



BARGE "EMS 509"

INNAGE TRIM TABLE

	1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.	
	<u>BOW</u>	<u>STERN</u>	<u>BOW</u>	<u>STERN</u>	<u>BOW</u>	<u>STERN</u>	<u>BOW</u>	<u>STERN</u>	<u>BOW</u>	<u>STERN</u>	<u>BOW</u>	<u>STERN</u>
1 PORT	00-1/8	- 00-1/8	00-3/8	- 00-3/8	00-1/2	- 00-1/2	00-3/4	- 00-3/4	00-7/8	- 00-7/8	01-1/8	- 01-1/8
1 STBD	00-1/8	- 00-1/8	00-3/8	- 00-3/8	00-1/2	- 00-1/2	00-3/4	- 00-3/4	00-7/8	- 00-7/8	01-1/8	- 01-1/8
2 PORT	00-1/8	- 00-1/8	00-1/4	- 00-1/4	00-3/8	- 00-3/8	00-1/2	- 00-1/2	00-5/8	- 00-5/8	00-3/4	- 00-3/4
2 STBD	00-1/8	- 00-1/8	00-1/4	- 00-1/4	00-3/8	- 00-3/8	00-1/2	- 00-1/2	00-5/8	- 00-5/8	00-3/4	- 00-3/4
3 PORT	00-1/8	- 00-1/8	00-1/4	- 00-1/4	00-3/8	- 00-3/8	00-1/2	- 00-1/2	00-5/8	- 00-5/8	00-3/4	- 00-3/4
3 STBD	00-1/8	- 00-1/8	00-1/4	- 00-1/4	00-3/8	- 00-3/8	00-1/2	- 00-1/2	00-5/8	- 00-5/8	00-3/4	- 00-3/4

(ALL MEASUREMENTS ABOVE ARE IN INCHES)

EXAMPLE FOR ABOVE TRIM CORRECTIONS:

FWD. DRAFT	=	2'-00"
AFT DRAFT	=	4'-00"
DIFF.	=	2'-00" (DOWN BY STERN)

THE CORRECTION FOR 2'-00" TRIM DOWN BY STERN FOR 1 PORT IS - 00-3/8"
FOR A MEASURED INNAGE GAUGE OF 4'-00" ON 1 PORT, THE TRIM CORRECTED INNAGE IS 3'-11 5/8"

LENGTH BETWEEN DRAFT MARKS: 236'-06"

August 5, 2019

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092
Pearland, Texas 77588

<http://www.pmacorp.net>



BARGE "EMS 509"

1 PORT

INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

0 FT.		1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.		7 FT.		8 FT.		GAUGE HEIGHT 16'-05 1/2"	
IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	10.39	0	263.39	0	555.68	0	876.53	0	1216.36	0	1557.66	0	1898.96	0	2240.26	0	2581.54	0	2922.83
1/4	13.71	1/4	269.20	1/4	562.10	1/4	883.52	1/4	1223.47	1/4	1564.77	1/4	1906.08	1/4	2247.37	1/4	2588.65	1/4	2929.94
1/2	17.03	1/2	275.01	1/2	568.52	1/2	890.52	1/2	1230.58	1/2	1571.88	1/2	1913.19	1/2	2254.48	1/2	2595.76	1/2	2937.05
3/4	20.35	3/4	280.82	3/4	574.94	3/4	897.51	3/4	1237.70	3/4	1578.99	3/4	1920.30	3/4	2261.59	3/4	2602.87	3/4	2944.16
1	23.66	1	286.63	1	581.36	1	904.50	1	1244.81	1	1586.10	1	1927.41	1	2268.70	1	2609.98	1	2951.27
1/4	28.32	1/4	292.49	1/4	587.83	1/4	911.53	1/4	1251.92	1/4	1593.22	1/4	1934.52	1/4	2275.81	1/4	2617.09	1/4	2958.38
1/2	32.97	1/2	298.34	1/2	594.31	1/2	918.57	1/2	1259.03	1/2	1600.33	1/2	1941.63	1/2	2282.92	1/2	2624.20	1/2	2965.49
3/4	37.63	3/4	304.20	3/4	600.78	3/4	925.60	3/4	1266.14	3/4	1607.44	3/4	1948.74	3/4	2290.03	3/4	2631.31	3/4	2972.60
2	42.28	2	310.06	2	607.25	2	932.64	2	1273.25	2	1614.55	2	1955.85	2	2297.14	2	2638.42	2	2979.71
1/4	47.58	1/4	315.97	1/4	613.77	1/4	939.70	1/4	1280.36	1/4	1621.66	1/4	1962.96	1/4	2304.25	1/4	2645.53	1/4	2986.82
1/2	52.88	1/2	321.89	1/2	620.30	1/2	946.76	1/2	1287.47	1/2	1628.77	1/2	1970.07	1/2	2311.36	1/2	2652.64	1/2	2993.93
3/4	58.17	3/4	327.80	3/4	626.82	3/4	953.82	3/4	1294.58	3/4	1635.88	3/4	1977.18	3/4	2318.47	3/4	2659.75	3/4	3001.04
3	63.47	3	333.71	3	633.34	3	960.88	3	1301.69	3	1642.99	3	1984.29	3	2325.58	3	2666.86	3	3008.15
1/4	68.82	1/4	339.67	1/4	639.92	1/4	967.95	1/4	1308.80	1/4	1650.10	1/4	1991.40	1/4	2332.69	1/4	2673.97	1/4	3015.26
1/2	74.17	1/2	345.63	1/2	646.49	1/2	975.01	1/2	1315.91	1/2	1657.21	1/2	1998.51	1/2	2339.80	1/2	2681.08	1/2	3022.37
3/4	79.52	3/4	351.59	3/4	653.07	3/4	982.08	3/4	1323.02	3/4	1664.32	3/4	2005.62	3/4	2346.91	3/4	2688.19	3/4	3029.47
4	84.87	4	357.55	4	659.64	4	989.15	4	1330.13	4	1671.43	4	2012.73	4	2354.02	4	2695.30	4	3036.58
1/4	90.27	1/4	363.57	1/4	666.26	1/4	996.22	1/4	1337.24	1/4	1678.54	1/4	2019.84	1/4	2361.13	1/4	2702.41	1/4	3043.69
1/2	95.67	1/2	369.58	1/2	672.89	1/2	1003.29	1/2	1344.35	1/2	1685.65	1/2	2026.95	1/2	2368.24	1/2	2709.52	1/2	3050.80
3/4	101.07	3/4	375.59	3/4	679.52	3/4	1010.36	3/4	1351.46	3/4	1692.76	3/4	2034.06	3/4	2375.35	3/4	2716.63	3/4	3057.91
5	106.47	5	381.60	5	686.14	5	1017.44	5	1358.57	5	1699.87	5	2041.17	5	2382.46	5	2723.74	5	3065.02
1/4	111.92	1/4	387.67	1/4	692.82	1/4	1024.52	1/4	1365.68	1/4	1706.98	1/4	2048.28	1/4	2389.57	1/4	2730.85	1/4	3072.13
1/2	117.37	1/2	393.73	1/2	699.49	1/2	1031.60	1/2	1372.79	1/2	1714.09	1/2	2055.39	1/2	2396.68	1/2	2737.96	1/2	3079.25
3/4	122.82	3/4	399.80	3/4	706.17	3/4	1038.68	3/4	1379.90	3/4	1721.20	3/4	2062.50	3/4	2403.79	3/4	2745.07	3/4	3086.36
6	128.27	6	405.86	6	712.85	6	1045.77	6	1387.01	6	1728.31	6	2069.61	6	2410.90	6	2752.18	6	3093.47
1/4	133.78	1/4	411.97	1/4	719.56	1/4	1052.86	1/4	1394.12	1/4	1735.42	1/4	2076.72	1/4	2418.01	1/4	2759.29	1/4	3100.58
1/2	139.28	1/2	418.09	1/2	726.27	1/2	1059.96	1/2	1401.23	1/2	1742.53	1/2	2083.84	1/2	2425.12	1/2	2766.40	1/2	3107.69
3/4	144.78	3/4	424.20	3/4	732.98	3/4	1067.06	3/4	1408.34	3/4	1749.64	3/4	2090.95	3/4	2432.23	3/4	2773.51	3/4	3114.80
7	150.28	7	430.32	7	739.69	7	1074.16	7	1415.46	7	1756.75	7	2098.06	7	2439.34	7	2780.63	7	3121.91
1/4	155.84	1/4	436.48	1/4	746.44	1/4	1081.27	1/4	1422.57	1/4	1763.86	1/4	2105.17	1/4	2446.45	1/4	2787.74	1/4	3129.02
1/2	161.39	1/2	442.65	1/2	753.13	1/2	1088.38	1/2	1429.68	1/2	1770.98	1/2	2112.28	1/2	2453.56	1/2	2794.85	1/2	3136.13
3/4	166.94	3/4	448.82	3/4	759.93	3/4	1095.49	3/4	1436.79	3/4	1778.09	3/4	2119.39	3/4	2460.67	3/4	2801.96	3/4	3143.24
8	172.50	8	454.98	8	766.68	8	1102.60	8	1443.90	8	1785.20	8	2126.50	8	2467.78	8	2809.07	8	3150.35
1/4	178.10	1/4	461.20	1/4	773.48	1/4	1109.71	1/4	1451.01	1/4	1792.31	1/4	2133.61	1/4	2474.89	1/4	2816.18	1/4	3157.46
1/2	183.71	1/2	467.42	1/2	780.27	1/2	1116.82	1/2	1458.12	1/2	1799.42	1/2	2140.72	1/2	2482.00	1/2	2823.29	1/2	3164.57
3/4	189.31	3/4	473.63	3/4	787.07	3/4	1123.93	3/4	1465.23	3/4	1806.53	3/4	2147.83	3/4	2489.11	3/4	2830.40	3/4	3171.68
9	194.91	9	479.85	9	793.86	9	1131.04	9	1472.34	9	1813.64	9	2154.94	9	2496.22	9	2837.51	9	3178.79
1/4	200.57	1/4	486.12	1/4	800.70	1/4	1138.15	1/4	1479.45	1/4	1820.75	1/4	2162.05	1/4	2503.33	1/4	2844.62	1/4	3185.90
1/2	206.23	1/2	492.39	1/2	807.54	1/2	1145.26	1/2	1486.56	1/2	1827.86	1/2	2169.16	1/2	2510.44	1/2	2851.73	1/2	3193.01
3/4	211.88	3/4	498.65	3/4	814.38	3/4	1152.37	3/4	1493.67	3/4	1834.97	3/4	2176.27	3/4	2517.55	3/4	2858.84	3/4	3200.12
10	217.54	10	504.92	10	821.22	10	1159.48	10	1500.78	10	1842.08	10	2183.38	10	2524.66	10	2865.95	10	3207.23
1/4	223.24	1/4	511.24	1/4	828.11	1/4	1166.59	1/4	1507.89	1/4	1849.19	1/4	2190.49	1/4	2531.77	1/4	2873.06	1/4	3214.34
1/2	228.95	1/2	517.56	1/2	835.00	1/2	1173.70	1/2	1515.00	1/2	1856.30	1/2	2197.60	1/2	2538.88	1/2	2880.17	1/2	3221.45
3/4	234.66	3/4	523.88	3/4	841.89	3/4	1180.81	3/4	1522.11	3/4	1863.41	3/4	2204.71	3/4	2545.99	3/4	2887.28	3/4	3228.56
11	240.36	11	530.20	11	848.78	11	1187.92	11	1529.22	11	1870.52	11	2211.82	11	2553.10	11	2894.39	11	3235.67
1/4	246.12	1/4	536.57	1/4	855.72	1/4	1195.03	1/4	1536.33	1/4	1877.63	1/4	2218.93	1/4	2560.21	1/4	2901.50	1/4	3242.78
1/2	251.88	1/2	542.94	1/2	862.66	1/2	1202.14	1/2	1543.44	1/2	1884.74	1/2	2226.04	1/2	2567.32	1/2	2908.61	1/2	3249.89
3/4	257.63	3/4	549.31	3/4	869.59	3/4	1209.25	3/4	1550.55	3/4	1891.85	3/4	2233.15	3/4	2574.43	3/4	2915.72	3/4	3257.01

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.

CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE ONLY APPLIES TO EXTREME HEIGHT OF TANK.

GAUGE POINT: (HERMETIC) LOCATED 12'-06" OFF CENTERLINE AND 37'-03" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.
P.O. Box 2082
Pearland, Texas 77588
<http://www.pmacorp.net>

Paul J. Gamm



BARGE "EMS 509"

1 PORT

INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		GAUGE HEIGHT 16'-05 1/2"	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
0	3,264.12	0	3,605.41	0	3,942.13	0	4,256.91	0	4,547.71	0	4,815.17	0		0					
1/4	3,271.23	1/4	3,612.53	1/4	3,948.92	1/4	4,263.20	1/4	4,553.50	1/4	4,820.48	1/4		1/4		1/4		1/4	
1/2	3,278.34	1/2	3,619.64	1/2	3,955.71	1/2	4,269.48	1/2	4,559.30	1/2	4,825.79	1/2		1/2		1/2		1/2	
3/4	3,285.45	3/4	3,626.75	3/4	3,962.49	3/4	4,275.76	3/4	4,565.09	3/4	4,831.10	3/4		3/4		3/4		3/4	
1	3,292.56	1	3,633.86	1	3,969.28	1	4,282.04	1	4,570.89	1	4,836.40	1		1		1		1	
1/4	3,299.67	1/4	3,640.97	1/4	3,976.02	1/4	4,288.28	1/4	4,576.64	1/4	4,842.59	1/4		1/4		1/4		1/4	
1/2	3,306.78	1/2	3,648.08	1/2	3,982.77	1/2	4,294.42	1/2	4,582.82	1/2	4,848.78	1/2		1/2		1/2		1/2	
3/4	3,313.89	3/4	3,655.19	3/4	3,989.52	3/4	4,300.76	3/4	4,588.15	3/4	4,854.97	3/4		3/4		3/4		3/4	
2	3,321.00	2	3,662.30	2	3,996.26	2	4,307.00	2	4,593.90	2	4,861.16	2		2		2		2	
1/4	3,328.11	1/4	3,669.41	1/4	4,002.97	1/4	4,313.20	1/4	4,599.62	1/4	4,867.35	1/4		1/4		1/4		1/4	
1/2	3,335.22	1/2	3,676.52	1/2	4,009.67	1/2	4,319.40	1/2	4,605.33	1/2	4,873.55	1/2		1/2		1/2		1/2	
3/4	3,342.33	3/4	3,683.63	3/4	4,016.38	3/4	4,325.60	3/4	4,611.05	3/4	4,879.80	3/4		3/4		3/4		3/4	
3	3,349.44	3	3,690.74	3	4,023.08	3	4,331.80	3	4,616.76	3	4,885.53	3		3		3		3	
1/4	3,356.55	1/4	3,697.85	1/4	4,029.75	1/4	4,337.96	1/4	4,622.43	1/4	4,891.79	1/4		1/4		1/4		1/4	
1/2	3,363.66	1/2	3,704.96	1/2	4,036.41	1/2	4,344.12	1/2	4,628.11	1/2	4,903.71	1/2		1/2		1/2		1/2	
3/4	3,370.77	3/4	3,712.07	3/4	4,043.08	3/4	4,350.28	3/4	4,633.78	3/4	4,910.80	3/4		3/4		3/4		3/4	
4	3,377.88	4	3,719.18	4	4,049.74	4	4,356.44	4	4,639.45	4	4,917.89	4		4		4		4	
1/4	3,384.99	1/4	3,726.28	1/4	4,056.37	1/4	4,362.56	1/4	4,645.09	1/4	4,924.54	1/4		1/4		1/4		1/4	
1/2	3,392.10	1/2	3,733.38	1/2	4,062.99	1/2	4,368.68	1/2	4,650.72	1/2	4,931.19	1/2		1/2		1/2		1/2	
3/4	3,399.21	3/4	3,740.48	3/4	4,069.62	3/4	4,374.79	3/4	4,656.35	3/4	4,937.83	3/4		3/4		3/4		3/4	
5	3,406.32	5	3,747.58	5	4,076.24	5	4,380.91	5	4,661.99	5	4,944.48	5		5		5		5	
1/4	3,413.43	1/4	3,754.65	1/4	4,082.82	1/4	4,386.99	1/4	4,667.58	1/4		1/4		1/4		1/4		1/4	
1/2	3,420.54	1/2	3,761.72	1/2	4,089.41	1/2	4,393.07	1/2	4,673.17	1/2		1/2		1/2		1/2		1/2	
3/4	3,427.65	3/4	3,768.79	3/4	4,095.99	3/4	4,399.15	3/4	4,678.76	3/4		3/4		3/4		3/4		3/4	
6	3,434.77	6	3,775.86	6	4,102.58	6	4,405.23	6	4,684.35	6		6		6		6		6	
1/4	3,441.88	1/4	3,782.89	1/4	4,109.12	1/4	4,411.26	1/4	4,689.91	1/4		1/4		1/4		1/4		1/4	
1/2	3,448.99	1/2	3,789.92	1/2	4,115.66	1/2	4,417.30	1/2	4,695.46	1/2		1/2		1/2		1/2		1/2	
3/4	3,456.10	3/4	3,796.95	3/4	4,122.21	3/4	4,423.34	3/4	4,701.01	3/4		3/4		3/4		3/4		3/4	
7	3,463.21	7	3,803.98	7	4,128.75	7	4,429.38	7	4,706.56	7		7		7		7		7	
1/4	3,470.32	1/4	3,810.97	1/4	4,135.25	1/4	4,435.38	1/4	4,712.07	1/4		1/4		1/4		1/4		1/4	
1/2	3,477.43	1/2	3,817.95	1/2	4,141.75	1/2	4,441.37	1/2	4,717.58	1/2		1/2		1/2		1/2		1/2	
3/4	3,484.54	3/4	3,824.94	3/4	4,148.26	3/4	4,447.37	3/4	4,723.10	3/4		3/4		3/4		3/4		3/4	
8	3,491.65	8	3,831.93	8	4,154.76	8	4,453.37	8	4,728.61	8		8		8		8		8	
1/4	3,498.76	1/4	3,838.88	1/4	4,161.21	1/4	4,459.33	1/4	4,734.08	1/4		1/4		1/4		1/4		1/4	
1/2	3,505.87	1/2	3,845.83	1/2	4,167.67	1/2	4,465.28	1/2	4,739.55	1/2		1/2		1/2		1/2		1/2	
3/4	3,512.98	3/4	3,852.78	3/4	4,174.12	3/4	4,471.24	3/4	4,745.02	3/4		3/4		3/4		3/4		3/4	
9	3,520.09	9	3,859.73	9	4,180.57	9	4,477.20	9	4,750.49	9		9		9		9		9	
1/4	3,527.20	1/4	3,866.63	1/4	4,186.97	1/4	4,483.11	1/4	4,755.92	1/4		1/4		1/4		1/4		1/4	
1/2	3,534.31	1/2	3,873.54	1/2	4,193.38	1/2	4,489.03	1/2	4,761.35	1/2		1/2		1/2		1/2		1/2	
3/4	3,541.42	3/4	3,880.45	3/4	4,199.78	3/4	4,494.95	3/4	4,766.78	3/4		3/4		3/4		3/4		3/4	
10	3,548.53	10	3,887.36	10	4,206.18	10	4,500.86	10	4,772.21	10		10		10		10		10	
1/4	3,555.64	1/4	3,894.22	1/4	4,212.54	1/4	4,506.74	1/4	4,777.60	1/4		1/4		1/4		1/4		1/4	
1/2	3,562.75	1/2	3,901.09	1/2	4,218.90	1/2	4,512.61	1/2	4,782.99	1/2		1/2		1/2		1/2		1/2	
3/4	3,569.86	3/4	3,907.96	3/4	4,225.27	3/4	4,518.49	3/4	4,788.38	3/4		3/4		3/4		3/4		3/4	
11	3,576.97	11	3,914.83	11	4,231.63	11	4,524.37	11	4,793.77	11		11		11		11		11	
1/4	3,584.08	1/4	3,921.65	1/4	4,237.95	1/4	4,530.20	1/4	4,799.12	1/4		1/4		1/4		1/4		1/4	
1/2	3,591.19	1/2	3,928.48	1/2	4,244.27	1/2	4,536.04	1/2	4,804.47	1/2		1/2		1/2		1/2		1/2	
3/4	3,598.30	3/4	3,935.31	3/4	4,250.59	3/4	4,541.87	3/4	4,809.82	3/4		3/4		3/4		3/4		3/4	

STRAPPED: 8/05/2019 JS

CALCULATED: 08/06/2019 CL

PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2019

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588

<http://www.pmacorp.net>

The Flame



BARGE "EMS 509"

