



BARGE "HFL 431"

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	00-0/8	- 00-0/8	00-0/8	- 00-0/8	00-0/8	- 00-0/8	00-0/8	- 00-0/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8
1 STBD	00-0/8	- 00-0/8	00-0/8	- 00-0/8	00-0/8	- 00-0/8	00-0/8	- 00-0/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8
2 PORT	00-0/8	- 00-0/8	00-0/8	- 00-0/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8
2 STBD	00-0/8	- 00-0/8	00-0/8	- 00-0/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8
3 PORT	00-3/8	- 00-3/8	00-3/4	- 00-3/4	01-0/8	- 01-0/8	01-3/8	- 01-3/8	01-3/4	- 01-3/4	02-1/8	- 02-1/8
3 STBD	00-3/8	- 00-3/8	00-3/4	- 00-3/4	01-0/8	- 01-0/8	01-3/8	- 01-3/8	01-3/4	- 01-3/4	02-1/8	- 02-1/8

(ALL MEASUREMENTS ABOVE ARE IN INCHES)

EXAMPLE FOR ABOVE TRIM CORRECTIONS:

FWD. DRAFT = 1'-00"
 AFT DRAFT = 4'-00"
 DIFF. = 3'-00" (DOWN BY STERN)

THE CORRECTION FOR 3'-00" TRIM DOWN BY STERN FOR 3 PORT IS - 01-0/8"
 FOR A MEASURED ULLAGE GAUGE OF 4'-00" ON 3 PORT, THE TRIM CORRECTED ULLAGE IS 3'-11"

LENGTH BETWEEN DRAFT MARKS: 241'-03"

March 5, 2015

PRECISION MEASUREMENT
 & ANALYSIS, INC.
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<http://www.pmacorp.net>

ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15-06 1/4"																			
0 FT.		1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.		7 FT.		8 FT.		9 FT.	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
1/4	0	1/4	195,220	1/4	180,370	1/4	165,520	1/4	150,670	1/4	135,733	1/4	120,840	1/4	105,946	1/4	91,052	1/4	76,158
1/2	1/4	1/2	194,911	1/2	180,061	1/2	165,211	1/2	150,317	1/2	135,423	1/2	120,529	1/2	105,635	1/2	90,742	1/2	75,848
3/4	1/2	3/4	194,601	3/4	179,751	3/4	164,900	3/4	150,007	3/4	135,113	3/4	120,219	3/4	105,325	3/4	90,431	3/4	75,537
1	1	1	193,982	1	179,133	1	164,280	1	149,386	1	134,492	1	119,598	1	104,705	1	89,811	1	74,917
1/4	1/4	1/4	193,673	1/4	178,823	1/4	163,970	1/4	149,076	1/4	134,182	1/4	119,288	1/4	104,394	1/4	89,501	1/4	74,608
1/2	1/2	1/2	193,364	1/2	178,514	1/2	163,659	1/2	148,765	1/2	133,872	1/2	118,978	1/2	104,084	1/2	89,190	1/2	74,304
3/4	3/4	3/4	193,054	3/4	178,204	3/4	163,349	3/4	148,455	3/4	133,561	3/4	118,668	3/4	103,774	3/4	88,880	3/4	74,000
2	2	2	192,745	2	177,895	2	163,039	2	148,145	2	133,251	2	118,357	2	103,463	2	88,570	2	73,699
1/4	1/4	1/4	192,436	1/4	177,586	1/4	162,728	1/4	147,835	1/4	132,941	1/4	118,047	1/4	103,153	1/4	88,259	1/4	73,395
1/2	1/2	1/2	192,126	1/2	177,276	1/2	162,418	1/2	147,524	1/2	132,631	1/2	117,737	1/2	102,843	1/2	87,949	1/2	73,091
3/4	3/4	3/4	191,817	3/4	176,967	3/4	162,108	3/4	147,214	3/4	132,320	3/4	117,426	3/4	102,533	3/4	87,639	3/4	72,783
3	3	3	191,507	3	176,658	3	161,798	3	146,904	3	132,010	3	117,116	3	102,222	3	87,328	3	72,474
1/4	1/4	1/4	191,198	1/4	176,348	1/4	161,487	1/4	146,593	1/4	131,700	1/4	116,806	1/4	101,912	1/4	87,018	1/4	72,165
1/2	1/2	1/2	190,889	1/2	176,039	1/2	161,177	1/2	146,283	1/2	131,389	1/2	116,496	1/2	101,602	1/2	86,708	1/2	71,857
3/4	3/4	3/4	190,579	3/4	175,729	3/4	160,867	3/4	145,973	3/4	131,079	3/4	116,185	3/4	101,291	3/4	86,398	3/4	71,549
4	4	4	190,270	4	175,420	4	160,563	4	145,663	4	130,769	4	115,875	4	100,981	4	86,087	4	71,241
1/4	1/4	1/4	189,961	1/4	175,111	1/4	160,246	1/4	145,352	1/4	130,458	1/4	115,565	1/4	100,671	1/4	85,777	1/4	70,936
1/2	1/2	1/2	189,651	1/2	174,801	1/2	159,936	1/2	145,042	1/2	130,148	1/2	115,254	1/2	100,361	1/2	85,467	1/2	70,628
3/4	3/4	3/4	189,342	3/4	174,492	3/4	159,626	3/4	144,732	3/4	129,838	3/4	114,944	3/4	100,050	3/4	85,156	3/4	70,320
5	5	5	189,032	5	174,183	5	159,315	5	144,421	5	129,528	5	114,634	5	99,740	5	84,846	5	69,952
1/4	1/4	1/4	188,723	1/4	173,873	1/4	159,005	1/4	144,111	1/4	129,217	1/4	114,324	1/4	99,430	1/4	84,536	1/4	69,644
1/2	1/2	1/2	188,414	1/2	173,564	1/2	158,695	1/2	143,801	1/2	128,907	1/2	114,013	1/2	99,119	1/2	84,226	1/2	69,336
3/4	3/4	3/4	188,104	3/4	173,254	3/4	158,384	3/4	143,491	3/4	128,597	3/4	113,703	3/4	98,809	3/4	83,915	3/4	69,028
6	6	6	187,795	6	172,945	6	158,074	6	143,180	6	128,286	6	113,393	6	98,499	6	83,605	6	68,721
1/4	1/4	1/4	187,486	1/4	172,636	1/4	157,764	1/4	142,870	1/4	127,976	1/4	113,082	1/4	98,189	1/4	83,295	1/4	68,413
1/2	1/2	1/2	187,176	1/2	172,326	1/2	157,454	1/2	142,560	1/2	127,666	1/2	112,772	1/2	97,878	1/2	82,984	1/2	68,105
3/4	3/4	3/4	186,867	3/4	172,017	3/4	157,143	3/4	142,249	3/4	127,356	3/4	112,462	3/4	97,568	3/4	82,674	3/4	67,797
7	7	7	186,557	7	171,708	7	156,833	7	141,939	7	127,045	7	112,152	7	97,258	7	82,364	7	67,489
1/4	1/4	1/4	186,248	1/4	171,398	1/4	156,523	1/4	141,623	1/4	126,735	1/4	111,841	1/4	96,947	1/4	82,054	1/4	67,181
1/2	1/2	1/2	185,939	1/2	171,089	1/2	156,212	1/2	141,319	1/2	126,425	1/2	111,531	1/2	96,637	1/2	81,743	1/2	66,873
3/4	3/4	3/4	185,629	3/4	170,779	3/4	155,902	3/4	141,008	3/4	126,114	3/4	111,221	3/4	96,327	3/4	81,433	3/4	66,565
8	8	8	185,320	8	170,470	8	155,592	8	140,698	8	125,804	8	110,910	8	96,017	8	81,123	8	66,257
1/4	1/4	1/4	185,011	1/4	170,161	1/4	155,282	1/4	140,388	1/4	125,494	1/4	110,600	1/4	95,706	1/4	80,812	1/4	65,949
1/2	1/2	1/2	184,701	1/2	169,851	1/2	154,971	1/2	140,077	1/2	125,184	1/2	110,290	1/2	95,396	1/2	80,502	1/2	65,641
3/4	3/4	3/4	184,392	3/4	169,542	3/4	154,661	3/4	139,767	3/4	124,873	3/4	109,980	3/4	95,086	3/4	80,192	3/4	65,333
9	9	9	184,082	9	169,233	9	154,351	9	139,457	9	124,563	9	109,669	9	94,775	9	79,882	9	65,025
1/4	1/4	1/4	183,773	1/4	168,923	1/4	154,040	1/4	139,147	1/4	124,253	1/4	109,359	1/4	94,465	1/4	79,571	1/4	64,717
1/2	1/2	1/2	183,464	1/2	168,614	1/2	153,730	1/2	138,836	1/2	123,942	1/2	109,049	1/2	94,155	1/2	79,261	1/2	64,409
3/4	3/4	3/4	183,154	3/4	168,304	3/4	153,420	3/4	138,526	3/4	123,632	3/4	108,738	3/4	93,845	3/4	78,951	3/4	64,101
10	10	10	182,845	10	167,995	10	153,109	10	138,216	10	123,322	10	108,428	10	93,534	10	78,640	10	63,793
1/4	1/4	1/4	182,536	1/4	167,686	1/4	152,799	1/4	137,905	1/4	123,012	1/4	108,118	1/4	93,224	1/4	78,330	1/4	63,485
1/2	1/2	1/2	182,226	1/2	167,376	1/2	152,489	1/2	137,595	1/2	122,701	1/2	107,807	1/2	92,914	1/2	78,020	1/2	63,177
3/4	3/4	3/4	181,917	3/4	167,067	3/4	152,179	3/4	137,285	3/4	122,391	3/4	107,497	3/4	92,603	3/4	77,710	3/4	62,869
11	11	11	181,608	11	166,758	11	151,868	11	136,975	11	122,081	11	107,187	11	92,293	11	77,399	11	62,561
1/4	1/4	1/4	181,298	1/4	166,448	1/4	151,558	1/4	136,664	1/4	121,770	1/4	106,877	1/4	91,983	1/4	77,089	1/4	62,253
1/2	1/2	1/2	180,989	1/2	166,139	1/2	151,248	1/2	136,354	1/2	121,460	1/2	106,566	1/2	91,673	1/2	76,779	1/2	61,945
3/4	3/4	3/4	180,679	3/4	165,829	3/4	150,937	3/4	136,044	3/4	121,150	3/4	106,256	3/4	91,362	3/4	76,468	3/4	61,637

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 TO TOP LIP OF 2" "HERMETIC" VALVE GAUGE POINT: (HERMETIC) LOCATED 12'-09" OFF CENTERLINE AND 42'-09" FORWARD OF AFT BULKHEAD.

