



BARGE "HFL 423"

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 | 00-1/8 | - 00-1/8 | 00-1/8 | - 00-1/8 | 00-1/8 | - 00-1/8 | 00-1/8 | - 00-1/8 |
| 1 STBD | 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 | 00-1/4 | - 00-1/4 |
| 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 | 00-0/8 | - 00-0/8 | 00-0/8 | - 00-0/8 | 00-0/8 | - 00-0/8 | 00-0/8 | - 00-0/8 | 00-0/8 | - 00-0/8 | 00-0/8 | - 00-0/8 |
| 3 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 | 00-0/8 | - 00-0/8 | 00-0/8 | - 00-0/8 |

(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 1 PORT IS - 00-1/8"
 FOR A MEASURED ULLAGE GAUGE OF 4'-00" ON 1 PORT, THE TRIM CORRECTED ULLAGE IS 3'-11 7/8"

LENGTH BETWEEN DRAFT MARKS: 238'-06"

August 6, 2013

**PRECISION MEASUREMENT
& ANALYSIS, INC.**

P.O. Box 2092
 Pearland, Texas 77588

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BARGE "HFL 423"

1 PORT ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-11 1/4"

| 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 | |
| 0 | | 0 | | 0 | 207,603 | 0 | 192,656 | 0 | 177,656 | 0 | 162,618 | 0 | 147,573 | 0 | 132,529 | 0 | 117,485 | 0 | 102,438 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 207,296 | 1/4 | 192,344 | 1/4 | 177,343 | 1/4 | 162,304 | 1/4 | 147,260 | 1/4 | 132,216 | 1/4 | 117,171 | 1/4 | 102,124 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 206,986 | 1/2 | 192,031 | 1/2 | 177,031 | 1/2 | 161,991 | 1/2 | 146,947 | 1/2 | 131,902 | 1/2 | 116,858 | 1/2 | 101,811 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 206,676 | 3/4 | 191,719 | 3/4 | 176,718 | 3/4 | 161,677 | 3/4 | 146,633 | 3/4 | 131,589 | 3/4 | 116,544 | 3/4 | 101,497 |
| 1 | | 1 | | 1 | 206,366 | 1 | 191,406 | 1 | 176,406 | 1 | 161,364 | 1 | 146,320 | 1 | 131,275 | 1 | 116,231 | 1 | 101,184 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 206,056 | 1/4 | 191,094 | 1/4 | 176,093 | 1/4 | 161,051 | 1/4 | 146,006 | 1/4 | 130,962 | 1/4 | 115,918 | 1/4 | 100,870 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 205,746 | 1/2 | 190,781 | 1/2 | 175,780 | 1/2 | 160,737 | 1/2 | 145,693 | 1/2 | 130,649 | 1/2 | 115,604 | 1/2 | 100,557 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 205,436 | 3/4 | 190,469 | 3/4 | 175,467 | 3/4 | 160,424 | 3/4 | 145,379 | 3/4 | 130,335 | 3/4 | 115,291 | 3/4 | 100,243 |
| 2 | | 2 | | 2 | 205,125 | 2 | 190,156 | 2 | 175,154 | 2 | 160,110 | 2 | 145,066 | 2 | 130,022 | 2 | 114,977 | 2 | 99,930 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 204,815 | 1/4 | 189,844 | 1/4 | 174,841 | 1/4 | 159,797 | 1/4 | 144,753 | 1/4 | 129,708 | 1/4 | 114,664 | 1/4 | 99,616 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 204,504 | 1/2 | 189,531 | 1/2 | 174,528 | 1/2 | 159,483 | 1/2 | 144,439 | 1/2 | 129,395 | 1/2 | 114,350 | 1/2 | 99,302 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 204,194 | 3/4 | 189,219 | 3/4 | 174,214 | 3/4 | 159,170 | 3/4 | 144,126 | 3/4 | 129,081 | 3/4 | 114,037 | 3/4 | 98,989 |
| 3 | | 3 | | 3 | 203,883 | 3 | 188,906 | 3 | 173,901 | 3 | 158,857 | 3 | 143,812 | 3 | 128,768 | 3 | 113,724 | 3 | 98,675 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 203,573 | 1/4 | 188,594 | 1/4 | 173,588 | 1/4 | 158,543 | 1/4 | 143,499 | 1/4 | 128,455 | 1/4 | 113,410 | 1/4 | 98,362 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 203,262 | 1/2 | 188,281 | 1/2 | 173,274 | 1/2 | 158,230 | 1/2 | 143,185 | 1/2 | 128,141 | 1/2 | 113,097 | 1/2 | 98,048 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 202,952 | 3/4 | 187,968 | 3/4 | 172,961 | 3/4 | 157,916 | 3/4 | 142,872 | 3/4 | 127,828 | 3/4 | 112,783 | 3/4 | 97,735 |
| 4 | | 4 | | 4 | 202,641 | 4 | 187,656 | 4 | 172,647 | 4 | 157,603 | 4 | 142,559 | 4 | 127,514 | 4 | 112,470 | 4 | 97,421 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 202,331 | 1/4 | 187,343 | 1/4 | 172,334 | 1/4 | 157,290 | 1/4 | 142,245 | 1/4 | 127,201 | 1/4 | 112,157 | 1/4 | 97,108 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 202,021 | 1/2 | 187,031 | 1/2 | 172,020 | 1/2 | 156,976 | 1/2 | 141,932 | 1/2 | 126,887 | 1/2 | 111,843 | 1/2 | 96,794 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 201,710 | 3/4 | 186,718 | 3/4 | 171,707 | 3/4 | 156,663 | 3/4 | 141,618 | 3/4 | 126,574 | 3/4 | 111,530 | 3/4 | 96,480 |
| 5 | | 5 | | 5 | 201,400 | 5 | 186,406 | 5 | 171,394 | 5 | 156,349 | 5 | 141,305 | 5 | 126,261 | 5 | 111,216 | 5 | 96,167 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 201,090 | 1/4 | 186,093 | 1/4 | 171,080 | 1/4 | 156,036 | 1/4 | 140,991 | 1/4 | 125,947 | 1/4 | 110,903 | 1/4 | 95,853 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 200,778 | 1/2 | 185,781 | 1/2 | 170,767 | 1/2 | 155,722 | 1/2 | 140,678 | 1/2 | 125,634 | 1/2 | 110,589 | 1/2 | 95,540 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 200,467 | 3/4 | 185,468 | 3/4 | 170,453 | 3/4 | 155,409 | 3/4 | 140,365 | 3/4 | 125,320 | 3/4 | 110,276 | 3/4 | 95,226 |
| 6 | | 6 | | 6 | 200,155 | 6 | 185,156 | 6 | 170,140 | 6 | 155,096 | 6 | 140,051 | 6 | 125,007 | 6 | 109,963 | 6 | 94,913 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 199,844 | 1/4 | 184,843 | 1/4 | 169,826 | 1/4 | 154,782 | 1/4 | 139,738 | 1/4 | 124,693 | 1/4 | 109,649 | 1/4 | 94,599 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 199,531 | 1/2 | 184,531 | 1/2 | 169,513 | 1/2 | 154,469 | 1/2 | 139,424 | 1/2 | 124,380 | 1/2 | 109,336 | 1/2 | 94,286 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 199,219 | 3/4 | 184,218 | 3/4 | 169,200 | 3/4 | 154,155 | 3/4 | 139,111 | 3/4 | 124,067 | 3/4 | 109,022 | 3/4 | 93,972 |
| 7 | | 7 | | 7 | 198,906 | 7 | 183,906 | 7 | 168,886 | 7 | 153,842 | 7 | 138,798 | 7 | 123,753 | 7 | 108,709 | 7 | 93,658 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 198,594 | 1/4 | 183,593 | 1/4 | 168,573 | 1/4 | 153,528 | 1/4 | 138,484 | 1/4 | 123,440 | 1/4 | 108,395 | 1/4 | 93,345 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 198,281 | 1/2 | 183,281 | 1/2 | 168,259 | 1/2 | 153,215 | 1/2 | 138,171 | 1/2 | 123,126 | 1/2 | 108,082 | 1/2 | 93,031 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 197,969 | 3/4 | 182,968 | 3/4 | 167,946 | 3/4 | 152,902 | 3/4 | 137,857 | 3/4 | 122,813 | 3/4 | 107,768 | 3/4 | 92,718 |
| 8 | | 8 | | 8 | 197,656 | 8 | 182,656 | 8 | 167,633 | 8 | 152,588 | 8 | 137,544 | 8 | 122,499 | 8 | 107,455 | 8 | 92,404 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 211,292 | 1/4 | 197,344 | 1/4 | 182,343 | 1/4 | 167,319 | 1/4 | 152,275 | 1/4 | 137,230 | 1/4 | 122,186 | 1/4 | 107,141 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 211,112 | 1/2 | 197,031 | 1/2 | 182,031 | 1/2 | 167,006 | 1/2 | 151,961 | 1/2 | 136,917 | 1/2 | 121,873 | 1/2 | 106,828 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 210,932 | 3/4 | 196,719 | 3/4 | 181,718 | 3/4 | 166,692 | 3/4 | 151,648 | 3/4 | 136,604 | 3/4 | 121,559 | 3/4 | 106,514 |
| 9 | | 9 | | 9 | 210,752 | 9 | 196,406 | 9 | 181,406 | 9 | 166,379 | 9 | 151,334 | 9 | 136,290 | 9 | 121,246 | 9 | 106,201 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 210,572 | 1/4 | 196,094 | 1/4 | 181,093 | 1/4 | 166,065 | 1/4 | 151,021 | 1/4 | 135,977 | 1/4 | 120,932 | 1/4 | 105,887 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 210,340 | 1/2 | 195,781 | 1/2 | 180,781 | 1/2 | 165,752 | 1/2 | 150,708 | 1/2 | 135,663 | 1/2 | 120,619 | 1/2 | 105,574 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 210,108 | 3/4 | 195,469 | 3/4 | 180,468 | 3/4 | 165,439 | 3/4 | 150,394 | 3/4 | 135,350 | 3/4 | 120,306 | 3/4 | 105,260 |
| 10 | | 10 | | 10 | 209,876 | 10 | 195,156 | 10 | 180,156 | 10 | 165,125 | 10 | 150,081 | 10 | 135,036 | 10 | 119,992 | 10 | 104,947 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 209,644 | 1/4 | 194,844 | 1/4 | 179,843 | 1/4 | 164,812 | 1/4 | 149,767 | 1/4 | 134,723 | 1/4 | 119,679 | 1/4 | 104,633 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 209,363 | 1/2 | 194,531 | 1/2 | 179,531 | 1/2 | 164,498 | 1/2 | 149,454 | 1/2 | 134,410 | 1/2 | 119,365 | 1/2 | 104,319 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 209,083 | 3/4 | 194,219 | 3/4 | 179,218 | 3/4 | 164,185 | 3/4 | 149,141 | 3/4 | 134,096 | 3/4 | 119,052 | 3/4 | 104,006 |
| 11 | | 11 | | 11 | 208,802 | 11 | 193,906 | 11 | 178,906 | 11 | 163,871 | 11 | 148,827 | 11 | 133,783 | 11 | 118,738 | 11 | 103,692 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 208,522 | 1/4 | 193,594 | 1/4 | 178,593 | 1/4 | 163,558 | 1/4 | 148,514 | 1/4 | 133,469 | 1/4 | 118,425 | 1/4 | 103,379 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 208,215 | 1/2 | 193,281 | 1/2 | 178,281 | 1/2 | 163,245 | 1/2 | 148,200 | 1/2 | 133,156 | 1/2 | 118,112 | 1/2 | 103,065 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 207,909 | 3/4 | 192,969 | 3/4 | 177,968 | 3/4 | 162,931 | 3/4 | 147,887 | 3/4 | 132,842 | 3/4 | 117,798 | 3/4 | 102,751 |

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 THREADS ON "MMC" VALVE.
 GAUGE POINT: (MMC) LOCATED 10'-09" OFF CENTERLINE AND 43'-06" FORWARD OF AFT BULKHEAD.