1 STBD

INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

0 FT.		1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.		7 FT.		8 FT.		9 FT.	
IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	10.42	0	264.14	0	557.21	0	878.88	0	1,219.54	0	1,561.67	0	1,903.79	0	2,245.91	0	2,588.02	0	2,930.12
1/4	13.75	1/4	269.97	1/4	563.64	1/4	885.88	1/4	1,226.67	1/4	1,568.80	1/4	1,910.92	1/4	2,253.04	1/4	2,595.14	1/4	2,937.25
1/2	17.08	1/2	275.79	1/2	570.08	1/2	892.89	1/2	1,233.80	1/2	1,575.92	1/2	1,918.05	1/2	2,260.16	1/2	2,602.27	1/2	2,944.38
3/4	20.40	3/4	281.62	3/4	576.52	3/4	899.90	3/4	1,240.93	3/4	1,583.05	3/4	1,925.18	3/4	2,267.29	3/4	2,609.40	3/4	2,951.50
1	23.73	1	287.44	1	582.96	1	906.91	1	1,248.05	1	1,590.18	1	1,932.30	1	2,274.42	1	2,616.52	1	2,958.63
1/4	28.40	1/4	293.32	1/4	589.44	1/4	913.96	1/4	1,255.18	1/4	1,597.31	1/4	1,939.43	1/4	2,281.55	1/4	2,623.65	1/4	2,965.76
1/2	33.07	1/2	299.19	1/2	595.93	1/2	921.01	1/2	1,262.31	1/2	1,604.43	1/2	1,946.56	1/2	2,288.67	1/2	2,630.78	1/2	2,972.88
3/4	37.74	3/4	305.07	3/4	602.42	3/4	928.07	3/4	1,269.44	3/4	1,611.56	3/4	1,953.69	3/4	2,295.80	3/4	2,637.91	3/4	2,980.01
2	42.40	2	310.94	2	608.91	2	935.12	2	1,276.57	2	1,618.69	2	1,960.81	2	2,302.93	2	2,645.03	2	2,987.14
1/4	47.72	1/4	316.87	1/4	615.45	1/4	942.20	1/4	1,283.69	1/4	1,625.82	1/4	1,967.94	1/4	2,310.05	1/4	2,652.16	1/4	2,994.27
1/2	53.03	1/2	322.79	1/2	621.99	1/2	949.28	1/2	1,290.82	1/2	1,632.95	1/2	1,975.07	1/2	2,317.18	1/2	2,659.29	1/2	3,001.39
3/4	58.34	3/4	328.72	3/4	628.53	3/4	956.36	3/4	1,297.95	3/4	1,640.07	3/4	1,982.20	3/4	2,324.31	3/4	2,666.41	3/4	3,008.52
3	63.66	3	334.65	3	635.07	3	963.43	3	1,305.08	3	1,647.20	3	1,989.32	3	2,331.44	3	2,673.54	3	3,015.65
1/4	69.02	1/4	340.63	1/4	641.66	1/4	970.52	1/4	1,312.20	1/4	1,654.33	1/4	1,996.45	1/4	2,338.56	1/4	2,680.67	1/4	3,022.78
1/2	74.39	1/2	346.60	1/2	648.25	1/2	977.60	1/2	1,319.33	1/2	1,661.46	1/2	2,003.58	1/2	2,345.69	1/2	2,687.80	1/2	3,029.90
3/4	79.75	3/4	352.58	3/4	654.84	3/4	984.69	3/4	1,326.46	3/4	1,668.58	3/4	2,010.71	3/4	2,352.82	3/4	2,694.92	3/4	3,037.03
4	85.12	4	358.56	4	661.43	4	991.77	4	1,333.59	4	1,675.71	4	2,017.84	4	2,359.94	4	2,702.05	4	3,044.16
1/4	90.53	1/4	364.59	1/4	668.08	1/4	998.86	1/4	1,340.71	1/4	1,682.84	1/4	2,024.96	1/4	2,367.07	1/4	2,709.18	1/4	3,051.29
1/2	95.95	1/2	370.62	1/2	674.72	1/2	1,005.96	1/2	1,347.84	1/2	1,689.97	1/2	2,032.09	1/2	2,374.20	1/2	2,716.30	1/2	3,058.41
3/4	101.36	3/4	376.65	3/4	681.36	3/4	1,013.05	3/4	1,354.97	3/4	1,697.09	3/4	2,039.22	3/4	2,381.33	3/4	2,723.43	3/4	3,065.54
5	106.78	5	382.67	5	688.00	5	1,020.14	5	1,362.10	5	1,704.22	5	2,046.35	5	2,388.45	5	2,730.56	5	3,072.67
1/4	112.25	1/4	388.75	1/4	694.69	1/4	1,027.24	1/4	1,369.22	1/4	1,711.35	1/4	2,053.47	1/4	2,395.58	1/4	2,737.69	1/4	3,079.80
1/2	117.71	1/2	394.83	1/2	701.39	1/2	1,034.33	1/2	1,376.35	1/2	1,718.48	1/2	2,060.60	1/2	2,402.71	1/2	2,744.81	1/2	3,086.92
3/4	123.18	3/4	400.91	3/4	708.08	3/4	1,041.43	3/4	1,383.48	3/4	1,725.60	3/4	2,067.73	3/4	2,409.84	3/4	2,751.94	3/4	3,094.05
6	128.65	6	406.99	6	714.77	6	1,048.53	6	1,390.61	6	1,732.73	6	2,074.86	6	2,416.96	6	2,759.07	6	3,101.18
1/4	134.16	1/4	413.13	1/4	721.50	1/4	1,055.65	1/4	1,397.73	1/4	1,739.86	1/4	2,081.98	1/4	2,424.09	1/4	2,766.20	1/4	3,108.31
1/2	139.68	1/2	419.26	1/2	728.23	1/2	1,062.76	1/2	1,404.86	1/2	1,746.99	1/2	2,089.11	1/2	2,431.22	1/2	2,773.32	1/2	3,115.43
3/4	145.20	3/4	425.39	3/4	734.96	3/4	1,069.88	3/4	1,411.99	3/4	1,754.11	3/4	2,096.24	3/4	2,438.34	3/4	2,780.45	3/4	3,122.56
7	150.72	7	431.52	7	741.69	7	1,076.99	7	1,419.12	7	1,761.24	7	2,103.37	7	2,445.47	7	2,787.58	7	3,129.69
1/4	156.29	1/4	437.70	1/4	748.45	1/4	1,084.12	1/4	1,426.24	1/4	1,768.37	1/4	2,110.49	1/4	2,452.60	1/4	2,794.70	1/4	3,136.82
1/2	161.86	1/2	443.88	1/2	755.22	1/2	1,091.25	1/2	1,433.37	1/2	1,775.50	1/2	2,117.62	1/2	2,459.73	1/2	2,801.83	1/2	3,143.94
3/4	167.43	3/4	450.07	3/4	761.98	3/4	1,098.38	3/4	1,440.50	3/4	1,782.62	3/4	2,124.75	3/4	2,466.85	3/4	2,808.96	3/4	3,151.07
8	172.99	8	456.25	8	768.74	8	1,105.50	8	1,447.63	8	1,789.75	8	2,131.87	8	2,473.98	8	2,816.09	8	3,158.20
1/4	178.61	1/4	462.48	1/4	775.56	1/4	1,112.63	1/4	1,454.76	1/4	1,796.88	1/4	2,139.00	1/4	2,481.11	1/4	2,823.21	1/4	3,165.33
1/2	184.23	1/2	468.71	1/2	782.37	1/2	1,119.76	1/2	1,461.88	1/2	1,804.01	1/2	2,146.13	1/2	2,488.23	1/2	2,830.34	1/2	3,172.45
3/4	189.85	3/4	474.95	3/4	789.18	3/4	1,126.89	3/4	1,469.01	3/4	1,811.14	3/4	2,153.26	3/4	2,495.36	3/4	2,837.47	3/4	3,179.58
9	195.47	9	481.18	9	795.99	9	1,134.01	9	1,476.14	9	1,818.26	9	2,160.38	9	2,502.49	9	2,844.59	9	3,186.71
1/4	201.15	1/4	487.46	1/4	802.85	1/4	1,141.14	1/4	1,483.27	1/4	1,825.39	1/4	2,167.51	1/4	2,509.62	1/4	2,851.72	1/4	3,193.84
1/2	206.82	1/2	493.75	1/2	809.71	1/2	1,148.27	1/2	1,490.39	1/2	1,832.52	1/2	2,174.64	1/2	2,516.74	1/2	2,858.85	1/2	3,200.96
3/4	212.49	3/4	500.03	3/4	816.57	3/4	1,155.40	3/4	1,497.52	3/4	1,839.65	3/4	2,181.78	3/4	2,523.87	3/4	2,865.98	3/4	3,208.09
10	218.16	10	506.32	10	823.42	10	1,162.52	10	1,504.65	10	1,846.77	10	2,188.89	10	2,531.00	10	2,873.10	10	3,215.22
1/4	223.88	1/4	512.65	1/4	830.33	1/4	1,169.65	1/4	1,511.78	1/4	1,853.90	1/4	2,196.02	1/4	2,538.12	1/4	2,880.23	1/4	3,222.35
1/2	229.60	1/2	518.99	1/2	837.24	1/2	1,176.78	1/2	1,518.90	1/2	1,861.03	1/2	2,203.15	1/2	2,545.25	1/2	2,887.36	1/2	3,229.47
3/4	235.33	3/4	525.32	3/4	844.14	3/4	1,183.91	3/4	1,526.03	3/4	1,868.16	3/4	2,210.27	3/4	2,552.38	3/4	2,894.48	3/4	3,236.60
11	241.05	11	531.66	11	851.05	11	1,191.03	11	1,533.16	11	1,875.28	11	2,217.40	11	2,559.51	11	2,901.61	11	3,243.73
1/4	246.82	1/4	538.05	1/4	858.00	1/4	1,198.16	1/4	1,540.29	1/4	1,882.41	1/4	2,224.53	1/4	2,566.63	1/4	2,908.74	1/4	3,250.86
1/2	252.59	1/2	544.43	1/2	864.96	1/2	1,205.29	1/2	1,547.41	1/2	1,889.54	1/2	2,231.66	1/2	2,573.76	1/2	2,915.87	1/2	3,257.98
3/4	258.37	3/4	550.82	3/4	871.92	3/4	1,212.42	3/4	1,554.54	3/4	1,896.67	3/4	2,238.78	3/4	2,580.89	3/4	2,922.99	3/4	3,265.11

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.

CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE ONLY APPLIES TO EXTREME HEIGHT OF TANK.

CAPACITY TABLE ONLY APPLIES TO INNAGE GAUGES TAKEN TO TOP OF 2" HERMETIC VALVE

GAUGE POINT: (HERMETIC) LOCATED 12'-08" OFF CENTERLINE AND 37'-03" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588

<http://www.pmacorp.net>

Paul J. Mac



BARGE "EMS 509"

1 STBD INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		19 FT.	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
0	3,272.24	0	3,614.36	0	3,951.50	0	4,267.48	0	4,559.05	0	4,827.27	0		0					
1/4	3,279.37	1/4	3,621.49	1/4	3,958.71	1/4	4,273.78	1/4	4,564.86	1/4	4,832.59	1/4		1/4		1/4		1/4	
1/2	3,286.49	1/2	3,628.61	1/2	3,965.51	1/2	4,280.08	1/2	4,570.67	1/2	4,837.92	1/2		1/2		1/2		1/2	
3/4	3,293.62	3/4	3,635.74	3/4	3,972.31	3/4	4,286.38	3/4	4,576.49	3/4	4,843.24	3/4		3/4		3/4		3/4	
1	3,300.75	1	3,642.87	1	3,979.12	1	4,292.67	1	4,582.30	1	4,848.57	1		1		1		1	
1/4	3,307.88	1/4	3,650.00	1/4	3,985.88	1/4	4,298.93	1/4	4,588.07	1/4	4,854.77	1/4		1/4		1/4		1/4	
1/2	3,315.00	1/2	3,657.12	1/2	3,992.64	1/2	4,305.19	1/2	4,593.84	1/2	4,860.98	1/2		1/2		1/2		1/2	
3/4	3,322.13	3/4	3,664.25	3/4	3,999.41	3/4	4,311.44	3/4	4,599.61	3/4	4,867.18	3/4		3/4		3/4		3/4	
2	3,329.26	2	3,671.38	2	4,006.17	2	4,317.70	2	4,605.38	2	4,873.39	2		2		2		2	
1/4	3,336.39	1/4	3,678.51	1/4	4,012.89	1/4	4,323.92	1/4	4,611.11	1/4	4,880.50	1/4		1/4		1/4		1/4	
1/2	3,343.51	1/2	3,685.63	1/2	4,019.61	1/2	4,330.13	1/2	4,616.84	1/2	4,887.61	1/2		1/2		1/2		1/2	
3/4	3,350.64	3/4	3,692.76	3/4	4,026.33	3/4	4,336.35	3/4	4,622.57	3/4	4,894.72	3/4		3/4		3/4		3/4	
3	3,357.77	3	3,699.89	3	4,033.06	3	4,342.57	3	4,628.30	3	4,901.82	3		3		3		3	
1/4	3,364.90	1/4	3,707.02	1/4	4,039.74	1/4	4,348.74	1/4	4,633.99	1/4	4,908.93	1/4		1/4		1/4		1/4	
1/2	3,372.02	1/2	3,714.14	1/2	4,046.42	1/2	4,354.92	1/2	4,639.67	1/2	4,916.04	1/2		1/2		1/2		1/2	
3/4	3,379.15	3/4	3,721.27	3/4	4,053.10	3/4	4,361.09	3/4	4,645.36	3/4	4,923.15	3/4		3/4		3/4		3/4	
4	3,386.28	4	3,728.40	4	4,059.78	4	4,367.27	4	4,651.05	4	4,930.26	4		4		4		4	
1/4	3,393.41	1/4	3,735.52	1/4	4,066.42	1/4	4,373.40	1/4	4,656.70	1/4	4,936.92	1/4		1/4		1/4		1/4	
1/2	3,400.53	1/2	3,742.64	1/2	4,073.06	1/2	4,379.54	1/2	4,662.35	1/2	4,943.58	1/2		1/2		1/2		1/2	
3/4	3,407.66	3/4	3,749.76	3/4	4,079.71	3/4	4,385.67	3/4	4,668.00	3/4	4,950.25	3/4		3/4		3/4		3/4	
5	3,414.79	5	3,756.87	5	4,086.35	5	4,391.81	5	4,673.65	5	4,956.91	5		5		5		5	
1/4	3,421.92	1/4	3,763.96	1/4	4,092.95	1/4	4,397.90	1/4	4,679.26	1/4		1/4		1/4		1/4		1/4	
1/2	3,429.04	1/2	3,771.05	1/2	4,099.55	1/2	4,404.00	1/2	4,684.86	1/2		1/2		1/2		1/2		1/2	
3/4	3,436.17	3/4	3,778.13	3/4	4,106.15	3/4	4,410.09	3/4	4,690.47	3/4		3/4		3/4		3/4		3/4	
6	3,443.30	6	3,785.22	6	4,112.75	6	4,416.19	6	4,696.08	6		6		6		6		6	
1/4	3,450.43	1/4	3,792.27	1/4	4,119.31	1/4	4,422.24	1/4	4,701.65	1/4		1/4		1/4		1/4		1/4	
1/2	3,457.55	1/2	3,799.31	1/2	4,125.87	1/2	4,428.30	1/2	4,707.22	1/2		1/2		1/2		1/2		1/2	
3/4	3,464.68	3/4	3,806.36	3/4	4,132.43	3/4	4,434.35	3/4	4,712.78	3/4		3/4		3/4		3/4		3/4	
7	3,471.81	7	3,813.41	7	4,138.99	7	4,440.40	7	4,718.35	7		7		7		7		7	
1/4	3,478.94	1/4	3,820.41	1/4	4,145.51	1/4	4,446.42	1/4	4,723.88	1/4		1/4		1/4		1/4		1/4	
1/2	3,486.06	1/2	3,827.42	1/2	4,152.03	1/2	4,452.43	1/2	4,729.40	1/2		1/2		1/2		1/2		1/2	
3/4	3,493.19	3/4	3,834.43	3/4	4,158.55	3/4	4,458.44	3/4	4,734.93	3/4		3/4		3/4		3/4		3/4	
8	3,500.32	8	3,841.43	8	4,165.07	8	4,464.46	8	4,740.46	8		8		8		8		8	
1/4	3,507.45	1/4	3,848.40	1/4	4,171.54	1/4	4,470.43	1/4	4,745.95	1/4		1/4		1/4		1/4		1/4	
1/2	3,514.57	1/2	3,855.36	1/2	4,178.00	1/2	4,476.40	1/2	4,751.43	1/2		1/2		1/2		1/2		1/2	
3/4	3,521.70	3/4	3,862.33	3/4	4,184.47	3/4	4,482.38	3/4	4,756.92	3/4		3/4		3/4		3/4		3/4	
9	3,528.83	9	3,869.29	9	4,190.94	9	4,488.35	9	4,762.40	9		9		9		9		9	
1/4	3,535.96	1/4	3,876.22	1/4	4,197.36	1/4	4,494.28	1/4	4,767.85	1/4		1/4		1/4		1/4		1/4	
1/2	3,543.08	1/2	3,883.14	1/2	4,203.78	1/2	4,500.22	1/2	4,773.30	1/2		1/2		1/2		1/2		1/2	
3/4	3,550.21	3/4	3,890.07	3/4	4,210.20	3/4	4,506.15	3/4	4,778.74	3/4		3/4		3/4		3/4		3/4	
10	3,557.34	10	3,896.99	10	4,216.62	10	4,512.08	10	4,784.19	10		10		10		10		10	
1/4	3,564.47	1/4	3,903.88	1/4	4,223.00	1/4	4,517.97	1/4	4,789.59	1/4		1/4		1/4		1/4		1/4	
1/2	3,571.59	1/2	3,910.76	1/2	4,229.38	1/2	4,523.86	1/2	4,795.00	1/2		1/2		1/2		1/2		1/2	
3/4	3,578.72	3/4	3,917.65	3/4	4,235.75	3/4	4,529.76	3/4	4,800.40	3/4		3/4		3/4		3/4		3/4	
11	3,585.85	11	3,924.53	11	4,242.13	11	4,535.65	11	4,805.81	11		11		11		11		11	
1/4	3,592.98	1/4	3,931.37	1/4	4,248.47	1/4	4,541.50	1/4	4,811.17	1/4		1/4		1/4		1/4		1/4	
1/2	3,600.10	1/2	3,938.22	1/2	4,254.81	1/2	4,547.35	1/2	4,816.54	1/2		1/2		1/2		1/2		1/2	
3/4	3,607.23	3/4	3,945.06	3/4	4,261.15	3/4	4,553.20	3/4	4,821.90	3/4		3/4		3/4		3/4		3/4	

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 8/05/2019 JS
CALCULATED: 08/06/2019 CL
PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2019

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2082

Pearland, Texas 77586

<http://www.pmacorp.net>

Paul J. Mac



BARGE "EMS 509"

2 PORT INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

0 FT.		1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.		7 FT.		8 FT.		9 FT.	
IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	13.95	0	388.93	0	777.29	0	1,165.54	0	1,554.02	0	1,942.49	0	2,330.97	0	2,719.44	0	3,107.90	0	3,496.36
1/4	19.34	1/4	397.02	1/4	785.37	1/4	1,173.63	1/4	1,562.11	1/4	1,950.59	1/4	2,339.07	1/4	2,727.53	1/4	3,115.99	1/4	3,504.45
1/2	24.74	1/2	793.45	1/2	1,181.72	1/2	1,570.20	1/2	1,958.68	1/2	2,347.16	1/2	2,735.62	1/2	3,124.08	1/2	3,512.54	1/2	3,901.00
3/4	30.13	3/4	413.21	3/4	801.54	3/4	1,189.82	3/4	1,578.30	3/4	1,966.77	3/4	2,355.25	3/4	2,743.72	3/4	3,132.18	3/4	3,520.64
1	35.53	1	421.30	1	809.62	1	1,197.91	1	1,586.39	1	1,974.87	1	2,363.35	1	2,751.81	1	3,140.27	1	3,528.73
1/4	42.95	1/4	429.39	1/4	817.70	1/4	1,206.00	1/4	1,594.48	1/4	1,982.96	1/4	2,371.44	1/4	2,759.90	1/4	3,148.36	1/4	3,536.82
1/2	50.37	1/2	437.48	1/2	825.79	1/2	1,214.10	1/2	1,602.58	1/2	1,991.05	1/2	2,379.53	1/2	2,768.00	1/2	3,156.45	1/2	3,544.91
3/4	57.78	3/4	445.58	3/4	833.87	3/4	1,222.19	3/4	1,610.67	3/4	1,999.15	3/4	2,387.63	3/4	2,776.09	3/4	3,164.55	3/4	3,553.01
2	65.20	2	453.67	2	841.95	2	1,230.28	2	1,618.76	2	2,007.24	2	2,395.72	2	2,784.18	2	3,172.64	2	3,561.10
1/4	73.30	1/4	461.76	1/4	850.03	1/4	1,238.38	1/4	1,626.86	1/4	2,015.33	1/4	2,403.81	1/4	2,792.27	1/4	3,180.73	1/4	3,569.19
1/2	81.39	1/2	469.86	1/2	858.12	1/2	1,246.47	1/2	1,634.95	1/2	2,023.43	1/2	2,411.91	1/2	2,800.37	1/2	3,188.83	1/2	3,577.29
3/4	89.48	3/4	477.95	3/4	866.20	3/4	1,254.56	3/4	1,643.04	3/4	2,031.52	3/4	2,420.00	3/4	2,808.46	3/4	3,196.92	3/4	3,585.38
3	97.57	3	486.04	3	874.28	3	1,262.66	3	1,651.14	3	2,039.61	3	2,428.09	3	2,816.55	3	3,205.01	3	3,593.47
1/4	105.67	1/4	494.14	1/4	882.36	1/4	1,270.75	1/4	1,659.23	1/4	2,047.71	1/4	2,436.19	1/4	2,824.65	1/4	3,213.11	1/4	3,601.56
1/2	113.76	1/2	502.23	1/2	890.45	1/2	1,278.84	1/2	1,667.32	1/2	2,055.80	1/2	2,444.28	1/2	2,832.74	1/2	3,221.20	1/2	3,609.65
3/4	121.85	3/4	510.32	3/4	898.53	3/4	1,286.94	3/4	1,675.41	3/4	2,063.89	3/4	2,452.37	3/4	2,840.83	3/4	3,229.29	3/4	3,617.75
4	129.95	4	518.42	4	906.61	4	1,295.03	4	1,683.51	4	2,071.99	4	2,460.47	4	2,848.92	4	3,237.38	4	3,625.84
1/4	138.04	1/4	526.51	1/4	914.70	1/4	1,303.12	1/4	1,691.60	1/4	2,080.08	1/4	2,468.56	1/4	2,857.02	1/4	3,245.48	1/4	3,633.93
1/2	146.13	1/2	534.60	1/2	922.78	1/2	1,311.22	1/2	1,699.69	1/2	2,088.17	1/2	2,476.65	1/2	2,865.11	1/2	3,253.57	1/2	3,642.02
3/4	154.23	3/4	542.70	3/4	930.86	3/4	1,319.31	3/4	1,707.79	3/4	2,096.27	3/4	2,484.74	3/4	2,873.20	3/4	3,261.66	3/4	3,650.12
5	162.32	5	550.79	5	938.94	5	1,327.40	5	1,715.88	5	2,104.36	5	2,492.84	5	2,881.30	5	3,269.76	5	3,658.21
1/4	170.41	1/4	558.88	1/4	947.03	1/4	1,335.50	1/4	1,723.97	1/4	2,112.45	1/4	2,500.93	1/4	2,889.39	1/4	3,277.85	1/4	3,666.30
1/2	178.51	1/2	566.97	1/2	955.12	1/2	1,343.59	1/2	1,732.07	1/2	2,120.55	1/2	2,509.02	1/2	2,897.48	1/2	3,285.94	1/2	3,674.40
3/4	186.60	3/4	575.07	3/4	963.21	3/4	1,351.68	3/4	1,740.16	3/4	2,128.64	3/4	2,517.12	3/4	2,905.57	3/4	3,294.03	3/4	3,682.49
6	194.69	6	583.16	6	971.30	6	1,359.78	6	1,748.25	6	2,136.73	6	2,525.21	6	2,913.67	6	3,302.13	6	3,690.58
1/4	202.78	1/4	591.25	1/4	979.39	1/4	1,367.87	1/4	1,756.35	1/4	2,144.83	1/4	2,533.30	1/4	2,921.76	1/4	3,310.22	1/4	3,698.68
1/2	210.88	1/2	599.35	1/2	987.48	1/2	1,375.96	1/2	1,764.44	1/2	2,152.92	1/2	2,541.40	1/2	2,929.85	1/2	3,318.31	1/2	3,706.77
3/4	218.97	3/4	607.44	3/4	995.58	3/4	1,384.06	3/4	1,772.53	3/4	2,161.01	3/4	2,549.49	3/4	2,937.95	3/4	3,326.41	3/4	3,714.86
7	227.06	7	615.53	7	1,003.67	7	1,392.15	7	1,780.63	7	2,169.11	7	2,557.58	7	2,946.04	7	3,334.50	7	3,722.96
1/4	235.16	1/4	623.63	1/4	1,011.76	1/4	1,400.24	1/4	1,788.72	1/4	2,177.20	1/4	2,565.68	1/4	2,954.13	1/4	3,342.59	1/4	3,731.05
1/2	243.25	1/2	631.72	1/2	1,019.86	1/2	1,408.34	1/2	1,796.81	1/2	2,185.29	1/2	2,573.77	1/2	2,962.23	1/2	3,350.68	1/2	3,739.14
3/4	251.34	3/4	639.81	3/4	1,027.95	3/4	1,416.43	3/4	1,804.91	3/4	2,193.39	3/4	2,581.86	3/4	2,970.32	3/4	3,358.78	3/4	3,747.24
8	259.44	8	647.91	8	1,036.04	8	1,424.52	8	1,813.00	8	2,201.48	8	2,589.95	8	2,978.41	8	3,366.87	8	3,755.33
1/4	267.53	1/4	656.00	1/4	1,044.14	1/4	1,432.62	1/4	1,821.09	1/4	2,209.57	1/4	2,598.04	1/4	2,986.50	1/4	3,374.96	1/4	3,763.42
1/2	275.62	1/2	664.09	1/2	1,052.23	1/2	1,440.71	1/2	1,829.19	1/2	2,217.67	1/2	2,606.14	1/2	2,994.60	1/2	3,383.06	1/2	3,771.52
3/4	283.72	3/4	672.18	3/4	1,060.32	3/4	1,448.80	3/4	1,837.28	3/4	2,225.76	3/4	2,614.23	3/4	3,002.69	3/4	3,391.15	3/4	3,779.61
9	291.81	9	680.28	9	1,068.42	9	1,456.90	9	1,845.37	9	2,233.85	9	2,622.32	9	3,010.78	9	3,399.24	9	3,787.70
1/4	299.90	1/4	688.36	1/4	1,076.51	1/4	1,464.99	1/4	1,853.47	1/4	2,241.95	1/4	2,630.42	1/4	3,018.88	1/4	3,407.33	1/4	3,795.80
1/2	308.00	1/2	696.45	1/2	1,084.60	1/2	1,473.08	1/2	1,861.56	1/2	2,250.04	1/2	2,638.51	1/2	3,026.97	1/2	3,415.43	1/2	3,803.89
3/4	316.09	3/4	704.54	3/4	1,092.70	3/4	1,481.18	3/4	1,869.65	3/4	2,258.13	3/4	2,646.60	3/4	3,035.06	3/4	3,423.52	3/4	3,811.98
10	324.18	10	712.63	10	1,100.79	10	1,489.27	10	1,877.75	10	2,266.23	10	2,654.70	10	3,043.15	10	3,431.61	10	3,820.08
1/4	332.27	1/4	720.71	1/4	1,108.88	1/4	1,497.36	1/4	1,885.84	1/4	2,274.32	1/4	2,662.79	1/4	3,051.25	1/4	3,439.71	1/4	3,828.17
1/2	340.37	1/2	728.79	1/2	1,116.98	1/2	1,505.46	1/2	1,893.93	1/2	2,282.41	1/2	2,670.88	1/2	3,059.34	1/2	3,447.80	1/2	3,836.26
3/4	348.46	3/4	736.87	3/4	1,125.07	3/4	1,513.55	3/4	1,902.03	3/4	2,290.51	3/4	2,678.97	3/4	3,067.43	3/4	3,455.89	3/4	3,844.36
11	356.55	11	744.96	11	1,133.16	11	1,521.64	11	1,910.12	11	2,298.60	11	2,687.07	11	3,075.53	11	3,463.99	11	3,852.45
1/4	364.65	1/4	753.04	1/4	1,141.26	1/4	1,529.74	1/4	1,918.21	1/4	2,306.69	1/4	2,695.16	1/4	3,083.62	1/4	3,472.08	1/4	3,860.54
1/2	372.74	1/2	761.12	1/2	1,149.35	1/2	1,537.83	1/2	1,926.31	1/2	2,314.79	1/2	2,703.25	1/2	3,091.71	1/2	3,480.17	1/2	3,868.64
3/4	380.83	3/4	769.21	3/4	1,157.44	3/4	1,545.92	3/4	1,934.40	3/4	2,322.88	3/4	2,711.35	3/4	3,099.80	3/4	3,488.26	3/4	3,876.73

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.
CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE ONLY APPLIES TO EXTREME HEIGHT OF TANK.