Year	Value	Unit	Total
1980	100		100
1981	100		100
1982	100		100
1983	100		100
1984	100		100
1985	100		100
1986	100		100
1987	100		100
1988	100		100
1989	100		100
1990	100		100
1991	100		100
1992	100		100
1993	100		100
1994	100		100
1995	100		100
1996	100		100
1997	100		100
1998	100		100
1999	100		100
2000	100		100
2001	100		100
2002	100		100
2003	100		100
2004	100		100
2005	100		100
2006	100		100
2007	100		100
2008	100		100
2009	100		100
2010	100		100
2011	100		100
2012	100		100
2013	100		100
2014	100		100
2015	100		100
2016	100		100
2017	100		100
2018	100		100
2019	100		100
2020	100		100
2021	100		100
2022	100		100
2023	100		100
2024	100		100
2025	100		100
2026	100		100
2027	100		100
2028	100		100
2029	100		100
2030	100		100
2031	100		100
2032	100		100
2033	100		100
2034	100		100
2035	100		100
2036	100		100
2037	100		100
2038	100		100
2039	100		100
2040	100		100
2041	100		100
2042	100		100
2043	100		100
2044	100		100
2045	100		100
2046	100		100
2047	100		100
2048	100		100
2049	100		100
2050	100		100
2051	100		100
2052	100		100
2053	100		100
2054	100		100
2055	100		100
2056	100		100
2057	100		100
2058	100		100
2059	100		100
2060	100		100
2061	100		100
2062	100		100
2063	100		100
2064	100		100
2065	100		100
2066	100		100
2067	100		100
2068	100		100
2069	100		100
2070	100		100
2071	100		100
2072	100		100
2073	100		100
2074	100		100
2075	100		100
2076	100		100
2077	100		100
2078	100		100
2079	100		100
2080	100		100
2			

**PRECISION MEASUREMENT
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2



BAKGE "HFL 431"

1 PORT
ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

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	76,158	0	61,264	0	46,371	0	31,694	0	18,266	0	6,278	0	0	0	0	0	0	0	0
1/4	75,848	1/4	60,954	1/4	46,060	1/4	31,399	1/4	18,001	1/4	6,043	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	75,538	1/2	60,644	1/2	45,750	1/2	31,107	1/2	17,737	1/2	5,810	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	75,227	3/4	60,333	3/4	45,440	3/4	30,815	3/4	17,474	3/4	5,578	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
1	74,917	1	60,023	1	45,129	1	30,523	1	17,211	1	5,346	1	1	1	1	1	1	1	1
1/4	74,607	1/4	59,713	1/4	44,819	1/4	30,231	1/4	16,948	1/4	5,113	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	74,296	1/2	59,403	1/2	44,509	1/2	29,942	1/2	16,687	1/2	4,884	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	73,986	3/4	59,092	3/4	44,199	3/4	29,652	3/4	16,427	3/4	4,654	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
2	73,676	2	58,782	2	43,888	2	29,363	2	16,166	2	4,425	2	2	2	2	2	2	2	2
1/4	73,366	1/4	58,472	1/4	43,578	1/4	29,073	1/4	15,906	1/4	4,196	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	73,055	1/2	58,161	1/2	43,268	1/2	28,786	1/2	15,648	1/2	3,969	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	72,745	3/4	57,851	3/4	42,957	3/4	28,499	3/4	15,390	3/4	3,743	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
3	72,435	3	57,541	3	42,647	3	28,212	3	15,132	3	3,517	3	3	3	3	3	3	3	3
1/4	72,124	1/4	57,231	1/4	42,337	1/4	27,925	1/4	14,873	1/4	3,291	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	71,814	1/2	56,920	1/2	42,026	1/2	27,641	1/2	14,618	1/2	3,068	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	71,504	3/4	56,610	3/4	41,716	3/4	27,357	3/4	14,362	3/4	2,845	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
4	71,194	4	56,300	4	41,406	4	27,072	4	14,107	4	2,622	4	4	4	4	4	4	4	4
1/4	70,883	1/4	55,989	1/4	41,096	1/4	26,788	1/4	13,851	1/4	2,400	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	70,573	1/2	55,679	1/2	40,787	1/2	26,504	1/2	13,599	1/2	2,181	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	70,263	3/4	55,369	3/4	40,478	3/4	26,221	3/4	13,346	3/4	1,963	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
5	69,952	5	55,059	5	40,169	5	25,937	5	13,093	5	1,745	5	5	5	5	5	5	5	5
1/4	69,642	1/4	54,748	1/4	39,860	1/4	25,654	1/4	12,840	1/4	1,526	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	69,332	1/2	54,438	1/2	39,551	1/2	25,373	1/2	12,589	1/2	1,358	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	69,022	3/4	54,128	3/4	39,242	3/4	25,092	3/4	12,339	3/4	1,190	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
6	68,711	6	53,817	6	38,933	6	24,811	6	12,089	6	1,023	6	6	6	6	6	6	6	6
1/4	68,401	1/4	53,507	1/4	38,624	1/4	24,530	1/4	11,838	1/4	855	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	68,091	1/2	53,197	1/2	38,317	1/2	24,251	1/2	11,590	1/2	855	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	67,780	3/4	52,887	3/4	38,009	3/4	23,973	3/4	11,342	3/4	855	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
7	67,470	7	52,576	7	37,701	7	23,695	7	11,095	7	7	7	7	7	7	7	7	7	7
1/4	67,160	1/4	52,266	1/4	37,394	1/4	23,416	1/4	10,847	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	66,850	1/2	51,956	1/2	37,089	1/2	23,140	1/2	10,601	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	66,539	3/4	51,645	3/4	36,784	3/4	22,864	3/4	10,356	3/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
8	66,229	8	51,335	8	36,479	8	22,589	8	10,111	8	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/4	65,919	1/4	51,025	1/4	36,174	1/4	22,313	1/4	9,866	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	65,608	1/2	50,715	1/2	35,871	1/2	22,039	1/2	9,623	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	65,298	3/4	50,404	3/4	35,569	3/4	21,766	3/4	9,380	3/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
9	64,988	9	50,094	9	35,267	9	21,493	9	9,137	9	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/4	64,677	1/4	49,784	1/4	34,965	1/4	21,219	1/4	8,895	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	64,367	1/2	49,473	1/2	34,665	1/2	20,949	1/2	8,654	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	64,057	3/4	49,163	3/4	34,365	3/4	20,678	3/4	8,414	3/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
10	63,747	10	48,853	10	34,066	10	20,407	10	8,174	10	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/4	63,436	1/4	48,543	1/4	33,766	1/4	20,136	1/4	7,934	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	63,126	1/2	48,232	1/2	33,469	1/2	19,868	1/2	7,696	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	62,816	3/4	47,922	3/4	33,172	3/4	19,600	3/4	7,458	3/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
11	62,505	11	47,612	11	32,875	11	19,332	11	7,221	11	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/4	62,195	1/4	47,301	1/4	32,577	1/4	19,063	1/4	6,983	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	61,885	1/2	46,991	1/2	32,283	1/2	18,798	1/2	6,748	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	61,575	3/4	46,681	3/4	31,988	3/4	18,532	3/4	6,513	3/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 03/05/2015 SW
CALCULATED: 03/05/2015 CL
PRINTED: 03/05/2015 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 03/2015

PRECISION MEASUREMENT
& ANALYSIS, INC.