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BARGE "HFL 423"

1 PORT ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-11 1/4"

| 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 | 87,387 | 0 | 72,336 | 0 | 57,335 | 0 | 42,340 | 0 | 27,289 | 0 | 12,382 | 0 | | 0 | | 0 | | 0 | |
| 1/4 | 87,074 | 1/4 | 72,023 | 1/4 | 57,024 | 1/4 | 42,026 | 1/4 | 26,976 | 1/4 | 12,084 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 86,760 | 1/2 | 71,709 | 1/2 | 56,713 | 1/2 | 41,713 | 1/2 | 26,662 | 1/2 | 11,789 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 86,447 | 3/4 | 71,396 | 3/4 | 56,402 | 3/4 | 41,399 | 3/4 | 26,349 | 3/4 | 11,495 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 1 | 86,133 | 1 | 71,082 | 1 | 56,091 | 1 | 41,085 | 1 | 26,035 | 1 | 11,201 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1/4 | 85,819 | 1/4 | 70,769 | 1/4 | 55,780 | 1/4 | 40,772 | 1/4 | 25,722 | 1/4 | 10,907 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 85,506 | 1/2 | 70,455 | 1/2 | 55,468 | 1/2 | 40,458 | 1/2 | 25,408 | 1/2 | 10,616 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 85,192 | 3/4 | 70,141 | 3/4 | 55,157 | 3/4 | 40,145 | 3/4 | 25,094 | 3/4 | 10,326 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 2 | 84,879 | 2 | 69,828 | 2 | 54,846 | 2 | 39,831 | 2 | 24,781 | 2 | 10,035 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1/4 | 84,565 | 1/4 | 69,514 | 1/4 | 54,535 | 1/4 | 39,518 | 1/4 | 24,467 | 1/4 | 9,745 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 84,252 | 1/2 | 69,201 | 1/2 | 54,224 | 1/2 | 39,204 | 1/2 | 24,154 | 1/2 | 9,458 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 83,938 | 3/4 | 68,887 | 3/4 | 53,912 | 3/4 | 38,891 | 3/4 | 23,840 | 3/4 | 9,172 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 3 | 83,624 | 3 | 68,574 | 3 | 53,601 | 3 | 38,577 | 3 | 23,527 | 3 | 8,885 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 1/4 | 83,311 | 1/4 | 68,260 | 1/4 | 53,290 | 1/4 | 38,264 | 1/4 | 23,213 | 1/4 | 8,599 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 82,997 | 1/2 | 67,947 | 1/2 | 52,979 | 1/2 | 37,950 | 1/2 | 22,900 | 1/2 | 8,316 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 82,684 | 3/4 | 67,633 | 3/4 | 52,667 | 3/4 | 37,636 | 3/4 | 22,586 | 3/4 | 8,034 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 4 | 82,370 | 4 | 67,319 | 4 | 52,356 | 4 | 37,323 | 4 | 22,272 | 4 | 7,751 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1/4 | 82,057 | 1/4 | 67,006 | 1/4 | 52,044 | 1/4 | 37,009 | 1/4 | 21,959 | 1/4 | 7,468 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 81,743 | 1/2 | 66,692 | 1/2 | 51,732 | 1/2 | 36,696 | 1/2 | 21,645 | 1/2 | 7,189 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 81,430 | 3/4 | 66,379 | 3/4 | 51,421 | 3/4 | 36,382 | 3/4 | 21,332 | 3/4 | 6,911 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 5 | 81,116 | 5 | 66,065 | 5 | 51,109 | 5 | 36,069 | 5 | 21,018 | 5 | 6,632 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1/4 | 80,802 | 1/4 | 65,752 | 1/4 | 50,797 | 1/4 | 35,755 | 1/4 | 20,705 | 1/4 | 6,353 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 80,489 | 1/2 | 65,438 | 1/2 | 50,485 | 1/2 | 35,442 | 1/2 | 20,391 | 1/2 | 6,078 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 80,175 | 3/4 | 65,125 | 3/4 | 50,173 | 3/4 | 35,128 | 3/4 | 20,078 | 3/4 | 5,803 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 6 | 79,862 | 6 | 64,811 | 6 | 49,861 | 6 | 34,814 | 6 | 19,764 | 6 | 5,528 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 1/4 | 79,548 | 1/4 | 64,498 | 1/4 | 49,548 | 1/4 | 34,501 | 1/4 | 19,451 | 1/4 | 5,253 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 79,235 | 1/2 | 64,186 | 1/2 | 49,236 | 1/2 | 34,187 | 1/2 | 19,137 | 1/2 | 4,982 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 78,921 | 3/4 | 63,873 | 3/4 | 48,923 | 3/4 | 33,874 | 3/4 | 18,823 | 3/4 | 4,711 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 7 | 78,608 | 7 | 63,561 | 7 | 48,610 | 7 | 33,560 | 7 | 18,510 | 7 | 4,440 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 1/4 | 78,294 | 1/4 | 63,249 | 1/4 | 48,297 | 1/4 | 33,247 | 1/4 | 18,196 | 1/4 | 4,169 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 77,980 | 1/2 | 62,937 | 1/2 | 47,984 | 1/2 | 32,933 | 1/2 | 17,884 | 1/2 | 3,902 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 77,667 | 3/4 | 62,626 | 3/4 | 47,670 | 3/4 | 32,620 | 3/4 | 17,571 | 3/4 | 3,635 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 8 | 77,353 | 8 | 62,315 | 8 | 47,356 | 8 | 32,306 | 8 | 17,259 | 8 | 3,368 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 1/4 | 77,040 | 1/4 | 62,003 | 1/4 | 47,043 | 1/4 | 31,993 | 1/4 | 16,946 | 1/4 | 3,101 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 76,726 | 1/2 | 61,692 | 1/2 | 46,729 | 1/2 | 31,679 | 1/2 | 16,636 | 1/2 | 2,839 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 76,413 | 3/4 | 61,381 | 3/4 | 46,416 | 3/4 | 31,365 | 3/4 | 16,327 | 3/4 | 2,576 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 9 | 76,099 | 9 | 61,070 | 9 | 46,102 | 9 | 31,052 | 9 | 16,017 | 9 | 2,314 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 1/4 | 75,785 | 1/4 | 60,758 | 1/4 | 45,789 | 1/4 | 30,738 | 1/4 | 15,707 | 1/4 | 2,051 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 75,472 | 1/2 | 60,447 | 1/2 | 45,475 | 1/2 | 30,425 | 1/2 | 15,401 | 1/2 | 1,812 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 75,158 | 3/4 | 60,136 | 3/4 | 45,162 | 3/4 | 30,111 | 3/4 | 15,096 | 3/4 | 1,573 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 10 | 74,845 | 10 | 59,825 | 10 | 44,848 | 10 | 29,798 | 10 | 14,790 | 10 | 1,334 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 1/4 | 74,531 | 1/4 | 59,514 | 1/4 | 44,535 | 1/4 | 29,484 | 1/4 | 14,484 | 1/4 | 1,095 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 74,218 | 1/2 | 59,203 | 1/2 | 44,221 | 1/2 | 29,171 | 1/2 | 14,182 | 1/2 | 918 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 73,904 | 3/4 | 58,891 | 3/4 | 43,907 | 3/4 | 28,857 | 3/4 | 13,880 | 3/4 | 740 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 11 | 73,591 | 11 | 58,580 | 11 | 43,594 | 11 | 28,543 | 11 | 13,578 | 11 | 563 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 1/4 | 73,277 | 1/4 | 58,269 | 1/4 | 43,280 | 1/4 | 28,230 | 1/4 | 13,276 | 1/4 | 386 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 72,963 | 1/2 | 57,958 | 1/2 | 42,967 | 1/2 | 27,916 | 1/2 | 12,978 | 1/2 | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 72,650 | 3/4 | 57,647 | 3/4 | 42,653 | 3/4 | 27,603 | 3/4 | 12,680 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 08/06/2013 SW
CALCULATED: 08/06/2013 CL
PRINTED: 08/06/2013 CL

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2013

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



BARGE "HFL 423"