GAUGE POINT: (HERMETIC) LOCATED 12'-06" OFF CENTERLINE AND 44'-00" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.
P.O. Box 2092
Pearland, Texas 77588

<http://www.pmacorp.net>

Signature



BARGE "EMS 509"

2 PORT INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		19 FT.	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
0	3,884.82	0	4,656.56	0	5,014.86	0	5,345.87	0	5,649.64	0	5,649.64	0	5,649.64	0	5,649.64	0	5,649.64	0	5,649.64
1/4	3,892.92	1/4	4,281.39	1/4	4,664.29	1/4	5,022.01	1/4	5,352.47	1/4	5,655.57	1/4	5,655.57	1/4	5,655.57	1/4	5,655.57	1/4	5,655.57
1/2	3,901.01	1/2	4,289.49	1/2	4,672.01	1/2	5,029.16	1/2	5,359.07	1/2	5,661.50	1/2	5,661.50	1/2	5,661.50	1/2	5,661.50	1/2	5,661.50
3/4	3,909.10	3/4	4,297.58	3/4	4,679.74	3/4	5,036.31	3/4	5,365.66	3/4	5,667.43	3/4	5,667.43	3/4	5,667.43	3/4	5,667.43	3/4	5,667.43
1	3,917.20	1	4,305.67	1	4,687.46	1	5,043.46	1	5,372.26	1	5,673.36	1	5,673.36	1	5,673.36	1	5,673.36	1	5,673.36
1/4	3,925.29	1/4	4,313.77	1/4	4,695.14	1/4	5,050.56	1/4	5,378.81	1/4	5,680.29	1/4	5,680.29	1/4	5,680.29	1/4	5,680.29	1/4	5,680.29
1/2	3,933.38	1/2	4,321.86	1/2	4,702.82	1/2	5,057.67	1/2	5,385.36	1/2	5,687.22	1/2	5,687.22	1/2	5,687.22	1/2	5,687.22	1/2	5,687.22
3/4	3,941.48	3/4	4,329.95	3/4	4,710.50	3/4	5,064.77	3/4	5,391.91	3/4	5,694.16	3/4	5,694.16	3/4	5,694.16	3/4	5,694.16	3/4	5,694.16
2	3,949.57	2	4,338.05	2	4,718.17	2	5,071.87	2	5,398.46	2	5,701.09	2	5,701.09	2	5,701.09	2	5,701.09	2	5,701.09
1/4	3,957.66	1/4	4,346.14	1/4	4,725.81	1/4	5,078.93	1/4	5,404.97	1/4	5,709.05	1/4	5,709.05	1/4	5,709.05	1/4	5,709.05	1/4	5,709.05
1/2	3,965.76	1/2	4,354.23	1/2	4,733.44	1/2	5,085.99	1/2	5,411.47	1/2	5,717.01	1/2	5,717.01	1/2	5,717.01	1/2	5,717.01	1/2	5,717.01
3/4	3,973.85	3/4	4,362.33	3/4	4,741.07	3/4	5,093.05	3/4	5,417.97	3/4	5,724.96	3/4	5,724.96	3/4	5,724.96	3/4	5,724.96	3/4	5,724.96
3	3,981.94	3	4,370.42	3	4,748.70	3	5,100.12	3	5,424.48	3	5,732.92	3	5,732.92	3	5,732.92	3	5,732.92	3	5,732.92
1/4	3,990.04	1/4	4,378.51	1/4	4,756.29	1/4	5,107.12	1/4	5,430.94	1/4	5,740.88	1/4	5,740.88	1/4	5,740.88	1/4	5,740.88	1/4	5,740.88
1/2	3,998.13	1/2	4,386.61	1/2	4,763.87	1/2	5,114.13	1/2	5,437.39	1/2	5,748.84	1/2	5,748.84	1/2	5,748.84	1/2	5,748.84	1/2	5,748.84
3/4	4,006.22	3/4	4,394.70	3/4	4,771.46	3/4	5,121.14	3/4	5,443.85	3/4	5,756.80	3/4	5,756.80	3/4	5,756.80	3/4	5,756.80	3/4	5,756.80
4	4,014.32	4	4,402.79	4	4,779.05	4	5,128.15	4	5,450.31	4	5,764.76	4	5,764.76	4	5,764.76	4	5,764.76	4	5,764.76
1/4	4,022.41	1/4	4,410.88	1/4	4,786.59	1/4	5,135.12	1/4	5,456.72	1/4	5,772.21	1/4	5,772.21	1/4	5,772.21	1/4	5,772.21	1/4	5,772.21
1/2	4,030.50	1/2	4,418.96	1/2	4,794.13	1/2	5,142.08	1/2	5,463.13	1/2	5,779.66	1/2	5,779.66	1/2	5,779.66	1/2	5,779.66	1/2	5,779.66
3/4	4,038.60	3/4	4,427.04	3/4	4,801.67	3/4	5,149.05	3/4	5,469.54	3/4	5,787.11	3/4	5,787.11	3/4	5,787.11	3/4	5,787.11	3/4	5,787.11
5	4,046.69	5	4,435.12	5	4,809.21	5	5,156.01	5	5,475.96	5	5,794.57	5	5,794.57	5	5,794.57	5	5,794.57	5	5,794.57
1/4	4,054.78	1/4	4,443.17	1/4	4,816.70	1/4	5,162.93	1/4	5,482.32	1/4	5,802.08	1/4	5,802.08	1/4	5,802.08	1/4	5,802.08	1/4	5,802.08
1/2	4,062.88	1/2	4,451.21	1/2	4,824.19	1/2	5,169.85	1/2	5,488.69	1/2	5,810.18	1/2	5,810.18	1/2	5,810.18	1/2	5,810.18	1/2	5,810.18
3/4	4,070.97	3/4	4,459.26	3/4	4,831.69	3/4	5,176.77	3/4	5,495.05	3/4	5,821.27	3/4	5,821.27	3/4	5,821.27	3/4	5,821.27	3/4	5,821.27
6	4,079.06	6	4,467.31	6	4,839.18	6	5,183.69	6	5,501.42	6	5,832.36	6	5,832.36	6	5,832.36	6	5,832.36	6	5,832.36
1/4	4,087.16	1/4	4,475.31	1/4	4,846.63	1/4	5,190.56	1/4	5,507.74	1/4	5,843.45	1/4	5,843.45	1/4	5,843.45	1/4	5,843.45	1/4	5,843.45
1/2	4,095.25	1/2	4,483.31	1/2	4,854.08	1/2	5,197.43	1/2	5,514.06	1/2	5,850.54	1/2	5,850.54	1/2	5,850.54	1/2	5,850.54	1/2	5,850.54
3/4	4,103.34	3/4	4,491.31	3/4	4,861.52	3/4	5,204.31	3/4	5,520.38	3/4	5,857.63	3/4	5,857.63	3/4	5,857.63	3/4	5,857.63	3/4	5,857.63
7	4,111.44	7	4,499.31	7	4,868.97	7	5,211.18	7	5,526.70	7	5,864.72	7	5,864.72	7	5,864.72	7	5,864.72	7	5,864.72
1/4	4,119.53	1/4	4,507.27	1/4	4,876.37	1/4	5,218.01	1/4	5,532.97	1/4	5,871.83	1/4	5,871.83	1/4	5,871.83	1/4	5,871.83	1/4	5,871.83
1/2	4,127.62	1/2	4,515.22	1/2	4,883.77	1/2	5,224.83	1/2	5,539.24	1/2	5,878.94	1/2	5,878.94	1/2	5,878.94	1/2	5,878.94	1/2	5,878.94
3/4	4,135.72	3/4	4,523.18	3/4	4,891.17	3/4	5,231.66	3/4	5,545.52	3/4	5,886.05	3/4	5,886.05	3/4	5,886.05	3/4	5,886.05	3/4	5,886.05
8	4,143.81	8	4,531.13	8	4,898.58	8	5,238.49	8	5,551.79	8	5,893.16	8	5,893.16	8	5,893.16	8	5,893.16	8	5,893.16
1/4	4,151.90	1/4	4,539.04	1/4	4,905.92	1/4	5,245.27	1/4	5,558.02	1/4	5,900.27	1/4	5,900.27	1/4	5,900.27	1/4	5,900.27	1/4	5,900.27
1/2	4,160.00	1/2	4,546.95	1/2	4,913.27	1/2	5,252.05	1/2	5,564.25	1/2	5,907.38	1/2	5,907.38	1/2	5,907.38	1/2	5,907.38	1/2	5,907.38
3/4	4,168.09	3/4	4,554.86	3/4	4,920.61	3/4	5,258.83	3/4	5,570.47	3/4	5,914.49	3/4	5,914.49	3/4	5,914.49	3/4	5,914.49	3/4	5,914.49
9	4,176.18	9	4,562.77	9	4,927.96	9	5,265.61	9	5,576.70	9	5,921.60	9	5,921.60	9	5,921.60	9	5,921.60	9	5,921.60
1/4	4,184.28	1/4	4,570.63	1/4	4,935.24	1/4	5,272.35	1/4	5,582.88	1/4	5,928.71	1/4	5,928.71	1/4	5,928.71	1/4	5,928.71	1/4	5,928.71
1/2	4,192.37	1/2	4,578.49	1/2	4,942.53	1/2	5,279.08	1/2	5,589.06	1/2	5,935.82	1/2	5,935.82	1/2	5,935.82	1/2	5,935.82	1/2	5,935.82
3/4	4,200.46	3/4	4,586.35	3/4	4,949.82	3/4	5,285.82	3/4	5,595.24	3/4	5,941.93	3/4	5,941.93	3/4	5,941.93	3/4	5,941.93	3/4	5,941.93
10	4,208.56	10	4,594.22	10	4,957.11	10	5,292.55	10	5,601.43	10	5,948.04	10	5,948.04	10	5,948.04	10	5,948.04	10	5,948.04
1/4	4,216.65	1/4	4,602.03	1/4	4,964.35	1/4	5,299.24	1/4	5,607.50	1/4	5,954.15	1/4	5,954.15	1/4	5,954.15	1/4	5,954.15	1/4	5,954.15
1/2	4,224.74	1/2	4,609.85	1/2	4,971.59	1/2	5,305.93	1/2	5,613.58	1/2	5,960.26	1/2	5,960.26	1/2	5,960.26	1/2	5,960.26	1/2	5,960.26
3/4	4,232.83	3/4	4,617.67	3/4	4,978.83	3/4	5,312.62	3/4	5,619.66	3/4	5,966.37	3/4	5,966.37	3/4	5,966.37	3/4	5,966.37	3/4	5,966.37
11	4,240.93	11	4,625.48	11	4,986.08	11	5,319.31	11	5,625.74	11	5,971.48	11	5,971.48	11	5,971.48	11	5,971.48	11	5,971.48
1/4	4,249.02	1/4	4,633.25	1/4	4,993.27	1/4	5,325.95	1/4	5,631.71	1/4	5,977.59	1/4	5,977.59	1/4	5,977.59	1/4	5,977.59	1/4	5,977.59
1/2	4,257.11	1/2	4,641.02	1/2	5,000.47	1/2	5,332.59	1/2	5,637.99	1/2	5,983.70	1/2	5,983.70	1/2	5,983.70	1/2	5,983.70	1/2	5,983.70
3/4	4,265.21	3/4	4,648.79	3/4	5,007.66	3/4	5,339.23	3/4	5,643.67	3/4	5,989.81	3/4	5,989.81	3/4	5,989.81	3/4	5,989.81	3/4	5,989.81

STRAPPED: 8/05/2019 JS
CALCULATED: 08/06/2019 CL
PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2019

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2002

Pearland, Texas 77588

<http://www.pmacorp.net>

The Joanne



BARGE "EMS 509"

2 STBD

INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

0 FT.		1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.		7 FT.		8 FT.		9 FT.	
IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	13.95	0	388.92	0	777.32	0	1,155.21	0	1,537.43	0	1,925.91	0	2,314.39	0	2,702.85	0	3,091.31	0	3,479.76
1/4	19.34	1/4	397.01	1/4	785.40	1/4	1,162.95	1/4	1,545.52	1/4	1,934.00	1/4	2,322.48	1/4	2,710.95	1/4	3,099.40	1/4	3,487.85
1/2	24.74	1/2	405.11	1/2	793.49	1/2	1,170.70	1/2	1,553.62	1/2	1,942.10	1/2	2,330.57	1/2	2,719.04	1/2	3,107.49	1/2	3,495.95
3/4	30.13	3/4	413.20	3/4	801.57	3/4	1,178.44	3/4	1,561.71	3/4	1,950.19	3/4	2,338.67	3/4	2,727.13	3/4	3,115.59	3/4	3,504.04
1	35.53	1	421.29	1	809.66	1	1,186.19	1	1,569.80	1	1,958.28	1	2,346.76	1	2,735.22	1	3,123.68	1	3,512.13
1/4	40.93	1/4	429.39	1/4	817.74	1/4	1,193.94	1/4	1,577.90	1/4	1,966.38	1/4	2,354.85	1/4	2,743.32	1/4	3,131.77	1/4	3,520.23
1/2	46.33	1/2	437.48	1/2	825.83	1/2	1,201.68	1/2	1,585.99	1/2	1,974.47	1/2	2,362.95	1/2	2,751.41	1/2	3,139.86	1/2	3,528.32
3/4	51.73	3/4	445.57	3/4	833.91	3/4	1,209.43	3/4	1,594.08	3/4	1,982.56	3/4	2,371.04	3/4	2,759.50	3/4	3,147.96	3/4	3,536.41
2	57.13	2	453.67	2	842.00	2	1,217.17	2	1,602.18	2	1,990.66	2	2,379.13	2	2,767.60	2	3,156.05	2	3,544.50
1/4	62.53	1/4	461.76	1/4	850.09	1/4	1,224.92	1/4	1,610.27	1/4	1,998.75	1/4	2,387.23	1/4	2,775.69	1/4	3,164.14	1/4	3,552.60
1/2	67.93	1/2	469.85	1/2	858.17	1/2	1,232.67	1/2	1,618.36	1/2	2,006.84	1/2	2,395.32	1/2	2,783.78	1/2	3,172.23	1/2	3,560.69
3/4	73.33	3/4	477.94	3/4	866.26	3/4	1,240.41	3/4	1,626.46	3/4	2,014.93	3/4	2,403.41	3/4	2,791.87	3/4	3,180.33	3/4	3,568.78
3	78.73	3	486.04	3	874.34	3	1,248.16	3	1,634.55	3	2,023.03	3	2,411.51	3	2,799.97	3	3,188.42	3	3,576.87
1/4	84.13	1/4	494.13	1/4	882.43	1/4	1,255.90	1/4	1,642.64	1/4	2,031.12	1/4	2,419.60	1/4	2,808.06	1/4	3,196.51	1/4	3,584.97
1/2	89.53	1/2	502.22	1/2	890.51	1/2	1,263.65	1/2	1,650.74	1/2	2,039.21	1/2	2,427.69	1/2	2,816.15	1/2	3,204.61	1/2	3,593.06
3/4	94.93	3/4	510.32	3/4	898.60	3/4	1,271.40	3/4	1,658.83	3/4	2,047.31	3/4	2,435.79	3/4	2,824.24	3/4	3,212.70	3/4	3,601.16
4	100.33	4	518.41	4	906.68	4	1,279.14	4	1,666.92	4	2,055.40	4	2,443.88	4	2,832.34	4	3,220.79	4	3,609.25
1/4	105.73	1/4	526.50	1/4	914.60	1/4	1,287.06	1/4	1,675.02	1/4	2,063.49	1/4	2,451.97	1/4	2,840.43	1/4	3,228.88	1/4	3,617.35
1/2	111.13	1/2	534.60	1/2	922.51	1/2	1,294.98	1/2	1,683.11	1/2	2,071.59	1/2	2,460.07	1/2	2,848.52	1/2	3,236.98	1/2	3,625.44
3/4	116.53	3/4	542.69	3/4	930.42	3/4	1,302.90	3/4	1,691.20	3/4	2,079.68	3/4	2,468.16	3/4	2,856.62	3/4	3,245.07	3/4	3,633.53
5	121.93	5	550.78	5	938.33	5	1,310.82	5	1,699.30	5	2,087.77	5	2,476.25	5	2,864.71	5	3,253.16	5	3,641.63
1/4	127.33	1/4	558.87	1/4	946.08	1/4	1,318.91	1/4	1,707.39	1/4	2,095.87	1/4	2,484.35	1/4	2,872.80	1/4	3,261.26	1/4	3,649.72
1/2	132.73	1/2	566.97	1/2	953.82	1/2	1,327.00	1/2	1,715.48	1/2	2,103.96	1/2	2,492.44	1/2	2,880.89	1/2	3,269.35	1/2	3,657.81
3/4	138.13	3/4	575.06	3/4	961.56	3/4	1,335.10	3/4	1,723.58	3/4	2,112.05	3/4	2,500.53	3/4	2,888.99	3/4	3,277.44	3/4	3,665.91
6	143.53	6	583.15	6	969.30	6	1,343.19	6	1,731.67	6	2,120.15	6	2,508.63	6	2,897.08	6	3,285.53	6	3,674.00
1/4	148.93	1/4	591.25	1/4	977.05	1/4	1,351.28	1/4	1,739.76	1/4	2,128.24	1/4	2,516.72	1/4	2,905.17	1/4	3,293.63	1/4	3,682.09
1/2	154.33	1/2	599.34	1/2	984.79	1/2	1,359.38	1/2	1,747.86	1/2	2,136.33	1/2	2,524.81	1/2	2,913.27	1/2	3,301.72	1/2	3,690.19
3/4	159.73	3/4	607.43	3/4	992.54	3/4	1,367.47	3/4	1,755.95	3/4	2,144.43	3/4	2,532.91	3/4	2,921.36	3/4	3,309.81	3/4	3,698.28
7	165.13	7	615.53	7	1,000.29	7	1,375.56	7	1,764.04	7	2,152.52	7	2,541.00	7	2,929.45	7	3,317.91	7	3,706.37
1/4	170.53	1/4	623.62	1/4	1,008.03	1/4	1,383.66	1/4	1,772.14	1/4	2,160.61	1/4	2,549.09	1/4	2,937.54	1/4	3,326.00	1/4	3,714.47
1/2	175.93	1/2	631.71	1/2	1,015.78	1/2	1,391.75	1/2	1,780.23	1/2	2,168.71	1/2	2,557.18	1/2	2,945.64	1/2	3,334.09	1/2	3,722.56
3/4	181.33	3/4	639.80	3/4	1,023.52	3/4	1,399.84	3/4	1,788.32	3/4	2,176.80	3/4	2,565.28	3/4	2,953.73	3/4	3,342.18	3/4	3,730.65
8	186.73	8	647.90	8	1,031.27	8	1,407.94	8	1,796.42	8	2,184.89	8	2,573.37	8	2,961.82	8	3,350.28	8	3,738.75
1/4	192.13	1/4	655.99	1/4	1,039.02	1/4	1,416.03	1/4	1,804.51	1/4	2,192.99	1/4	2,581.46	1/4	2,969.92	1/4	3,358.37	1/4	3,746.84
1/2	197.53	1/2	664.08	1/2	1,046.76	1/2	1,424.12	1/2	1,812.60	1/2	2,201.08	1/2	2,589.55	1/2	2,978.01	1/2	3,366.46	1/2	3,754.93
3/4	202.93	3/4	672.18	3/4	1,054.51	3/4	1,432.22	3/4	1,820.70	3/4	2,209.17	3/4	2,597.65	3/4	2,986.10	3/4	3,374.55	3/4	3,763.03
9	208.33	9	680.27	9	1,062.25	9	1,440.31	9	1,828.79	9	2,217.27	9	2,605.74	9	2,994.19	9	3,382.65	9	3,771.12
1/4	213.73	1/4	688.36	1/4	1,070.00	1/4	1,448.40	1/4	1,836.88	1/4	2,225.36	1/4	2,613.83	1/4	3,002.29	1/4	3,390.74	1/4	3,779.21
1/2	219.13	1/2	696.45	1/2	1,077.75	1/2	1,456.50	1/2	1,844.98	1/2	2,233.45	1/2	2,621.92	1/2	3,010.38	1/2	3,398.83	1/2	3,787.31
3/4	224.53	3/4	704.54	3/4	1,085.49	3/4	1,464.59	3/4	1,853.07	3/4	2,241.55	3/4	2,630.02	3/4	3,018.47	3/4	3,406.93	3/4	3,795.40
10	229.93	10	712.63	10	1,093.24	10	1,472.68	10	1,861.16	10	2,249.64	10	2,638.11	10	3,026.56	10	3,415.02	10	3,803.49
1/4	235.33	1/4	720.72	1/4	1,100.98	1/4	1,480.78	1/4	1,869.26	1/4	2,257.73	1/4	2,646.20	1/4	3,034.66	1/4	3,423.11	1/4	3,811.59
1/2	240.73	1/2	728.80	1/2	1,108.73	1/2	1,488.87	1/2	1,877.35	1/2	2,265.83	1/2	2,654.30	1/2	3,042.75	1/2	3,431.20	1/2	3,819.68
3/4	246.13	3/4	736.89	3/4	1,116.48	3/4	1,496.96	3/4	1,885.44	3/4	2,273.92	3/4	2,662.39	3/4	3,050.84	3/4	3,439.30	3/4	3,827.77
11	251.53	11	744.97	11	1,124.22	11	1,505.06	11	1,893.54	11	2,282.01	11	2,670.48	11	3,058.94	11	3,447.39	11	3,835.87
1/4	256.93	1/4	753.06	1/4	1,131.97	1/4	1,513.15	1/4	1,901.63	1/4	2,290.11	1/4	2,678.57	1/4	3,067.03	1/4	3,455.48	1/4	3,843.96
1/2	262.33	1/2	761.14	1/2	1,139.71	1/2	1,521.24	1/2	1,909.72	1/2	2,298.20	1/2	2,686.67	1/2	3,075.12	1/2	3,463.58	1/2	3,852.05
3/4	267.73	3/4	769.23	3/4	1,147.46	3/4	1,529.34	3/4	1,917.82	3/4	2,306.29	3/4	2,694.76	3/4	3,083.21	3/4	3,471.67	3/4	3,860.15

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.

CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.