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

P. J. Pearson



1 STBD

1 STBD

ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

0 FT.		1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.		7 FT.		8 FT.		9 FT.	
N	IN	N	IN	N	IN	N	IN	N	IN	N	IN	N	IN	N	IN	N	IN	N	IN
0	0	0	0	194,716	0	179,862	0	165,008	0	150,110	0	135,213	0	120,315	0	105,418	0	90,520	0
1/4	1/4	1/4	1/4	194,406	1/4	179,553	1/4	164,697	1/4	149,800	1/4	134,902	1/4	120,005	1/4	105,107	1/4	90,210	1/4
1/2	1/2	1/2	1/2	194,097	1/2	179,243	1/2	164,387	1/2	149,489	1/2	134,591	1/2	119,694	1/2	104,797	1/2	89,900	1/2
3/4	3/4	3/4	3/4	193,787	3/4	178,934	3/4	164,076	3/4	149,179	3/4	134,282	3/4	119,384	3/4	104,487	3/4	89,599	3/4
1	1	1	1	193,478	1	178,624	1	163,766	1	148,869	1	133,971	1	119,074	1	104,176	1	89,279	1
1/4	1/4	1/4	1/4	193,168	1/4	178,315	1/4	163,456	1/4	148,558	1/4	133,661	1/4	118,763	1/4	103,866	1/4	88,968	1/4
1/2	1/2	1/2	1/2	192,859	1/2	177,996	1/2	163,145	1/2	148,248	1/2	133,350	1/2	118,453	1/2	103,556	1/2	88,658	1/2
3/4	3/4	3/4	3/4	192,549	3/4	177,686	3/4	162,835	3/4	147,938	3/4	133,040	3/4	118,143	3/4	103,245	3/4	88,348	3/4
2	2	2	2	192,240	2	177,386	2	162,525	2	147,627	2	132,730	2	117,932	2	102,935	2	88,037	2
1/4	1/4	1/4	1/4	191,931	1/4	177,077	1/4	162,214	1/4	147,317	1/4	132,419	1/4	117,622	1/4	102,624	1/4	87,727	1/4
1/2	1/2	1/2	1/2	191,621	1/2	176,768	1/2	161,904	1/2	147,006	1/2	132,109	1/2	117,312	1/2	102,314	1/2	87,417	1/2
3/4	3/4	3/4	3/4	191,312	3/4	176,458	3/4	161,594	3/4	146,696	3/4	131,799	3/4	117,001	3/4	102,004	3/4	87,106	3/4
3	3	3	3	191,002	3	176,149	3	161,283	3	146,386	3	131,488	3	116,691	3	101,693	3	86,796	3
1/4	1/4	1/4	1/4	190,693	1/4	175,839	1/4	160,973	1/4	146,075	1/4	131,178	1/4	116,380	1/4	101,383	1/4	86,486	1/4
1/2	1/2	1/2	1/2	190,383	1/2	175,530	1/2	160,662	1/2	145,765	1/2	130,868	1/2	116,070	1/2	101,073	1/2	86,175	1/2
3/4	3/4	3/4	3/4	190,074	3/4	175,220	3/4	160,352	3/4	145,455	3/4	130,557	3/4	115,760	3/4	100,762	3/4	85,865	3/4
4	4	4	4	189,764	4	174,911	4	160,042	4	145,144	4	130,247	4	115,459	4	100,452	4	85,554	4
1/4	1/4	1/4	1/4	189,455	1/4	174,601	1/4	159,731	1/4	144,834	1/4	129,936	1/4	115,153	1/4	100,142	1/4	85,244	1/4
1/2	1/2	1/2	1/2	189,146	1/2	174,292	1/2	159,421	1/2	144,524	1/2	129,626	1/2	114,848	1/2	99,831	1/2	84,934	1/2
3/4	3/4	3/4	3/4	188,836	3/4	173,983	3/4	159,111	3/4	144,213	3/4	129,316	3/4	114,541	3/4	99,521	3/4	84,623	3/4
5	5	5	5	188,526	5	173,673	5	158,800	5	143,903	5	129,005	5	114,230	5	99,210	5	84,313	5
1/4	1/4	1/4	1/4	188,217	1/4	173,364	1/4	158,490	1/4	143,592	1/4	128,695	1/4	113,958	1/4	98,900	1/4	84,003	1/4
1/2	1/2	1/2	1/2	187,908	1/2	173,054	1/2	158,180	1/2	143,282	1/2	128,385	1/2	113,647	1/2	98,590	1/2	83,692	1/2
3/4	3/4	3/4	3/4	187,598	3/4	172,745	3/4	157,869	3/4	142,972	3/4	128,074	3/4	113,337	3/4	98,279	3/4	83,382	3/4
6	6	6	6	187,289	6	172,435	6	157,559	6	142,661	6	127,764	6	113,026	6	97,969	6	83,072	6
1/4	1/4	1/4	1/4	186,979	1/4	172,126	1/4	157,248	1/4	142,351	1/4	127,454	1/4	112,711	1/4	97,659	1/4	82,761	1/4
1/2	1/2	1/2	1/2	186,670	1/2	171,816	1/2	156,938	1/2	142,041	1/2	127,143	1/2	112,400	1/2	97,348	1/2	82,451	1/2
3/4	3/4	3/4	3/4	186,361	3/4	171,507	3/4	156,628	3/4	141,730	3/4	126,833	3/4	112,089	3/4	97,038	3/4	82,140	3/4
7	7	7	7	186,051	7	171,197	7	156,317	7	141,420	7	126,522	7	111,778	7	96,728	7	81,830	7
1/4	1/4	1/4	1/4	185,742	1/4	170,888	1/4	156,007	1/4	141,110	1/4	126,212	1/4	111,467	1/4	96,417	1/4	81,520	1/4
1/2	1/2	1/2	1/2	185,432	1/2	170,579	1/2	155,697	1/2	140,799	1/2	125,902	1/2	111,156	1/2	96,107	1/2	81,209	1/2
3/4	3/4	3/4	3/4	185,123	3/4	170,269	3/4	155,386	3/4	140,489	3/4	125,591	3/4	110,845	3/4	95,796	3/4	80,899	3/4
8	8	8	8	184,813	8	169,960	8	155,076	8	140,178	8	125,281	8	110,534	8	95,486	8	80,589	8
1/4	1/4	1/4	1/4	184,504	1/4	169,650	1/4	154,766	1/4	139,868	1/4	124,971	1/4	110,223	1/4	95,176	1/4	80,278	1/4
1/2	1/2	1/2	1/2	184,194	1/2	169,341	1/2	154,455	1/2	139,558	1/2	124,660	1/2	109,912	1/2	94,865	1/2	79,968	1/2
3/4	3/4	3/4	3/4	183,885	3/4	169,031	3/4	154,145	3/4	139,247	3/4	124,350	3/4	109,601	3/4	94,555	3/4	79,658	3/4
9	9	9	9	183,575	9	168,722	9	153,834	9	138,937	9	124,040	9	109,290	9	94,245	9	79,347	9
1/4	1/4	1/4	1/4	183,266	1/4	168,412	1/4	153,524	1/4	138,627	1/4	123,729	1/4	108,979	1/4	93,934	1/4	79,037	1/4
1/2	1/2	1/2	1/2	182,957	1/2	168,103	1/2	153,214	1/2	138,316	1/2	123,419	1/2	108,668	1/2	93,624	1/2	78,726	1/2
3/4	3/4	3/4	3/4	182,647	3/4	167,794	3/4	152,903	3/4	138,006	3/4	123,108	3/4	108,359	3/4	93,314	3/4	78,416	3/4
10	10	10	10	182,338	10	167,484	10	152,593	10	137,696	10	122,798	10	108,050	10	93,003	10	78,106	10
1/4	1/4	1/4	1/4	182,028	1/4	167,175	1/4	152,283	1/4	137,385	1/4	122,488	1/4	107,740	1/4	92,693	1/4	77,795	1/4
1/2	1/2	1/2	1/2	181,719	1/2	166,865	1/2	151,972	1/2	137,075	1/2	122,177	1/2	107,431	1/2	92,382	1/2	77,485	1/2
3/4	3/4	3/4	3/4	181,409	3/4	166,556	3/4	151,662	3/4	136,764	3/4	121,867	3/4	107,122	3/4	92,072	3/4	77,175	3/4
11	11	11	11	181,100	11	166,246	11	151,352	11	136,454	11	121,557	11	106,813	11	91,762	11	76,864	11
1/4	1/4	1/4	1/4	180,790	1/4	165,937	1/4	151,041	1/4	136,144	1/4	121,246	1/4	106,504	1/4	91,451	1/4	76,554	1/4
1/2	1/2	1/2	1/2	180,481	1/2	165,627	1/2	150,731	1/2	135,833	1/2	120,936	1/2	106,195	1/2	91,141	1/2	76,244	1/2
3/4	3/4	3/4	3/4	180,172	3/4	165,318	3/4	150,420	3/4	135,523	3/4	120,626	3/4	105,886	3/4	90,831	3/4	75,933	3/4

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'-09" OFF CENTERLINE AND 42'-09" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588

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[Signature]



BAKGE "HFL 431"

1 STBD

ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-05 3/4"