1 STBD ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-11 1/4"

| 0 FT. | | 1 FT. | | 2 FT. | | 3 FT. | | 4 FT. | | 5 FT. | | 6 FT. | | 7 FT. | | 8 FT. | | 9 FT. | |
|-------|-----|---------|-----|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|--------|---------|
| IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT |
| 0 | | 0 | | 0 | 207,647 | 0 | 192,704 | 0 | 177,707 | 0 | 162,673 | 0 | 147,632 | 0 | 132,592 | 0 | 117,551 | 0 | 102,509 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 207,341 | 1/4 | 192,391 | 1/4 | 177,395 | 1/4 | 162,360 | 1/4 | 147,319 | 1/4 | 132,278 | 1/4 | 117,238 | 1/4 | 102,195 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 207,031 | 1/2 | 192,079 | 1/2 | 177,082 | 1/2 | 162,046 | 1/2 | 147,006 | 1/2 | 131,965 | 1/2 | 116,925 | 1/2 | 101,882 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 206,721 | 3/4 | 191,767 | 3/4 | 176,770 | 3/4 | 161,733 | 3/4 | 146,692 | 3/4 | 131,652 | 3/4 | 116,611 | 3/4 | 101,568 |
| 1 | | 1 | | 1 | 206,411 | 1 | 191,454 | 1 | 176,457 | 1 | 161,419 | 1 | 146,379 | 1 | 131,338 | 1 | 116,298 | 1 | 101,255 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 206,101 | 1/4 | 191,142 | 1/4 | 176,145 | 1/4 | 161,106 | 1/4 | 146,065 | 1/4 | 131,025 | 1/4 | 115,985 | 1/4 | 100,941 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 205,791 | 1/2 | 190,829 | 1/2 | 175,832 | 1/2 | 160,793 | 1/2 | 145,752 | 1/2 | 130,712 | 1/2 | 115,671 | 1/2 | 100,628 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 205,480 | 3/4 | 190,517 | 3/4 | 175,519 | 3/4 | 160,479 | 3/4 | 145,439 | 3/4 | 130,398 | 3/4 | 115,358 | 3/4 | 100,314 |
| 2 | | 2 | | 2 | 205,170 | 2 | 190,204 | 2 | 175,206 | 2 | 160,166 | 2 | 145,125 | 2 | 130,085 | 2 | 115,045 | 2 | 100,001 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 204,860 | 1/4 | 189,892 | 1/4 | 174,893 | 1/4 | 159,853 | 1/4 | 144,812 | 1/4 | 129,772 | 1/4 | 114,731 | 1/4 | 99,687 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 204,549 | 1/2 | 189,580 | 1/2 | 174,580 | 1/2 | 159,539 | 1/2 | 144,499 | 1/2 | 129,458 | 1/2 | 114,418 | 1/2 | 99,374 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 204,239 | 3/4 | 189,267 | 3/4 | 174,267 | 3/4 | 159,226 | 3/4 | 144,185 | 3/4 | 129,145 | 3/4 | 114,105 | 3/4 | 99,060 |
| 3 | | 3 | | 3 | 203,928 | 3 | 188,955 | 3 | 173,953 | 3 | 158,913 | 3 | 143,872 | 3 | 128,832 | 3 | 113,791 | 3 | 98,747 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 203,618 | 1/4 | 188,642 | 1/4 | 173,640 | 1/4 | 158,599 | 1/4 | 143,559 | 1/4 | 128,518 | 1/4 | 113,478 | 1/4 | 98,433 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 203,307 | 1/2 | 188,330 | 1/2 | 173,327 | 1/2 | 158,286 | 1/2 | 143,245 | 1/2 | 128,205 | 1/2 | 113,164 | 1/2 | 98,120 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 202,997 | 3/4 | 188,017 | 3/4 | 173,013 | 3/4 | 157,973 | 3/4 | 142,932 | 3/4 | 127,892 | 3/4 | 112,851 | 3/4 | 97,806 |
| 4 | | 4 | | 4 | 202,687 | 4 | 187,705 | 4 | 172,700 | 4 | 157,659 | 4 | 142,619 | 4 | 127,578 | 4 | 112,538 | 4 | 97,493 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 202,376 | 1/4 | 187,393 | 1/4 | 172,387 | 1/4 | 157,346 | 1/4 | 142,305 | 1/4 | 127,265 | 1/4 | 112,224 | 1/4 | 97,179 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 202,066 | 1/2 | 187,080 | 1/2 | 172,073 | 1/2 | 157,033 | 1/2 | 141,992 | 1/2 | 126,952 | 1/2 | 111,911 | 1/2 | 96,866 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 201,756 | 3/4 | 186,768 | 3/4 | 171,760 | 3/4 | 156,719 | 3/4 | 141,679 | 3/4 | 126,638 | 3/4 | 111,598 | 3/4 | 96,553 |
| 5 | | 5 | | 5 | 201,446 | 5 | 186,455 | 5 | 171,447 | 5 | 156,406 | 5 | 141,365 | 5 | 126,325 | 5 | 111,284 | 5 | 96,239 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 201,135 | 1/4 | 186,143 | 1/4 | 171,133 | 1/4 | 156,093 | 1/4 | 141,052 | 1/4 | 126,011 | 1/4 | 110,971 | 1/4 | 95,926 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 200,824 | 1/2 | 185,830 | 1/2 | 170,820 | 1/2 | 155,779 | 1/2 | 140,739 | 1/2 | 125,698 | 1/2 | 110,658 | 1/2 | 95,612 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 200,513 | 3/4 | 185,518 | 3/4 | 170,507 | 3/4 | 155,466 | 3/4 | 140,425 | 3/4 | 125,385 | 3/4 | 110,344 | 3/4 | 95,299 |
| 6 | | 6 | | 6 | 200,201 | 6 | 185,205 | 6 | 170,193 | 6 | 155,153 | 6 | 140,112 | 6 | 125,071 | 6 | 110,031 | 6 | 94,985 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 199,890 | 1/4 | 184,893 | 1/4 | 169,880 | 1/4 | 154,839 | 1/4 | 139,799 | 1/4 | 124,758 | 1/4 | 109,718 | 1/4 | 94,672 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 199,577 | 1/2 | 184,581 | 1/2 | 169,566 | 1/2 | 154,526 | 1/2 | 139,485 | 1/2 | 124,445 | 1/2 | 109,404 | 1/2 | 94,358 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 199,265 | 3/4 | 184,268 | 3/4 | 169,253 | 3/4 | 154,213 | 3/4 | 139,172 | 3/4 | 124,131 | 3/4 | 109,091 | 3/4 | 94,045 |
| 7 | | 7 | | 7 | 198,953 | 7 | 183,956 | 7 | 168,940 | 7 | 153,899 | 7 | 138,859 | 7 | 123,818 | 7 | 108,778 | 7 | 93,731 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 198,640 | 1/4 | 183,643 | 1/4 | 168,626 | 1/4 | 153,586 | 1/4 | 138,545 | 1/4 | 123,505 | 1/4 | 108,464 | 1/4 | 93,418 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 198,328 | 1/2 | 183,331 | 1/2 | 168,313 | 1/2 | 153,272 | 1/2 | 138,232 | 1/2 | 123,191 | 1/2 | 108,151 | 1/2 | 93,104 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 198,015 | 3/4 | 183,018 | 3/4 | 168,000 | 3/4 | 152,959 | 3/4 | 137,918 | 3/4 | 122,878 | 3/4 | 107,838 | 3/4 | 92,791 |
| 8 | | 8 | | 8 | 197,703 | 8 | 182,706 | 8 | 167,686 | 8 | 152,646 | 8 | 137,605 | 8 | 122,565 | 8 | 107,524 | 8 | 92,477 |
| 1/4 | 1/4 | 211,335 | 1/4 | 197,390 | 1/4 | 182,394 | 1/4 | 167,373 | 1/4 | 152,332 | 1/4 | 137,292 | 1/4 | 122,251 | 1/4 | 107,211 | 1/4 | 92,164 | |
| 1/2 | 1/2 | 211,155 | 1/2 | 197,078 | 1/2 | 182,081 | 1/2 | 167,060 | 1/2 | 152,019 | 1/2 | 136,978 | 1/2 | 121,938 | 1/2 | 106,897 | 1/2 | 91,850 | |
| 3/4 | 3/4 | 210,975 | 3/4 | 196,765 | 3/4 | 181,769 | 3/4 | 166,746 | 3/4 | 151,706 | 3/4 | 136,665 | 3/4 | 121,625 | 3/4 | 106,584 | 3/4 | 91,537 | |
| 9 | | 210,796 | 9 | 196,453 | 9 | 181,456 | 9 | 166,433 | 9 | 151,392 | 9 | 136,352 | 9 | 121,311 | 9 | 106,270 | 9 | 91,223 | |
| 1/4 | 1/4 | 210,616 | 1/4 | 196,141 | 1/4 | 181,144 | 1/4 | 166,120 | 1/4 | 151,079 | 1/4 | 136,038 | 1/4 | 120,998 | 1/4 | 105,957 | 1/4 | 90,910 | |
| 1/2 | 1/2 | 210,384 | 1/2 | 195,828 | 1/2 | 180,831 | 1/2 | 165,806 | 1/2 | 150,766 | 1/2 | 135,725 | 1/2 | 120,685 | 1/2 | 105,643 | 1/2 | 90,596 | |
| 3/4 | 3/4 | 210,152 | 3/4 | 195,516 | 3/4 | 180,519 | 3/4 | 165,493 | 3/4 | 150,452 | 3/4 | 135,412 | 3/4 | 120,371 | 3/4 | 105,330 | 3/4 | 90,283 | |
| 10 | | 209,920 | 10 | 195,203 | 10 | 180,207 | 10 | 165,180 | 10 | 150,139 | 10 | 135,098 | 10 | 120,058 | 10 | 105,016 | 10 | 89,969 | |
| 1/4 | 1/4 | 209,688 | 1/4 | 194,891 | 1/4 | 179,894 | 1/4 | 164,866 | 1/4 | 149,826 | 1/4 | 134,785 | 1/4 | 119,745 | 1/4 | 104,703 | 1/4 | 89,656 | |
| 1/2 | 1/2 | 209,407 | 1/2 | 194,578 | 1/2 | 179,582 | 1/2 | 164,553 | 1/2 | 149,512 | 1/2 | 134,472 | 1/2 | 119,431 | 1/2 | 104,389 | 1/2 | 89,343 | |
| 3/4 | 3/4 | 209,126 | 3/4 | 194,266 | 3/4 | 179,269 | 3/4 | 164,240 | 3/4 | 149,199 | 3/4 | 134,158 | 3/4 | 119,118 | 3/4 | 104,076 | 3/4 | 89,029 | |
| 11 | | 208,846 | 11 | 193,954 | 11 | 178,957 | 11 | 163,926 | 11 | 148,886 | 11 | 133,845 | 11 | 118,805 | 11 | 103,762 | 11 | 88,716 | |
| 1/4 | 1/4 | 208,565 | 1/4 | 193,641 | 1/4 | 178,644 | 1/4 | 163,613 | 1/4 | 148,572 | 1/4 | 133,532 | 1/4 | 118,491 | 1/4 | 103,449 | 1/4 | 88,402 | |
| 1/2 | 1/2 | 208,259 | 1/2 | 193,329 | 1/2 | 178,332 | 1/2 | 163,300 | 1/2 | 148,259 | 1/2 | 133,218 | 1/2 | 118,178 | 1/2 | 103,136 | 1/2 | 88,089 | |
| 3/4 | 3/4 | 207,953 | 3/4 | 193,016 | 3/4 | 178,020 | 3/4 | 162,986 | 3/4 | 147,946 | 3/4 | 132,905 | 3/4 | 117,865 | 3/4 | 102,822 | 3/4 | 87,775 | |

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 THREADS ON "MMC" VALVE.
 GAUGE POINT: (MMC) LOCATED 10'-09" OFF CENTERLINE AND 43'-06" FORWARD OF AFT BULKHEAD.