CAPACITY TABLE ONLY APPLIES TO INNAGE GAUGES TAKEN TO TOP OF 2" HERMETIC VALVE

GAUGE POINT: (HERMETIC) LOCATED 12'-06" OFF CENTERLINE AND 44'-00" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77688

<http://www.pmacorp.net>

Paul J. Mac



BARGE "EMS 509"

2 STBD INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		19 FT.	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
0	3,868.24	0	4,256.72	0	4,639.99	0	4,998.34	0	5,329.46	0	5,633.37	0	5,900.00	0	6,166.67	0	6,433.33	0	6,700.00
1/4	3,876.33	1/4	4,264.81	1/4	4,647.71	1/4	5,005.49	1/4	5,336.05	1/4	5,639.31	1/4	5,906.00	1/4	6,172.67	1/4	6,439.33	1/4	6,706.00
1/2	3,884.43	1/2	4,272.90	1/2	4,655.44	1/2	5,012.64	1/2	5,342.65	1/2	5,645.24	1/2	5,912.00	1/2	6,178.67	1/2	6,445.33	1/2	6,712.00
3/4	3,892.52	3/4	4,281.00	3/4	4,663.16	3/4	5,019.79	3/4	5,349.25	3/4	5,651.17	3/4	5,920.00	3/4	6,184.67	3/4	6,451.33	3/4	6,718.00
1	3,900.61	1	4,289.09	1	4,670.89	1	5,026.95	1	5,355.85	1	5,657.11	1	5,928.00	1	6,191.67	1	6,457.33	1	6,724.00
1/4	3,908.71	1/4	4,297.18	1/4	4,678.57	1/4	5,034.05	1/4	5,362.40	1/4	5,664.04	1/4	5,936.00	1/4	6,198.67	1/4	6,463.33	1/4	6,730.00
1/2	3,916.80	1/2	4,305.28	1/2	4,686.25	1/2	5,041.16	1/2	5,368.96	1/2	5,670.97	1/2	5,944.00	1/2	6,205.67	1/2	6,469.33	1/2	6,736.00
3/4	3,924.89	3/4	4,313.37	3/4	4,693.93	3/4	5,048.26	3/4	5,375.51	3/4	5,677.91	3/4	5,952.00	3/4	6,212.67	3/4	6,475.33	3/4	6,742.00
2	3,932.99	2	4,321.46	2	4,701.61	2	5,055.37	2	5,382.06	2	5,684.84	2	5,960.00	2	6,219.67	2	6,481.33	2	6,748.00
1/4	3,941.08	1/4	4,329.56	1/4	4,709.24	1/4	5,062.43	1/4	5,388.57	1/4	5,692.80	1/4	5,968.00	1/4	6,226.67	1/4	6,487.33	1/4	6,754.00
1/2	3,949.17	1/2	4,337.65	1/2	4,716.87	1/2	5,069.49	1/2	5,395.08	1/2	5,700.76	1/2	5,976.00	1/2	6,233.67	1/2	6,493.33	1/2	6,760.00
3/4	3,957.27	3/4	4,345.74	3/4	4,724.50	3/4	5,076.54	3/4	5,401.58	3/4	5,708.72	3/4	5,984.00	3/4	6,240.67	3/4	6,499.33	3/4	6,766.00
3	3,965.36	3	4,353.84	3	4,732.14	3	5,083.60	3	5,408.09	3	5,716.68	3	5,992.00	3	6,247.67	3	6,505.33	3	6,772.00
1/4	3,973.45	1/4	4,361.93	1/4	4,739.72	1/4	5,090.62	1/4	5,414.55	1/4	5,724.64	1/4	5,999.00	1/4	6,254.67	1/4	6,511.33	1/4	6,778.00
1/2	3,981.55	1/2	4,370.02	1/2	4,747.31	1/2	5,097.63	1/2	5,421.01	1/2	5,732.60	1/2	5,999.00	1/2	6,261.67	1/2	6,517.33	1/2	6,784.00
3/4	3,989.64	3/4	4,378.12	3/4	4,754.90	3/4	5,104.64	3/4	5,427.47	3/4	5,740.56	3/4	5,999.00	3/4	6,268.67	3/4	6,523.33	3/4	6,790.00
4	3,997.73	4	4,386.21	4	4,762.48	4	5,111.66	4	5,433.93	4	5,748.52	4	5,999.00	4	6,275.67	4	6,529.33	4	6,796.00
1/4	4,005.83	1/4	4,394.29	1/4	4,770.02	1/4	5,118.63	1/4	5,440.35	1/4	5,755.97	1/4	5,999.00	1/4	6,282.67	1/4	6,535.33	1/4	6,802.00
1/2	4,013.92	1/2	4,402.37	1/2	4,777.57	1/2	5,125.59	1/2	5,446.76	1/2	5,763.42	1/2	5,999.00	1/2	6,289.67	1/2	6,541.33	1/2	6,808.00
3/4	4,022.01	3/4	4,410.45	3/4	4,785.11	3/4	5,132.56	3/4	5,453.18	3/4	5,770.87	3/4	5,999.00	3/4	6,296.67	3/4	6,547.33	3/4	6,814.00
5	4,030.10	5	4,418.54	5	4,792.65	5	5,139.53	5	5,459.59	5	5,778.33	5	5,999.00	5	6,303.67	5	6,553.33	5	6,820.00
1/4	4,038.20	1/4	4,426.58	1/4	4,800.14	1/4	5,146.45	1/4	5,465.96	1/4	5,785.07	1/4	5,999.00	1/4	6,310.67	1/4	6,559.33	1/4	6,826.00
1/2	4,046.29	1/2	4,434.63	1/2	4,807.64	1/2	5,153.37	1/2	5,472.33	1/2	5,792.11	1/2	5,999.00	1/2	6,317.67	1/2	6,565.33	1/2	6,832.00
3/4	4,054.38	3/4	4,442.68	3/4	4,815.13	3/4	5,160.29	3/4	5,478.70	3/4	5,800.87	3/4	5,999.00	3/4	6,324.67	3/4	6,571.33	3/4	6,838.00
6	4,062.48	6	4,450.72	6	4,822.63	6	5,167.21	6	5,485.07	6	5,808.00	6	5,999.00	6	6,331.67	6	6,577.33	6	6,844.00
1/4	4,070.57	1/4	4,458.73	1/4	4,830.07	1/4	5,174.09	1/4	5,491.39	1/4	5,815.07	1/4	5,999.00	1/4	6,338.67	1/4	6,583.33	1/4	6,850.00
1/2	4,078.66	1/2	4,466.73	1/2	4,837.52	1/2	5,180.96	1/2	5,497.71	1/2	5,820.11	1/2	5,999.00	1/2	6,345.67	1/2	6,589.33	1/2	6,856.00
3/4	4,086.76	3/4	4,474.73	3/4	4,844.97	3/4	5,187.84	3/4	5,504.04	3/4	5,827.11	3/4	5,999.00	3/4	6,352.67	3/4	6,595.33	3/4	6,862.00
7	4,094.85	7	4,482.73	7	4,852.42	7	5,194.71	7	5,510.36	7	5,832.11	7	5,999.00	7	6,359.67	7	6,601.33	7	6,868.00
1/4	4,102.94	1/4	4,490.68	1/4	4,859.82	1/4	5,201.54	1/4	5,516.64	1/4	5,839.11	1/4	5,999.00	1/4	6,366.67	1/4	6,607.33	1/4	6,874.00
1/2	4,111.04	1/2	4,498.64	1/2	4,867.23	1/2	5,208.37	1/2	5,522.91	1/2	5,846.11	1/2	5,999.00	1/2	6,373.67	1/2	6,613.33	1/2	6,880.00
3/4	4,119.13	3/4	4,506.59	3/4	4,874.63	3/4	5,215.20	3/4	5,529.19	3/4	5,853.11	3/4	5,999.00	3/4	6,380.67	3/4	6,619.33	3/4	6,886.00
8	4,127.22	8	4,514.55	8	4,882.03	8	5,222.03	8	5,535.47	8	5,861.11	8	5,999.00	8	6,387.67	8	6,625.33	8	6,892.00
1/4	4,135.32	1/4	4,522.46	1/4	4,889.38	1/4	5,228.81	1/4	5,541.70	1/4	5,868.11	1/4	5,999.00	1/4	6,394.67	1/4	6,631.33	1/4	6,898.00
1/2	4,143.41	1/2	4,530.37	1/2	4,896.72	1/2	5,235.60	1/2	5,547.93	1/2	5,875.11	1/2	5,999.00	1/2	6,401.67	1/2	6,637.33	1/2	6,904.00
3/4	4,151.50	3/4	4,538.28	3/4	4,904.07	3/4	5,242.38	3/4	5,554.16	3/4	5,882.11	3/4	5,999.00	3/4	6,408.67	3/4	6,643.33	3/4	6,910.00
9	4,159.60	9	4,546.19	9	4,911.42	9	5,249.16	9	5,560.39	9	5,889.11	9	5,999.00	9	6,415.67	9	6,649.33	9	6,916.00
1/4	4,167.69	1/4	4,554.05	1/4	4,918.71	1/4	5,255.90	1/4	5,566.57	1/4	5,896.11	1/4	5,999.00	1/4	6,422.67	1/4	6,655.33	1/4	6,922.00
1/2	4,175.78	1/2	4,561.91	1/2	4,926.00	1/2	5,262.64	1/2	5,572.76	1/2	5,903.11	1/2	5,999.00	1/2	6,429.67	1/2	6,661.33	1/2	6,928.00
3/4	4,183.88	3/4	4,569.77	3/4	4,933.28	3/4	5,269.37	3/4	5,578.94	3/4	5,910.11	3/4	5,999.00	3/4	6,436.67	3/4	6,667.33	3/4	6,934.00
10	4,191.97	10	4,577.64	10	4,940.57	10	5,276.11	10	5,585.13	10	5,917.11	10	5,999.00	10	6,443.67	10	6,673.33	10	6,940.00
1/4	4,200.06	1/4	4,585.45	1/4	4,947.82	1/4	5,282.80	1/4	5,591.21	1/4	5,924.11	1/4	5,999.00	1/4	6,450.67	1/4	6,679.33	1/4	6,946.00
1/2	4,208.16	1/2	4,593.27	1/2	4,955.06	1/2	5,289.49	1/2	5,597.29	1/2	5,931.11	1/2	5,999.00	1/2	6,457.67	1/2	6,685.33	1/2	6,952.00
3/4	4,216.25	3/4	4,601.09	3/4	4,962.31	3/4	5,296.18	3/4	5,603.37	3/4	5,938.11	3/4	5,999.00	3/4	6,464.67	3/4	6,691.33	3/4	6,958.00
11	4,224.34	11	4,608.91	11	4,969.55	11	5,302.88	11	5,609.46	11	5,945.11	11	5,999.00	11	6,471.67	11	6,697.33	11	6,964.00
1/4	4,232.44	1/4	4,616.68	1/4	4,976.75	1/4	5,309.52	1/4	5,615.43	1/4	5,952.11	1/4	5,999.00	1/4	6,478.67	1/4	6,703.33	1/4	6,970.00
1/2	4,240.53	1/2	4,624.45	1/2	4,983.94	1/2	5,316.17	1/2	5,621.41	1/2	5,959.11	1/2	5,999.00	1/2	6,485.67	1/2	6,709.33	1/2	6,976.00
3/4	4,248.62	3/4	4,632.22	3/4	4,991.14	3/4	5,322.81	3/4	5,627.39	3/4	5,966.11	3/4	5,999.00	3/4	6,492.67	3/4	6,715.33	3/4	6,982.00

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 8/05/2019 JS
CALCULATED: 08/06/2019 CL
PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2019

PRECISION MEASUREMENT
& ANALYSIS, INC.
P.O. Box 2092
Pearland, Texas 77588
<http://www.pmacorp.net>

Paul J. Hume



BARGE "EMS 509"

3 PORT INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

0 FT.		1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.		7 FT.		8 FT.		9 FT.	
IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	13.02	0	362.25	0	723.84	0	1,085.18	0	1,446.98	0	1,808.79	0	2,170.59	0	2,532.37	0	2,893.99	0	3,255.60
1/4	18.05	1/4	369.79	1/4	731.36	1/4	1,092.71	1/4	1,454.52	1/4	1,816.32	1/4	2,178.13	1/4	2,539.91	1/4	2,901.52	1/4	3,263.13
1/2	23.07	1/2	377.33	1/2	738.87	1/2	1,100.25	1/2	1,462.06	1/2	1,823.86	1/2	2,185.67	1/2	2,547.44	1/2	2,909.05	1/2	3,270.67
3/4	28.10	3/4	384.87	3/4	746.39	3/4	1,107.79	3/4	1,469.59	3/4	1,831.40	3/4	2,193.20	3/4	2,554.97	3/4	2,916.59	3/4	3,278.20
1	33.12	1	392.40	1	753.90	1	1,115.33	1	1,477.13	1	1,838.94	1	2,200.74	1	2,562.51	1	2,924.12	1	3,285.73
1/4	40.03	1/4	399.94	1/4	761.42	1/4	1,122.86	1/4	1,484.67	1/4	1,846.47	1/4	2,208.28	1/4	2,570.04	1/4	2,931.65	1/4	3,298.27
1/2	46.94	1/2	407.48	1/2	768.94	1/2	1,130.40	1/2	1,492.21	1/2	1,854.01	1/2	2,215.82	1/2	2,577.57	1/2	2,939.19	1/2	3,300.80
3/4	53.85	3/4	415.02	3/4	776.45	3/4	1,137.94	3/4	1,499.74	3/4	1,861.55	3/4	2,223.35	3/4	2,585.11	3/4	2,946.72	3/4	3,308.33
2	60.76	2	422.55	2	783.97	2	1,145.48	2	1,507.28	2	1,869.09	2	2,230.89	2	2,592.64	2	2,954.25	2	3,315.87
1/4	68.29	1/4	430.09	1/4	791.49	1/4	1,153.01	1/4	1,514.82	1/4	1,876.62	1/4	2,238.43	1/4	2,600.17	1/4	2,961.79	1/4	3,323.40
1/2	75.83	1/2	437.63	1/2	799.00	1/2	1,160.55	1/2	1,522.36	1/2	1,884.16	1/2	2,245.97	1/2	2,607.71	1/2	2,969.32	1/2	3,330.93
3/4	83.37	3/4	445.16	3/4	806.52	3/4	1,168.09	3/4	1,529.89	3/4	1,891.70	3/4	2,253.50	3/4	2,615.24	3/4	2,976.85	3/4	3,338.47
3	90.91	3	452.70	3	814.04	3	1,175.63	3	1,537.43	3	1,899.24	3	2,261.04	3	2,622.78	3	2,984.39	3	3,346.00
1/4	98.44	1/4	460.24	1/4	821.55	1/4	1,183.16	1/4	1,544.97	1/4	1,906.77	1/4	2,268.58	1/4	2,630.31	1/4	2,991.92	1/4	3,353.54
1/2	105.98	1/2	467.78	1/2	829.07	1/2	1,190.70	1/2	1,552.51	1/2	1,914.31	1/2	2,276.12	1/2	2,637.84	1/2	2,999.46	1/2	3,361.07
3/4	113.52	3/4	475.31	3/4	836.58	3/4	1,198.24	3/4	1,560.04	3/4	1,921.85	3/4	2,283.65	3/4	2,645.38	3/4	3,006.99	3/4	3,368.61
4	121.06	4	482.85	4	844.10	4	1,205.78	4	1,567.58	4	1,929.39	4	2,291.19	4	2,652.91	4	3,014.52	4	3,376.14
1/4	128.59	1/4	490.39	1/4	851.62	1/4	1,213.32	1/4	1,575.12	1/4	1,936.92	1/4	2,298.73	1/4	2,660.44	1/4	3,022.06	1/4	3,383.68
1/2	136.13	1/2	497.93	1/2	859.13	1/2	1,220.85	1/2	1,582.66	1/2	1,944.46	1/2	2,306.27	1/2	2,667.98	1/2	3,029.59	1/2	3,391.21
3/4	143.67	3/4	505.46	3/4	866.65	3/4	1,228.39	3/4	1,590.20	3/4	1,952.00	3/4	2,313.80	3/4	2,675.51	3/4	3,037.12	3/4	3,398.75
5	151.21	5	513.00	5	874.17	5	1,235.93	5	1,597.73	5	1,959.54	5	2,321.34	5	2,683.04	5	3,044.66	5	3,406.28
1/4	158.74	1/4	520.54	1/4	881.69	1/4	1,243.47	1/4	1,605.27	1/4	1,967.08	1/4	2,328.88	1/4	2,690.58	1/4	3,052.19	1/4	3,413.80
1/2	166.28	1/2	528.08	1/2	889.22	1/2	1,251.00	1/2	1,612.81	1/2	1,974.61	1/2	2,336.42	1/2	2,698.11	1/2	3,059.72	1/2	3,421.32
3/4	173.82	3/4	535.61	3/4	896.75	3/4	1,258.54	3/4	1,620.35	3/4	1,982.15	3/4	2,343.96	3/4	2,705.65	3/4	3,067.26	3/4	3,428.83
6	181.36	6	543.15	6	904.27	6	1,266.08	6	1,627.88	6	1,999.69	6	2,351.49	6	2,713.18	6	3,074.79	6	3,436.35
1/4	188.89	1/4	550.69	1/4	911.81	1/4	1,273.62	1/4	1,635.42	1/4	1,997.23	1/4	2,359.03	1/4	2,720.71	1/4	3,082.33	1/4	3,443.86
1/2	196.43	1/2	558.23	1/2	919.35	1/2	1,281.15	1/2	1,642.96	1/2	2,004.76	1/2	2,366.57	1/2	2,728.25	1/2	3,089.86	1/2	3,451.36
3/4	203.97	3/4	565.76	3/4	926.89	3/4	1,288.69	3/4	1,650.50	3/4	2,012.30	3/4	2,374.11	3/4	2,735.78	3/4	3,097.39	3/4	3,458.86
7	211.51	7	573.30	7	934.42	7	1,296.23	7	1,658.03	7	2,019.84	7	2,381.64	7	2,743.31	7	3,104.93	7	3,466.36
1/4	219.04	1/4	580.84	1/4	941.96	1/4	1,303.77	1/4	1,665.57	1/4	2,027.38	1/4	2,389.18	1/4	2,750.85	1/4	3,112.46	1/4	3,473.87
1/2	226.58	1/2	588.38	1/2	949.50	1/2	1,311.30	1/2	1,673.11	1/2	2,034.91	1/2	2,396.72	1/2	2,758.38	1/2	3,119.99	1/2	3,481.37
3/4	234.12	3/4	595.91	3/4	957.04	3/4	1,318.84	3/4	1,680.65	3/4	2,042.45	3/4	2,404.26	3/4	2,765.91	3/4	3,127.53	3/4	3,488.87
8	241.66	8	603.45	8	964.57	8	1,326.38	8	1,688.18	8	2,049.99	8	2,411.80	8	2,773.45	8	3,135.06	8	3,496.38
1/4	249.19	1/4	610.99	1/4	972.11	1/4	1,333.92	1/4	1,695.72	1/4	2,057.53	1/4	2,419.33	1/4	2,780.98	1/4	3,142.59	1/4	3,503.88
1/2	256.73	1/2	618.53	1/2	979.65	1/2	1,341.45	1/2	1,703.26	1/2	2,065.06	1/2	2,426.87	1/2	2,788.51	1/2	3,150.13	1/2	3,511.38
3/4	264.27	3/4	626.06	3/4	987.19	3/4	1,348.99	3/4	1,710.80	3/4	2,072.60	3/4	2,434.41	3/4	2,796.05	3/4	3,157.66	3/4	3,518.88
9	271.80	9	633.60	9	994.72	9	1,356.53	9	1,718.33	9	2,080.14	9	2,441.95	9	2,803.58	9	3,165.19	9	3,526.39
1/4	279.34	1/4	641.13	1/4	1,002.26	1/4	1,364.07	1/4	1,725.87	1/4	2,087.68	1/4	2,449.48	1/4	2,811.12	1/4	3,172.73	1/4	3,533.89
1/2	286.88	1/2	648.65	1/2	1,009.80	1/2	1,371.60	1/2	1,733.41	1/2	2,095.21	1/2	2,457.02	1/2	2,818.65	1/2	3,180.26	1/2	3,541.39
3/4	294.42	3/4	656.18	3/4	1,017.34	3/4	1,379.14	3/4	1,740.95	3/4	2,102.75	3/4	2,464.56	3/4	2,826.18	3/4	3,187.80	3/4	3,548.90
10	301.95	10	663.71	10	1,024.88	10	1,386.68	10	1,748.48	10	2,110.29	10	2,472.10	10	2,833.72	10	3,195.33	10	3,556.40
1/4	309.49	1/4	671.22	1/4	1,032.41	1/4	1,394.22	1/4	1,756.02	1/4	2,117.83	1/4	2,479.63	1/4	2,841.25	1/4	3,202.86	1/4	3,563.90
1/2	317.03	1/2	678.74	1/2	1,039.95	1/2	1,401.76	1/2	1,763.56	1/2	2,125.36	1/2	2,487.17	1/2	2,848.78	1/2	3,210.40	1/2	3,571.40
3/4	324.57	3/4	686.26	3/4	1,047.49	3/4	1,409.29	3/4	1,771.10	3/4	2,132.90	3/4	2,494.70	3/4	2,856.32	3/4	3,217.93	3/4	3,578.91
11	332.10	11	693.77	11	1,055.03	11	1,416.83	11	1,778.64	11	2,140.44	11	2,502.24	11	2,863.85	11	3,225.46	11	3,586.41
1/4	339.64	1/4	701.29	1/4	1,062.56	1/4	1,424.37	1/4	1,786.17	1/4	2,147.98	1/4	2,509.77	1/4	2,871.38	1/4	3,233.00	1/4	3,593.91
1/2	347.18	1/2	708.81	1/2	1,070.10	1/2	1,431.91	1/2	1,793.71	1/2	2,155.52	1/2	2,517.31	1/2	2,878.92	1/2	3,240.53	1/2	3,601.42
3/4	354.72	3/4	716.32	3/4	1,077.64	3/4	1,439.44	3/4	1,801.25	3/4	2,163.05	3/4	2,524.84	3/4	2,886.45	3/4	3,248.06	3/4	3,608.92

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.

CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.

CAPACITY TABLE ONLY APPLIES TO INNAGE GAUGES TAKEN TO TOP OF 2" HERMETIC VALVE
GAUGE POINT: (HERMETIC) LOCATED 12'-06" OFF CENTERLINE AND 41'-00" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588
<http://www.jmacorp.net>



BARGE "EMS 509"

3 PORT INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		GAUGE HEIGHT 16'-04 1/2"	
IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
0	3,616.42	0	3,913.98	0	4,203.96	0	4,470.66	0	4,712.01	0	4,927.91	0		0		0		0	
1/4	3,623.25	1/4	3,920.13	1/4	4,209.76	1/4	4,475.93	1/4	4,716.76	1/4	4,932.04	1/4		1/4		1/4		1/4	
1/2	3,630.07	1/2	3,926.27	1/2	4,215.55	1/2	4,481.19	1/2	4,721.51	1/2	4,936.16	1/2		1/2		1/2		1/2	
3/4	3,636.89	3/4	3,932.41	3/4	4,221.35	3/4	4,486.46	3/4	4,726.25	3/4	4,940.29	3/4		3/4		3/4		3/4	
1	3,643.71	1	3,938.55	1	4,227.15	1	4,491.72	1	4,731.00	1	4,944.41	1		1		1		1	
1/4	3,649.86	1/4	3,944.70	1/4	4,232.90	1/4	4,496.94	1/4	4,735.71	1/4	4,949.47	1/4		1/4		1/4		1/4	
1/2	3,656.00	1/2	3,950.84	1/2	4,238.66	1/2	4,502.17	1/2	4,740.41	1/2	4,954.54	1/2		1/2		1/2		1/2	
3/4	3,662.14	3/4	3,956.98	3/4	4,244.41	3/4	4,507.39	3/4	4,745.12	3/4	4,959.60	3/4		3/4		3/4		3/4	
2	3,668.28	2	3,963.12	2	4,250.17	2	4,512.61	2	4,749.82	2	4,964.66	2		2		2		2	
1/4	3,674.43	1/4	3,969.27	1/4	4,255.88	1/4	4,517.79	1/4	4,754.48	1/4	4,970.68	1/4		1/4		1/4		1/4	
1/2	3,680.57	1/2	3,975.41	1/2	4,261.59	1/2	4,522.97	1/2	4,759.15	1/2	4,976.70	1/2		1/2		1/2		1/2	
3/4	3,686.71	3/4	3,981.55	3/4	4,267.30	3/4	4,528.15	3/4	4,763.81	3/4	4,982.72	3/4		3/4		3/4		3/4	
3	3,692.85	3	3,987.69	3	4,273.02	3	4,533.32	3	4,768.47	3	4,988.74	3		3		3		3	
1/4	3,699.00	1/4	3,993.84	1/4	4,278.66	1/4	4,538.46	1/4	4,773.09	1/4	4,994.76	1/4		1/4		1/4		1/4	
1/2	3,705.14	1/2	3,999.98	1/2	4,284.35	1/2	4,543.60	1/2	4,777.71	1/2	5,000.78	1/2		1/2		1/2		1/2	
3/4	3,711.28	3/4	4,006.12	3/4	4,290.02	3/4	4,548.73	3/4	4,782.33	3/4	5,006.80	3/4		3/4		3/4		3/4	
4	3,717.42	4	4,012.26	4	4,295.69	4	4,553.87	4	4,786.95	4	5,012.82	4		4		4		4	
1/4	3,723.57	1/4	4,018.40	1/4	4,301.32	1/4	4,558.96	1/4	4,791.52	1/4	5,018.37	1/4		1/4		1/4		1/4	
1/2	3,729.71	1/2	4,024.53	1/2	4,306.94	1/2	4,564.05	1/2	4,796.10	1/2	5,023.92	1/2		1/2		1/2		1/2	
3/4	3,735.85	3/4	4,030.66	3/4	4,312.57	3/4	4,569.15	3/4	4,800.67	3/4	5,029.47	3/4		3/4		3/4		3/4	
5	3,741.99	5	4,036.79	5	4,318.19	5	4,574.24	5	4,805.25	5	5,035.02	5		5		5		5	
1/4	3,748.14	1/4	4,042.89	1/4	4,323.78	1/4	4,579.29	1/4	4,809.78	1/4				1/4		1/4		1/4	
1/2	3,754.28	1/2	4,048.99	1/2	4,329.36	1/2	4,584.34	1/2	4,814.31	1/2				1/2		1/2		1/2	
3/4	3,760.42	3/4	4,055.09	3/4	4,334.94	3/4	4,589.39	3/4	4,818.85	3/4				3/4		3/4		3/4	
6	3,766.56	6	4,061.19	6	4,340.52	6	4,594.44	6	4,823.38	6				6		6		6	
1/4	3,772.71	1/4	4,067.25	1/4	4,346.06	1/4	4,599.44	1/4	4,827.87	1/4				1/4		1/4		1/4	
1/2	3,778.85	1/2	4,073.30	1/2	4,351.60	1/2	4,604.45	1/2	4,832.36	1/2				1/2		1/2		1/2	
3/4	3,784.99	3/4	4,079.36	3/4	4,357.14	3/4	4,609.46	3/4	4,836.85	3/4				3/4		3/4		3/4	
7	3,791.13	7	4,085.41	7	4,362.68	7	4,614.46	7	4,841.34	7				7		7		7	
1/4	3,797.28	1/4	4,091.43	1/4	4,368.18	1/4	4,619.43	1/4	4,845.78	1/4				1/4		1/4		1/4	
1/2	3,803.42	1/2	4,097.44	1/2	4,373.68	1/2	4,624.39	1/2	4,850.23	1/2				1/2		1/2		1/2	
3/4	3,809.56	3/4	4,103.45	3/4	4,379.17	3/4	4,629.35	3/4	4,854.68	3/4				3/4		3/4		3/4	
8	3,815.70	8	4,109.47	8	4,384.67	8	4,634.32	8	4,859.12	8				8		8		8	
1/4	3,821.85	1/4	4,115.44	1/4	4,390.11	1/4	4,639.24	1/4	4,863.53	1/4				1/4		1/4		1/4	
1/2	3,827.99	1/2	4,121.41	1/2	4,395.56	1/2	4,644.16	1/2	4,867.93	1/2				1/2		1/2		1/2	
3/4	3,834.13	3/4	4,127.38	3/4	4,401.00	3/4	4,649.08	3/4	4,872.33	3/4				3/4		3/4		3/4	
9	3,840.27	9	4,133.35	9	4,406.45	9	4,654.00	9	4,876.74	9				9		9		9	
1/4	3,846.42	1/4	4,139.28	1/4	4,411.84	1/4	4,658.88	1/4	4,881.10	1/4				1/4		1/4		1/4	
1/2	3,852.56	1/2	4,145.20	1/2	4,417.24	1/2	4,663.75	1/2	4,885.46	1/2				1/2		1/2		1/2	
3/4	3,858.70	3/4	4,151.13	3/4	4,422.63	3/4	4,668.63	3/4	4,889.82	3/4				3/4		3/4		3/4	
10	3,864.84	10	4,157.06	10	4,428.03	10	4,673.51	10	4,894.18	10				10		10		10	
1/4	3,870.99	1/4	4,162.94	1/4	4,433.38	1/4	4,678.34	1/4	4,898.44	1/4				1/4		1/4		1/4	
1/2	3,877.13	1/2	4,168.83	1/2	4,438.73	1/2	4,683.18	1/2	4,902.71	1/2				1/2		1/2		1/2	
3/4	3,883.27	3/4	4,174.71	3/4	4,444.08	3/4	4,688.01	3/4	4,906.97	3/4				3/4		3/4		3/4	
11	3,889.41	11	4,180.59	11	4,449.43	11	4,692.84	11	4,911.24	11				11		11		11	
1/4	3,895.56	1/4	4,186.43	1/4	4,454.74	1/4	4,697.64	1/4	4,915.41	1/4				1/4		1/4		1/4	
1/2	3,901.70	1/2	4,192.28	1/2	4,460.05	1/2	4,702.43	1/2	4,919.57	1/2				1/2		1/2		1/2	
3/4	3,907.84	3/4	4,198.12	3/4	4,465.35	3/4	4,707.22	3/4	4,923.74	3/4				3/4		3/4		3/4	