N	10 FT.	N	11 FT.	N	12 FT.	N	13 FT.	N	14 FT.	N	15 FT.	N	16 FT.	N	17 FT.	N	18 FT.	N	19 FT.
0	75,623	0	60,725	0	45,828	0	31,136	0	17,742	0	5,812	0		0		0		0	
1/4	75,312	1/4	60,415	1/4	45,517	1/4	30,842	1/4	17,479	1/4	5,579	1/4		1/4		1/4		1/4	
1/2	75,002	1/2	60,105	1/2	45,207	1/2	30,549	1/2	17,215	1/2	5,347	1/2		1/2		1/2		1/2	
3/4	74,692	3/4	59,794	3/4	44,897	3/4	30,255	3/4	16,952	3/4	5,114	3/4		3/4		3/4		3/4	
1	74,381	1	59,484	1	44,586	1	29,964	1	16,692	1	4,885	1		1		1		1	
1/4	74,071	1/4	59,173	1/4	44,276	1/4	29,673	1/4	16,431	1/4	4,655	1/4		1/4		1/4		1/4	
1/2	73,761	1/2	58,863	1/2	43,966	1/2	29,383	1/2	16,170	1/2	4,426	1/2		1/2		1/2		1/2	
3/4	73,450	3/4	58,553	3/4	43,655	3/4	29,092	3/4	15,910	3/4	4,196	3/4		3/4		3/4		3/4	
2	73,140	2	58,242	2	43,345	2	28,803	2	15,651	2	3,970	2		2		2		2	
1/4	72,830	1/4	57,932	1/4	43,035	1/4	28,515	1/4	15,393	1/4	3,744	1/4		1/4		1/4		1/4	
1/2	72,519	1/2	57,622	1/2	42,724	1/2	28,226	1/2	15,135	1/2	3,517	1/2		1/2		1/2		1/2	
3/4	72,209	3/4	57,311	3/4	42,414	3/4	27,938	3/4	14,877	3/4	3,291	3/4		3/4		3/4		3/4	
3	71,898	3	57,001	3	42,103	3	27,652	3	14,622	3	3,068	3		3		3		3	
1/4	71,588	1/4	56,691	1/4	41,793	1/4	27,366	1/4	14,366	1/4	2,845	1/4		1/4		1/4		1/4	
1/2	71,278	1/2	56,380	1/2	41,483	1/2	27,081	1/2	14,110	1/2	2,623	1/2		1/2		1/2		1/2	
3/4	70,967	3/4	56,070	3/4	41,172	3/4	26,795	3/4	13,855	3/4	2,400	3/4		3/4		3/4		3/4	
4	70,657	4	55,759	4	40,862	4	26,511	4	13,602	4	2,182	4		4		4		4	
1/4	70,347	1/4	55,449	1/4	40,552	1/4	26,227	1/4	13,349	1/4	1,963	1/4		1/4		1/4		1/4	
1/2	70,036	1/2	55,139	1/2	40,241	1/2	25,944	1/2	13,096	1/2	1,745	1/2		1/2		1/2		1/2	
3/4	69,726	3/4	54,828	3/4	39,931	3/4	25,660	3/4	12,843	3/4	1,526	3/4		3/4		3/4		3/4	
5	69,416	5	54,518	5	39,621	5	25,379	5	12,592	5	1,358	5		5		5		5	
1/4	69,105	1/4	54,208	1/4	39,310	1/4	25,098	1/4	12,342	1/4	1,190	1/4		1/4		1/4		1/4	
1/2	68,795	1/2	53,897	1/2	39,000	1/2	24,817	1/2	12,091	1/2	1,022	1/2		1/2		1/2		1/2	
3/4	68,484	3/4	53,587	3/4	38,689	3/4	24,536	3/4	11,841	3/4	855	3/4		3/4		3/4		3/4	
6	68,174	6	53,277	6	38,380	6	24,258	6	11,593	6		6		6		6		6	
1/4	67,864	1/4	52,966	1/4	38,071	1/4	23,979	1/4	11,345	1/4		1/4		1/4		1/4		1/4	
1/2	67,553	1/2	52,656	1/2	37,762	1/2	23,701	1/2	11,097	1/2		1/2		1/2		1/2		1/2	
3/4	67,243	3/4	52,345	3/4	37,453	3/4	23,422	3/4	10,849	3/4		3/4		3/4		3/4		3/4	
7	66,933	7	52,035	7	37,147	7	23,146	7	10,604	7		7		7		7		7	
1/4	66,622	1/4	51,725	1/4	36,840	1/4	22,870	1/4	10,359	1/4		1/4		1/4		1/4		1/4	
1/2	66,312	1/2	51,414	1/2	36,534	1/2	22,594	1/2	10,113	1/2		1/2		1/2		1/2		1/2	
3/4	66,001	3/4	51,104	3/4	36,227	3/4	22,318	3/4	9,868	3/4		3/4		3/4		3/4		3/4	
8	65,691	8	50,794	8	35,923	8	22,045	8	9,625	8		8		8		8		8	
1/4	65,381	1/4	50,483	1/4	35,620	1/4	21,772	1/4	9,382	1/4		1/4		1/4		1/4		1/4	
1/2	65,070	1/2	50,173	1/2	35,316	1/2	21,498	1/2	9,139	1/2		1/2		1/2		1/2		1/2	
3/4	64,760	3/4	49,863	3/4	35,012	3/4	21,225	3/4	8,897	3/4		3/4		3/4		3/4		3/4	
9	64,450	9	49,552	9	34,711	9	20,954	9	8,656	9		9		9		9		9	
1/4	64,139	1/4	49,242	1/4	34,410	1/4	20,683	1/4	8,416	1/4		1/4		1/4		1/4		1/4	
1/2	63,829	1/2	48,931	1/2	34,109	1/2	20,412	1/2	8,176	1/2		1/2		1/2		1/2		1/2	
3/4	63,519	3/4	48,621	3/4	33,808	3/4	20,141	3/4	7,935	3/4		3/4		3/4		3/4		3/4	
10	63,208	10	48,311	10	33,509	10	19,873	10	7,698	10		10		10		10		10	
1/4	62,898	1/4	48,000	1/4	33,211	1/4	19,605	1/4	7,460	1/4		1/4		1/4		1/4		1/4	
1/2	62,587	1/2	47,690	1/2	32,912	1/2	19,336	1/2	7,222	1/2		1/2		1/2		1/2		1/2	
3/4	62,277	3/4	47,380	3/4	32,613	3/4	19,068	3/4	6,985	3/4		3/4		3/4		3/4		3/4	
11	61,967	11	47,069	11	32,317	11	18,802	11	6,749	11		11		11		11		11	
1/4	61,656	1/4	46,759	1/4	32,021	1/4	18,537	1/4	6,514	1/4		1/4		1/4		1/4		1/4	
1/2	61,346	1/2	46,449	1/2	31,725	1/2	18,271	1/2	6,279	1/2		1/2		1/2		1/2		1/2	
3/4	61,036	3/4	46,138	3/4	31,429	3/4	18,005	3/4	6,044	3/4		3/4		3/4		3/4		3/4	

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 03/05/2015 SW
CALCULATED: 03/05/2015 CL
PRINTED: 03/05/2015 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 03/2015

PRECISION MEASUREMENT
& ANALYSIS, INC.
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Pearland, Texas 77588
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P. J. Lane



ULLAGE TABLE

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 TO TOP LIP OF 2" "HERMETIC" VALVE
 GAUGE POINT: (HERMETIC) LOCATED 12'-09" OFF CENTERLINE AND 42'-09" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

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 III I AGE GAIGES TAKEN TO TOP I IR OF 2" "HERMETIC" VALVE

GAUGE POINT: (HERMETIC) LOCATED 12" A8" OFF CENTERLINE AND 18" A8" FROM END OF VALVE

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BARGE "HFL 431"

2 PORT
ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE 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		IN	
0	81,489	0	66,676	0	51,863	0	37,049	0	22,830	0	8,017	0	0	0	0	0	0	0	0	0	0
1/4	81,180	1/4	66,367	1/4	51,554	1/4	36,752	1/4	22,521	1/4	7,708	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	80,872	1/2	66,059	1/2	51,245	1/2	36,455	1/2	22,212	1/2	7,400	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	80,563	3/4	65,750	3/4	50,937	3/4	36,158	3/4	21,904	3/4	7,092	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
1	80,255	1	65,441	1	50,628	1	35,862	1	21,595	1	6,783	1	1	1	1	1	1	1	1	1	1
1/4	79,946	1/4	65,133	1/4	50,319	1/4	35,565	1/4	21,287	1/4	6,475	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	79,637	1/2	64,824	1/2	50,011	1/2	35,268	1/2	20,978	1/2	6,167	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	79,329	3/4	64,515	3/4	49,702	3/4	34,971	3/4	20,669	3/4	5,859	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
2	79,020	2	64,207	2	49,394	2	34,674	2	20,361	2	5,551	2	2	2	2	2	2	2	2	2	2
1/4	78,712	1/4	63,898	1/4	49,085	1/4	34,377	1/4	20,052	1/4	5,244	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	78,403	1/2	63,590	1/2	48,776	1/2	34,081	1/2	19,744	1/2	4,936	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	78,094	3/4	63,281	3/4	48,468	3/4	33,785	3/4	19,435	3/4	4,629	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
3	77,786	3	62,972	3	48,159	3	33,488	3	19,126	3	4,322	3	3	3	3	3	3	3	3	3	3
1/4	77,477	1/4	62,664	1/4	47,851	1/4	33,192	1/4	18,818	1/4	4,015	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	77,168	1/2	62,355	1/2	47,542	1/2	32,896	1/2	18,509	1/2	3,709	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	76,860	3/4	62,047	3/4	47,233	3/4	32,599	3/4	18,201	3/4	3,403	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
4	76,551	4	61,738	4	46,925	4	32,303	4	17,892	4	3,096	4	4	4	4	4	4	4	4	4	4
1/4	76,243	1/4	61,429	1/4	46,616	1/4	32,007	1/4	17,583	1/4	2,792	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	75,934	1/2	61,121	1/2	46,308	1/2	31,711	1/2	17,275	1/2	2,487	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	75,625	3/4	60,812	3/4	45,999	3/4	31,415	3/4	16,966	3/4	2,183	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
5	75,317	5	60,504	5	45,690	5	31,119	5	16,658	5	1,879	5	5	5	5	5	5	5	5	5	5
1/4	75,008	1/4	60,195	1/4	45,382	1/4	30,823	1/4	16,349	1/4	1,622	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	74,700	1/2	59,886	1/2	45,073	1/2	30,527	1/2	16,040	1/2	1,365	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	74,391	3/4	59,578	3/4	44,765	3/4	30,231	3/4	15,732	3/4	1,108	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
6	74,082	6	59,269	6	44,456	6	29,935	6	15,423	6	850	6	6	6	6	6	6	6	6	6	6
1/4	73,774	1/4	58,961	1/4	44,147	1/4	29,639	1/4	15,115	1/4	822	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	73,465	1/2	58,652	1/2	43,839	1/2	29,342	1/2	14,806	1/2	794	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	73,157	3/4	58,343	3/4	43,530	3/4	29,046	3/4	14,497	3/4	766	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
7	72,848	7	58,035	7	43,221	7	28,750	7	14,189	7	738	7	7	7	7	7	7	7	7	7	7
1/4	72,539	1/4	57,726	1/4	42,913	1/4	28,454	1/4	13,880	1/4	710	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	72,231	1/2	57,417	1/2	42,604	1/2	28,158	1/2	13,572	1/2	682	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	71,922	3/4	57,109	3/4	42,296	3/4	27,862	3/4	13,263	3/4	654	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
8	71,614	8	56,800	8	41,987	8	27,566	8	12,954	8	626	8	8	8	8	8	8	8	8	8	8
1/4	71,305	1/4	56,492	1/4	41,678	1/4	27,270	1/4	12,646	1/4	598	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	70,996	1/2	56,183	1/2	41,370	1/2	26,974	1/2	12,337	1/2	570	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	70,688	3/4	55,874	3/4	41,061	3/4	26,678	3/4	12,029	3/4	542	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
9	70,379	9	55,566	9	40,753	9	26,382	9	11,720	9	514	9	9	9	9	9	9	9	9	9	9
1/4	70,070	1/4	55,257	1/4	40,444	1/4	26,086	1/4	11,411	1/4	486	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	69,762	1/2	54,949	1/2	40,135	1/2	25,790	1/2	11,103	1/2	458	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	69,453	3/4	54,640	3/4	39,827	3/4	25,494	3/4	10,794	3/4	430	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
10	69,145	10	54,331	10	39,518	10	25,198	10	10,486	10	402	10	10	10	10	10	10	10	10	10	10
1/4	68,836	1/4	54,023	1/4	39,210	1/4	24,902	1/4	10,177	1/4	374	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	68,527	1/2	53,714	1/2	38,901	1/2	24,606	1/2	9,868	1/2	346	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	68,219	3/4	53,406	3/4	38,592	3/4	24,310	3/4	9,560	3/4	318	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4
11	67,910	11	53,097	11	38,284	11	24,014	11	9,251	11	290	11	11	11	11	11	11	11	11	11	11
1/4	67,602	1/4	52,788	1/4	37,975	1/4	23,718	1/4	8,943	1/4	262	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/4
1/2	67,293	1/2	52,480	1/2	37,667	1/2	23,422	1/2	8,634	1/2	234	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2	1/2
3/4	66,984	3/4	52,171	3/4	37,358	3/4	23,126	3/4	8,325	3/4	206	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4	3/4