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



BARGE "HFL 423"

1 STBD ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-11 1/4"

| 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 | 87,462 | 0 | 72,415 | 0 | 57,371 | 0 | 42,329 | 0 | 27,282 | 0 | 12,379 | 0 | | 0 | | 0 | | 0 | |
| 1/4 | 87,148 | 1/4 | 72,101 | 1/4 | 57,058 | 1/4 | 42,015 | 1/4 | 26,969 | 1/4 | 12,081 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 86,835 | 1/2 | 71,788 | 1/2 | 56,745 | 1/2 | 41,702 | 1/2 | 26,655 | 1/2 | 11,786 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 86,521 | 3/4 | 71,474 | 3/4 | 56,432 | 3/4 | 41,388 | 3/4 | 26,342 | 3/4 | 11,492 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 1 | 86,208 | 1 | 71,161 | 1 | 56,118 | 1 | 41,075 | 1 | 26,028 | 1 | 11,198 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1/4 | 85,894 | 1/4 | 70,847 | 1/4 | 55,805 | 1/4 | 40,761 | 1/4 | 25,715 | 1/4 | 10,904 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 85,581 | 1/2 | 70,534 | 1/2 | 55,492 | 1/2 | 40,448 | 1/2 | 25,401 | 1/2 | 10,613 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 85,267 | 3/4 | 70,220 | 3/4 | 55,179 | 3/4 | 40,134 | 3/4 | 25,088 | 3/4 | 10,323 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 2 | 84,954 | 2 | 69,907 | 2 | 54,865 | 2 | 39,821 | 2 | 24,774 | 2 | 10,033 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1/4 | 84,640 | 1/4 | 69,593 | 1/4 | 54,552 | 1/4 | 39,507 | 1/4 | 24,461 | 1/4 | 9,743 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 84,327 | 1/2 | 69,280 | 1/2 | 54,239 | 1/2 | 39,194 | 1/2 | 24,148 | 1/2 | 9,456 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 84,013 | 3/4 | 68,967 | 3/4 | 53,926 | 3/4 | 38,880 | 3/4 | 23,834 | 3/4 | 9,170 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 3 | 83,700 | 3 | 68,653 | 3 | 53,612 | 3 | 38,567 | 3 | 23,521 | 3 | 8,883 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 1/4 | 83,386 | 1/4 | 68,340 | 1/4 | 53,299 | 1/4 | 38,254 | 1/4 | 23,207 | 1/4 | 8,597 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 83,073 | 1/2 | 68,026 | 1/2 | 52,986 | 1/2 | 37,940 | 1/2 | 22,894 | 1/2 | 8,314 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 82,760 | 3/4 | 67,713 | 3/4 | 52,673 | 3/4 | 37,627 | 3/4 | 22,580 | 3/4 | 8,032 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 4 | 82,446 | 4 | 67,399 | 4 | 52,359 | 4 | 37,313 | 4 | 22,267 | 4 | 7,749 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1/4 | 82,133 | 1/4 | 67,086 | 1/4 | 52,046 | 1/4 | 37,000 | 1/4 | 21,953 | 1/4 | 7,466 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 81,819 | 1/2 | 66,772 | 1/2 | 51,733 | 1/2 | 36,686 | 1/2 | 21,640 | 1/2 | 7,188 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 81,506 | 3/4 | 66,459 | 3/4 | 51,419 | 3/4 | 36,373 | 3/4 | 21,326 | 3/4 | 6,909 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 5 | 81,192 | 5 | 66,145 | 5 | 51,106 | 5 | 36,059 | 5 | 21,013 | 5 | 6,630 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1/4 | 80,879 | 1/4 | 65,832 | 1/4 | 50,792 | 1/4 | 35,746 | 1/4 | 20,699 | 1/4 | 6,351 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 80,565 | 1/2 | 65,518 | 1/2 | 50,479 | 1/2 | 35,432 | 1/2 | 20,386 | 1/2 | 6,077 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 80,252 | 3/4 | 65,205 | 3/4 | 50,165 | 3/4 | 35,119 | 3/4 | 20,072 | 3/4 | 5,802 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 6 | 79,938 | 6 | 64,891 | 6 | 49,852 | 6 | 34,805 | 6 | 19,759 | 6 | 5,527 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 1/4 | 79,625 | 1/4 | 64,578 | 1/4 | 49,538 | 1/4 | 34,492 | 1/4 | 19,446 | 1/4 | 5,252 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 79,311 | 1/2 | 64,264 | 1/2 | 49,225 | 1/2 | 34,178 | 1/2 | 19,132 | 1/2 | 4,981 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 78,998 | 3/4 | 63,951 | 3/4 | 48,911 | 3/4 | 33,865 | 3/4 | 18,819 | 3/4 | 4,710 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 7 | 78,684 | 7 | 63,637 | 7 | 48,598 | 7 | 33,552 | 7 | 18,505 | 7 | 4,439 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 1/4 | 78,371 | 1/4 | 63,324 | 1/4 | 48,285 | 1/4 | 33,238 | 1/4 | 18,192 | 1/4 | 4,168 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 78,057 | 1/2 | 63,011 | 1/2 | 47,971 | 1/2 | 32,925 | 1/2 | 17,879 | 1/2 | 3,901 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 77,744 | 3/4 | 62,697 | 3/4 | 47,658 | 3/4 | 32,611 | 3/4 | 17,567 | 3/4 | 3,634 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 8 | 77,430 | 8 | 62,384 | 8 | 47,344 | 8 | 32,298 | 8 | 17,254 | 8 | 3,367 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 1/4 | 77,117 | 1/4 | 62,070 | 1/4 | 47,031 | 1/4 | 31,984 | 1/4 | 16,942 | 1/4 | 3,100 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 76,803 | 1/2 | 61,757 | 1/2 | 46,717 | 1/2 | 31,671 | 1/2 | 16,632 | 1/2 | 2,838 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 76,490 | 3/4 | 61,444 | 3/4 | 46,404 | 3/4 | 31,357 | 3/4 | 16,322 | 3/4 | 2,576 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 9 | 76,177 | 9 | 61,130 | 9 | 46,090 | 9 | 31,044 | 9 | 16,013 | 9 | 2,313 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 1/4 | 75,863 | 1/4 | 60,817 | 1/4 | 45,777 | 1/4 | 30,730 | 1/4 | 15,703 | 1/4 | 2,051 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 75,550 | 1/2 | 60,504 | 1/2 | 45,463 | 1/2 | 30,417 | 1/2 | 15,397 | 1/2 | 1,812 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 75,236 | 3/4 | 60,191 | 3/4 | 45,150 | 3/4 | 30,103 | 3/4 | 15,092 | 3/4 | 1,573 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 10 | 74,923 | 10 | 59,877 | 10 | 44,836 | 10 | 29,790 | 10 | 14,786 | 10 | 1,334 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 1/4 | 74,609 | 1/4 | 59,564 | 1/4 | 44,523 | 1/4 | 29,476 | 1/4 | 14,480 | 1/4 | 1,095 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 74,296 | 1/2 | 59,251 | 1/2 | 44,209 | 1/2 | 29,163 | 1/2 | 14,178 | 1/2 | 918 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 73,982 | 3/4 | 58,938 | 3/4 | 43,896 | 3/4 | 28,850 | 3/4 | 13,876 | 3/4 | 740 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 11 | 73,669 | 11 | 58,624 | 11 | 43,583 | 11 | 28,536 | 11 | 13,575 | 11 | 563 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 1/4 | 73,355 | 1/4 | 58,311 | 1/4 | 43,269 | 1/4 | 28,223 | 1/4 | 13,273 | 1/4 | 386 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 73,042 | 1/2 | 57,998 | 1/2 | 42,956 | 1/2 | 27,909 | 1/2 | 12,975 | 1/2 | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 72,728 | 3/4 | 57,685 | 3/4 | 42,642 | 3/4 | 27,596 | 3/4 | 12,677 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 08/06/2013 SW
CALCULATED: 08/06/2013 CL
PRINTED: 08/06/2013 CL

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2013

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



BARGE "HFL 423"