STRAPPED: 8/05/2019 JS

CALCULATED: 08/06/2019 CL

PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES

ALL PRIOR TO 08/2019

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588

<http://www.pmacorp.net>

Paul J. Mac



BARGE "EMS 509"

3 STBD

INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

0 FT.		1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.		7 FT.		8 FT.		9 FT.	
IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	13.04	0	362.43	0	723.98	0	1,075.52	0	1,431.39	0	1,792.94	0	2,151.74	0	2,513.13	0	2,874.34	0	3,235.77
1/4	18.07	1/4	369.97	1/4	731.50	1/4	1,082.73	1/4	1,438.93	1/4	1,800.44	1/4	2,159.25	1/4	2,520.65	1/4	2,881.87	1/4	3,243.30
1/2	23.10	1/2	377.51	1/2	739.01	1/2	1,089.94	1/2	1,446.46	1/2	1,807.94	1/2	2,166.75	1/2	2,528.17	1/2	2,889.40	1/2	3,250.83
3/4	28.13	3/4	385.04	3/4	746.53	3/4	1,097.15	3/4	1,453.99	3/4	1,815.44	3/4	2,174.26	3/4	2,535.69	3/4	2,896.93	3/4	3,258.36
1	33.17	1	392.58	1	754.04	1	1,104.36	1	1,461.52	1	1,822.94	1	2,181.76	1	2,543.21	1	2,904.46	1	3,265.89
1/4	40.09	1/4	400.12	1/4	761.56	1/4	1,111.57	1/4	1,469.06	1/4	1,830.41	1/4	2,189.30	1/4	2,550.73	1/4	2,911.99	1/4	3,273.42
1/2	47.00	1/2	407.65	1/2	769.08	1/2	1,118.79	1/2	1,476.59	1/2	1,837.89	1/2	2,196.83	1/2	2,558.24	1/2	2,919.52	1/2	3,280.95
3/4	53.92	3/4	415.19	3/4	776.59	3/4	1,126.01	3/4	1,484.12	3/4	1,845.36	3/4	2,204.37	3/4	2,565.76	3/4	2,927.05	3/4	3,288.48
2	60.84	2	422.72	2	784.11	2	1,133.22	2	1,491.65	2	1,852.83	2	2,211.90	2	2,573.28	2	2,934.58	2	3,296.01
1/4	68.39	1/4	430.26	1/4	791.62	1/4	1,140.44	1/4	1,499.18	1/4	1,860.30	1/4	2,219.44	1/4	2,580.80	1/4	2,942.11	1/4	3,303.54
1/2	75.94	1/2	437.80	1/2	799.14	1/2	1,147.66	1/2	1,506.72	1/2	1,867.78	1/2	2,226.97	1/2	2,588.32	1/2	2,949.64	1/2	3,311.07
3/4	83.49	3/4	445.33	3/4	806.65	3/4	1,154.88	3/4	1,514.25	3/4	1,875.25	3/4	2,234.51	3/4	2,595.84	3/4	2,957.17	3/4	3,318.60
3	91.04	3	452.87	3	814.17	3	1,162.11	3	1,521.78	3	1,882.72	3	2,242.05	3	2,603.35	3	2,964.70	3	3,326.13
1/4	98.58	1/4	460.41	1/4	821.69	1/4	1,169.33	1/4	1,529.31	1/4	1,890.20	1/4	2,249.58	1/4	2,610.87	1/4	2,972.23	1/4	3,333.66
1/2	106.13	1/2	467.94	1/2	829.20	1/2	1,176.55	1/2	1,536.84	1/2	1,897.67	1/2	2,257.12	1/2	2,618.39	1/2	2,979.76	1/2	3,341.19
3/4	113.68	3/4	475.48	3/4	836.72	3/4	1,183.77	3/4	1,544.38	3/4	1,905.14	3/4	2,264.65	3/4	2,625.91	3/4	2,987.29	3/4	3,348.72
4	121.23	4	483.02	4	844.23	4	1,190.99	4	1,551.91	4	1,912.61	4	2,272.19	4	2,633.43	4	2,994.82	4	3,356.25
1/4	128.77	1/4	490.55	1/4	851.59	1/4	1,198.37	1/4	1,559.44	1/4	1,920.09	1/4	2,279.72	1/4	2,640.95	1/4	3,002.35	1/4	3,363.78
1/2	136.32	1/2	498.09	1/2	858.95	1/2	1,205.74	1/2	1,566.97	1/2	1,927.56	1/2	2,287.26	1/2	2,648.47	1/2	3,009.88	1/2	3,371.31
3/4	143.87	3/4	505.63	3/4	866.31	3/4	1,213.12	3/4	1,574.50	3/4	1,935.03	3/4	2,294.79	3/4	2,655.99	3/4	3,017.41	3/4	3,378.84
5	151.41	5	513.16	5	873.67	5	1,220.50	5	1,582.04	5	1,942.50	5	2,302.33	5	2,663.51	5	3,024.94	5	3,386.37
1/4	158.95	1/4	520.70	1/4	880.87	1/4	1,228.03	1/4	1,589.57	1/4	1,949.98	1/4	2,309.86	1/4	2,671.04	1/4	3,032.47	1/4	3,393.89
1/2	166.49	1/2	528.24	1/2	888.08	1/2	1,235.56	1/2	1,597.10	1/2	1,957.45	1/2	2,317.40	1/2	2,678.57	1/2	3,040.00	1/2	3,401.40
3/4	174.03	3/4	535.77	3/4	895.28	3/4	1,243.09	3/4	1,604.63	3/4	1,964.92	3/4	2,324.93	3/4	2,686.09	3/4	3,047.53	3/4	3,408.92
6	181.57	6	543.31	6	902.49	6	1,250.62	6	1,612.17	6	1,972.40	6	2,332.47	6	2,693.62	6	3,055.06	6	3,416.43
1/4	189.10	1/4	550.85	1/4	909.70	1/4	1,258.16	1/4	1,619.70	1/4	1,979.87	1/4	2,340.00	1/4	2,701.15	1/4	3,062.59	1/4	3,423.93
1/2	196.64	1/2	558.38	1/2	916.91	1/2	1,265.69	1/2	1,627.23	1/2	1,987.34	1/2	2,347.54	1/2	2,708.68	1/2	3,070.12	1/2	3,431.43
3/4	204.17	3/4	565.92	3/4	924.12	3/4	1,273.22	3/4	1,634.76	3/4	1,994.81	3/4	2,355.07	3/4	2,716.21	3/4	3,077.65	3/4	3,438.93
7	211.71	7	573.45	7	931.33	7	1,280.75	7	1,642.29	7	2,002.29	7	2,362.61	7	2,723.74	7	3,085.18	7	3,446.43
1/4	219.24	1/4	580.99	1/4	938.54	1/4	1,288.28	1/4	1,649.83	1/4	2,009.76	1/4	2,370.15	1/4	2,731.27	1/4	3,092.71	1/4	3,453.93
1/2	226.78	1/2	588.53	1/2	945.75	1/2	1,295.82	1/2	1,657.36	1/2	2,017.23	1/2	2,377.68	1/2	2,738.80	1/2	3,100.24	1/2	3,461.43
3/4	234.31	3/4	596.06	3/4	952.95	3/4	1,303.35	3/4	1,664.89	3/4	2,024.71	3/4	2,385.22	3/4	2,746.33	3/4	3,107.77	3/4	3,468.93
8	241.85	8	603.60	8	960.16	8	1,310.88	8	1,672.42	8	2,032.18	8	2,392.75	8	2,753.86	8	3,115.30	8	3,476.43
1/4	249.39	1/4	611.14	1/4	967.37	1/4	1,318.41	1/4	1,679.95	1/4	2,039.65	1/4	2,400.28	1/4	2,761.39	1/4	3,122.83	1/4	3,483.93
1/2	256.92	1/2	618.67	1/2	974.58	1/2	1,325.95	1/2	1,687.49	1/2	2,047.12	1/2	2,407.81	1/2	2,768.92	1/2	3,130.36	1/2	3,491.42
3/4	264.46	3/4	626.21	3/4	981.79	3/4	1,333.48	3/4	1,695.02	3/4	2,054.60	3/4	2,415.35	3/4	2,776.45	3/4	3,137.89	3/4	3,498.92
9	271.99	9	633.75	9	989.00	9	1,341.01	9	1,702.55	9	2,062.07	9	2,422.88	9	2,783.98	9	3,145.42	9	3,506.42
1/4	279.53	1/4	641.27	1/4	996.21	1/4	1,348.54	1/4	1,710.08	1/4	2,069.54	1/4	2,430.40	1/4	2,791.51	1/4	3,152.95	1/4	3,513.92
1/2	287.07	1/2	648.80	1/2	1,003.42	1/2	1,356.07	1/2	1,717.61	1/2	2,077.02	1/2	2,437.93	1/2	2,799.04	1/2	3,160.48	1/2	3,521.42
3/4	294.60	3/4	656.33	3/4	1,010.63	3/4	1,363.61	3/4	1,725.15	3/4	2,084.49	3/4	2,445.45	3/4	2,806.57	3/4	3,168.01	3/4	3,528.92
10	302.14	10	663.86	10	1,017.84	10	1,371.14	10	1,732.68	10	2,091.96	10	2,452.98	10	2,814.10	10	3,175.54	10	3,536.42
1/4	309.68	1/4	671.37	1/4	1,025.05	1/4	1,378.67	1/4	1,740.21	1/4	2,099.43	1/4	2,460.50	1/4	2,821.63	1/4	3,183.07	1/4	3,543.93
1/2	317.21	1/2	678.89	1/2	1,032.26	1/2	1,386.20	1/2	1,747.74	1/2	2,106.91	1/2	2,468.02	1/2	2,829.16	1/2	3,190.60	1/2	3,551.43
3/4	324.75	3/4	686.40	3/4	1,039.47	3/4	1,393.73	3/4	1,755.27	3/4	2,114.38	3/4	2,475.54	3/4	2,836.69	3/4	3,198.13	3/4	3,558.94
11	332.29	11	693.92	11	1,046.68	11	1,401.27	11	1,762.81	11	2,121.85	11	2,483.06	11	2,844.22	11	3,205.65	11	3,566.45
1/4	339.82	1/4	701.43	1/4	1,053.89	1/4	1,408.80	1/4	1,770.34	1/4	2,129.32	1/4	2,490.58	1/4	2,851.75	1/4	3,213.18	1/4	3,573.96
1/2	347.36	1/2	708.95	1/2	1,061.10	1/2	1,416.33	1/2	1,777.87	1/2	2,136.80	1/2	2,498.10	1/2	2,859.28	1/2	3,220.71	1/2	3,581.47
3/4	354.90	3/4	716.47	3/4	1,068.31	3/4	1,423.86	3/4	1,785.40	3/4	2,144.27	3/4	2,505.62	3/4	2,866.81	3/4	3,228.24	3/4	3,588.99

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.
CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE ONLY APPLIES TO EXTREME HEIGHT OF TANK.

GAUGE POINT: (HERMETIC) LOCATED 12'-06" OFF CENTERLINE AND 41'-00" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092
Pearland, Texas 77588

<http://www.pmacorp.net>

Signature



BARGE "EMS 509"

3 STBD INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		19 FT.	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
0	3,596.50	0	3,894.91	0	4,185.76	0	4,453.46	0	4,695.93	0	4,913.08	0							
1/4	3,603.34	1/4	3,901.07	1/4	4,191.58	1/4	4,458.75	1/4	4,700.71	1/4	4,917.24	1/4							
1/2	3,610.18	1/2	3,907.23	1/2	4,197.40	1/2	4,464.04	1/2	4,705.48	1/2	4,921.39	1/2							
3/4	3,617.01	3/4	3,913.39	3/4	4,203.22	3/4	4,469.33	3/4	4,710.25	3/4	4,925.54	3/4							
1	3,623.85	1	3,919.55	1	4,209.03	1	4,474.61	1	4,715.03	1	4,929.70	1							
1/4	3,630.01	1/4	3,925.71	1/4	4,214.81	1/4	4,479.86	1/4	4,719.76	1/4	4,934.78	1/4							
1/2	3,636.17	1/2	3,931.87	1/2	4,220.58	1/2	4,485.10	1/2	4,724.49	1/2	4,939.87	1/2							
3/4	3,642.33	3/4	3,938.03	3/4	4,226.36	3/4	4,490.35	3/4	4,729.22	3/4	4,944.95	3/4							
2	3,648.49	2	3,944.19	2	4,232.13	2	4,495.59	2	4,733.95	2	4,950.04	2							
1/4	3,654.65	1/4	3,950.35	1/4	4,237.86	1/4	4,500.79	1/4	4,738.63	1/4	4,956.08	1/4							
1/2	3,660.81	1/2	3,956.51	1/2	4,243.60	1/2	4,505.99	1/2	4,743.32	1/2	4,962.12	1/2							
3/4	3,666.97	3/4	3,962.67	3/4	4,249.33	3/4	4,511.19	3/4	4,748.01	3/4	4,968.15	3/4							
3	3,673.13	3	3,968.83	3	4,255.06	3	4,516.40	3	4,752.69	3	4,974.19	3							
1/4	3,679.29	1/4	3,974.99	1/4	4,260.75	1/4	4,521.55	1/4	4,757.34	1/4	4,980.23	1/4							
1/2	3,685.46	1/2	3,981.15	1/2	4,266.44	1/2	4,526.71	1/2	4,761.98	1/2	4,986.27	1/2							
3/4	3,691.62	3/4	3,987.31	3/4	4,272.13	3/4	4,531.87	3/4	4,766.63	3/4	4,992.31	3/4							
4	3,697.78	4	3,993.47	4	4,277.81	4	4,537.03	4	4,771.27	4	4,998.35	4							
1/4	3,703.94	1/4	3,999.62	1/4	4,283.46	1/4	4,542.15	1/4	4,775.87	1/4	5,003.92	1/4							
1/2	3,710.10	1/2	4,005.77	1/2	4,289.11	1/2	4,547.26	1/2	4,780.47	1/2	5,009.48	1/2							
3/4	3,716.26	3/4	4,011.92	3/4	4,294.75	3/4	4,552.38	3/4	4,785.08	3/4	5,015.05	3/4							
5	3,722.42	5	4,018.07	5	4,300.40	5	4,557.49	5	4,789.68	5	5,020.62	5							
1/4	3,728.58	1/4	4,024.19	1/4	4,306.00	1/4	4,562.57	1/4	4,794.24	1/4									
1/2	3,734.74	1/2	4,030.31	1/2	4,311.61	1/2	4,567.64	1/2	4,798.79	1/2									
3/4	3,740.90	3/4	4,036.43	3/4	4,317.21	3/4	4,572.71	3/4	4,803.35	3/4									
6	3,747.06	6	4,042.54	6	4,322.81	6	4,577.78	6	4,807.91	6									
1/4	3,753.22	1/4	4,048.62	1/4	4,328.37	1/4	4,582.81	1/4	4,812.43	1/4									
1/2	3,759.38	1/2	4,054.69	1/2	4,333.93	1/2	4,587.84	1/2	4,816.94	1/2									
3/4	3,765.54	3/4	4,060.77	3/4	4,339.49	3/4	4,592.87	3/4	4,821.46	3/4									
7	3,771.70	7	4,066.84	7	4,345.05	7	4,597.90	7	4,825.97	7									
1/4	3,777.86	1/4	4,072.80	1/4	4,350.57	1/4	4,602.89	1/4	4,830.45	1/4									
1/2	3,784.02	1/2	4,078.90	1/2	4,356.09	1/2	4,607.88	1/2	4,834.92	1/2									
3/4	3,790.18	3/4	4,084.94	3/4	4,361.61	3/4	4,612.87	3/4	4,839.39	3/4									
8	3,796.34	8	4,090.97	8	4,367.12	8	4,617.85	8	4,843.87	8									
1/4	3,802.50	1/4	4,096.96	1/4	4,372.59	1/4	4,622.80	1/4	4,848.30	1/4									
1/2	3,808.66	1/2	4,102.95	1/2	4,378.06	1/2	4,627.74	1/2	4,852.73	1/2									
3/4	3,814.82	3/4	4,108.94	3/4	4,383.52	3/4	4,632.69	3/4	4,857.16	3/4									
9	3,820.98	9	4,114.92	9	4,388.99	9	4,637.63	9	4,861.59	9									
1/4	3,827.14	1/4	4,120.87	1/4	4,394.41	1/4	4,642.53	1/4	4,865.97	1/4									
1/2	3,833.30	1/2	4,126.82	1/2	4,399.82	1/2	4,647.43	1/2	4,870.36	1/2									
3/4	3,839.46	3/4	4,132.76	3/4	4,405.24	3/4	4,652.34	3/4	4,874.75	3/4									
10	3,845.62	10	4,138.71	10	4,410.65	10	4,657.24	10	4,879.13	10									
1/4	3,851.78	1/4	4,144.61	1/4	4,416.03	1/4	4,662.10	1/4	4,883.43	1/4									
1/2	3,857.94	1/2	4,150.51	1/2	4,421.40	1/2	4,666.95	1/2	4,887.72	1/2									
3/4	3,864.10	3/4	4,156.42	3/4	4,426.77	3/4	4,671.81	3/4	4,892.01	3/4									
11	3,870.26	11	4,162.32	11	4,432.14	11	4,676.67	11	4,896.30	11									
1/4	3,876.42	1/4	4,168.18	1/4	4,437.47	1/4	4,681.49	1/4	4,900.50	1/4									
1/2	3,882.58	1/2	4,174.04	1/2	4,442.80	1/2	4,686.30	1/2	4,904.69	1/2									
3/4	3,888.75	3/4	4,179.90	3/4	4,448.13	3/4	4,691.12	3/4	4,908.89	3/4									

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 8/05/2019 JS
CALCULATED: 08/06/2019 CL
PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2019

PRECISION MEASUREMENT
& ANALYSIS, INC.
P.O. Box 2092
Pearland, Texas 77588
<http://www.pmacorp.net>

Paul J. Mac



BARGE "EMS 509"

ULLAGE TRIM TABLE

	1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.	
	<u>BOW</u>	<u>STERN</u>	<u>BOW</u>	<u>STERN</u>	<u>BOW</u>	<u>STERN</u>	<u>BOW</u>	<u>STERN</u>	<u>BOW</u>	<u>STERN</u>	<u>BOW</u>	<u>STERN</u>
1 PORT	- 00-1/8	00-1/8	- 00-3/8	00-3/8	- 00-1/2	00-1/2	- 00-3/4	00-3/4	- 00-7/8	00-7/8	- 01-1/8	01-1/8
1 STBD	- 00-1/8	00-1/8	- 00-3/8	00-3/8	- 00-1/2	00-1/2	- 00-3/4	00-3/4	- 00-7/8	00-7/8	- 01-1/8	01-1/8
2 PORT	- 00-1/8	00-1/8	- 00-1/4	00-1/4	- 00-3/8	00-3/8	- 00-1/2	00-1/2	- 00-5/8	00-5/8	- 00-3/4	00-3/4
2 STBD	- 00-1/8	00-1/8	- 00-1/4	00-1/4	- 00-3/8	00-3/8	- 00-1/2	00-1/2	- 00-5/8	00-5/8	- 00-3/4	00-3/4
3 PORT	- 00-1/8	00-1/8	- 00-1/4	00-1/4	- 00-3/8	00-3/8	- 00-1/2	00-1/2	- 00-5/8	00-5/8	- 00-3/4	00-3/4
3 STBD	- 00-1/8	00-1/8	- 00-1/4	00-1/4	- 00-3/8	00-3/8	- 00-1/2	00-1/2	- 00-5/8	00-5/8	- 00-3/4	00-3/4

(ALL MEASUREMENTS ABOVE ARE IN INCHES)

EXAMPLE FOR ABOVE TRIM CORRECTIONS:

FWD. DRAFT = 2'-00"
AFT DRAFT = 4'-00"
DIFF. = 2'-00" (DOWN BY STERN)

THE CORRECTION FOR 2'-00" TRIM DOWN BY STERN FOR 1 PORT IS 00-3/8"
FOR A MEASURED ULLAGE GAUGE OF 4'-00" ON 1 PORT, THE TRIM CORRECTED ULLAGE IS 4'-00 3/8"

LENGTH BETWEEN DRAFT MARKS: 236'-06"

August 5, 2019

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092
Pearland, Texas 77588

<http://www.pmacorp.net>



ULLAGE TABLE

0 FT.			1 FT.			2 FT.			3 FT.			4 FT.			5 FT.			6 FT.			7 FT.			8 FT.			GAUGE HEIGHT 18'-00"		
IN	0	IN	0	4,815.17	IN	0	4,547.71	IN	0	4,256.92	IN	0	3,942.13	IN	0	3,605.42	IN	0	3,264.12	IN	0	2,922.83							
1/4	1/4	1/4	1/4	4,809.82	1/4	1/4	4,541.87	1/4	1/4	4,250.59	1/4	1/4	3,935.31	1/4	1/4	3,598.31	1/4	1/4	3,257.01	1/4	1/4	2,915.72							
3/4	3/4	3/4	3/4	4,804.47	1/2	1/2	4,536.04	1/2	1/2	4,244.27	1/2	1/2	3,928.48	1/2	1/2	3,591.19	1/2	1/2	3,249.90	1/2	1/2	2,908.61							
1	1	1	1	4,793.77	3/4	3/4	4,530.20	3/4	3/4	4,237.95	3/4	3/4	3,921.65	3/4	3/4	3,584.08	3/4	3/4	3,242.79	3/4	3/4	2,901.50							
1/4	1/4	1/4	1/4	4,788.38	1/4	1/4	4,518.49	1/4	1/4	4,231.63	1	1	3,914.83	1	1	3,576.97	1	1	3,235.67	1	1	2,894.39							
1/2	1/2	1/2	1/2	4,782.99	1/2	1/2	4,512.61	1/2	1/2	4,218.91	1/2	1/2	3,907.96	1/4	1/4	3,569.86	1/4	1/4	3,228.56	1/4	1/4	2,887.28							
3/4	3/4	3/4	3/4	4,777.60	3/4	3/4	4,506.74	3/4	3/4	4,212.54	3/4	3/4	3,894.33	3/4	3/4	3,562.75	3/4	3/4	3,221.45	3/4	3/4	2,880.17							
2	2	2	2	4,772.21	2	2	4,500.86	2	2	4,206.18	2	2	3,887.36	2	2	3,548.53	2	2	3,207.23	2	2	2,865.95							
1/4	1/4	1/4	1/4	4,766.78	1/4	1/4	4,494.95	1/4	1/4	4,199.78	1/4	1/4	3,880.45	1/4	1/4	3,541.42	1/4	1/4	3,200.12	1/4	1/4	2,865.95							
1/2	1/2	1/2	1/2	4,761.35	1/2	1/2	4,489.03	1/2	1/2	4,193.38	1/2	1/2	3,873.54	1/2	1/2	3,534.31	1/2	1/2	3,193.01	1/2	1/2	2,851.73							
3/4	3/4	3/4	3/4	4,755.92	3/4	3/4	4,483.11	3/4	3/4	4,186.97	3/4	3/4	3,866.63	3/4	3/4	3,527.20	3/4	3/4	3,185.90	3/4	3/4	2,844.62							
3	3	3	3	4,750.49	3	3	4,477.20	3	3	4,180.57	3	3	3,859.73	3	3	3,520.09	3	3	3,178.79	3	3	2,837.51							
1/4	1/4	1/4	1/4	4,745.02	1/4	1/4	4,471.24	1/4	1/4	4,174.12	1/4	1/4	3,852.78	1/4	1/4	3,512.98	1/4	1/4	3,171.68	1/4	1/4	2,830.40							
1/2	1/2	1/2	1/2	4,739.55	1/2	1/2	4,465.28	1/2	1/2	4,167.67	1/2	1/2	3,845.83	1/2	1/2	3,505.87	1/2	1/2	3,162.37	1/2	1/2	2,823.29							
3/4	3/4	3/4	3/4	4,734.08	3/4	3/4	4,459.33	3/4	3/4	4,161.21	3/4	3/4	3,838.98	3/4	3/4	3,498.76	3/4	3/4	3,157.46	3/4	3/4	2,816.18							
4	4	4	4	4,728.61	4	4	4,453.37	4	4	4,154.76	4	4	3,831.93	4	4	3,491.65	4	4	3,150.35	4	4	2,809.07							
1/4	1/4	1/4	1/4	4,723.10	1/4	1/4	4,447.37	1/4	1/4	4,148.26	1/4	1/4	3,824.94	1/4	1/4	3,484.54	1/4	1/4	3,143.24	1/4	1/4	2,801.96							
1/2	1/2	1/2	1/2	4,717.59	1/2	1/2	4,441.37	1/2	1/2	4,141.76	1/2	1/2	3,817.96	1/2	1/2	3,477.43	1/2	1/2	3,136.13	1/2	1/2	2,794.85							
3/4	3/4	3/4	3/4	4,712.07	3/4	3/4	4,435.38	3/4	3/4	4,135.25	3/4	3/4																	

CAPACITY TABLE ONLY APPLIES TO ULLAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE. GAUGE POINT: (HERMETIC) LOCATED 12'-06" OFF CENTERLINE AND 37'-03" FORWARD OF AFT BULKHEAD.