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R. Shamm



ULLAGE TABLE

GAUGE HEIGHT 15'-06"

0 FT.		1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.		7 FT.		8 FT.		9 FT.	
N	IN	N	IN	N	IN	N	IN	N	IN	N	IN	N	IN	N	IN	N	IN	N	IN
0	0	0	0	200,420	0	185,655	0	170,889	0	156,079	0	141,269	0	126,460	0	111,650	0	96,840	0
1/4	1/4	1/4	1/4	200,113	1/4	185,347	1/4	170,580	1/4	155,770	1/4	140,961	1/4	126,151	1/4	111,341	1/4	96,532	1/4
1/2	1/2	1/2	1/2	199,805	1/2	185,039	1/2	170,272	1/2	155,462	1/2	140,652	1/2	125,842	1/2	111,033	1/2	96,223	1/2
3/4	3/4	3/4	3/4	199,498	3/4	184,732	3/4	169,963	3/4	155,153	3/4	140,344	3/4	125,534	3/4	110,724	3/4	95,915	3/4
1	1	1	1	199,190	1	184,424	1	169,655	1	154,845	1	140,035	1	125,225	1	110,416	1	95,606	1
1/4	1/4	1/4	1/4	198,882	1/4	184,117	1/4	169,346	1/4	154,536	1/4	139,727	1/4	124,917	1/4	110,107	1/4	95,297	1/4
1/2	1/2	1/2	1/2	198,575	1/2	183,809	1/2	169,038	1/2	154,228	1/2	139,418	1/2	124,608	1/2	109,799	1/2	94,989	1/2
3/4	3/4	3/4	3/4	198,267	3/4	183,501	3/4	168,729	3/4	153,919	3/4	139,110	3/4	124,300	3/4	109,490	3/4	94,680	3/4
2	2	2	2	197,960	2	183,194	2	168,420	2	153,611	2	138,801	2	123,991	2	109,182	2	94,372	2
1/4	1/4	1/4	1/4	197,652	1/4	182,886	1/4	168,112	1/4	153,302	1/4	138,492	1/4	123,683	1/4	108,873	1/4	94,063	1/4
1/2	1/2	1/2	1/2	197,344	1/2	182,578	1/2	167,803	1/2	152,994	1/2	138,184	1/2	123,374	1/2	108,564	1/2	93,755	1/2
3/4	3/4	3/4	3/4	197,037	3/4	182,271	3/4	167,495	3/4	152,685	3/4	137,875	3/4	123,066	3/4	108,256	3/4	93,446	3/4
3	3	3	3	196,729	3	181,963	3	167,186	3	152,377	3	137,567	3	122,757	3	107,947	3	93,138	3
1/4	1/4	1/4	1/4	196,421	1/4	181,656	1/4	166,878	1/4	152,068	1/4	137,258	1/4	122,449	1/4	107,639	1/4	92,829	1/4
1/2	1/2	1/2	1/2	196,114	1/2	181,348	1/2	166,569	1/2	151,760	1/2	136,950	1/2	122,140	1/2	107,330	1/2	92,521	1/2
3/4	3/4	3/4	3/4	195,806	3/4	181,040	3/4	166,261	3/4	151,451	3/4	136,641	3/4	121,832	3/4	107,022	3/4	92,212	3/4
4	4	4	4	195,499	4	180,733	4	165,952	4	151,142	4	136,333	4	121,523	4	106,713	4	91,904	4
1/4	1/4	1/4	1/4	195,191	1/4	180,425	1/4	165,644	1/4	150,834	1/4	136,024	1/4	121,214	1/4	106,405	1/4	91,595	1/4
1/2	1/2	1/2	1/2	194,883	1/2	180,117	1/2	165,335	1/2	150,525	1/2	135,716	1/2	120,906	1/2	106,096	1/2	91,286	1/2
3/4	3/4	3/4	3/4	194,576	3/4	179,810	3/4	165,027	3/4	150,217	3/4	135,407	3/4	120,597	3/4	105,788	3/4	90,978	3/4
5	5	5	5	194,268	5	179,502	5	164,718	5	149,908	5	135,099	5	120,289	5	105,479	5	90,669	5
1/4	1/4	1/4	1/4	193,960	1/4	179,195	1/4	164,409	1/4	149,600	1/4	134,790	1/4	119,980	1/4	105,171	1/4	90,361	1/4
1/2	1/2	1/2	1/2	193,653	1/2	178,887	1/2	164,101	1/2	149,291	1/2	134,482	1/2	119,672	1/2	104,862	1/2	90,052	1/2
3/4	3/4	3/4	3/4	193,345	3/4	178,579	3/4	163,792	3/4	148,983	3/4	134,173	3/4	119,363	3/4	104,554	3/4	89,744	3/4
6	6	6	6	193,038	6	178,272	6	163,484	6	148,674	6	133,864	6	119,055	6	104,245	6	89,435	6
1/4	1/4	1/4	1/4	192,730	1/4	177,964	1/4	163,175	1/4	148,366	1/4	133,556	1/4	118,746	1/4	103,936	1/4	89,127	1/4
1/2	1/2	1/2	1/2	192,422	1/2	177,656	1/2	162,867	1/2	148,057	1/2	133,247	1/2	118,438	1/2	103,628	1/2	88,818	1/2
3/4	3/4	3/4	3/4	192,115	3/4	177,349	3/4	162,558	3/4	147,749	3/4	132,939	3/4	118,129	3/4	103,319	3/4	88,510	3/4
7	7	7	7	191,807	7	177,041	7	162,250	7	147,440	7	132,630	7	117,821	7	103,011	7	88,201	7
1/4	1/4	1/4	1/4	191,499	1/4	176,734	1/4	161,941	1/4	147,131	1/4	132,322	1/4	117,512	1/4	102,702	1/4	87,893	1/4
1/2	1/2	1/2	1/2	191,192	1/2	176,426	1/2	161,633	1/2	146,823	1/2	132,013	1/2	117,203	1/2	102,394	1/2	87,584	1/2
3/4	3/4	3/4	3/4	190,884	3/4	176,118	3/4	161,324	3/4	146,514	3/4	131,705	3/4	116,895	3/4	102,085	3/4	87,275	3/4
8	8	8	8	190,577	8	175,811	8	161,016	8	146,206	8	131,396	8	116,586	8	101,777	8	86,967	8
1/4	1/4	1/4	1/4	190,269	1/4	175,503	1/4	160,707	1/4	145,897	1/4	131,088	1/4	116,278	1/4	101,468	1/4	86,658	1/4
1/2	1/2	1/2	1/2	189,961	1/2	175,195	1/2	160,399	1/2	145,589	1/2	130,779	1/2	115,969	1/2	101,160	1/2	86,350	1/2
3/4	3/4	3/4	3/4	189,654	3/4	174,888	3/4	160,090	3/4	145,280	3/4	130,471	3/4	115,661	3/4	100,851	3/4	86,041	3/4
9	9	9	9	189,346	9	174,580	9	159,781	9	144,972	9	130,162	9	115,352	9	100,543	9	85,733	9
1/4	1/4	1/4	1/4	189,038	1/4	174,273	1/4	159,473	1/4	144,663	1/4	129,853	1/4	115,044	1/4	100,234	1/4	85,424	1/4
1/2	1/2	1/2	1/2	188,731	1/2	173,965	1/2	159,164	1/2	144,355	1/2	129,545	1/2	114,735	1/2	99,925	1/2	85,116	1/2
3/4	3/4	3/4	3/4	188,423	3/4	173,657	3/4	158,856	3/4	144,046	3/4	129,236	3/4	114,427	3/4	99,617	3/4	84,807	3/4
10	10	10	10	188,116	10	173,350	10	158,547	10	143,738	10	128,928	10	114,118	10	99,308	10	84,499	10
1/4	1/4	1/4	1/4	187,808	1/4	173,042	1/4	158,239	1/4	143,429	1/4	128,619	1/4	113,810	1/4	99,000	1/4	84,190	1/4
1/2	1/2	1/2	1/2	187,500	1/2	172,734	1/2	157,930	1/2	143,121	1/2	128,311	1/2	113,501	1/2	98,691	1/2	83,882	1/2
3/4	3/4	3/4	3/4	187,193	3/4	172,427	3/4	157,622	3/4	142,812	3/4	128,002	3/4	113,193	3/4	98,383	3/4	83,573	3/4
11	11	11	11	186,885	11	172,119	11	157,313	11	142,503	11	127,694	11	112,884	11	98,074	11	83,265	11
1/4	1/4	1/4	1/4	186,577	1/4	171,812	1/4	157,005	1/4	142,195	1/4	127,385	1/4	112,575	1/4	97,766	1/4	82,956	1/4
1/2	1/2	1/2	1/2	186,270	1/2	171,504	1/2	156,696	1/2	141,886	1/2	127,077	1/2	112,267	1/2	97,457	1/2	82,647	1/2
3/4	3/4	3/4	3/4	185,962	3/4	171,196	3/4	156,388	3/4	141,578	3/4	126,768	3/4	111,958	3/4	97,148	3/4	82,338	3/4