2 PORT ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-11 1/2"

| 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 | |
| 0 | | 0 | | 0 | 210,066 | 0 | 195,102 | 0 | 180,055 | 0 | 164,966 | 0 | 149,868 | 0 | 134,770 | 0 | 119,671 | 0 | 104,571 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 209,760 | 1/4 | 194,789 | 1/4 | 179,742 | 1/4 | 164,651 | 1/4 | 149,553 | 1/4 | 134,455 | 1/4 | 119,357 | 1/4 | 104,256 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 209,453 | 1/2 | 194,475 | 1/2 | 179,428 | 1/2 | 164,337 | 1/2 | 149,239 | 1/2 | 134,140 | 1/2 | 119,042 | 1/2 | 103,941 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 209,143 | 3/4 | 194,162 | 3/4 | 179,115 | 3/4 | 164,022 | 3/4 | 148,924 | 3/4 | 133,826 | 3/4 | 118,728 | 3/4 | 103,627 |
| 1 | | 1 | | 1 | 208,833 | 1 | 193,848 | 1 | 178,801 | 1 | 163,707 | 1 | 148,609 | 1 | 133,511 | 1 | 118,413 | 1 | 103,312 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 208,523 | 1/4 | 193,535 | 1/4 | 178,488 | 1/4 | 163,393 | 1/4 | 148,295 | 1/4 | 133,197 | 1/4 | 118,099 | 1/4 | 102,997 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 208,213 | 1/2 | 193,221 | 1/2 | 178,174 | 1/2 | 163,078 | 1/2 | 147,980 | 1/2 | 132,882 | 1/2 | 117,784 | 1/2 | 102,683 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 207,903 | 3/4 | 192,908 | 3/4 | 177,860 | 3/4 | 162,764 | 3/4 | 147,666 | 3/4 | 132,568 | 3/4 | 117,470 | 3/4 | 102,368 |
| 2 | | 2 | | 2 | 207,592 | 2 | 192,594 | 2 | 177,546 | 2 | 162,449 | 2 | 147,351 | 2 | 132,253 | 2 | 117,155 | 2 | 102,053 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 207,282 | 1/4 | 192,281 | 1/4 | 177,232 | 1/4 | 162,135 | 1/4 | 147,037 | 1/4 | 131,939 | 1/4 | 116,841 | 1/4 | 101,739 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 206,972 | 1/2 | 191,967 | 1/2 | 176,918 | 1/2 | 161,820 | 1/2 | 146,722 | 1/2 | 131,624 | 1/2 | 116,526 | 1/2 | 101,424 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 206,661 | 3/4 | 191,654 | 3/4 | 176,604 | 3/4 | 161,506 | 3/4 | 146,408 | 3/4 | 131,310 | 3/4 | 116,211 | 3/4 | 101,109 |
| 3 | | 3 | | 3 | 206,350 | 3 | 191,340 | 3 | 176,289 | 3 | 161,191 | 3 | 146,093 | 3 | 130,995 | 3 | 115,897 | 3 | 100,794 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 206,040 | 1/4 | 191,027 | 1/4 | 175,975 | 1/4 | 160,877 | 1/4 | 145,779 | 1/4 | 130,680 | 1/4 | 115,582 | 1/4 | 100,480 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 205,729 | 1/2 | 190,713 | 1/2 | 175,660 | 1/2 | 160,562 | 1/2 | 145,464 | 1/2 | 130,366 | 1/2 | 115,268 | 1/2 | 100,165 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 205,419 | 3/4 | 190,400 | 3/4 | 175,346 | 3/4 | 160,248 | 3/4 | 145,149 | 3/4 | 130,051 | 3/4 | 114,953 | 3/4 | 99,850 |
| 4 | | 4 | | 4 | 205,109 | 4 | 190,086 | 4 | 175,031 | 4 | 159,933 | 4 | 144,835 | 4 | 129,737 | 4 | 114,639 | 4 | 99,536 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 204,798 | 1/4 | 189,773 | 1/4 | 174,716 | 1/4 | 159,618 | 1/4 | 144,520 | 1/4 | 129,422 | 1/4 | 114,324 | 1/4 | 99,221 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 204,488 | 1/2 | 189,459 | 1/2 | 174,402 | 1/2 | 159,304 | 1/2 | 144,206 | 1/2 | 129,108 | 1/2 | 114,010 | 1/2 | 98,906 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 204,177 | 3/4 | 189,146 | 3/4 | 174,087 | 3/4 | 158,989 | 3/4 | 143,891 | 3/4 | 128,793 | 3/4 | 113,695 | 3/4 | 98,592 |
| 5 | | 5 | | 5 | 203,867 | 5 | 188,832 | 5 | 173,773 | 5 | 158,675 | 5 | 143,577 | 5 | 128,479 | 5 | 113,381 | 5 | 98,277 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 203,557 | 1/4 | 188,519 | 1/4 | 173,458 | 1/4 | 158,360 | 1/4 | 143,262 | 1/4 | 128,164 | 1/4 | 113,066 | 1/4 | 97,962 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 203,246 | 1/2 | 188,206 | 1/2 | 173,144 | 1/2 | 158,046 | 1/2 | 142,948 | 1/2 | 127,850 | 1/2 | 112,752 | 1/2 | 97,647 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 202,934 | 3/4 | 187,892 | 3/4 | 172,829 | 3/4 | 157,731 | 3/4 | 142,633 | 3/4 | 127,535 | 3/4 | 112,437 | 3/4 | 97,333 |
| 6 | | 6 | | 6 | 202,622 | 6 | 187,579 | 6 | 172,515 | 6 | 157,417 | 6 | 142,319 | 6 | 127,220 | 6 | 112,122 | 6 | 97,018 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 202,310 | 1/4 | 187,265 | 1/4 | 172,200 | 1/4 | 157,102 | 1/4 | 142,004 | 1/4 | 126,906 | 1/4 | 111,808 | 1/4 | 96,703 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 201,998 | 1/2 | 186,952 | 1/2 | 171,886 | 1/2 | 156,788 | 1/2 | 141,689 | 1/2 | 126,591 | 1/2 | 111,493 | 1/2 | 96,389 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 201,685 | 3/4 | 186,638 | 3/4 | 171,571 | 3/4 | 156,473 | 3/4 | 141,375 | 3/4 | 126,277 | 3/4 | 111,179 | 3/4 | 96,074 |
| 7 | | 7 | | 7 | 201,372 | 7 | 186,325 | 7 | 171,257 | 7 | 156,158 | 7 | 141,060 | 7 | 125,962 | 7 | 110,864 | 7 | 95,759 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 201,058 | 1/4 | 186,011 | 1/4 | 170,942 | 1/4 | 155,844 | 1/4 | 140,746 | 1/4 | 125,648 | 1/4 | 110,550 | 1/4 | 95,445 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 200,745 | 1/2 | 185,698 | 1/2 | 170,627 | 1/2 | 155,529 | 1/2 | 140,431 | 1/2 | 125,333 | 1/2 | 110,235 | 1/2 | 95,130 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 200,431 | 3/4 | 185,384 | 3/4 | 170,313 | 3/4 | 155,215 | 3/4 | 140,117 | 3/4 | 125,019 | 3/4 | 109,921 | 3/4 | 94,815 |
| 8 | | 8 | | 8 | 200,118 | 8 | 185,071 | 8 | 169,998 | 8 | 154,900 | 8 | 139,802 | 8 | 124,704 | 8 | 109,606 | 8 | 94,500 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 199,804 | 1/4 | 184,757 | 1/4 | 169,684 | 1/4 | 154,586 | 1/4 | 139,488 | 1/4 | 124,390 | 1/4 | 109,291 | 1/4 | 94,186 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 213,446 | 1/2 | 199,491 | 1/2 | 184,444 | 1/2 | 169,369 | 1/2 | 154,271 | 1/2 | 139,173 | 1/2 | 124,075 | 1/2 | 108,977 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 213,266 | 3/4 | 199,177 | 3/4 | 184,130 | 3/4 | 169,055 | 3/4 | 153,957 | 3/4 | 138,859 | 3/4 | 123,761 | 3/4 | 108,662 |
| 9 | | 9 | | 9 | 213,087 | 9 | 198,864 | 9 | 183,817 | 9 | 168,740 | 9 | 153,642 | 9 | 138,544 | 9 | 123,446 | 9 | 108,347 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 212,907 | 1/4 | 198,550 | 1/4 | 183,503 | 1/4 | 168,426 | 1/4 | 153,328 | 1/4 | 138,230 | 1/4 | 123,131 | 1/4 | 108,033 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 212,728 | 1/2 | 198,237 | 1/2 | 183,190 | 1/2 | 168,111 | 1/2 | 153,013 | 1/2 | 137,915 | 1/2 | 122,817 | 1/2 | 107,718 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 212,496 | 3/4 | 197,923 | 3/4 | 182,876 | 3/4 | 167,797 | 3/4 | 152,698 | 3/4 | 137,600 | 3/4 | 122,502 | 3/4 | 107,403 |
| 10 | | 10 | | 10 | 212,264 | 10 | 197,610 | 10 | 182,563 | 10 | 167,482 | 10 | 152,384 | 10 | 137,286 | 10 | 122,188 | 10 | 107,088 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 212,033 | 1/4 | 197,296 | 1/4 | 182,250 | 1/4 | 167,167 | 1/4 | 152,069 | 1/4 | 136,971 | 1/4 | 121,873 | 1/4 | 106,774 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 211,801 | 1/2 | 196,983 | 1/2 | 181,936 | 1/2 | 166,853 | 1/2 | 151,755 | 1/2 | 136,657 | 1/2 | 121,559 | 1/2 | 106,459 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 211,520 | 3/4 | 196,669 | 3/4 | 181,623 | 3/4 | 166,538 | 3/4 | 151,440 | 3/4 | 136,342 | 3/4 | 121,244 | 3/4 | 106,144 |
| 11 | | 11 | | 11 | 211,240 | 11 | 196,356 | 11 | 181,309 | 11 | 166,224 | 11 | 151,126 | 11 | 136,028 | 11 | 120,930 | 11 | 105,830 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 210,959 | 1/4 | 196,042 | 1/4 | 180,996 | 1/4 | 165,909 | 1/4 | 150,811 | 1/4 | 135,713 | 1/4 | 120,615 | 1/4 | 105,515 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 210,679 | 1/2 | 195,729 | 1/2 | 180,682 | 1/2 | 165,595 | 1/2 | 150,497 | 1/2 | 135,399 | 1/2 | 120,301 | 1/2 | 105,200 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 210,372 | 3/4 | 195,415 | 3/4 | 180,369 | 3/4 | 165,280 | 3/4 | 150,182 | 3/4 | 135,084 | 3/4 | 119,986 | 3/4 | 104,886 |

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 THREADS ON "MMC" VALVE.
 GAUGE POINT: (MMC) LOCATED 10'-09" OFF CENTERLINE AND 43'-06" FORWARD OF AFT BULKHEAD.

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



BARGE "HFL 423"