P.O. Box 2092
Pearland, Texas 77588
<http://www.pma.com.net>

SHEET NO. 1 OF 12



BARGE "EMS 509"

1 PORT ULLAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

IN	10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		19 FT.	
	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT	IN	OUT
0	2,581.54	0	2,240.26	0	1,898.97	0	1,557.66	0	1,216.36	0	876.54	0	535.68	0	263.39	0	10.39	0		
1/4	2,574.43	1/4	2,233.15	1/4	1,891.86	1/4	1,550.55	1/4	1,209.25	1/4	869.60	1/4	528.57	1/4	261.83	1/4	9.89	1/4		
1/2	2,567.32	1/2	2,226.04	1/2	1,884.74	1/2	1,543.44	1/2	1,202.14	1/2	862.66	1/2	521.46	1/2	259.36	1/2	9.39	1/2		
3/4	2,560.21	3/4	2,218.93	3/4	1,877.63	3/4	1,536.33	3/4	1,195.03	3/4	855.72	3/4	514.35	3/4	256.89	3/4	8.89	3/4		
1	2,553.10	1	2,211.82	1	1,870.52	1	1,529.22	1	1,187.92	1	848.78	1	507.24	1	254.42	1	8.39	1		
1/4	2,545.99	1/4	2,204.71	1/4	1,863.41	1/4	1,522.11	1/4	1,180.81	1/4	841.89	1/4	500.13	1/4	251.95	1/4	7.89	1/4		
1/2	2,538.88	1/2	2,197.60	1/2	1,856.30	1/2	1,515.00	1/2	1,173.70	1/2	835.00	1/2	497.02	1/2	249.48	1/2	7.39	1/2		
3/4	2,531.77	3/4	2,190.49	3/4	1,849.19	3/4	1,507.89	3/4	1,166.59	3/4	828.11	3/4	489.90	3/4	247.01	3/4	6.89	3/4		
2	2,524.66	2	2,183.38	2	1,842.08	2	1,500.78	2	1,159.48	2	821.22	2	486.82	2	244.54	2	6.39	2		
1/4	2,517.55	1/4	2,176.27	1/4	1,834.97	1/4	1,493.67	1/4	1,152.37	1/4	814.38	1/4	483.74	1/4	242.07	1/4	5.89	1/4		
1/2	2,510.44	1/2	2,169.16	1/2	1,827.86	1/2	1,486.56	1/2	1,145.26	1/2	807.54	1/2	480.66	1/2	239.60	1/2	5.39	1/2		
3/4	2,503.33	3/4	2,162.05	3/4	1,820.75	3/4	1,479.45	3/4	1,138.15	3/4	800.70	3/4	477.58	3/4	237.13	3/4	4.89	3/4		
3	2,496.22	3	2,154.94	3	1,813.64	3	1,472.34	3	1,131.04	3	793.86	3	474.50	3	234.66	3	4.39	3		
1/4	2,489.11	1/4	2,147.83	1/4	1,806.53	1/4	1,465.23	1/4	1,123.93	1/4	786.98	1/4	471.42	1/4	232.19	1/4	3.89	1/4		
1/2	2,482.00	1/2	2,140.72	1/2	1,799.42	1/2	1,458.12	1/2	1,116.82	1/2	780.27	1/2	468.34	1/2	229.72	1/2	3.39	1/2		
3/4	2,474.89	3/4	2,133.61	3/4	1,792.31	3/4	1,451.01	3/4	1,109.71	3/4	773.48	3/4	465.26	3/4	227.25	3/4	2.89	3/4		
4	2,467.78	4	2,126.50	4	1,785.20	4	1,443.90	4	1,102.60	4	766.68	4	462.18	4	224.78	4	2.39	4		
1/4	2,460.67	1/4	2,119.39	1/4	1,778.09	1/4	1,436.79	1/4	1,095.49	1/4	759.94	1/4	459.10	1/4	222.31	1/4	1.89	1/4		
1/2	2,453.56	1/2	2,112.28	1/2	1,770.98	1/2	1,429.68	1/2	1,088.38	1/2	753.19	1/2	456.02	1/2	219.84	1/2	1.39	1/2		
3/4	2,446.45	3/4	2,105.17	3/4	1,763.87	3/4	1,422.57	3/4	1,081.27	3/4	746.44	3/4	452.94	3/4	217.37	3/4	0.89	3/4		
5	2,439.34	5	2,098.06	5	1,756.76	5	1,415.46	5	1,074.16	5	739.69	5	449.86	5	214.90	5	0.39	5		
1/4	2,432.23	1/4	2,090.95	1/4	1,749.64	1/4	1,408.35	1/4	1,067.06	1/4	732.98	1/4	446.78	1/4	212.43	1/4	-0.11	1/4		
1/2	2,425.12	1/2	2,083.84	1/2	1,742.53	1/2	1,401.24	1/2	1,059.96	1/2	726.27	1/2	443.70	1/2	210.00	1/2	-0.61	1/2		
3/4	2,418.01	3/4	2,076.73	3/4	1,735.42	3/4	1,394.12	3/4	1,052.86	3/4	719.56	3/4	440.62	3/4	207.53	3/4	-1.11	3/4		
6	2,410.90	6	2,069.62	6	1,728.31	6	1,387.01	6	1,045.77	6	712.85	6	437.54	6	205.06	6	-1.61	6		
1/4	2,403.79	1/4	2,062.50	1/4	1,721.20	1/4	1,379.90	1/4	1,038.68	1/4	706.17	1/4	434.46	1/4	202.59	1/4	-2.11	1/4		
1/2	2,396.68	1/2	2,055.39	1/2	1,714.09	1/2	1,372.79	1/2	1,031.60	1/2	699.49	1/2	431.38	1/2	200.12	1/2	-2.61	1/2		
3/4	2,389.57	3/4	2,048.28	3/4	1,706.98	3/4	1,365.68	3/4	1,024.52	3/4	692.82	3/4	428.30	3/4	197.65	3/4	-3.11	3/4		
7	2,382.46	7	2,041.17	7	1,699.87	7	1,358.57	7	1,017.44	7	686.14	7	425.22	7	195.18	7	-3.61	7		
1/4	2,375.35	1/4	2,034.06	1/4	1,692.76	1/4	1,351.46	1/4	1,010.37	1/4	679.52	1/4	422.14	1/4	192.71	1/4	-4.11	1/4		
1/2	2,368.24	1/2	2,026.95	1/2	1,685.65	1/2	1,344.35	1/2	1,003.29	1/2	672.89	1/2	419.06	1/2	190.24	1/2	-4.61	1/2		
3/4	2,361.13	3/4	2,019.84	3/4	1,678.54	3/4	1,337.24	3/4	996.22	3/4	666.27	3/4	415.98	3/4	187.77	3/4	-5.11	3/4		
8	2,354.02	8	2,012.73	8	1,671.43	8	1,330.13	8	989.15	8	659.64	8	412.90	8	185.30	8	-5.61	8		
1/4	2,346.91	1/4	2,005.62	1/4	1,664.32	1/4	1,323.02	1/4	982.08	1/4	653.07	1/4	409.82	1/4	182.83	1/4	-6.11	1/4		
1/2	2,339.80	1/2	1,998.51	1/2	1,657.21	1/2	1,315.91	1/2	975.01	1/2	646.49	1/2	406.74	1/2	180.36	1/2	-6.61	1/2		
3/4	2,332.69	3/4	1,991.40	3/4	1,650.10	3/4	1,308.80	3/4	967.95	3/4	639.92	3/4	403.66	3/4	177.89	3/4	-7.11	3/4		
9	2,325.58	9	1,984.29	9	1,642.99	9	1,301.69	9	960.88	9	633.34	9	400.58	9	175.42	9	-7.61	9		
1/4	2,318.47	1/4	1,977.18	1/4	1,635.88	1/4	1,294.58	1/4	953.82	1/4	626.82	1/4	397.50	1/4	172.95	1/4	-8.11	1/4		
1/2	2,311.36	1/2	1,970.07	1/2	1,628.77	1/2	1,287.47	1/2	946.76	1/2	620.30	1/2	394.42	1/2	170.48	1/2	-8.61	1/2		
3/4	2,304.25	3/4	1,962.96	3/4	1,621.66	3/4	1,280.36	3/4	939.70	3/4	613.77	3/4	391.34	3/4	168.01	3/4	-9.11	3/4		
10	2,297.14	10	1,955.85	10	1,614.55	10	1,273.25	10	932.64	10	607.25	10	388.26	10	165.54	10	-9.61	10		
1/4	2,290.03	1/4	1,948.74	1/4	1,607.44	1/4	1,266.14	1/4	925.60	1/4	600.78	1/4	385.18	1/4	163.07	1/4	-10.11	1/4		
1/2	2,282.92	1/2	1,941.63	1/2	1,600.33	1/2	1,259.03	1/2	918.57	1/2	594.31	1/2	382.10	1/2	160.60	1/2	-10.61	1/2		
3/4	2,275.81	3/4	1,934.52	3/4	1,593.22	3/4	1,251.92	3/4	911.53	3/4	587.83	3/4	379.02	3/4	158.13	3/4	-11.11	3/4		
11	2,268.70	11	1,927.41	11	1,586.11	11	1,244.81	11	904.50	11	581.36	11	376.04	11	155.66	11	-11.61	11		
1/4	2,261.59	1/4	1,920.30	1/4	1,579.00	1/4	1,237.70	1/4	897.51	1/4	574.94	1/4	373.06	1/4	153.19	1/4	-12.11	1/4		
1/2	2,254.48	1/2	1,913.19	1/2	1,571.88	1/2	1,230.59	1/2	890.52	1/2	568.52	1/2	370.08	1/2	150.72	1/2	-12.61	1/2		
3/4	2,247.37	3/4	1,906.08	3/4	1,564.77	3/4	1,223.48	3/4	883.53	3/4	562.10	3/4	367.10	3/4	148.25	3/4	-13.11	3/4		

STRAPPED: 8/05/2019 JS
CALCULATED: 08/06/2019 CL
PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2019

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.
P.O. Box 2092
Pearland, Texas 77588
<http://www.pmacorp.net>

Paul J. Gamm



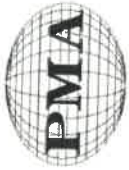
ULLAGE TABLE

0 FT.			1 FT.			2 FT.			3 FT.			4 FT.			5 FT.			6 FT.			7 FT.			8 FT.			9 FT.		
IN		IN	IN		IN	IN		IN	IN		IN	IN		IN	IN		IN	IN		IN	IN		IN	IN		IN	IN		
0		0	0	0	4,816.54	0	4,547.35	0	4,254.81	0	3,938.22	0	3,600.11	0	3,257.99	0	2,915.87	0	2,573.75	0	2,231.63	0	1,889.51	0	1,547.39	0	1,205.27		
1/4	1/4	1/4	1/4	1/4	4,811.18	1/4	4,541.50	1/4	4,242.13	1/4	3,931.37	1/4	3,592.98	1/4	3,250.86	1/4	2,908.74	1/4	2,566.62	1/4	2,224.50	1/4	1,882.38	1/4	1,540.26	1/4	1,198.14		
1/2	1/2	1/2	1/2	1/2	4,805.81	1/2	4,535.65	1/2	4,237.36	1/2	3,925.53	1/2	3,587.14	1/2	3,245.02	1/2	2,902.90	1/2	2,560.78	1/2	2,218.38	1/2	1,876.26	1/2	1,534.14	1/2	1,192.02		
3/4	3/4	3/4	3/4	3/4	4,800.41	3/4	4,529.76	3/4	4,232.76	3/4	3,920.94	3/4	3,582.55	3/4	3,240.43	3/4	2,898.31	3/4	2,556.19	3/4	2,214.07	3/4	1,871.94	3/4	1,529.82	3/4	1,187.70		
1	1	1	1	1	4,795.00	1	4,523.87	1	4,228.38	1	3,917.65	1	3,578.22	1	3,236.10	1	2,894.00	1	2,551.88	1	2,209.76	1	1,867.64	1	1,525.52	1	1,183.40		
1/4	1/4	1/4	1/4	1/4	4,789.60	1/4	4,517.97	1/4	4,223.00	1/4	3,912.23	1/4	3,572.80	1/4	3,230.68	1/4	2,888.56	1/4	2,546.44	1/4	2,204.32	1/4	1,863.52	1/4	1,521.40	1/4	1,181.28		
1/2	1/2	1/2	1/2	1/2	4,784.19	1/2	4,512.08	1/2	4,218.12	1/2	3,907.99	1/2	3,568.56	1/2	3,226.44	1/2	2,884.32	1/2	2,542.20	1/2	2,200.08	1/2	1,859.40	1/2	1,519.28	1/2	1,179.16		
3/4	3/4	3/4	3/4	3/4	4,778.74	3/4	4,506.15	3/4	4,214.15	3/4	3,902.90	3/4	3,563.47	3/4	3,222.35	3/4	2,880.23	3/4	2,538.11	3/4	2,195.99	3/4	1,857.28	3/4	1,517.16	3/4	1,177.04		
2	2	2	2	2	4,773.30	2	4,500.22	2	4,209.78	2	3,898.14	2	3,558.71	2	3,218.28	2	2,876.16	2	2,534.04	2	2,191.92	2	1,855.16	2	1,515.04	2	1,174.92		
1/4	1/4	1/4	1/4	1/4	4,767.85	1/4	4,494.28	1/4	4,197.36	1/4	3,893.22	1/4	3,553.79	1/4	3,213.86	1/4	2,871.74	1/4	2,529.62	1/4	2,187.50	1/4	1,853.04	1/4	1,512.92	1/4	1,172.80		
1/2	1/2	1/2	1/2	1/2	4,762.41	1/2	4,488.35	1/2	4,190.94	1/2	3,888.09	1/2	3,548.66	1/2	3,208.73	1/2	2,866.61	1/2	2,524.49	1/2	2,185.37	1/2	1,850.92	1/2	1,510.80	1/2	1,170.68		
3/4	3/4	3/4	3/4	3/4	4,756.92	3/4	4,482.38	3/4	4,184.48	3/4	3,883.63	3/4	3,544.20	3/4	3,204.27	3/4	2,862.15	3/4	2,520.03	3/4	2,183.25	3/4	1,848.80	3/4	1,508.70	3/4	1,168.56		
3	3	3	3	3	4,751.43	3	4,476.41	3	4,178.01	3	3,878.19	3	3,538.76	3	3,198.83	3	2,856.71	3	2,514.59	3	2,172.47	3	1,846.68	3	1,506.58	3	1,166.44		
1/4	1/4	1/4	1/4	1/4	4,745.95	1/4	4,470.43	1/4	4,171.54	1/4	3,873.71	1/4	3,534.28	1/4	3,194.35	1/4	2,852.23	1/4	2,510.11	1/4	2,170.31								

GAUGE POINT: (HERMETIC) LOCATED 12'-06" OFF CENTERLINE AND 37'-03" FORWARD OF AFT BULKHEAD.

P.O. Box 2092
Pearland, Texas 77588
<http://www.pmacorp.net>

SHEET NO. 3 OF 12



BARGE "EMS 509"

1 STBD

ULLAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		17'-11 1/2"	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
0	2,573.76	0	2,231.66	0	1,889.54	0	1,547.42	0	1,205.29	0	864.96	0	544.43	0	252.60	0	0	0	0
1/4	2,566.63	1/4	2,224.53	1/4	1,882.41	1/4	1,540.29	1/4	1,198.16	1/4	858.01	1/4	538.05	1/4	246.82	1/4	1/4	1/4	1/4
1/2	2,559.51	1/2	2,217.40	1/2	1,875.28	1/2	1,533.16	1/2	1,191.04	1/2	851.05	1/2	531.66	1/2	241.05	1/2	1/2	1/2	1/2
3/4	2,552.38	3/4	2,210.27	3/4	1,868.16	3/4	1,526.03	3/4	1,183.91	3/4	844.14	3/4	525.33	3/4	235.33	3/4	3/4	3/4	3/4
1	2,545.25	1	2,203.15	1	1,861.03	1	1,518.90	1	1,176.78	1	837.24	1	518.99	1	229.60	1	1	1	1
1 1/4	2,538.13	1 1/4	2,196.02	1 1/4	1,853.90	1 1/4	1,511.78	1 1/4	1,169.65	1 1/4	830.33	1 1/4	512.65	1 1/4	223.88	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,531.00	1 1/2	2,188.89	1 1/2	1,846.77	1 1/2	1,504.65	1 1/2	1,162.52	1 1/2	823.43	1 1/2	506.32	1 1/2	218.16	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,523.87	3/4	2,181.77	3/4	1,839.65	3/4	1,497.52	3/4	1,155.40	3/4	816.57	3/4	500.03	3/4	212.49	3/4	3/4	3/4	3/4
2	2,516.74	2	2,174.64	2	1,832.52	2	1,490.39	2	1,148.27	2	809.71	2	493.75	2	206.82	2	2	2	2
1 1/4	2,509.62	1 1/4	2,167.51	1 1/4	1,825.39	1 1/4	1,483.27	1 1/4	1,141.14	1 1/4	802.85	1 1/4	487.47	1 1/4	201.15	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,502.49	1 1/2	2,160.38	1 1/2	1,818.26	1 1/2	1,476.14	1 1/2	1,134.01	1 1/2	795.99	1 1/2	481.18	1 1/2	195.48	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,495.36	3/4	2,153.26	3/4	1,811.14	3/4	1,469.01	3/4	1,126.89	3/4	789.18	3/4	474.95	3/4	189.86	3/4	3/4	3/4	3/4
3	2,488.24	3	2,146.13	3	1,804.01	3	1,461.88	3	1,119.76	3	782.37	3	468.71	3	184.24	3	3	3	3
1 1/4	2,481.11	1 1/4	2,139.00	1 1/4	1,796.88	1 1/4	1,454.76	1 1/4	1,112.63	1 1/4	775.56	1 1/4	462.48	1 1/4	178.62	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,473.98	1 1/2	2,131.88	1 1/2	1,789.75	1 1/2	1,447.63	1 1/2	1,105.50	1 1/2	768.74	1 1/2	456.25	1 1/2	173.00	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,466.85	3/4	2,124.75	3/4	1,782.63	3/4	1,440.50	3/4	1,098.38	3/4	761.98	3/4	450.07	3/4	167.43	3/4	3/4	3/4	3/4
4	2,459.73	4	2,117.62	4	1,775.50	4	1,433.37	4	1,091.25	4	755.22	4	443.88	4	161.86	4	4	4	4
1 1/4	2,452.60	1 1/4	2,110.49	1 1/4	1,768.37	1 1/4	1,426.25	1 1/4	1,084.12	1 1/4	748.45	1 1/4	437.70	1 1/4	156.29	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,445.47	1 1/2	2,103.37	1 1/2	1,761.24	1 1/2	1,419.12	1 1/2	1,076.99	1 1/2	741.69	1 1/2	431.52	1 1/2	150.72	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,438.35	3/4	2,096.24	3/4	1,754.12	3/4	1,411.99	3/4	1,069.88	3/4	734.96	3/4	425.39	3/4	145.20	3/4	3/4	3/4	3/4
5	2,431.22	5	2,089.11	5	1,746.99	5	1,404.86	5	1,062.76	5	728.23	5	419.26	5	139.68	5	5	5	5
1 1/4	2,424.09	1 1/4	2,081.98	1 1/4	1,739.86	1 1/4	1,397.74	1 1/4	1,055.65	1 1/4	721.50	1 1/4	413.13	1 1/4	134.17	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,416.96	1 1/2	2,074.86	1 1/2	1,732.73	1 1/2	1,390.61	1 1/2	1,048.53	1 1/2	714.77	1 1/2	407.00	1 1/2	128.65	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,409.84	3/4	2,067.73	3/4	1,725.61	3/4	1,383.48	3/4	1,041.43	3/4	708.08	3/4	400.92	3/4	123.18	3/4	3/4	3/4	3/4
6	2,402.71	6	2,060.60	6	1,718.48	6	1,376.35	6	1,034.34	6	701.39	6	394.84	6	117.71	6	6	6	6
1 1/4	2,395.58	1 1/4	2,053.47	1 1/4	1,711.35	1 1/4	1,369.23	1 1/4	1,027.24	1 1/4	694.70	1 1/4	388.76	1 1/4	112.25	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,388.45	1 1/2	2,046.35	1 1/2	1,704.22	1 1/2	1,362.10	1 1/2	1,020.14	1 1/2	688.00	1 1/2	382.68	1 1/2	106.78	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,381.33	3/4	2,039.22	3/4	1,697.09	3/4	1,354.97	3/4	1,013.05	3/4	681.36	3/4	376.65	3/4	101.36	3/4	3/4	3/4	3/4
7	2,374.20	7	2,032.09	7	1,689.97	7	1,347.84	7	1,005.96	7	674.72	7	370.62	7	95.95	7	7	7	7
1 1/4	2,367.07	1 1/4	2,024.96	1 1/4	1,682.84	1 1/4	1,340.71	1 1/4	998.87	1 1/4	668.08	1 1/4	364.59	1 1/4	90.53	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,359.95	1 1/2	2,017.84	1 1/2	1,675.71	1 1/2	1,333.59	1 1/2	991.78	1 1/2	661.43	1 1/2	358.56	1 1/2	85.12	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,352.82	3/4	2,010.71	3/4	1,668.58	3/4	1,326.46	3/4	984.69	3/4	654.84	3/4	352.58	3/4	79.75	3/4	3/4	3/4	3/4
8	2,345.69	8	2,003.58	8	1,661.46	8	1,319.33	8	977.61	8	648.25	8	346.61	8	74.39	8	8	8	8
1 1/4	2,338.56	1 1/4	1,996.45	1 1/4	1,654.33	1 1/4	1,312.20	1 1/4	970.52	1 1/4	641.66	1 1/4	340.63	1 1/4	69.02	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,331.44	1 1/2	1,989.33	1 1/2	1,647.20	1 1/2	1,305.08	1 1/2	963.44	1 1/2	635.07	1 1/2	334.65	1 1/2	63.66	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,324.31	3/4	1,982.20	3/4	1,640.07	3/4	1,297.95	3/4	956.36	3/4	628.53	3/4	328.72	3/4	58.35	3/4	3/4	3/4	3/4
9	2,317.18	9	1,975.07	9	1,632.95	9	1,290.82	9	949.28	9	621.99	9	322.80	9	53.03	9	9	9	9
1 1/4	2,310.06	1 1/4	1,967.94	1 1/4	1,625.82	1 1/4	1,283.69	1 1/4	942.20	1 1/4	615.45	1 1/4	316.87	1 1/4	47.72	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,302.93	1 1/2	1,960.82	1 1/2	1,618.69	1 1/2	1,276.57	1 1/2	935.12	1 1/2	608.91	1 1/2	310.94	1 1/2	42.41	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,295.80	3/4	1,953.69	3/4	1,611.56	3/4	1,269.44	3/4	928.07	3/4	602.42	3/4	305.07	3/4	37.74	3/4	3/4	3/4	3/4
10	2,288.67	10	1,946.56	10	1,604.44	10	1,262.31	10	921.02	10	595.93	10	299.19	10	33.07	10	10	10	10
1 1/4	2,281.55	1 1/4	1,939.43	1 1/4	1,597.31	1 1/4	1,255.18	1 1/4	913.96	1 1/4	589.45	1 1/4	293.32	1 1/4	28.40	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,274.42	1 1/2	1,932.31	1 1/2	1,590.18	1 1/2	1,248.06	1 1/2	906.91	1 1/2	582.96	1 1/2	287.44	1 1/2	23.73	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,267.29	3/4	1,925.18	3/4	1,583.05	3/4	1,240.93	3/4	899.90	3/4	576.52	3/4	281.62	3/4	20.40	3/4	3/4	3/4	3/4
11	2,260.17	11	1,918.05	11	1,575.93	11	1,233.80	11	892.89	11	570.08	11	275.79	11	17.08	11	11	11	11
1 1/4	2,253.04	1 1/4	1,910.92	1 1/4	1,568.80	1 1/4	1,226.67	1 1/4	885.89	1 1/4	563.64	1 1/4	269.97	1 1/4	13.75	1 1/4	1 1/4	1 1/4	1 1/4
1 1/2	2,245.91	1 1/2	1,903.79	1 1/2	1,561.67	1 1/2	1,219.55	1 1/2	878.88	1 1/2	557.21	1 1/2	264.14	1 1/2	10.42	1 1/2	1 1/2	1 1/2	1 1/2
3/4	2,238.78	3/4	1,896.67	3/4	1,554.54	3/4	1,212.42	3/4	871.92	3/4	550.82	3/4	258.37	3/4	0	3/4	3/4	3/4	3/4