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 TO TOP LIP OF 2" "HERMETIC" VALVE

GAUGE POINT: (HERMETIC) LOCATED 12'-09" OFF CENTERLINE AND 42'-09" FORWARD OF AFT BILI KHEAD

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY

**PRECISION MEASUREMENT
& ANALYSIS, INC.**

P.O. Box 2092

Pearland Texas 77588

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BAKGE "HFL 431"

2 STBD

ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

[illegible]

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 03/05/2015 SW
CALCULATED: 03/05/2015 CL
PRINTED: 03/05/2015 SW

**CANCELS AND SUPERCEDES
ALL PRIOR TO 03/2015**

**PRECISION MEASUREMENT
& ANALYSIS, INC.**

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1



ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS										GAUGE HEIGHT 15'-05.3/4"									
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	IN
0	0	0	208,063	0	196,775	0	185,487	0	174,166	0	160,847	0	143,883	0	126,919	0	109,945	0	92,971
1/4	1/4	1/4	207,828	1/4	196,540	1/4	185,251	1/4	173,930	1/4	160,493	1/4	143,529	1/4	126,565	1/4	109,591	1/4	92,526
1/2	1/2	1/2	207,593	1/2	196,305	1/2	185,015	1/2	173,694	1/2	160,140	1/2	143,176	1/2	126,212	1/2	109,237	1/2	92,291
3/4	3/4	3/4	207,357	3/4	196,070	3/4	184,779	3/4	173,458	3/4	159,786	3/4	142,822	3/4	125,858	3/4	108,883	3/4	91,817
1	1	1	207,122	1	195,835	1	184,543	1	173,223	1	159,433	1	142,469	1	125,505	1	108,529	1	91,582
1/4	1/4	1/4	206,887	1/4	195,599	1/4	184,307	1/4	172,987	1/4	159,080	1/4	142,116	1/4	125,151	1/4	108,176	1/4	91,337
1/2	1/2	1/2	206,652	1/2	195,364	1/2	184,072	1/2	172,751	1/2	158,726	1/2	141,762	1/2	124,798	1/2	107,700	1/2	90,899
3/4	3/4	3/4	206,417	3/4	195,129	3/4	183,836	3/4	172,515	3/4	158,373	3/4	141,409	3/4	124,444	3/4	107,468	3/4	90,655
2	2	2	206,182	2	194,894	2	183,600	2	172,279	2	158,019	2	141,055	2	124,091	2	107,114	2	90,410
1/4	1/4	1/4	205,946	1/4	194,659	1/4	183,364	1/4	172,043	1/4	157,666	1/4	140,702	1/4	123,737	1/4	106,760	1/4	89,969
1/2	1/2	1/2	205,711	1/2	194,424	1/2	183,128	1/2	171,808	1/2	157,312	1/2	140,348	1/2	123,384	1/2	106,400	1/2	89,724
3/4	3/4	3/4	205,476	3/4	194,188	3/4	182,892	3/4	171,572	3/4	156,959	3/4	139,995	3/4	123,030	3/4	106,052	3/4	89,479
3	3	3	205,241	3	193,953	3	182,657	3	171,336	3	156,606	3	139,642	3	122,677	3	105,699	3	89,234
1/4	1/4	1/4	205,006	1/4	193,718	1/4	182,421	1/4	170,913	1/4	156,252	1/4	139,288	1/4	122,323	1/4	105,345	1/4	88,989
1/2	1/2	1/2	204,771	1/2	193,483	1/2	182,185	1/2	170,864	1/2	155,899	1/2	138,935	1/2	121,970	1/2	104,991	1/2	88,744
3/4	3/4	3/4	204,536	3/4	193,248	3/4	181,949	3/4	170,628	3/4	155,545	3/4	138,581	3/4	121,616	3/4	104,637	3/4	88,499
4	4	4	204,300	4	193,013	4	181,713	4	170,392	4	155,192	4	138,228	4	121,263	4	104,283	4	88,254
1/4	1/4	1/4	204,065	1/4	192,777	1/4	181,477	1/4	170,157	1/4	154,839	1/4	137,875	1/4	120,909	1/4	103,929	1/4	87,994
1/2	1/2	1/2	203,830	1/2	192,542	1/2	181,241	1/2	169,921	1/2	154,485	1/2	137,521	1/2	120,556	1/2	103,575	1/2	87,749
3/4	3/4	3/4	203,595	3/4	192,307	3/4	181,006	3/4	169,685	3/4	154,132	3/4	137,168	3/4	12				

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

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 TO TOP LIP OF 2" "HERMETIC" VALVE GAUGE POINT: (HERMETIC) LOCATED 12'-09" OFF CENTERLINE AND 55'-06" FORWARD OF AFT BULKHEAD.

**PRECISION MEASUREMENT
& ANALYSIS, INC.**

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1



BAKGE "HFL 431"

3 PORT
ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

		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	IN	OUT
0	92,960	0	76,050	0	59,282	0	42,342	0	25,831	0	8,845	0									
1/4	92,606	1/4	75,698	1/4	58,933	1/4	41,998	1/4	25,477	1/4	8,492	1/4								1/4	0
1/2	92,252	1/2	75,347	1/2	58,583	1/2	41,654	1/2	25,124	1/2	8,138	1/2								1/2	1/4
3/4	91,898	3/4	74,995	3/4	58,234	3/4	41,309	3/4	24,770	3/4	7,785	3/4								3/4	1/2
1	91,544	1	74,647	1	57,880	1	40,965	1	24,416	1	7,431	1								1	3/4
1/4	91,190	1/4	74,300	1/4	57,527	1/4	40,621	1/4	24,062	1/4	7,078	1/4								1/4	1
1/2	90,836	1/2	73,952	1/2	57,174	1/2	40,276	1/2	23,708	1/2	6,725	1/2								1/2	1/4
3/4	90,483	3/4	73,604	3/4	56,820	3/4	39,932	3/4	23,354	3/4	6,371	3/4								3/4	1/2
2	90,129	2	73,257	2	56,467	2	39,588	2	23,000	2	6,018	2								2	3/4
1/4	89,775	1/4	72,909	1/4	56,114	1/4	39,245	1/4	22,646	1/4	5,665	1/4								1/4	2
1/2	89,421	1/2	72,561	1/2	55,760	1/2	38,901	1/2	22,292	1/2	5,312	1/2								1/2	1/4
3/4	89,067	3/4	72,214	3/4	55,407	3/4	38,557	3/4	21,939	3/4	4,959	3/4								3/4	1/2
3	88,715	3	71,864	3	55,053	3	38,214	3	21,585	3	4,608	3								3	3/4
1/4	88,363	1/4	71,515	1/4	54,700	1/4	37,870	1/4	21,231	1/4	4,256	1/4								1/4	3
1/2	88,012	1/2	71,165	1/2	54,347	1/2	37,526	1/2	20,877	1/2	3,904	1/2								1/2	1/4
3/4	87,660	3/4	70,816	3/4	53,993	3/4	37,182	3/4	20,523	3/4	3,552	3/4								3/4	1/2
4	87,308	4	70,466	4	53,640	4	36,839	4	20,169	4	3,202	4								4	3/4
1/4	86,956	1/4	70,117	1/4	53,287	1/4	36,496	1/4	19,815	1/4	2,852	1/4								1/4	4
1/2	86,604	1/2	69,767	1/2	52,933	1/2	36,152	1/2	19,461	1/2	2,502	1/2								1/2	1/4
3/4	86,253	3/4	69,418	3/4	52,580	3/4	35,809	3/4	19,107	3/4	2,152	3/4								3/4	1/2
5	85,901	5	69,068	5	52,227	5	35,466	5	18,754	5	1,857	5								5	3/4
1/4	85,549	1/4	68,719	1/4	51,873	1/4	35,122	1/4	18,400	1/4	1,562	1/4								1/4	5
1/2	85,197	1/2	68,369	1/2	51,520	1/2	34,779	1/2	18,046	1/2	1,267	1/2								1/2	1/4
3/4	84,845	3/4	68,020	3/4	51,167	3/4	34,435	3/4	17,692	3/4	972	3/4								3/4	1/2
6	84,494	6	67,670	6	50,813	6	34,092	6	17,338	6										6	3/4
1/4	84,142	1/4	67,321	1/4	50,460	1/4	33,749	1/4	16,984	1/4										1/4	6
1/2	83,790	1/2	66,971	1/2	50,107	1/2	33,405	1/2	16,630	1/2										1/2	1/4
3/4	83,438	3/4	66,622	3/4	49,753	3/4	33,062	3/4	16,276	3/4										3/4	1/2
7	83,086	7	66,272	7	49,400	7	32,718	7	15,923	7										7	3/4
1/4	82,735	1/4	65,923	1/4	49,047	1/4	32,375	1/4	15,569	1/4										1/4	7
1/2	82,383	1/2	65,573	1/2	48,693	1/2	32,032	1/2	15,215	1/2										1/2	1/4
3/4	82,031	3/4	65,224	3/4	48,340	3/4	31,688	3/4	14,861	3/4										3/4	1/2
8	81,679	8	64,874	8	47,987	8	31,344	8	14,507	8										8	3/4
1/4	81,327	1/4	64,525	1/4	47,633	1/4	31,000	1/4	14,153	1/4										1/4	8
1/2	80,975	1/2	64,175	1/2	47,280	1/2	30,656	1/2	13,799	1/2										1/2	1/4
3/4	80,624	3/4	63,826	3/4	46,927	3/4	30,312	3/4	13,445	3/4										3/4	1/2
9	80,272	9	63,476	9	46,573	9	29,969	9	13,091	9										9	3/4
1/4	79,920	1/4	63,127	1/4	46,220	1/4	29,625	1/4	12,738	1/4										1/4	9
1/2	79,568	1/2	62,777	1/2	45,867	1/2	29,281	1/2	12,384	1/2										1/2	1/4
3/4	79,216	3/4	62,428	3/4	45,513	3/4	28,937	3/4	12,030	3/4										3/4	1/2
10	78,865	10	62,078	10	45,160	10	28,593	10	11,676	10										10	3/4
1/4	78,513	1/4	61,729	1/4	44,806	1/4	28,249	1/4	11,322	1/4										1/4	10
1/2	78,161	1/2	61,379	1/2	44,453	1/2	27,905	1/2	10,968	1/2										1/2	1/4
3/4	77,809	3/4	61,030	3/4	44,100	3/4	27,561	3/4	10,614	3/4										3/4	1/2
11	77,457	11	60,680	11	43,746	11	27,217	11	10,260	11										11	3/4
1/4	77,106	1/4	60,331	1/4	43,393	1/4	26,873	1/4	9,906	1/4										1/4	11
1/2	76,754	1/2	59,981	1/2	43,040	1/2	26,529	1/2	9,552	1/2										1/2	1/4
3/4	76,402	3/4	59,632	3/4	42,686	3/4	26,185	3/4	9,198	3/4										3/4	1/2

