,734.67	92.16	178.01	89.00
9	1	179.69	8,635.06	3,853.22	94.48	8,424.45	3,642.61	92.18	179.59	89.79
9	0	180.69	8,540.80	3,758.96	94.31	8,332.49	3,550.65	92.01	181.17	90.58
8	11	181.69	8,446.68	3,664.84	94.14	8,240.66	3,458.82	91.84	183.27	91.63
8	10	182.69	8,352.72	3,570.88	93.98	8,149.00	3,367.16	91.69	185.36	92.68
8	9	183.69	8,258.90	3,477.06	93.83	8,057.46	3,275.62	91.54	187.46	93.73
8	8	184.69	8,165.22	3,383.38	93.68	7,966.07	3,184.23	91.40	189.55	94.77
8	7	185.69	8,071.69	3,289.85	93.53	7,874.82	3,092.98	91.25	191.64	95.82
8	6	186.69	7,978.29	3,196.45	93.39	7,783.70	3,001.86	91.11	193.72	96.86
8	5	187.69	7,885.02	3,103.18	93.25	7,692.70	2,910.86	90.98	195.80	97.90
8	4	188.69	7,791.89	3,010.05	93.12	7,601.84	2,820.00	90.85	197.88	98.94
8	3	189.69	7,698.88	2,917.04	92.99	7,511.10	2,729.26	90.72	199.96	99.98
8	2	190.69	7,606.01	2,824.17	92.86	7,420.50	2,638.66	90.60	202.03	101.01
8	1	191.69	7,513.25	2,731.41	92.74	7,330.00	2,548.16	90.48	204.10	102.05
8	0	192.69	7,420.61	2,638.77	92.62	7,239.62	2,457.78	90.36	206.17	103.08
7	11	193.69	7,328.08	2,546.24	92.50	7,149.35	2,367.51	90.24	208.78	104.39
7	10	194.69	7,235.67	2,453.83	92.39	7,059.19	2,277.35	90.14	211.39	105.69
7	9	195.69	7,143.16	2,361.32	93.07	6,968.94	2,187.10	90.80	214.00	106.99
7	8	196.69	7,050.48	2,268.64	92.93	6,878.52	2,096.68	90.66	216.62	108.30
7	7	197.69	6,957.93	2,176.09	92.78	6,788.22	2,006.38	90.52	219.23	109.60
7	6	198.69	6,865.52	2,083.68	92.64	6,698.07	1,916.23	90.38	221.84	110.90
7	5	199.69	6,773.24	1,991.40	92.50	6,608.04	1,826.20	90.24	224.45	112.20
7	4	200.69	6,681.10	1,899.26	92.36	6,518.15	1,736.31	90.11	227.05	113.50
7	3	201.69	6,589.09	1,807.25	92.22	6,428.38	1,646.54	89.97	229.65	114.79
7	2	202.69	6,497.22	1,715.38	92.08	6,338.75	1,556.91	89.83	232.24	116.09
7	1	203.69	6,405.48	1,623.64	91.91	6,249.25	1,467.41	89.67	234.83	117.38
7	0	204.69	6,313.91	1,532.07	91.70	6,159.91	1,378.07	89.46	237.42	118.67