STRAPPED: 8/05/2019 JS
CALCULATED: 08/06/2019 CL
PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2019

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.
P.O. Box 2092
Pearland, Texas 77588
<http://www.pmacorp.net>

Paul J. Pearson



ULLAGE TABLE

0 FT.			1 FT.			2 FT.			3 FT.			4 FT.			5 FT.			6 FT.			7 FT.			8 FT.			9 FT.		
IN		IN	IN		IN	IN		IN	IN		IN	IN		IN	IN		IN	IN		IN	IN		IN	IN		IN	IN		
0		0	0		0	5,643.67	0	5,339.24	0	5,007.67	0	4,648.80	0	4,265.21	0	3,876.73	0	3,488.27											
1/4		1/4	1/4		1/4	5,637.69	1/4	5,332.59	1/4	5,000.47	1/4	4,641.03	1/4	4,257.12	1/4	3,868.64	1/4	3,480.17											
1/2		1/2	1/2		1/2	5,631.72	1/2	5,325.95	1/2	4,993.28	1/2	4,633.26	1/2	4,249.03	1/2	3,860.55	1/2	3,472.08											
3/4		3/4	3/4		3/4	5,625.74	3/4	5,319.31	3/4	4,986.08	3/4	4,625.49	3/4	4,240.93	3/4	3,852.45	3/4	3,463.99											
1	1	1	1	1	1	5,619.66	1	5,312.62	1	4,978.84	1	4,617.67	1	4,232.84	1	3,844.36	1	3,455.90											
1/4	1/4	1/4	1/4	1/4	1/4	5,613.59	1/4	5,305.93	1/4	4,971.60	1/4	4,609.95	1/4	4,224.75	1/4	3,836.27	1/4	3,447.80											
1/2	1/2	1/2	1/2	1/2	1/2	5,607.51	1/2	5,299.24	1/2	4,964.35	1/2	4,602.04	1/2	4,216.65	1/2	3,828.17	1/2	3,439.71											
3/4	3/4	3/4	3/4	3/4	3/4	5,601.43	3/4	5,292.55	3/4	4,957.11	3/4	4,594.22	3/4	4,208.56	3/4	3,820.08	3/4	3,431.62											
2	2	2	2	2	2	5,595.25	2	5,285.82	2	4,949.82	2	4,586.36	2	4,200.47	2	3,811.99	2	3,423.52											
1/4	1/4	1/4	1/4	1/4	1/4	5,589.07	1/4	5,279.09	1/4	4,942.54	1/4	4,578.50	1/4	4,192.37	1/4	3,803.89	1/4	3,415.43											
1/2	1/2	1/2	1/2	1/2	1/2	5,582.89	1/2	5,272.35	1/2	4,935.25	1/2	4,570.63	1/2	4,184.28	1/2	3,795.80	1/2	3,407.34											
3/4	3/4	3/4	3/4	3/4	3/4	5,576.70	3/4	5,265.62	3/4	4,927.96	3/4	4,562.77	3/4	4,176.19	3/4	3,787.71	3/4	3,399.25											
3	3	3	3	3	3	5,570.48	3	5,258.83	3	4,920.61	3	4,554.86	3	4,168.09	3	3,779.61	3	3,391.15											
1/4	1/4	1/4	1/4	1/4	1/4	5,564.25	1/4	5,252.05	1/4	4,913.27	1/4	4,546.95	1/4	4,160.00	1/4	3,771.52	1/4	3,383.06											
1/2	1/2	1/2	1/2	1/2	1/2	5,558.02	1/2	5,245.27	1/2	4,905.92	1/2	4,539.04	1/2	4,151.91	1/2	3,763.43	1/2	3,374.97											
3/4	3/4	3/4	3/4	3/4	3/4	5,551.80	3/4	5,238.49	3/4	4,898.58	3/4	4,531.13	3/4	4,143.81	3/4	3,755.33	3/4	3,366.87											
4	4	4	4	4	4	5,545.52	4	5,231.67	4	4,891.18	4	4,523.18	4	4,135.72	4	3,747.24	4	3,358.78											
1/4	1/4	1/4	1/4	1/4	1/4	5,539.25	1/4	5,224.84	1/4	4,883.78	1/4	4,515.23																	

CAPACITY TABLE ONLY APPLIES TO ULLAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE. GAUGE POINT: (HERMETIC) LOCATED 12'-08" OFF CENTERLINE AND 44'-00" FORWARD OF AFT BULKHEAD.

Pearland, Texas 77588
<http://www.pmacorp.net>

SHEET NO. 5 OF 12

[Signature]



BARGE "EMS 509"

2 PORT ULLAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		19 FT.	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
0	3,099.81	0	2,711.35	0	2,322.88	0	1,934.40	0	1,545.93	0	1,157.45	0	769.21	0	380.84	0			
1/4	3,091.72	1/4	2,703.26	1/4	2,314.79	1/4	1,926.31	1/4	1,537.83	1/4	1,149.35	1/4	761.13	1/4	372.74	1/4			
1/2	3,083.62	1/2	2,695.16	1/2	2,306.70	1/2	1,918.22	1/2	1,529.74	1/2	1,141.26	1/2	753.04	1/2	364.65	1/2			
3/4	3,075.53	3/4	2,687.07	3/4	2,298.60	3/4	1,910.12	3/4	1,521.65	3/4	1,133.17	3/4	744.96	3/4	356.56	3/4			
1	3,067.44	1	2,678.98	1	2,290.51	1	1,902.03	1	1,513.55	1	1,125.07	1	736.88	1	348.46	1			
1/4	3,059.34	1/4	2,670.88	1/4	2,282.42	1/4	1,893.94	1/4	1,505.46	1/4	1,116.98	1/4	728.80	1/4	340.37	1/4			
1/2	3,051.25	1/2	2,662.79	1/2	2,274.32	1/2	1,885.84	1/2	1,497.37	1/2	1,108.89	1/2	720.71	1/2	332.28	1/2			
3/4	3,043.16	3/4	2,654.70	3/4	2,266.23	3/4	1,877.75	3/4	1,489.27	3/4	1,100.79	3/4	712.63	3/4	324.19	3/4			
2	3,035.07	2	2,646.61	2	2,258.14	2	1,869.66	2	1,481.18	2	1,092.70	2	704.54	2	316.09	2			
1/4	3,026.97	1/4	2,638.51	1/4	2,250.04	1/4	1,861.56	1/4	1,473.09	1/4	1,084.61	1/4	696.46	1/4	308.00	1/4			
1/2	3,018.88	1/2	2,630.42	1/2	2,241.95	1/2	1,853.47	1/2	1,464.99	1/2	1,076.51	1/2	688.37	1/2	299.91	1/2			
3/4	3,010.79	3/4	2,622.33	3/4	2,233.86	3/4	1,845.38	3/4	1,456.90	3/4	1,068.42	3/4	680.28	3/4	291.81	3/4			
3	3,002.69	3	2,614.23	3	2,225.76	3	1,837.28	3	1,448.81	3	1,060.33	3	672.19	3	283.72	3			
1/4	2,994.60	1/4	2,606.14	1/4	2,217.67	1/4	1,829.19	1/4	1,440.71	1/4	1,052.23	1/4	664.10	1/4	275.63	1/4			
1/2	2,986.51	1/2	2,598.05	1/2	2,209.58	1/2	1,821.10	1/2	1,432.62	1/2	1,044.14	1/2	656.00	1/2	267.53	1/2			
3/4	2,978.41	3/4	2,589.96	3/4	2,201.48	3/4	1,813.00	3/4	1,424.53	3/4	1,036.05	3/4	647.91	3/4	259.44	3/4			
4	2,970.32	4	2,581.86	4	2,193.39	4	1,804.91	4	1,416.43	4	1,027.95	4	639.82	4	251.35	4			
1/4	2,962.23	1/4	2,573.77	1/4	2,185.30	1/4	1,796.82	1/4	1,408.34	1/4	1,019.86	1/4	631.72	1/4	243.25	1/4			
1/2	2,954.14	1/2	2,565.68	1/2	2,177.20	1/2	1,788.72	1/2	1,400.25	1/2	1,011.77	1/2	623.63	1/2	235.16	1/2			
3/4	2,946.04	3/4	2,557.59	3/4	2,169.11	3/4	1,780.63	3/4	1,392.15	3/4	1,003.67	3/4	615.54	3/4	227.07	3/4			
5	2,937.95	5	2,549.50	5	2,161.02	5	1,772.54	5	1,384.06	5	995.58	5	607.44	5	218.97	5			
1/4	2,929.86	1/4	2,541.40	1/4	2,152.92	1/4	1,764.44	1/4	1,375.97	1/4	987.49	1/4	599.35	1/4	210.88	1/4			
1/2	2,921.76	1/2	2,533.31	1/2	2,144.83	1/2	1,756.35	1/2	1,367.87	1/2	979.39	1/2	591.26	1/2	202.79	1/2			
3/4	2,913.67	3/4	2,525.22	3/4	2,136.74	3/4	1,748.26	3/4	1,359.78	3/4	971.30	3/4	583.16	3/4	194.70	3/4			
6	2,905.58	6	2,517.12	6	2,128.64	6	1,740.17	6	1,351.69	6	963.21	6	575.07	6	186.60	6			
1/4	2,897.49	1/4	2,509.03	1/4	2,120.55	1/4	1,732.07	1/4	1,343.59	1/4	955.12	1/4	566.98	1/4	178.51	1/4			
1/2	2,889.39	1/2	2,500.94	1/2	2,112.46	1/2	1,723.98	1/2	1,335.50	1/2	947.04	1/2	558.89	1/2	170.42	1/2			
3/4	2,881.30	3/4	2,492.84	3/4	2,104.36	3/4	1,715.89	3/4	1,327.41	3/4	938.95	3/4	550.79	3/4	162.32	3/4			
7	2,873.21	7	2,484.75	7	2,096.27	7	1,707.79	7	1,319.31	7	930.87	7	542.70	7	154.23	7			
1/4	2,865.11	1/4	2,476.66	1/4	2,088.18	1/4	1,699.70	1/4	1,311.22	1/4	922.78	1/4	534.61	1/4	146.14	1/4			
1/2	2,857.02	1/2	2,468.56	1/2	2,080.08	1/2	1,691.61	1/2	1,303.13	1/2	914.70	1/2	526.51	1/2	138.04	1/2			
3/4	2,848.93	3/4	2,460.47	3/4	2,071.99	3/4	1,683.51	3/4	1,295.03	3/4	906.62	3/4	518.42	3/4	129.95	3/4			
8	2,840.84	8	2,452.38	8	2,063.90	8	1,675.42	8	1,286.94	8	898.53	8	510.33	8	121.86	8			
1/4	2,832.74	1/4	2,444.28	1/4	2,055.80	1/4	1,667.33	1/4	1,278.85	1/4	890.45	1/4	502.23	1/4	113.76	1/4			
1/2	2,824.65	1/2	2,436.19	1/2	2,047.71	1/2	1,659.23	1/2	1,270.75	1/2	882.37	1/2	494.14	1/2	105.67	1/2			
3/4	2,816.56	3/4	2,428.10	3/4	2,039.62	3/4	1,651.14	3/4	1,262.66	3/4	874.29	3/4	486.05	3/4	97.58	3/4			
9	2,808.46	9	2,420.00	9	2,031.52	9	1,643.05	9	1,254.57	9	866.20	9	477.95	9	89.49	9			
1/4	2,800.37	1/4	2,411.91	1/4	2,023.43	1/4	1,634.95	1/4	1,246.47	1/4	858.12	1/4	469.86	1/4	81.39	1/4			
1/2	2,792.28	1/2	2,403.82	1/2	2,015.34	1/2	1,626.86	1/2	1,238.38	1/2	850.04	1/2	461.77	1/2	73.30	1/2			
3/4	2,784.19	3/4	2,395.72	3/4	2,007.24	3/4	1,618.77	3/4	1,230.29	3/4	841.95	3/4	453.67	3/4	65.21	3/4			
10	2,776.09	10	2,387.63	10	1,999.15	10	1,610.67	10	1,222.19	10	833.87	10	445.58	10	57.79	10			
1/4	2,768.00	1/4	2,379.54	1/4	1,991.06	1/4	1,602.58	1/4	1,214.10	1/4	825.79	1/4	437.49	1/4	50.37	1/4			
1/2	2,759.91	1/2	2,371.44	1/2	1,982.96	1/2	1,594.49	1/2	1,206.01	1/2	817.71	1/2	429.40	1/2	42.95	1/2			
3/4	2,751.81	3/4	2,363.35	3/4	1,974.87	3/4	1,586.39	3/4	1,197.91	3/4	809.62	3/4	421.30	3/4	35.53	3/4			
11	2,743.72	11	2,355.26	11	1,966.78	11	1,578.30	11	1,189.82	11	801.54	11	413.21	11	30.14	11			
1/4	2,735.63	1/4	2,347.16	1/4	1,958.68	1/4	1,570.21	1/4	1,181.73	1/4	793.46	1/4	405.12	1/4	24.74	1/4			
1/2	2,727.53	1/2	2,339.07	1/2	1,950.59	1/2	1,562.11	1/2	1,173.63	1/2	785.37	1/2	397.02	1/2	19.35	1/2			
3/4	2,719.44	3/4	2,330.98	3/4	1,942.50	3/4	1,554.02	3/4	1,165.54	3/4	777.29	3/4	388.93	3/4	13.95	3/4			

STRAPPED: 8/05/2019 JS

CALCULATED: 08/08/2019 CL

PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES

ALL PRIOR TO 08/2019

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588

<http://www.pmacorp.net>

Joe J. J. J.



2 STBD

ULLAGE TABLE

[illegible]

**BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.
CAPACITY TABLE ONLY APPLIES WHEN USED AS A BARGE.**

CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.

CAPACITY TABLE ONLY APPLIES TO ULLAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE.
GAUGE POINT: (HERMETIC) LOCATED 12'-06" OFF CENTERLINE AND 44'-00" FORWARD OF AFT BULKHEAD.

	3/4	3/4	3/4
CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY	3,471.01	3,083.22	

**PRECISION MEASUREMENT
& ANALYSIS, INC.**

P.O. Box 2092

P.O. BOX 2092
Pearland, Texas 77588

Peeland, Texas 77588
http://www.pmacom.net

SHEET NO. 7 OF 12

[Signature]



BARGE "EMS 509"

2 STBD

ULLAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		17'-11 1/2"	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
0	3,075.13	0	2,686.67	0	2,298.20	0	1,909.73	0	1,521.25	0	1,139.72	0	761.15	0	372.74	0			
1/4	3,067.03	1/4	2,678.58	1/4	2,290.11	1/4	1,901.63	1/4	1,513.15	1/4	1,131.97	1/4	753.06	1/4	364.65	1/4			19 FT.
1/2	3,058.94	1/2	2,670.49	1/2	2,282.02	1/2	1,893.54	1/2	1,505.06	1/2	1,124.23	1/2	744.98	1/2	356.55	1/2			1/4
3/4	3,050.85	3/4	2,662.39	3/4	2,273.93	3/4	1,885.45	3/4	1,496.97	3/4	1,116.48	3/4	736.89	3/4	348.46	3/4			1/2
1	3,042.75	1	2,654.30	1	2,265.83	1	1,877.35	1	1,488.87	1	1,108.73	1	728.81	1	340.37	1			3/4
1/4	3,034.66	1/4	2,646.21	1/4	2,257.74	1/4	1,869.26	1/4	1,480.78	1/4	1,100.99	1/4	720.72	1/4	332.28	1/4			1
1/2	3,026.57	1/2	2,638.11	1/2	2,249.65	1/2	1,861.17	1/2	1,472.69	1/2	1,093.24	1/2	712.63	1/2	324.18	1/2			1/4
3/4	3,018.48	3/4	2,630.02	3/4	2,241.55	3/4	1,853.07	3/4	1,464.60	3/4	1,085.50	3/4	704.54	3/4	316.09	3/4			1/2
2	3,010.38	2	2,621.93	2	2,233.46	2	1,844.98	2	1,456.50	2	1,077.75	2	696.45	2	308.00	2			3/4
1/4	3,002.29	1/4	2,613.84	1/4	2,225.37	1/4	1,836.89	1/4	1,448.41	1/4	1,070.00	1/4	688.36	1/4	299.90	1/4			1
1/2	2,994.20	1/2	2,605.74	1/2	2,217.27	1/2	1,828.79	1/2	1,440.32	1/2	1,062.26	1/2	680.27	1/2	291.81	1/2			1/4
3/4	2,986.11	3/4	2,597.65	3/4	2,209.18	3/4	1,820.70	3/4	1,432.22	3/4	1,054.51	3/4	672.18	3/4	283.72	3/4			1/2
3	2,978.01	3	2,589.56	3	2,201.09	3	1,812.61	3	1,424.13	3	1,046.77	3	664.09	3	275.62	3			3/4
1/4	2,969.92	1/4	2,581.47	1/4	2,192.99	1/4	1,804.51	1/4	1,416.04	1/4	1,039.02	1/4	656.00	1/4	267.53	1/4			1
1/2	2,961.83	1/2	2,573.37	1/2	2,184.90	1/2	1,796.42	1/2	1,407.94	1/2	1,031.27	1/2	647.90	1/2	259.44	1/2			1/4
3/4	2,953.73	3/4	2,565.28	3/4	2,176.81	3/4	1,788.33	3/4	1,399.85	3/4	1,023.53	3/4	639.81	3/4	251.35	3/4			1/2
4	2,945.64	4	2,557.19	4	2,168.71	4	1,780.23	4	1,391.76	4	1,015.78	4	631.72	4	243.25	4			3/4
1/4	2,937.55	1/4	2,549.10	1/4	2,160.62	1/4	1,772.14	1/4	1,383.66	1/4	1,008.04	1/4	623.62	1/4	235.16	1/4			1
1/2	2,929.46	1/2	2,541.01	1/2	2,152.53	1/2	1,764.05	1/2	1,375.57	1/2	1,000.29	1/2	615.53	1/2	227.07	1/2			1/4
3/4	2,921.36	3/4	2,532.91	3/4	2,144.43	3/4	1,755.95	3/4	1,367.48	3/4	992.54	3/4	607.44	3/4	218.97	3/4			1/2
5	2,913.27	5	2,524.82	5	2,136.34	5	1,747.86	5	1,359.38	5	984.80	5	599.34	5	210.88	5			3/4
1/4	2,905.18	1/4	2,516.72	1/4	2,128.25	1/4	1,739.77	1/4	1,351.29	1/4	977.05	1/4	591.25	1/4	202.79	1/4			1
1/2	2,897.08	1/2	2,508.63	1/2	2,120.15	1/2	1,731.67	1/2	1,343.20	1/2	969.31	1/2	583.16	1/2	194.69	1/2			1/4
3/4	2,888.99	3/4	2,500.54	3/4	2,112.06	3/4	1,723.58	3/4	1,335.10	3/4	961.56	3/4	575.07	3/4	186.60	3/4			1/2
6	2,880.90	6	2,492.44	6	2,103.97	6	1,715.49	6	1,327.01	6	953.82	6	566.97	6	178.51	6			3/4
1/4	2,872.81	1/4	2,484.35	1/4	2,095.87	1/4	1,707.39	1/4	1,318.92	1/4	946.08	1/4	558.88	1/4	170.42	1/4			1
1/2	2,864.71	1/2	2,476.26	1/2	2,087.78	1/2	1,699.30	1/2	1,310.82	1/2	938.34	1/2	550.79	1/2	162.32	1/2			1/4
3/4	2,856.62	3/4	2,468.16	3/4	2,079.69	3/4	1,691.21	3/4	1,302.90	3/4	930.43	3/4	542.69	3/4	154.23	3/4			1/2
7	2,848.53	7	2,460.07	7	2,071.59	7	1,683.11	7	1,294.98	7	922.51	7	534.60	7	146.14	7			3/4
1/4	2,840.43	1/4	2,451.98	1/4	2,063.50	1/4	1,675.02	1/4	1,287.07	1/4	914.60	1/4	526.51	1/4	138.04	1/4			1
1/2	2,832.34	1/2	2,443.88	1/2	2,055.41	1/2	1,666.93	1/2	1,279.15	1/2	906.69	1/2	518.41	1/2	129.95	1/2			1/4
3/4	2,824.25	3/4	2,435.79	3/4	2,047.31	3/4	1,658.83	3/4	1,271.40	3/4	898.60	3/4	510.32	3/4	121.86	3/4			1/2
8	2,816.16	8	2,427.70	8	2,039.22	8	1,650.74	8	1,263.65	8	890.52	8	502.23	8	113.76	8			3/4
1/4	2,808.06	1/4	2,419.60	1/4	2,031.13	1/4	1,642.65	1/4	1,255.91	1/4	882.43	1/4	494.14	1/4	105.67	1/4			1
1/2	2,799.97	1/2	2,411.51	1/2	2,023.03	1/2	1,634.55	1/2	1,248.16	1/2	874.35	1/2	486.04	1/2	97.58	1/2			1/4
3/4	2,791.88	3/4	2,403.42	3/4	2,014.94	3/4	1,626.46	3/4	1,240.42	3/4	866.26	3/4	477.95	3/4	89.49	3/4			1/2
9	2,783.79	9	2,395.32	9	2,006.85	9	1,618.37	9	1,232.67	9	858.18	9	469.86	9	81.39	9			3/4
1/4	2,775.69	1/4	2,387.23	1/4	1,998.75	1/4	1,610.27	1/4	1,224.92	1/4	850.09	1/4	461.76	1/4	73.30	1/4			1
1/2	2,767.60	1/2	2,379.14	1/2	1,990.66	1/2	1,602.18	1/2	1,217.18	1/2	842.00	1/2	453.67	1/2	65.21	1/2			1/4
3/4	2,759.51	3/4	2,371.04	3/4	1,982.57	3/4	1,594.09	3/4	1,209.43	3/4	833.92	3/4	445.58	3/4	57.79	3/4			1/2
10	2,751.41	10	2,362.95	10	1,974.47	10	1,585.99	10	1,201.69	10	825.83	10	437.48	10	50.37	10			3/4
1/4	2,743.32	1/4	2,354.86	1/4	1,966.38	1/4	1,577.90	1/4	1,193.94	1/4	817.75	1/4	429.39	1/4	42.95	1/4			1
1/2	2,735.23	1/2	2,346.76	1/2	1,958.29	1/2	1,569.81	1/2	1,186.19	1/2	809.66	1/2	421.30	1/2	35.53	1/2			1/4
3/4	2,727.14	3/4	2,338.67	3/4	1,950.19	3/4	1,561.71	3/4	1,178.45	3/4	801.58	3/4	413.21	3/4	30.14	3/4			1/2
11	2,719.04	11	2,330.58	11	1,942.10	11	1,553.62	11	1,170.70	11	793.49	11	405.11	11	24.74	11			3/4
1/4	2,710.95	1/4	2,322.48	1/4	1,934.01	1/4	1,545.53	1/4	1,162.96	1/4	785.41	1/4	397.02	1/4	19.35	1/4			1
1/2	2,702.86	1/2	2,314.39	1/2	1,925.91	1/2	1,537.41	1/2	1,155.21	1/2	777.32	1/2	388.93	1/2	13.95	1/2			1/4
3/4	2,694.76	3/4	2,306.30	3/4	1,917.82	3/4	1,529.34	3/4	1,147.46	3/4	769.23	3/4	380.83	3/4		3/4			1/2

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 8/05/2019 JS
CALCULATED: 08/06/2019 CL
PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2019

PRECISION MEASUREMENT
& ANALYSIS, INC.
P.O. Box 2092
Pearland, Texas 77588
<http://www.pmacorp.net>

Joe J. J. J.