2 PORT ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-11 1/2"

| 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 | 89,465 | 0 | 74,360 | 0 | 59,490 | 0 | 44,967 | 0 | 30,211 | 0 | 15,108 | 0 | | 0 | | 0 | | 0 | |
| 1/4 | 89,151 | 1/4 | 74,045 | 1/4 | 59,187 | 1/4 | 44,666 | 1/4 | 29,897 | 1/4 | 14,794 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 88,836 | 1/2 | 73,730 | 1/2 | 58,884 | 1/2 | 44,364 | 1/2 | 29,582 | 1/2 | 14,479 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 88,521 | 3/4 | 73,415 | 3/4 | 58,581 | 3/4 | 44,062 | 3/4 | 29,268 | 3/4 | 14,164 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 1 | 88,206 | 1 | 73,101 | 1 | 58,278 | 1 | 43,760 | 1 | 28,953 | 1 | 13,850 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1/4 | 87,892 | 1/4 | 72,786 | 1/4 | 57,975 | 1/4 | 43,458 | 1/4 | 28,639 | 1/4 | 13,535 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 87,577 | 1/2 | 72,471 | 1/2 | 57,672 | 1/2 | 43,156 | 1/2 | 28,324 | 1/2 | 13,220 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 87,262 | 3/4 | 72,157 | 3/4 | 57,370 | 3/4 | 42,854 | 3/4 | 28,010 | 3/4 | 12,906 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 2 | 86,948 | 2 | 71,842 | 2 | 57,067 | 2 | 42,552 | 2 | 27,695 | 2 | 12,591 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1/4 | 86,633 | 1/4 | 71,527 | 1/4 | 56,764 | 1/4 | 42,250 | 1/4 | 27,381 | 1/4 | 12,276 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 86,318 | 1/2 | 71,213 | 1/2 | 56,461 | 1/2 | 41,948 | 1/2 | 27,066 | 1/2 | 11,961 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 86,004 | 3/4 | 70,898 | 3/4 | 56,158 | 3/4 | 41,646 | 3/4 | 26,752 | 3/4 | 11,647 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 3 | 85,689 | 3 | 70,583 | 3 | 55,855 | 3 | 41,344 | 3 | 26,437 | 3 | 11,332 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 1/4 | 85,374 | 1/4 | 70,268 | 1/4 | 55,552 | 1/4 | 41,042 | 1/4 | 26,123 | 1/4 | 11,017 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 85,059 | 1/2 | 69,954 | 1/2 | 55,249 | 1/2 | 40,740 | 1/2 | 25,808 | 1/2 | 10,703 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 84,745 | 3/4 | 69,639 | 3/4 | 54,946 | 3/4 | 40,438 | 3/4 | 25,493 | 3/4 | 10,388 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 4 | 84,430 | 4 | 69,324 | 4 | 54,643 | 4 | 40,136 | 4 | 25,179 | 4 | 10,073 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1/4 | 84,115 | 1/4 | 69,010 | 1/4 | 54,341 | 1/4 | 39,834 | 1/4 | 24,864 | 1/4 | 9,759 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 83,801 | 1/2 | 68,695 | 1/2 | 54,038 | 1/2 | 39,532 | 1/2 | 24,549 | 1/2 | 9,444 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 83,486 | 3/4 | 68,380 | 3/4 | 53,735 | 3/4 | 39,230 | 3/4 | 24,234 | 3/4 | 9,129 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 5 | 83,171 | 5 | 68,066 | 5 | 53,432 | 5 | 38,927 | 5 | 23,920 | 5 | 8,815 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1/4 | 82,857 | 1/4 | 67,751 | 1/4 | 53,129 | 1/4 | 38,625 | 1/4 | 23,605 | 1/4 | 8,500 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 82,542 | 1/2 | 67,436 | 1/2 | 52,826 | 1/2 | 38,322 | 1/2 | 23,290 | 1/2 | 8,185 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 82,227 | 3/4 | 67,121 | 3/4 | 52,523 | 3/4 | 38,020 | 3/4 | 22,976 | 3/4 | 7,870 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 6 | 81,912 | 6 | 66,807 | 6 | 52,220 | 6 | 37,717 | 6 | 22,661 | 6 | 7,556 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 1/4 | 81,598 | 1/4 | 66,492 | 1/4 | 51,917 | 1/4 | 37,414 | 1/4 | 22,346 | 1/4 | 7,241 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 81,283 | 1/2 | 66,177 | 1/2 | 51,614 | 1/2 | 37,111 | 1/2 | 22,032 | 1/2 | 6,926 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 80,968 | 3/4 | 65,869 | 3/4 | 51,312 | 3/4 | 36,802 | 3/4 | 21,717 | 3/4 | 6,612 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 7 | 80,654 | 7 | 65,560 | 7 | 51,009 | 7 | 36,493 | 7 | 21,402 | 7 | 6,297 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 1/4 | 80,339 | 1/4 | 65,251 | 1/4 | 50,707 | 1/4 | 36,184 | 1/4 | 21,088 | 1/4 | 5,982 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 80,024 | 1/2 | 64,942 | 1/2 | 50,404 | 1/2 | 35,876 | 1/2 | 20,773 | 1/2 | 5,668 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 79,710 | 3/4 | 64,639 | 3/4 | 50,102 | 3/4 | 35,561 | 3/4 | 20,458 | 3/4 | 5,353 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 8 | 79,395 | 8 | 64,336 | 8 | 49,800 | 8 | 35,246 | 8 | 20,143 | 8 | 5,039 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 1/4 | 79,080 | 1/4 | 64,033 | 1/4 | 49,498 | 1/4 | 34,932 | 1/4 | 19,829 | 1/4 | 4,724 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 78,765 | 1/2 | 63,731 | 1/2 | 49,195 | 1/2 | 34,617 | 1/2 | 19,514 | 1/2 | 4,410 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 78,451 | 3/4 | 63,428 | 3/4 | 48,893 | 3/4 | 34,302 | 3/4 | 19,199 | 3/4 | 4,096 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 9 | 78,136 | 9 | 63,125 | 9 | 48,591 | 9 | 33,988 | 9 | 18,885 | 9 | 3,783 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 1/4 | 77,821 | 1/4 | 62,822 | 1/4 | 48,289 | 1/4 | 33,673 | 1/4 | 18,570 | 1/4 | 3,469 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 77,507 | 1/2 | 62,519 | 1/2 | 47,987 | 1/2 | 33,358 | 1/2 | 18,255 | 1/2 | 3,155 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 77,192 | 3/4 | 62,216 | 3/4 | 47,685 | 3/4 | 33,043 | 3/4 | 17,941 | 3/4 | 2,861 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 10 | 76,877 | 10 | 61,913 | 10 | 47,383 | 10 | 32,729 | 10 | 17,626 | 10 | 2,567 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 1/4 | 76,562 | 1/4 | 61,610 | 1/4 | 47,081 | 1/4 | 32,414 | 1/4 | 17,311 | 1/4 | 2,272 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 76,248 | 1/2 | 61,307 | 1/2 | 46,779 | 1/2 | 32,099 | 1/2 | 16,997 | 1/2 | 1,978 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 75,933 | 3/4 | 61,004 | 3/4 | 46,477 | 3/4 | 31,785 | 3/4 | 16,682 | 3/4 | 1,742 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 11 | 75,618 | 11 | 60,702 | 11 | 46,175 | 11 | 31,470 | 11 | 16,367 | 11 | 1,506 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 1/4 | 75,304 | 1/4 | 60,399 | 1/4 | 45,873 | 1/4 | 31,155 | 1/4 | 16,052 | 1/4 | 1,270 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 74,989 | 1/2 | 60,096 | 1/2 | 45,571 | 1/2 | 30,841 | 1/2 | 15,738 | 1/2 | 1,034 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 74,674 | 3/4 | 59,793 | 3/4 | 45,269 | 3/4 | 30,526 | 3/4 | 15,423 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 08/06/2013 SW
CALCULATED: 08/06/2013 CL
PRINTED: 08/06/2013 CL

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2013

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



BARGE "HFL 423"

2 STBD ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-11 1/2"

| 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 | |
| 0 | | 0 | | 0 | 211,251 | 0 | 196,284 | 0 | 181,233 | 0 | 166,140 | 0 | 151,038 | 0 | 135,937 | 0 | 120,835 | 0 | 105,731 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 210,945 | 1/4 | 195,970 | 1/4 | 180,920 | 1/4 | 165,825 | 1/4 | 150,724 | 1/4 | 135,622 | 1/4 | 120,520 | 1/4 | 105,416 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 210,639 | 1/2 | 195,657 | 1/2 | 180,606 | 1/2 | 165,511 | 1/2 | 150,409 | 1/2 | 135,307 | 1/2 | 120,206 | 1/2 | 105,101 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 210,328 | 3/4 | 195,343 | 3/4 | 180,292 | 3/4 | 165,196 | 3/4 | 150,094 | 3/4 | 134,993 | 3/4 | 119,891 | 3/4 | 104,786 |
| 1 | | 1 | | 1 | 210,018 | 1 | 195,029 | 1 | 179,979 | 1 | 164,881 | 1 | 149,780 | 1 | 134,678 | 1 | 119,576 | 1 | 104,471 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 209,708 | 1/4 | 194,716 | 1/4 | 179,665 | 1/4 | 164,567 | 1/4 | 149,465 | 1/4 | 134,363 | 1/4 | 119,262 | 1/4 | 104,157 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 209,398 | 1/2 | 194,402 | 1/2 | 179,352 | 1/2 | 164,252 | 1/2 | 149,151 | 1/2 | 134,049 | 1/2 | 118,947 | 1/2 | 103,842 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 209,088 | 3/4 | 194,089 | 3/4 | 179,038 | 3/4 | 163,938 | 3/4 | 148,836 | 3/4 | 133,734 | 3/4 | 118,632 | 3/4 | 103,527 |
| 2 | | 2 | | 2 | 208,777 | 2 | 193,775 | 2 | 178,724 | 2 | 163,623 | 2 | 148,521 | 2 | 133,420 | 2 | 118,318 | 2 | 103,212 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 208,467 | 1/4 | 193,462 | 1/4 | 178,410 | 1/4 | 163,308 | 1/4 | 148,207 | 1/4 | 133,105 | 1/4 | 118,003 | 1/4 | 102,898 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 208,156 | 1/2 | 193,148 | 1/2 | 178,095 | 1/2 | 162,994 | 1/2 | 147,892 | 1/2 | 132,790 | 1/2 | 117,689 | 1/2 | 102,583 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 207,845 | 3/4 | 192,835 | 3/4 | 177,781 | 3/4 | 162,679 | 3/4 | 147,577 | 3/4 | 132,476 | 3/4 | 117,374 | 3/4 | 102,268 |
| 3 | | 3 | | 3 | 207,535 | 3 | 192,521 | 3 | 177,466 | 3 | 162,365 | 3 | 147,263 | 3 | 132,161 | 3 | 117,059 | 3 | 101,953 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 207,224 | 1/4 | 192,207 | 1/4 | 177,152 | 1/4 | 162,050 | 1/4 | 146,948 | 1/4 | 131,846 | 1/4 | 116,745 | 1/4 | 101,638 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 206,914 | 1/2 | 191,894 | 1/2 | 176,837 | 1/2 | 161,735 | 1/2 | 146,634 | 1/2 | 131,532 | 1/2 | 116,430 | 1/2 | 101,324 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 206,603 | 3/4 | 191,580 | 3/4 | 176,522 | 3/4 | 161,421 | 3/4 | 146,319 | 3/4 | 131,217 | 3/4 | 116,115 | 3/4 | 101,009 |
| 4 | | 4 | | 4 | 206,293 | 4 | 191,267 | 4 | 176,208 | 4 | 161,106 | 4 | 146,004 | 4 | 130,903 | 4 | 115,801 | 4 | 100,694 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 205,982 | 1/4 | 190,953 | 1/4 | 175,893 | 1/4 | 160,791 | 1/4 | 145,690 | 1/4 | 130,588 | 1/4 | 115,486 | 1/4 | 100,379 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 205,672 | 1/2 | 190,640 | 1/2 | 175,579 | 1/2 | 160,477 | 1/2 | 145,375 | 1/2 | 130,273 | 1/2 | 115,172 | 1/2 | 100,065 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 205,361 | 3/4 | 190,326 | 3/4 | 175,264 | 3/4 | 160,162 | 3/4 | 145,060 | 3/4 | 129,959 | 3/4 | 114,857 | 3/4 | 99,750 |
| 5 | | 5 | | 5 | 205,051 | 5 | 190,013 | 5 | 174,949 | 5 | 159,848 | 5 | 144,746 | 5 | 129,644 | 5 | 114,542 | 5 | 99,435 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 204,740 | 1/4 | 189,699 | 1/4 | 174,635 | 1/4 | 159,533 | 1/4 | 144,431 | 1/4 | 129,330 | 1/4 | 114,228 | 1/4 | 99,120 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 204,430 | 1/2 | 189,385 | 1/2 | 174,320 | 1/2 | 159,218 | 1/2 | 144,117 | 1/2 | 129,015 | 1/2 | 113,913 | 1/2 | 98,805 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 204,118 | 3/4 | 189,072 | 3/4 | 174,005 | 3/4 | 158,904 | 3/4 | 143,802 | 3/4 | 128,700 | 3/4 | 113,599 | 3/4 | 98,491 |
| 6 | | 6 | | 6 | 203,806 | 6 | 188,758 | 6 | 173,691 | 6 | 158,589 | 6 | 143,487 | 6 | 128,386 | 6 | 113,284 | 6 | 98,176 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 203,494 | 1/4 | 188,445 | 1/4 | 173,376 | 1/4 | 158,274 | 1/4 | 143,173 | 1/4 | 128,071 | 1/4 | 112,969 | 1/4 | 97,861 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 203,182 | 1/2 | 188,131 | 1/2 | 173,062 | 1/2 | 157,960 | 1/2 | 142,858 | 1/2 | 127,756 | 1/2 | 112,655 | 1/2 | 97,546 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 202,868 | 3/4 | 187,818 | 3/4 | 172,747 | 3/4 | 157,645 | 3/4 | 142,544 | 3/4 | 127,442 | 3/4 | 112,340 | 3/4 | 97,232 |
| 7 | | 7 | | 7 | 202,555 | 7 | 187,504 | 7 | 172,432 | 7 | 157,331 | 7 | 142,229 | 7 | 127,127 | 7 | 112,025 | 7 | 96,917 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 202,241 | 1/4 | 187,191 | 1/4 | 172,118 | 1/4 | 157,016 | 1/4 | 141,914 | 1/4 | 126,813 | 1/4 | 111,711 | 1/4 | 96,602 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 201,928 | 1/2 | 186,877 | 1/2 | 171,803 | 1/2 | 156,701 | 1/2 | 141,600 | 1/2 | 126,498 | 1/2 | 111,396 | 1/2 | 96,287 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 201,614 | 3/4 | 186,564 | 3/4 | 171,488 | 3/4 | 156,387 | 3/4 | 141,285 | 3/4 | 126,183 | 3/4 | 111,082 | 3/4 | 95,972 |
| 8 | | 8 | | 8 | 201,300 | 8 | 186,250 | 8 | 171,174 | 8 | 156,072 | 8 | 140,970 | 8 | 125,869 | 8 | 110,767 | 8 | 95,658 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 200,987 | 1/4 | 185,936 | 1/4 | 170,859 | 1/4 | 155,758 | 1/4 | 140,656 | 1/4 | 125,554 | 1/4 | 110,452 | 1/4 | 95,343 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 214,632 | 1/2 | 200,673 | 1/2 | 185,623 | 1/2 | 170,545 | 1/2 | 155,443 | 1/2 | 140,341 | 1/2 | 125,239 | 1/2 | 110,137 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 214,452 | 3/4 | 200,360 | 3/4 | 185,309 | 3/4 | 170,230 | 3/4 | 155,128 | 3/4 | 140,027 | 3/4 | 124,925 | 3/4 | 109,823 |
| 9 | | 9 | | 9 | 214,273 | 9 | 200,046 | 9 | 184,996 | 9 | 169,915 | 9 | 154,814 | 9 | 139,712 | 9 | 124,610 | 9 | 109,508 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 214,094 | 1/4 | 199,733 | 1/4 | 184,682 | 1/4 | 169,601 | 1/4 | 154,499 | 1/4 | 139,397 | 1/4 | 124,296 | 1/4 | 109,193 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 213,914 | 1/2 | 199,419 | 1/2 | 184,369 | 1/2 | 169,286 | 1/2 | 154,184 | 1/2 | 139,083 | 1/2 | 123,981 | 1/2 | 108,878 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 213,682 | 3/4 | 199,106 | 3/4 | 184,055 | 3/4 | 168,972 | 3/4 | 153,870 | 3/4 | 138,768 | 3/4 | 123,666 | 3/4 | 108,564 |
| 10 | | 10 | | 10 | 213,450 | 10 | 198,792 | 10 | 183,742 | 10 | 168,657 | 10 | 153,555 | 10 | 138,453 | 10 | 123,352 | 10 | 108,249 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 213,218 | 1/4 | 198,478 | 1/4 | 183,428 | 1/4 | 168,342 | 1/4 | 153,241 | 1/4 | 138,139 | 1/4 | 123,037 | 1/4 | 107,934 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 212,986 | 1/2 | 198,165 | 1/2 | 183,114 | 1/2 | 168,028 | 1/2 | 152,926 | 1/2 | 137,824 | 1/2 | 122,723 | 1/2 | 107,619 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 212,706 | 3/4 | 197,851 | 3/4 | 182,801 | 3/4 | 167,713 | 3/4 | 152,611 | 3/4 | 137,510 | 3/4 | 122,408 | 3/4 | 107,304 |
| 11 | | 11 | | 11 | 212,425 | 11 | 197,538 | 11 | 182,487 | 11 | 167,398 | 11 | 152,297 | 11 | 137,195 | 11 | 122,093 | 11 | 106,990 |
| 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 212,145 | 1/4 | 197,224 | 1/4 | 182,174 | 1/4 | 167,084 | 1/4 | 151,982 | 1/4 | 136,880 | 1/4 | 121,779 | 1/4 | 106,675 |
| 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 211,864 | 1/2 | 196,911 | 1/2 | 181,860 | 1/2 | 166,769 | 1/2 | 151,667 | 1/2 | 136,566 | 1/2 | 121,464 | 1/2 | 106,360 |
| 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 211,558 | 3/4 | 196,597 | 3/4 | 181,547 | 3/4 | 166,455 | 3/4 | 151,353 | 3/4 | 136,251 | 3/4 | 121,149 | 3/4 | 106,045 |