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 03/05/2015 SW
CALCULATED: 03/05/2015 CL
PRINTED: 03/05/2015 SW
CANCELS AND SUPERCEDES
ALL PRIOR TO 03/2015

PRECISION MEASUREMENT
& ANALYSIS, INC.
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P. J. Jones



VILLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

CAPACITIES GIVEN IN WHOLE GALLONS										GAUGE HEIGHT 15'-05 3/4"									
0 FT.		1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.		7 FT.		8 FT.		9 FT.	
IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0	IN	0
1/4	0	1/4	209,073	1/4	197,786	1/4	186,499	1/4	175,178	1/4	161,850	1/4	144,860	1/4	127,869	1/4	110,872	1/4	93,881
1/2	1/4	1/2	208,838	1/2	197,551	1/2	186,263	1/2	174,943	1/2	161,496	1/2	144,506	1/2	127,515	1/2	110,518	1/2	93,636
3/4	1/2	3/4	208,603	3/4	197,316	3/4	186,027	3/4	174,707	3/4	161,142	3/4	144,152	3/4	127,161	3/4	110,163	3/4	93,451
1	3/4	1	208,368	1	197,081	1	185,791	1	174,471	1	160,788	1	143,798	1	126,807	1	109,809	1	93,226
1 1/4	1	1 1/4	208,133	1 1/4	196,846	1 1/4	185,555	1 1/4	174,235	1 1/4	160,434	1 1/4	143,444	1 1/4	126,453	1 1/4	109,455	1 1/4	93,041
1 1/2	1 1/4	1 1/2	207,898	1 1/2	196,611	1 1/2	185,319	1 1/2	173,999	1 1/2	160,080	1 1/2	143,090	1 1/2	126,099	1 1/2	109,100	1 1/2	92,856
1 3/4	1 1/2	1 3/4	207,663	1 3/4	196,375	1 3/4	185,084	1 3/4	173,763	1 3/4	159,726	1 3/4	142,736	1 3/4	125,745	1 3/4	108,746	1 3/4	92,641
2	3/4	2	207,427	2	196,140	2	184,848	2	173,528	2	159,372	2	142,382	2	125,391	2	108,392	2	92,446
2 1/4	2	2 1/4	207,192	2 1/4	195,905	2 1/4	184,612	2 1/4	173,292	2 1/4	159,018	2 1/4	142,028	2 1/4	125,037	2 1/4	108,037	2 1/4	92,251
2 1/2	1 1/4	2 1/2	206,957	2 1/2	195,670	2 1/2	184,376	2 1/2	173,056	2 1/2	158,664	2 1/2	141,674	2 1/2	124,683	2 1/2	107,683	2 1/2	92,056
2 3/4	1 1/2	2 3/4	206,722	2 3/4	195,435	2 3/4	184,140	2 3/4	172,820	2 3/4	158,310	2 3/4	141,320	2 3/4	124,329	2 3/4	107,329	2 3/4	91,861
3	3/4	3	206,487	3	195,200	3	183,904	3	172,584	3	157,956	3	140,966	3	123,975	3	106,974	3	91,666
3 1/4	3	3 1/4	206,252	3 1/4	194,965	3 1/4	183,669	3 1/4	172,348	3 1/4	157,603	3 1/4	140,612	3 1/4	123,621	3 1/4	106,620	3 1/4	91,471
3 1/2	1 1/4	3 1/2	206,017	3 1/2	194,729	3 1/2	183,433	3 1/2	172,113	3 1/2	157,249	3 1/2	140,258	3 1/2	123,268	3 1/2	106,266	3 1/2	91,276
3 3/4	1 1/2	3 3/4	205,781	3 3/4	194,494	3 3/4	183,197	3 3/4	171,877	3 3/4	156,896	3 3/4	139,904	3 3/4	122,914	3 3/4	105,911	3 3/4	91,081
4	3/4	4	205,546	4	194,259	4	182,961	4	171,641	4	156,541	4	139,550	4	122,560	4	105,557	4	90,891
4 1/4	4	4 1/4	205,311	4 1/4	194,024	4 1/4	182,725	4 1/4	171,405	4 1/4	156,187	4 1/4	139,196	4 1/4	122,206	4 1/4	105,202	4 1/4	90,701
4 1/2	1 1/4	4 1/2	205,076	4 1/2	193,789	4 1/2	182,489	4 1/2	171,169	4 1/2	155,833	4 1/2	138,842	4 1/2	121,852	4 1/2	104,848	4 1/2	90,511
4 3/4	1 1/2	4 3/4	204,841	4 3/4	193,554	4 3/4	182,254	4 3/4	170,933	4 3/4	155,479	4 3/4	138,488	4 3/4	121,498	4 3/4	104,494	4 3/4	90,321
5	3/4	5	204,606	5	193,319	5	182,018	5	170,698	5	155,125	5	138,134	5	121,144	5	104,139	5	90,131
5 1/4	5	5 1/4	204,371	5 1/4	193,083	5 1/4	181,782	5 1/4	170,462	5 1/4	154,771	5 1/4	137,780	5 1/4	120,790	5 1/4	103,785	5 1/4	90,001
5 1/2	1 1/4	5 1/2	204,135	5 1/2	192,848	5 1/2	181,546	5 1/2	170,236	5 1/2	154,417	5 1/2	137,426	5 1/2	120,436	5 1/2	103,431	5 1/2	89,811
5 3/4	1 1/2	5 3/4	203,900	5 3/4	192,613	5 3/4	181,310	5 3/4	169,990	5 3/4	154,063	5 3/4	137,072	5 3/4	120,082	5 3/4	103,076	5 3/4	89,621
6	3/4	6	203,665	6	192,378	6	181,074	6	169,754	6	153,709	6	136,718	6	119,728	6	102,722	6	89,431
6 1/4	6	6 1/4	203,430	6 1/4	192,143	6 1/4	180,839	6 1/4	169,518	6 1/4	153,355	6 1/4	136,364	6 1/4	119,374	6 1/4	102,368	6 1/4	89,241
6 1/2	1 1/4	6 1/2	203,195	6 1/2	191,908	6 1/2	180,603	6 1/2	169,283	6 1/2	153,001	6 1/2	136,010	6 1/2	119,020	6 1/2	102,013	6 1/2	89,051
6 3/4	1 1/2	6 3/4	202,960	6 3/4	191,672	6 3/4	180,367	6 3/4	169,047	6 3/4	152,647	6 3/4	135,656	6 3/4	118,666	6 3/4	101,659	6 3/4	88,861
7	3/4	7	202,724	7	191,437	7	180,131	7	168,811	7	152,293	7	135,302	7	118,312	7	101,305	7	88,671
7 1/4	7	7 1/4	202,489	7 1/4	191,202	7 1/4	179,895	7 1/4	168,575	7 1/4	151,939	7 1/4	134,948	7 1/4	117,958	7 1/4	100,950	7 1/4	88,481
7 1/2	1 1/4	7 1/2	202,254	7 1/2	190,967	7 1/2	179,659	7 1/2	168,339	7 1/2	151,585	7 1/2	134,595	7 1/2	117,604	7 1/2	100,596	7 1/2	88,291
7 3/4	1 1/2	7 3/4	202,019	7 3/4	190,732	7 3/4	179,424	7 3/4	168,103	7 3/4	151,231	7 3/4	134,241	7 3/4	117,250	7 3/4	100,242	7 3/4	88,101
8	3/4	8	201,784	8	190,497	8	179,188	8	167,868	8	150,877	8	133,887	8	116,896	8	99,887	8	87,911
8 1/4	8	8 1/4	201,549	8 1/4	190,262	8 1/4	178,952	8 1/4	167,514	8 1/4	150,523	8 1/4	133,533	8 1/4	116,542	8 1/4	99,533	8 1/4	87,721
8 1/2	1 1/4	8 1/2	201,314	8 1/2	190,026	8 1/2	178,716	8 1/2	167,160	8 1/2	150,169	8 1/2	133,179	8 1/2	116,187	8 1/2	99,178	8 1/2	87,531
8 3/4	1 1/2	8 3/4	201,078	8 3/4	189,791	8 3/4	178,480	8 3/4	166,806	8 3/4	149,815	8 3/4	132,825	8 3/4	115,833	8 3/4	98,824	8 3/4	87,341
9	3/4	9	200,843	9	189,556	9	178,244	9	166,452	9	149,461	9	132,471	9	115,479	9	98,470	9	87,151
9 1/4	9	9 1/4	200,608	9 1/4	189,321	9 1/4	178,009	9 1/4	166,098	9 1/4	149,107	9 1/4	132,117	9 1/4	115,124	9 1/4	98,115	9 1/4	86,961
9 1/2	1 1/4	9 1/2	200,373	9 1/2	189,086	9 1/2	177,773	9 1/2	165,744	9 1/2	148,753	9 1/2	131,763	9 1/2	114,770	9 1/2	97,761	9 1/2	86,771
9 3/4	1 1/2	9 3/4	200,138	9 3/4	188,851	9 3/4	177,537	9 3/4	165,390	9 3/4	148,399	9 3/4	131,409	9 3/4	114,416	9 3/4	97,407	9 3/4	86,581
10	3/4	10	199,903	10	188,616	10	177,301	10	165,036	10	148,045	10	131,055	10	114,061	10	97,052	10	86,391
10 1/4	10	10 1/4	199,668	10 1/4	188,380	10 1/4	177,065	10 1/4	164,682	10 1/4	147,691	10 1/4	130,701	10 1/4	113,707	10 1/4	96,698	10 1/4	86,201
10 1/2	1 1/4	10 1/2	199,432	10 1/2	188,145	10 1/2	176,829	10 1/2	164,328	10 1/2	147,337	10 1/2	130,347	10 1/2	113,353	10 1/2	96,344	10 1/2	86,011
10 3/4	1 1/2	10 3/4	199,197	10 3/4	187,910	10 3/4	176,594	10 3/4	163,974	10 3/4	146,983	10 3/4	129,993	10 3/4	112,998	10 3/4	95,989	10 3/4	85,821
11	3/4	11	198,962	11	187,675	11	176,358	11	163,620	11	146,629	11	129,639	11	112,644	11	95,635	11	85,631
11 1/4	11	11 1/4	198,727	11 1/4	187,440	11 1/4	176,122	11 1/4	163,266	11 1/4	146,276	11 1/4	129,285	11 1/4	112,289	11 1/4	95,281	11 1/4	85,441
11 1/2	1 1/4	11 1/2	198,492	11 1/2	187,205	11 1/2	175,886	11 1/2	162,912	11 1/2	145,922	11 1/2	128,931	11 1/2	111,935	11 1/2	94,926	11 1/2	85,251
11 3/4	1 1/2	11 3/4	198,257	11 3/4	186,970	11 3/4	175,650	11 3/4	162,558	11 3/4	145,568	11 3/4	128,577	11 3/4	111,581	11 3/4	94,736	11 3/4	85,061
12	3/4	12	198,021	12	186,734	12	175,414	12	162,204	12	145,214	12	128,223	12	111,226	12	94,218	12	84,871