3 PORT

ULLAGE TABLE

0 FT.										1 FT.										2 FT.										3 FT.										4 FT.										5 FT.										6 FT.										7 FT.										8 FT.										GAUGE HEIGHT 17'-11"																																																																																																																																																																																																																																																																																																																								
IN	0	1/4	1/2	3/4	1	1 1/4	1 1/2	1 3/4	2	2 1/4	2 1/2	2 3/4	3	3 1/4	3 1/2	3 3/4	4	4 1/4	4 1/2	4 3/4	5	5 1/4	5 1/2	5 3/4	6	6 1/4	6 1/2	6 3/4	7	7 1/4	7 1/2	7 3/4	8	8 1/4	8 1/2	8 3/4	9	9 1/4	9 1/2	9 3/4	10	10 1/4	10 1/2	10 3/4	11	11 1/4	11 1/2	11 3/4	12	12 1/4	12 1/2	12 3/4	13	13 1/4	13 1/2	13 3/4	14	14 1/4	14 1/2	14 3/4	15	15 1/4	15 1/2	15 3/4	16	16 1/4	16 1/2	16 3/4	17	17 1/4	17 1/2	17 3/4	18	18 1/4	18 1/2	18 3/4	19	19 1/4	19 1/2	19 3/4	20	20 1/4	20 1/2	20 3/4	21	21 1/4	21 1/2	21 3/4	22	22 1/4	22 1/2	22 3/4	23	23 1/4	23 1/2	23 3/4	24	24 1/4	24 1/2	24 3/4	25	25 1/4	25 1/2	25 3/4	26	26 1/4	26 1/2	26 3/4	27	27 1/4	27 1/2	27 3/4	28	28 1/4	28 1/2	28 3/4	29	29 1/4	29 1/2	29 3/4	30	30 1/4	30 1/2	30 3/4	31	31 1/4	31 1/2	31 3/4	32	32 1/4	32 1/2	32 3/4	33	33 1/4	33 1/2	33 3/4	34	34 1/4	34 1/2	34 3/4	35	35 1/4	35 1/2	35 3/4	36	36 1/4	36 1/2	36 3/4	37	37 1/4	37 1/2	37 3/4	38	38 1/4	38 1/2	38 3/4	39	39 1/4	39 1/2	39 3/4	40	40 1/4	40 1/2	40 3/4	41	41 1/4	41 1/2	41 3/4	42	42 1/4	42 1/2	42 3/4	43	43 1/4	43 1/2	43 3/4	44	44 1/4	44 1/2	44 3/4	45	45 1/4	45 1/2	45 3/4	46	46 1/4	46 1/2	46 3/4	47	47 1/4	47 1/2	47 3/4	48	48 1/4	48 1/2	48 3/4	49	49 1/4	49 1/2	49 3/4	50	50 1/4	50 1/2	50 3/4	51	51 1/4	51 1/2	51 3/4	52	52 1/4	52 1/2	52 3/4	53	53 1/4	53 1/2	53 3/4	54	54 1/4	54 1/2	54 3/4	55	55 1/4	55 1/2	55 3/4	56	56 1/4	56 1/2	56 3/4	57	57 1/4	57 1/2	57 3/4	58	58 1/4	58 1/2	58 3/4	59	59 1/4	59 1/2	59 3/4	60	60 1/4	60 1/2	60 3/4	61	61 1/4	61 1/2	61 3/4	62	62 1/4	62 1/2	62 3/4	63	63 1/4	63 1/2	63 3/4	64	64 1/4	64 1/2	64 3/4	65	65 1/4	65 1/2	65 3/4	66	66 1/4	66 1/2	66 3/4	67	67 1/4	67 1/2	67 3/4	68	68 1/4	68 1/2	68 3/4	69	69 1/4	69 1/2	69 3/4	70	70 1/4	70 1/2	70 3/4	71	71 1/4	71 1/2	71 3/4	72	72 1/4	72 1/2	72 3/4	73	73 1/4	73 1/2	73 3/4	74	74 1/4	74 1/2	74 3/4	75	75 1/4	75 1/2	75 3/4	76	76 1/4	76 1/2	76 3/4	77	77 1/4	77 1/2	77 3/4	78	78 1/4	78 1/2	78 3/4	79	79 1/4	79 1/2	79 3/4	80	80 1/4	80 1/2	80 3/4	81	81 1/4	81 1/2	81 3/4	82	82 1/4	82 1/2	82 3/4	83	83 1/4	83 1/2	83 3/4	84	84 1/4	84 1/2	84 3/4	85	85 1/4	85 1/2	85 3/4	86	86 1/4	86 1/2	86 3/4	87	87 1/4	87 1/2	87 3/4	88	88 1/4	88 1/2	88 3/4	89	89 1/4	89 1/2	89 3/4	90	90 1/4	90 1/2	90 3/4	91	91 1/4	91 1/2	91 3/4	92	92 1/4	92 1/2	92 3/4	93	93 1/4	93 1/2	93 3/4	94	94 1/4	94 1/2	94 3/4	95	95 1/4	95 1/2	95 3/4	96	96 1/4	96 1/2	96 3/4	97	97 1/4	97 1/2	97 3/4	98	98 1/4	98 1/2	98 3/4	99	99 1/4	99 1/2	99 3/4	100	1

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 27.

**CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN
CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.**

CAPACITY TABLE ONLY APPLIES TO ULLAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE.
GAUGE POINT: (HERMETIC) LOCATED 12'-06" OFF CENTERLINE AND 41'-00" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY

**PRECISION MEASUREMENT
& ANALYSIS, INC.**

P.O. Box 2092
Pearland, Texas 77588
<http://www.pmacorp.net>

SHEET NO. 9 OF 12

[Signature]



BARGE "EMS 509"

3 PORT ULLAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.			11 FT.			12 FT.			13 FT.			14 FT.			15 FT.			16 FT.			17 FT.			18 FT.			19 FT.		
IN			IN			IN			IN			IN			IN			IN			IN			IN			IN		
0	2,863.85	0	2,502.23	0	2,140.44	0	1,778.63	0	1,416.83	0	1,055.02	0	693.77	0	332.10	0													
1/4	2,856.31	1/4	2,494.70	1/4	2,132.90	1/4	1,771.09	1/4	1,409.29	1/4	1,047.48	1/4	686.25	1/4	324.56	1/4													
1/2	2,848.78	1/2	2,487.16	1/2	2,125.36	1/2	1,763.56	1/2	1,401.75	1/2	1,039.95	1/2	678.74	1/2	317.03	1/2													
3/4	2,841.25	3/4	2,479.63	3/4	2,117.82	3/4	1,756.02	3/4	1,394.21	3/4	1,032.41	3/4	671.22	3/4	309.49	3/4													
1	2,833.71	1	2,472.09	1	2,110.29	1	1,748.48	1	1,386.68	1	1,024.87	1	663.70	1	301.95	1													
1/4	2,826.18	1/4	2,464.56	1/4	2,102.75	1/4	1,740.94	1/4	1,379.14	1/4	1,017.33	1/4	656.18	1/4	294.41	1/4													
1/2	2,818.65	1/2	2,457.02	1/2	2,095.21	1/2	1,733.41	1/2	1,371.60	1/2	1,009.80	1/2	648.65	1/2	286.88	1/2													
3/4	2,811.11	3/4	2,449.48	3/4	2,087.67	3/4	1,725.87	3/4	1,364.06	3/4	1,002.26	3/4	641.12	3/4	279.34	3/4													
2	2,803.58	2	2,441.94	2	2,080.14	2	1,718.33	2	1,356.53	2	994.72	2	633.60	2	271.80	2													
1/4	2,796.04	1/4	2,434.41	1/4	2,072.60	1/4	1,710.79	1/4	1,348.99	1/4	987.18	1/4	626.06	1/4	264.26	1/4													
1/2	2,788.51	1/2	2,426.87	1/2	2,065.06	1/2	1,703.26	1/2	1,341.45	1/2	979.65	1/2	618.52	1/2	256.73	1/2													
3/4	2,780.98	3/4	2,419.33	3/4	2,057.52	3/4	1,695.72	3/4	1,333.91	3/4	972.11	3/4	610.98	3/4	249.19	3/4													
3	2,773.44	3	2,411.79	3	2,049.99	3	1,688.18	3	1,326.38	3	964.57	3	603.45	3	241.65	3													
1/4	2,765.91	1/4	2,404.26	1/4	2,042.45	1/4	1,680.64	1/4	1,318.84	1/4	957.03	1/4	595.91	1/4	234.11	1/4													
1/2	2,758.38	1/2	2,396.72	1/2	2,034.91	1/2	1,673.11	1/2	1,311.30	1/2	949.50	1/2	588.37	1/2	226.58	1/2													
3/4	2,750.84	3/4	2,389.18	3/4	2,027.37	3/4	1,665.57	3/4	1,303.76	3/4	941.96	3/4	580.83	3/4	219.04	3/4													
4	2,743.31	4	2,381.64	4	2,019.83	4	1,658.03	4	1,296.23	4	934.42	4	573.30	4	211.50	4													
1/4	2,735.78	1/4	2,374.10	1/4	2,012.30	1/4	1,650.49	1/4	1,288.69	1/4	926.88	1/4	565.76	1/4	203.96	1/4													
1/2	2,728.24	1/2	2,366.56	1/2	2,004.76	1/2	1,642.95	1/2	1,281.15	1/2	919.35	1/2	558.22	1/2	196.43	1/2													
3/4	2,720.71	3/4	2,359.03	3/4	1,997.22	3/4	1,635.42	3/4	1,273.61	3/4	911.81	3/4	550.68	3/4	188.89	3/4													
5	2,713.18	5	2,351.49	5	1,989.68	5	1,627.88	5	1,266.07	5	904.27	5	543.15	5	181.35	5													
1/4	2,705.64	1/4	2,343.95	1/4	1,982.15	1/4	1,620.34	1/4	1,258.54	1/4	896.74	1/4	535.61	1/4	173.81	1/4													
1/2	2,698.11	1/2	2,336.41	1/2	1,974.61	1/2	1,612.80	1/2	1,251.00	1/2	889.22	1/2	528.07	1/2	166.28	1/2													
3/4	2,690.57	3/4	2,328.88	3/4	1,967.07	3/4	1,605.27	3/4	1,243.46	3/4	881.69	3/4	520.54	3/4	158.74	3/4													
6	2,683.04	6	2,321.34	6	1,959.53	6	1,597.73	6	1,235.92	6	874.16	6	513.00	6	151.20	6													
1/4	2,675.51	1/4	2,313.80	1/4	1,952.00	1/4	1,590.19	1/4	1,228.39	1/4	866.65	1/4	505.46	1/4	143.67	1/4													
1/2	2,667.97	1/2	2,306.26	1/2	1,944.46	1/2	1,582.65	1/2	1,220.85	1/2	859.13	1/2	497.92	1/2	136.13	1/2													
3/4	2,660.44	3/4	2,298.73	3/4	1,936.92	3/4	1,575.12	3/4	1,213.31	3/4	851.61	3/4	490.39	3/4	128.59	3/4													
7	2,652.91	7	2,291.19	7	1,929.38	7	1,567.58	7	1,205.77	7	844.10	7	482.85	7	121.05	7													
1/4	2,645.37	1/4	2,283.65	1/4	1,921.85	1/4	1,560.04	1/4	1,198.24	1/4	836.58	1/4	475.31	1/4	113.52	1/4													
1/2	2,637.84	1/2	2,276.11	1/2	1,914.31	1/2	1,552.50	1/2	1,190.70	1/2	829.06	1/2	467.77	1/2	105.98	1/2													
3/4	2,630.31	3/4	2,268.58	3/4	1,906.77	3/4	1,544.97	3/4	1,183.16	3/4	821.55	3/4	460.24	3/4	98.44	3/4													
8	2,622.77	8	2,261.04	8	1,899.23	8	1,537.43	8	1,175.62	8	814.03	8	452.70	8	90.90	8													
1/4	2,615.24	1/4	2,253.50	1/4	1,891.70	1/4	1,529.89	1/4	1,168.09	1/4	806.52	1/4	445.16	1/4	83.37	1/4													
1/2	2,607.70	1/2	2,245.96	1/2	1,884.16	1/2	1,522.35	1/2	1,160.55	1/2	799.00	1/2	437.62	1/2	75.83	1/2													
3/4	2,600.17	3/4	2,238.43	3/4	1,876.62	3/4	1,514.82	3/4	1,153.01	3/4	791.48	3/4	430.09	3/4	68.29	3/4													
9	2,592.64	9	2,230.89	9	1,869.08	9	1,507.28	9	1,145.47	9	783.97	9	422.55	9	60.75	9													
1/4	2,585.10	1/4	2,223.35	1/4	1,861.55	1/4	1,499.74	1/4	1,137.94	1/4	776.45	1/4	415.01	1/4	53.84	1/4													
1/2	2,577.57	1/2	2,215.81	1/2	1,854.01	1/2	1,492.20	1/2	1,130.40	1/2	768.93	1/2	407.47	1/2	46.94	1/2													
3/4	2,570.04	3/4	2,208.27	3/4	1,846.47	3/4	1,484.67	3/4	1,122.86	3/4	761.42	3/4	399.94	3/4	40.03	3/4													
10	2,562.50	10	2,200.74	10	1,838.93	10	1,477.13	10	1,115.32	10	753.90	10	392.40	10	33.12	10													
1/4	2,554.97	1/4	2,193.20	1/4	1,831.39	1/4	1,469.59	1/4	1,107.79	1/4	746.38	1/4	384.86	1/4	28.09	1/4													
1/2	2,547.44	1/2	2,185.66	1/2	1,823.86	1/2	1,462.05	1/2	1,100.25	1/2	738.87	1/2	377.32	1/2	23.07	1/2													
3/4	2,539.90	3/4	2,178.12	3/4	1,816.32	3/4	1,454.51	3/4	1,092.71	3/4	731.35	3/4	369.79	3/4	18.04	3/4													
11	2,532.37	11	2,170.59	11	1,808.78	11	1,446.98	11	1,085.17	11	723.84	11	362.25	11	13.02	11													
1/4	2,524.84	1/4	2,163.05	1/4	1,801.24	1/4	1,439.44	1/4	1,077.63	1/4	716.32	1/4																	

STBD

ULLAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

[illegible]

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7. CAPACITY TABLE ONLY APPLICABLE TO BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.

**CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.
CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.**

CAPACITY TABLE ONLY APPLIES TO ULLAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE.
GAUGE POINT: (HERMETIC) LOCATED 12'-06" OFF CENTERLINE AND 41'-00" FORWARD OF AFT BULKHEAD.

34	2,859.28
----	----------

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY

**PRECISION MEASUREMENT
& ANALYSIS, INC.**

P.O. Box 2092

Pearland, Texas 77588
<http://www.pmacorp.net>

[Signature]



BARGE "EMS 509"

3 STBD

ULLAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

10 FT.		11 FT.		12 FT.		13 FT.		14 FT.		15 FT.		16 FT.		17 FT.		18 FT.		19 FT.	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
0	2,851.75	0	2,490.58	0	2,129.33	0	1,770.34	0	1,408.80	0	1,053.89	0	701.44	0	339.82	0			
1/4	2,844.22	1/4	2,483.06	1/4	2,121.85	1/4	1,762.81	1/4	1,401.27	1/4	1,046.68	1/4	693.92	1/4	332.29	1/4			
1/2	2,836.69	1/2	2,475.54	1/2	2,114.38	1/2	1,755.28	1/2	1,393.74	1/2	1,039.47	1/2	686.40	1/2	324.75	1/2			
3/4	2,829.16	3/4	2,468.02	3/4	2,106.91	3/4	1,747.74	3/4	1,386.20	3/4	1,032.26	3/4	678.89	3/4	317.22	3/4			
1	2,821.63	1	2,460.50	1	2,099.43	1	1,740.21	1	1,378.67	1	1,025.05	1	671.37	1	309.68	1			
1/4	2,814.10	1/4	2,452.98	1/4	2,091.96	1/4	1,732.68	1/4	1,371.14	1/4	1,017.84	1/4	663.86	1/4	302.14	1/4			
1/2	2,806.57	1/2	2,445.46	1/2	2,084.49	1/2	1,725.15	1/2	1,363.61	1/2	1,010.63	1/2	656.33	1/2	294.61	1/2			
3/4	2,799.04	3/4	2,437.93	3/4	2,077.02	3/4	1,717.62	3/4	1,356.08	3/4	1,003.42	3/4	648.80	3/4	287.07	3/4			
2	2,791.51	2	2,430.40	2	2,069.54	2	1,710.08	2	1,348.54	2	996.21	2	641.28	2	279.53	2			
1/4	2,783.98	1/4	2,422.88	1/4	2,062.07	1/4	1,702.55	1/4	1,341.01	1/4	989.00	1/4	633.75	1/4	272.00	1/4			
1/2	2,776.45	1/2	2,415.35	1/2	2,054.60	1/2	1,695.02	1/2	1,333.48	1/2	981.80	1/2	626.21	1/2	264.46	1/2			
3/4	2,768.92	3/4	2,407.82	3/4	2,047.13	3/4	1,687.49	3/4	1,325.95	3/4	974.59	3/4	618.68	3/4	256.92	3/4			
3	2,761.39	3	2,400.28	3	2,039.65	3	1,679.96	3	1,318.41	3	967.38	3	611.14	3	249.39	3			
1/4	2,753.86	1/4	2,392.75	1/4	2,032.18	1/4	1,672.42	1/4	1,310.88	1/4	960.17	1/4	603.60	1/4	241.85	1/4			
1/2	2,746.33	1/2	2,385.22	1/2	2,024.71	1/2	1,664.89	1/2	1,303.35	1/2	952.96	1/2	596.07	1/2	234.32	1/2			
3/4	2,738.80	3/4	2,377.68	3/4	2,017.23	3/4	1,657.36	3/4	1,295.82	3/4	945.75	3/4	588.53	3/4	226.78	3/4			
4	2,731.27	4	2,370.15	4	2,009.76	4	1,649.83	4	1,288.29	4	938.54	4	580.99	4	219.25	4			
1/4	2,723.74	1/4	2,362.61	1/4	2,002.29	1/4	1,642.29	1/4	1,280.75	1/4	931.33	1/4	573.46	1/4	211.71	1/4			
1/2	2,716.21	1/2	2,355.08	1/2	1,994.82	1/2	1,634.76	1/2	1,273.22	1/2	924.12	1/2	565.92	1/2	204.18	1/2			
3/4	2,708.68	3/4	2,347.54	3/4	1,987.34	3/4	1,627.23	3/4	1,265.69	3/4	916.91	3/4	558.38	3/4	196.64	3/4			
5	2,701.15	5	2,340.01	5	1,979.87	5	1,619.70	5	1,258.16	5	909.79	5	550.85	5	189.10	5			
1/4	2,693.62	1/4	2,332.47	1/4	1,972.40	1/4	1,612.17	1/4	1,250.63	1/4	902.49	1/4	543.31	1/4	181.57	1/4			
1/2	2,686.10	1/2	2,324.93	1/2	1,964.92	1/2	1,604.63	1/2	1,243.09	1/2	895.28	1/2	535.77	1/2	174.03	1/2			
3/4	2,678.57	3/4	2,317.40	3/4	1,957.45	3/4	1,597.10	3/4	1,235.56	3/4	888.08	3/4	528.24	3/4	166.49	3/4			
6	2,671.04	6	2,309.86	6	1,949.98	6	1,589.57	6	1,228.03	6	880.87	6	520.70	6	158.95	6			
1/4	2,663.51	1/4	2,302.33	1/4	1,942.51	1/4	1,582.04	1/4	1,220.50	1/4	873.67	1/4	513.16	1/4	151.41	1/4			
1/2	2,655.99	1/2	2,294.79	1/2	1,935.03	1/2	1,574.51	1/2	1,213.12	1/2	866.31	1/2	505.63	1/2	143.87	1/2			
3/4	2,648.47	3/4	2,287.26	3/4	1,927.56	3/4	1,566.97	3/4	1,205.74	3/4	858.95	3/4	498.09	3/4	136.32	3/4			
7	2,640.95	7	2,279.72	7	1,920.09	7	1,559.44	7	1,198.37	7	851.59	7	490.55	7	128.78	7			
1/4	2,633.43	1/4	2,272.19	1/4	1,912.61	1/4	1,551.91	1/4	1,190.99	1/4	844.23	1/4	483.02	1/4	121.23	1/4			
1/2	2,625.91	1/2	2,264.65	1/2	1,905.14	1/2	1,544.38	1/2	1,183.77	1/2	836.72	1/2	475.48	1/2	113.68	1/2			
3/4	2,618.39	3/4	2,257.12	3/4	1,897.67	3/4	1,536.85	3/4	1,176.55	3/4	829.20	3/4	467.95	3/4	106.13	3/4			
8	2,610.87	8	2,249.58	8	1,890.20	8	1,529.31	8	1,169.33	8	821.69	8	460.41	8	98.59	8			
1/4	2,603.36	1/4	2,242.05	1/4	1,882.72	1/4	1,521.78	1/4	1,162.11	1/4	814.17	1/4	452.87	1/4	91.04	1/4			
1/2	2,595.84	1/2	2,234.51	1/2	1,875.25	1/2	1,514.25	1/2	1,154.89	1/2	806.66	1/2	445.34	1/2	83.49	1/2			
3/4	2,588.32	3/4	2,226.98	3/4	1,867.78	3/4	1,506.72	3/4	1,147.67	3/4	799.14	3/4	437.80	3/4	75.94	3/4			
9	2,580.80	9	2,219.44	9	1,860.31	9	1,498.18	9	1,140.44	9	791.62	9	430.26	9	68.39	9			
1/4	2,573.28	1/4	2,211.91	1/4	1,852.83	1/4	1,491.65	1/4	1,133.22	1/4	784.11	1/4	422.73	1/4	60.84	1/4			
1/2	2,565.76	1/2	2,204.37	1/2	1,845.36	1/2	1,484.12	1/2	1,126.01	1/2	776.59	1/2	415.19	1/2	53.92	1/2			
3/4	2,558.25	3/4	2,196.83	3/4	1,837.89	3/4	1,476.59	3/4	1,118.79	3/4	769.08	3/4	407.65	3/4	47.01	3/4			
10	2,550.73	10	2,189.30	10	1,830.41	10	1,469.06	10	1,111.58	10	761.56	10	400.12	10	40.09	10			
1/4	2,543.21	1/4	2,181.76	1/4	1,822.94	1/4	1,461.52	1/4	1,104.36	1/4	754.05	1/4	392.58	1/4	33.17	1/4			
1/2	2,535.69	1/2	2,174.26	1/2	1,815.44	1/2	1,453.99	1/2	1,097.15	1/2	746.53	1/2	385.04	1/2	28.14	1/2			
3/4	2,528.17	3/4	2,166.75	3/4	1,807.94	3/4	1,446.46	3/4	1,089.94	3/4	739.01	3/4	377.51	3/4	23.10	3/4			
11	2,520.65	11	2,159.25	11	1,800.44	11	1,438.93	11	1,082.73	11	731.50	11	369.97	11	18.07	11			
1/4	2,513.14	1/4	2,151.74	1/4	1,792.94	1/4	1,431.40	1/4	1,075.52	1/4	723.98	1/4	362.43	1/4	13.04	1/4			
1/2	2,505.62	1/2	2,144.27	1/2	1,785.40	1/2	1,423.86	1/2	1,068.31	1/2	716.47	1/2	354.90	1/2	6.47	1/2			
3/4	2,498.10	3/4	2,136.80	3/4	1,777.87	3/4	1,416.33	3/4	1,061.10	3/4	708.95	3/4	347.36	3/4	0.00	3/4			

STRAPPED: 8/05/2019 JS

CALCULATED: 08/06/2019 CL

PRINTED: 08/12/2019 SW

CANCELS AND SUPERCEDES

ALL PRIOR TO 08/2019

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588

<http://www.pmacorp.net>

Tom J. Gamm