Notes: 1. Cargo heights and VCGs shown are measured above the steel main deck

CENTERLINE CONTAINER RACKS ON										
		Vessel in Sea Water			Vessel in Fresh Water			Max. Cargo Height	Max. Cargo VCG	
Draft Ft - Inches	Freeboard Inches	Vessel Displacement Short Tons	Cargo/Blst Deadweight Short Tons	Tons/inch Short Tons	Vessel Displacement Short Tons	Cargo/Blst Deadweight Short Tons	Tons/inch Short Tons	Ft abv. Dk. Note 1	Ft abv. dk Note 1	
7	0	204.69	6,313.91	1,532.07	91.70	6,159.91	1,378.07	89.46	237.42	118.67
6	11	205.69	6,222.51	1,440.67	91.49	6,070.74	1,288.90	89.26	240.29	120.10
6	10	206.69	6,131.30	1,349.46	91.28	5,981.76	1,199.92	89.05	243.15	121.54
6	9	207.69	6,040.25	1,258.41	91.08	5,892.93	1,111.09	88.86	246.01	122.97
6	8	208.69	5,949.38	1,167.54	90.89	5,804.27	1,022.43	88.67	248.86	124.40
6	7	209.69	5,858.68	1,076.84	90.70	5,715.79	933.95	88.49	251.71	125.83
6	6	210.69	5,768.14	986.30	90.52	5,627.45	845.61	88.31	254.55	127.25
6	5	211.69	5,677.77	895.93	90.34	5,539.29	757.45	88.14	257.39	128.68
6	4	212.69	5,587.56	805.72	90.17	5,451.28	669.44	87.97	260.22	130.10
6	3	213.69	5,497.51	715.67	90.00	5,363.42	581.58	87.80	263.05	131.51
6	2	214.69	5,407.61	625.77	89.83	5,275.72	493.88	87.64	265.87	132.93
6	1	215.69	5,317.86	536.02	89.72	5,188.16	406.32	87.53	268.69	134.34
6	0	216.69	5,228.25	446.41	89.56	5,100.73	318.89	87.38	271.50	135.75
5	11	217.69	5,138.79	356.95	89.41	5,013.45	231.61	87.23	274.86	137.42
5	10	218.69	5,049.47	267.63	89.26	4,926.31	144.47	87.08	278.21	139.09
5	9	219.69	4,960.31	178.47	89.11	4,839.33	57.49	86.94	281.55	140.75
5	8	220.69	4,871.28	89.44	88.97	4,752.47	-29.37	86.80	284.89	142.41
5	7	221.69	4,781.84	0.00	88.83	4,665.21	-116.63	86.66	288.25	144.08 Light Ship

Notes: 1. Cargo heights and VCGs shown are measured above the steel main deck

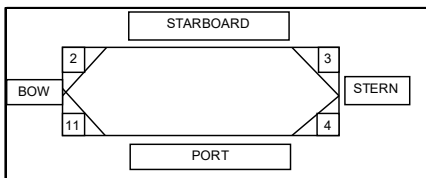
II. DEADWEIGHT RECORDING FORMS

See following two pages for forms

Barge Shipment - Center Racks OFF

From:	To:	Barge:
Date Loaded:	Tug Co.:	Bill of Lading No:
Qty Loaded (short tons of 2000 lb):	Date and Time Delivered Seattle:	

Load Calculations

		Freeboard Loaded inches	Freeboard Light inches
Port Bow	1		
Starboard Bow	2		
Starboard Stern	3		
Port Stern	4		
Total (1+2+3+4)			
Average Fbd (Total / 4)			
Displacement (short tons) From Displacement Chart		Loaded:	Light:
		Total Deadweight : (Disp Loaded - Disp Light)	
Date & Time Spotted:	Date & Time Finished Off Loading	Signed By:	
Notes: Light ship weight = 4,346.40 short tons, from deadweight survey 12/09/2014, corrected for CL Racks OFF			

Barge Shipment - Center Racks ON

From:	To:	Barge:
Date Loaded:	Tug Co.:	Bill of Lading No:
Qty Loaded (short tons of 2000 lb):	Date and Time Delivered Seattle:	

Load Calculations

	Freeboard Loaded inches	Freeboard Light inches
Port Bow 1		
Starboard Bow 2		
Starboard Stern 3		
Port Stern 4		
Total (1+2+3+4)		
Average Fbd (Total / 4)		
Displacement (short tons) From Displacement Chart	Loaded:	Light:
Total Deadweight : (Disp Loaded - Disp Light)		
Date & Time Spotted:	Date & Time Finished Off Loading	Signed By:
Notes: Light ship weight = 4,781.84 short tons, from deadweight survey 12/09/2014,		

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