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 THREADS ON "MMC" VALVE.
 GAUGE POINT: (MMC) LOCATED 10'-09" OFF CENTERLINE AND 43'-06" FORWARD OF AFT BULKHEAD.

PRECISION MEASUREMENT
 & ANALYSIS, INC.
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 Pearland, Texas 77588
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BARGE "HFL 423"

2 STBD ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-11 1/2"

| 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 | 90,621 | 0 | 75,512 | 0 | 60,403 | 0 | 45,310 | 0 | 30,220 | 0 | 15,113 | 0 | | 0 | | 0 | | 0 | |
| 1/4 | 90,306 | 1/4 | 75,197 | 1/4 | 60,088 | 1/4 | 44,996 | 1/4 | 29,905 | 1/4 | 14,798 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 89,992 | 1/2 | 74,882 | 1/2 | 59,773 | 1/2 | 44,683 | 1/2 | 29,590 | 1/2 | 14,483 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 89,677 | 3/4 | 74,568 | 3/4 | 59,458 | 3/4 | 44,369 | 3/4 | 29,276 | 3/4 | 14,168 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 1 | 89,362 | 1 | 74,253 | 1 | 59,144 | 1 | 44,055 | 1 | 28,961 | 1 | 13,853 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1/4 | 89,047 | 1/4 | 73,938 | 1/4 | 58,829 | 1/4 | 43,741 | 1/4 | 28,647 | 1/4 | 13,539 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 88,733 | 1/2 | 73,623 | 1/2 | 58,514 | 1/2 | 43,427 | 1/2 | 28,332 | 1/2 | 13,224 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 88,418 | 3/4 | 73,309 | 3/4 | 58,199 | 3/4 | 43,113 | 3/4 | 28,017 | 3/4 | 12,909 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 2 | 88,103 | 2 | 72,994 | 2 | 57,884 | 2 | 42,799 | 2 | 27,703 | 2 | 12,594 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1/4 | 87,788 | 1/4 | 72,679 | 1/4 | 57,570 | 1/4 | 42,486 | 1/4 | 27,388 | 1/4 | 12,280 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 87,473 | 1/2 | 72,364 | 1/2 | 57,255 | 1/2 | 42,172 | 1/2 | 27,074 | 1/2 | 11,965 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 87,159 | 3/4 | 72,049 | 3/4 | 56,940 | 3/4 | 41,858 | 3/4 | 26,759 | 3/4 | 11,650 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 3 | 86,844 | 3 | 71,735 | 3 | 56,625 | 3 | 41,544 | 3 | 26,444 | 3 | 11,335 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 1/4 | 86,529 | 1/4 | 71,420 | 1/4 | 56,311 | 1/4 | 41,230 | 1/4 | 26,130 | 1/4 | 11,021 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 86,214 | 1/2 | 71,105 | 1/2 | 55,996 | 1/2 | 40,916 | 1/2 | 25,815 | 1/2 | 10,706 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 85,900 | 3/4 | 70,790 | 3/4 | 55,681 | 3/4 | 40,603 | 3/4 | 25,500 | 3/4 | 10,391 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 4 | 85,585 | 4 | 70,476 | 4 | 55,366 | 4 | 40,289 | 4 | 25,185 | 4 | 10,076 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1/4 | 85,270 | 1/4 | 70,161 | 1/4 | 55,051 | 1/4 | 39,975 | 1/4 | 24,871 | 1/4 | 9,761 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 84,955 | 1/2 | 69,846 | 1/2 | 54,737 | 1/2 | 39,661 | 1/2 | 24,556 | 1/2 | 9,447 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 84,640 | 3/4 | 69,531 | 3/4 | 54,422 | 3/4 | 39,347 | 3/4 | 24,241 | 3/4 | 9,132 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 5 | 84,326 | 5 | 69,216 | 5 | 54,107 | 5 | 39,032 | 5 | 23,926 | 5 | 8,817 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1/4 | 84,011 | 1/4 | 68,902 | 1/4 | 53,792 | 1/4 | 38,718 | 1/4 | 23,612 | 1/4 | 8,502 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 83,696 | 1/2 | 68,587 | 1/2 | 53,478 | 1/2 | 38,404 | 1/2 | 23,297 | 1/2 | 8,188 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 83,381 | 3/4 | 68,272 | 3/4 | 53,163 | 3/4 | 38,089 | 3/4 | 22,982 | 3/4 | 7,873 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 6 | 83,067 | 6 | 67,957 | 6 | 52,848 | 6 | 37,774 | 6 | 22,667 | 6 | 7,558 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 1/4 | 82,752 | 1/4 | 67,643 | 1/4 | 52,533 | 1/4 | 37,459 | 1/4 | 22,352 | 1/4 | 7,243 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 82,437 | 1/2 | 67,328 | 1/2 | 52,218 | 1/2 | 37,145 | 1/2 | 22,038 | 1/2 | 6,928 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 82,122 | 3/4 | 67,013 | 3/4 | 51,904 | 3/4 | 36,830 | 3/4 | 21,723 | 3/4 | 6,614 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 7 | 81,807 | 7 | 66,698 | 7 | 51,590 | 7 | 36,515 | 7 | 21,408 | 7 | 6,299 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 1/4 | 81,493 | 1/4 | 66,383 | 1/4 | 51,275 | 1/4 | 36,200 | 1/4 | 21,093 | 1/4 | 5,984 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 81,178 | 1/2 | 66,069 | 1/2 | 50,961 | 1/2 | 35,886 | 1/2 | 20,779 | 1/2 | 5,669 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 80,863 | 3/4 | 65,754 | 3/4 | 50,647 | 3/4 | 35,571 | 3/4 | 20,464 | 3/4 | 5,355 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 8 | 80,548 | 8 | 65,439 | 8 | 50,333 | 8 | 35,256 | 8 | 20,149 | 8 | 5,040 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 1/4 | 80,234 | 1/4 | 65,124 | 1/4 | 50,019 | 1/4 | 34,941 | 1/4 | 19,834 | 1/4 | 4,726 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 79,919 | 1/2 | 64,810 | 1/2 | 49,704 | 1/2 | 34,626 | 1/2 | 19,519 | 1/2 | 4,411 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 79,604 | 3/4 | 64,495 | 3/4 | 49,391 | 3/4 | 34,312 | 3/4 | 19,205 | 3/4 | 4,098 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 9 | 79,289 | 9 | 64,180 | 9 | 49,077 | 9 | 33,997 | 9 | 18,890 | 9 | 3,784 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 1/4 | 78,974 | 1/4 | 63,865 | 1/4 | 48,763 | 1/4 | 33,682 | 1/4 | 18,575 | 1/4 | 3,470 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 78,660 | 1/2 | 63,550 | 1/2 | 48,449 | 1/2 | 33,367 | 1/2 | 18,260 | 1/2 | 3,156 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 78,345 | 3/4 | 63,236 | 3/4 | 48,135 | 3/4 | 33,053 | 3/4 | 17,946 | 3/4 | 2,862 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 10 | 78,030 | 10 | 62,921 | 10 | 47,821 | 10 | 32,738 | 10 | 17,631 | 10 | 2,568 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 1/4 | 77,715 | 1/4 | 62,606 | 1/4 | 47,507 | 1/4 | 32,423 | 1/4 | 17,316 | 1/4 | 2,273 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 77,401 | 1/2 | 62,291 | 1/2 | 47,193 | 1/2 | 32,108 | 1/2 | 17,001 | 1/2 | 1,979 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 77,086 | 3/4 | 61,977 | 3/4 | 46,879 | 3/4 | 31,793 | 3/4 | 16,686 | 3/4 | 1,743 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 11 | 76,771 | 11 | 61,662 | 11 | 46,566 | 11 | 31,479 | 11 | 16,372 | 11 | 1,507 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 1/4 | 76,456 | 1/4 | 61,347 | 1/4 | 46,252 | 1/4 | 31,164 | 1/4 | 16,057 | 1/4 | 1,271 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 76,141 | 1/2 | 61,032 | 1/2 | 45,938 | 1/2 | 30,849 | 1/2 | 15,742 | 1/2 | 1,035 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 75,827 | 3/4 | 60,717 | 3/4 | 45,624 | 3/4 | 30,534 | 3/4 | 15,427 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 08/06/2013 SW
CALCULATED: 08/06/2013 CL
PRINTED: 08/06/2013 CL