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 TO TOP LIP OF 2" HERMETIC VALVE GAUGE POINT: (HERMETIC) LOCATED 12'-09" OFF CENTERLINE AND 55'-06" 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>

1



BAKGE "HFL 431"

3 STBD

ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-05 3/4"

IN	10 FT.	IN	11 FT.	IN	12 FT.	IN	13 FT.	IN	14 FT.	IN	15 FT.	IN	16 FT.	IN	17 FT.	IN	18 FT.	IN	19 FT.
0	93,863	0	76,854	0	59,844	0	42,834	0	25,824	0	8,814	0		0		0		0	
1/4	93,509	1/4	76,500	1/4	59,490	1/4	42,480	1/4	25,503	1/4	8,493	1/4		1/4		1/4		1/4	
1/2	93,155	1/2	76,146	1/2	59,136	1/2	42,125	1/2	25,148	1/2	8,139	1/2		1/2		1/2		1/2	
3/4	92,800	3/4	75,791	3/4	58,781	3/4	41,771	3/4	24,794	3/4	7,785	3/4		3/4		3/4		3/4	
1	92,446	1	75,437	1	58,472	1	41,416	1	24,440	1	7,431	1		1		1		1	
1/4	92,091	1/4	75,083	1/4	58,118	1/4	41,062	1/4	24,085	1/4	7,078	1/4		1/4		1/4		1/4	
1/2	91,737	1/2	74,728	1/2	57,718	1/2	40,708	1/2	23,731	1/2	6,724	1/2		1/2		1/2		1/2	
3/4	91,383	3/4	74,374	3/4	57,364	3/4	40,353	3/4	23,377	3/4	6,370	3/4		3/4		3/4		3/4	
2	91,028	2	74,020	2	57,009	2	40,000	2	23,022	2	6,017	2		2		2		2	
1/4	90,674	1/4	73,665	1/4	56,655	1/4	39,646	1/4	22,668	1/4	5,664	1/4		1/4		1/4		1/4	
1/2	90,320	1/2	73,311	1/2	56,301	1/2	39,292	1/2	22,313	1/2	5,311	1/2		1/2		1/2		1/2	
3/4	89,965	3/4	72,956	3/4	55,946	3/4	38,938	3/4	21,959	3/4	4,958	3/4		3/4		3/4		3/4	
3	89,611	3	72,602	3	55,592	3	38,584	3	21,605	3	4,607	3		3		3		3	
1/4	89,257	1/4	72,248	1/4	55,237	1/4	38,231	1/4	21,250	1/4	4,255	1/4		1/4		1/4		1/4	
1/2	88,902	1/2	71,893	1/2	54,883	1/2	37,877	1/2	20,896	1/2	3,903	1/2		1/2		1/2		1/2	
3/4	88,548	3/4	71,539	3/4	54,529	3/4	37,523	3/4	20,542	3/4	3,551	3/4		3/4		3/4		3/4	
4	88,194	4	71,185	4	54,174	4	37,169	4	20,187	4	3,202	4		4		4		4	
1/4	87,839	1/4	70,830	1/4	53,820	1/4	36,816	1/4	19,833	1/4	2,852	1/4		1/4		1/4		1/4	
1/2	87,485	1/2	70,476	1/2	53,466	1/2	36,463	1/2	19,478	1/2	2,502	1/2		1/2		1/2		1/2	
3/4	87,131	3/4	70,122	3/4	53,111	3/4	36,109	3/4	19,124	3/4	2,153	3/4		3/4		3/4		3/4	
5	86,776	5	69,767	5	52,757	5	35,756	5	18,770	5	1,858	5		5		5		5	
1/4	86,422	1/4	69,413	1/4	52,402	1/4	35,402	1/4	18,415	1/4	1,563	1/4		1/4		1/4		1/4	
1/2	86,067	1/2	69,058	1/2	52,048	1/2	35,049	1/2	18,061	1/2	1,267	1/2		1/2		1/2		1/2	
3/4	85,713	3/4	68,704	3/4	51,694	3/4	34,695	3/4	17,707	3/4	972	3/4		3/4		3/4		3/4	
6	85,359	6	68,350	6	51,339	6	34,342	6	17,352	6		6		6		6		6	
1/4	85,004	1/4	67,995	1/4	50,985	1/4	33,988	1/4	16,998	1/4		1/4		1/4		1/4		1/4	
1/2	84,650	1/2	67,641	1/2	50,630	1/2	33,635	1/2	16,643	1/2		1/2		1/2		1/2		1/2	
3/4	84,296	3/4	67,286	3/4	50,276	3/4	33,281	3/4	16,289	3/4		3/4		3/4		3/4		3/4	
7	83,941	7	66,932	7	49,922	7	32,928	7	15,935	7		7		7		7		7	
1/4	83,587	1/4	66,578	1/4	49,567	1/4	32,574	1/4	15,580	1/4		1/4		1/4		1/4		1/4	
1/2	83,233	1/2	66,223	1/2	49,213	1/2	32,221	1/2	15,226	1/2		1/2		1/2		1/2		1/2	
3/4	82,878	3/4	65,869	3/4	48,859	3/4	31,867	3/4	14,872	3/4		3/4		3/4		3/4		3/4	
8	82,524	8	65,515	8	48,504	8	31,514	8	14,517	8		8		8		8		8	
1/4	82,170	1/4	65,160	1/4	48,150	1/4	31,160	1/4	14,163	1/4		1/4		1/4		1/4		1/4	
1/2	81,815	1/2	64,806	1/2	47,795	1/2	30,807	1/2	13,808	1/2		1/2		1/2		1/2		1/2	
3/4	81,461	3/4	64,451	3/4	47,441	3/4	30,453	3/4	13,454	3/4		3/4		3/4		3/4		3/4	
9	81,107	9	64,097	9	47,087	9	30,100	9	13,100	9		9		9		9		9	
1/4	80,752	1/4	63,743	1/4	46,732	1/4	29,746	1/4	12,745	1/4		1/4		1/4		1/4		1/4	
1/2	80,398	1/2	63,388	1/2	46,378	1/2	29,393	1/2	12,391	1/2		1/2		1/2		1/2		1/2	
3/4	80,044	3/4	63,034	3/4	46,023	3/4	29,039	3/4	12,037	3/4		3/4		3/4		3/4		3/4	
10	79,689	10	62,679	10	45,669	10	28,686	10	11,682	10		10		10		10		10	
1/4	79,335	1/4	62,325	1/4	45,315	1/4	28,332	1/4	11,328	1/4		1/4		1/4		1/4		1/4	
1/2	78,980	1/2	61,971	1/2	44,960	1/2	27,979	1/2	10,973	1/2		1/2		1/2		1/2		1/2	
3/4	78,626	3/4	61,616	3/4	44,606	3/4	27,626	3/4	10,619	3/4		3/4		3/4		3/4		3/4	
11	78,272	11	61,262	11	44,252	11	27,272	11	10,265	11		11		11		11		11	
1/4	77,917	1/4	60,908	1/4	43,897	1/4	26,919	1/4	9,910	1/4		1/4		1/4		1/4		1/4	
1/2	77,563	1/2	60,553	1/2	43,543	1/2	26,565	1/2	9,556	1/2		1/2		1/2		1/2		1/2	
3/4	77,209	3/4	60,199	3/4	43,188	3/4	26,212	3/4	9,202	3/4		3/4		3/4		3/4		3/4	

STRAPPED: 03/05/2015 SW
CALCULATED: 03/05/2015 CL
PRINTED: 03/05/2015 SW

CANCELS AND SUPERCEDES
ALL PRIOR TO 03/2015

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

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P. J. [Signature]