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2013

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



BARGE "HFL 423"

3 PORT ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-11 1/4"

| 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 | 89,016 | 0 | 74,032 | 0 | 59,103 | 0 | 44,540 | 0 | 29,731 | 0 | 14,719 | 0 | | 0 | | 0 | | 0 | |
| 1/4 | 88,703 | 1/4 | 73,721 | 1/4 | 58,794 | 1/4 | 44,237 | 1/4 | 29,418 | 1/4 | 14,406 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 88,391 | 1/2 | 73,410 | 1/2 | 58,488 | 1/2 | 43,931 | 1/2 | 29,105 | 1/2 | 14,093 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 88,078 | 3/4 | 73,099 | 3/4 | 58,182 | 3/4 | 43,626 | 3/4 | 28,793 | 3/4 | 13,780 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 1 | 87,766 | 1 | 72,789 | 1 | 57,876 | 1 | 43,320 | 1 | 28,480 | 1 | 13,468 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1/4 | 87,453 | 1/4 | 72,478 | 1/4 | 57,570 | 1/4 | 43,015 | 1/4 | 28,168 | 1/4 | 13,155 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 87,140 | 1/2 | 72,167 | 1/2 | 57,265 | 1/2 | 42,709 | 1/2 | 27,855 | 1/2 | 12,842 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 86,828 | 3/4 | 71,856 | 3/4 | 56,961 | 3/4 | 42,404 | 3/4 | 27,542 | 3/4 | 12,529 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 2 | 86,515 | 2 | 71,546 | 2 | 56,656 | 2 | 42,098 | 2 | 27,230 | 2 | 12,217 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1/4 | 86,202 | 1/4 | 71,235 | 1/4 | 56,352 | 1/4 | 41,793 | 1/4 | 26,917 | 1/4 | 11,904 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 85,890 | 1/2 | 70,924 | 1/2 | 56,049 | 1/2 | 41,488 | 1/2 | 26,605 | 1/2 | 11,591 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 85,577 | 3/4 | 70,613 | 3/4 | 55,746 | 3/4 | 41,182 | 3/4 | 26,292 | 3/4 | 11,278 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 3 | 85,264 | 3 | 70,303 | 3 | 55,443 | 3 | 40,877 | 3 | 25,979 | 3 | 10,965 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 1/4 | 84,951 | 1/4 | 69,992 | 1/4 | 55,140 | 1/4 | 40,571 | 1/4 | 25,666 | 1/4 | 10,652 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 84,639 | 1/2 | 69,681 | 1/2 | 54,837 | 1/2 | 40,266 | 1/2 | 25,354 | 1/2 | 10,338 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 84,326 | 3/4 | 69,370 | 3/4 | 54,534 | 3/4 | 39,960 | 3/4 | 25,041 | 3/4 | 10,025 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 4 | 84,013 | 4 | 69,060 | 4 | 54,231 | 4 | 39,655 | 4 | 24,728 | 4 | 9,712 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1/4 | 83,700 | 1/4 | 68,749 | 1/4 | 53,928 | 1/4 | 39,349 | 1/4 | 24,415 | 1/4 | 9,399 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 83,388 | 1/2 | 68,438 | 1/2 | 53,625 | 1/2 | 39,044 | 1/2 | 24,102 | 1/2 | 9,085 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 83,075 | 3/4 | 68,127 | 3/4 | 53,323 | 3/4 | 38,738 | 3/4 | 23,790 | 3/4 | 8,772 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 5 | 82,762 | 5 | 67,817 | 5 | 53,020 | 5 | 38,433 | 5 | 23,477 | 5 | 8,459 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1/4 | 82,450 | 1/4 | 67,506 | 1/4 | 52,717 | 1/4 | 38,128 | 1/4 | 23,164 | 1/4 | 8,146 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 82,137 | 1/2 | 67,195 | 1/2 | 52,414 | 1/2 | 37,822 | 1/2 | 22,851 | 1/2 | 7,833 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 81,824 | 3/4 | 66,884 | 3/4 | 52,111 | 3/4 | 37,517 | 3/4 | 22,538 | 3/4 | 7,520 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 6 | 81,511 | 6 | 66,573 | 6 | 51,808 | 6 | 37,211 | 6 | 22,226 | 6 | 7,207 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 1/4 | 81,199 | 1/4 | 66,263 | 1/4 | 51,505 | 1/4 | 36,906 | 1/4 | 21,913 | 1/4 | 6,894 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 80,886 | 1/2 | 65,952 | 1/2 | 51,202 | 1/2 | 36,597 | 1/2 | 21,600 | 1/2 | 6,581 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 80,573 | 3/4 | 65,641 | 3/4 | 50,899 | 3/4 | 36,289 | 3/4 | 21,287 | 3/4 | 6,268 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 7 | 80,261 | 7 | 65,330 | 7 | 50,596 | 7 | 35,980 | 7 | 20,975 | 7 | 5,955 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 1/4 | 79,948 | 1/4 | 65,020 | 1/4 | 50,293 | 1/4 | 35,671 | 1/4 | 20,662 | 1/4 | 5,642 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 79,635 | 1/2 | 64,709 | 1/2 | 49,991 | 1/2 | 35,359 | 1/2 | 20,349 | 1/2 | 5,329 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 79,322 | 3/4 | 64,398 | 3/4 | 49,688 | 3/4 | 35,047 | 3/4 | 20,036 | 3/4 | 5,016 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 8 | 79,010 | 8 | 64,087 | 8 | 49,385 | 8 | 34,735 | 8 | 19,723 | 8 | 4,703 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 1/4 | 78,697 | 1/4 | 63,777 | 1/4 | 49,082 | 1/4 | 34,422 | 1/4 | 19,411 | 1/4 | 4,390 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 78,385 | 1/2 | 63,465 | 1/2 | 48,779 | 1/2 | 34,110 | 1/2 | 19,098 | 1/2 | 4,078 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 78,073 | 3/4 | 63,154 | 3/4 | 48,476 | 3/4 | 33,797 | 3/4 | 18,785 | 3/4 | 3,766 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 9 | 77,762 | 9 | 62,842 | 9 | 48,173 | 9 | 33,484 | 9 | 18,472 | 9 | 3,453 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 1/4 | 77,450 | 1/4 | 62,530 | 1/4 | 47,870 | 1/4 | 33,171 | 1/4 | 18,159 | 1/4 | 3,141 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 77,139 | 1/2 | 62,218 | 1/2 | 47,568 | 1/2 | 32,858 | 1/2 | 17,847 | 1/2 | 2,848 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 76,828 | 3/4 | 61,906 | 3/4 | 47,265 | 3/4 | 32,546 | 3/4 | 17,534 | 3/4 | 2,555 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 10 | 76,518 | 10 | 61,593 | 10 | 46,963 | 10 | 32,233 | 10 | 17,221 | 10 | 2,262 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 1/4 | 76,207 | 1/4 | 61,281 | 1/4 | 46,660 | 1/4 | 31,920 | 1/4 | 16,908 | 1/4 | 1,969 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 75,896 | 1/2 | 60,968 | 1/2 | 46,358 | 1/2 | 31,607 | 1/2 | 16,596 | 1/2 | 1,734 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 75,585 | 3/4 | 60,656 | 3/4 | 46,056 | 3/4 | 31,295 | 3/4 | 16,283 | 3/4 | 1,500 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 11 | 75,275 | 11 | 60,343 | 11 | 45,754 | 11 | 30,982 | 11 | 15,970 | 11 | 1,265 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 1/4 | 74,964 | 1/4 | 60,031 | 1/4 | 45,452 | 1/4 | 30,669 | 1/4 | 15,657 | 1/4 | 1,030 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 74,653 | 1/2 | 59,722 | 1/2 | 45,148 | 1/2 | 30,356 | 1/2 | 15,344 | 1/2 | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 74,342 | 3/4 | 59,413 | 3/4 | 44,844 | 3/4 | 30,044 | 3/4 | 15,032 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 08/06/2013 SW
CALCULATED: 08/06/2013 CL
PRINTED: 08/06/2013 CL

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2013

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



BARGE "HFL 423"

3 STBD ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 15'-10 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 | 89,292 | 0 | 74,250 | 0 | 59,209 | 0 | 44,171 | 0 | 29,145 | 0 | 14,104 | 0 | | 0 | | 0 | | 0 | |
| 1/4 | 88,978 | 1/4 | 73,937 | 1/4 | 58,896 | 1/4 | 43,859 | 1/4 | 28,831 | 1/4 | 13,791 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 88,665 | 1/2 | 73,624 | 1/2 | 58,582 | 1/2 | 43,546 | 1/2 | 28,518 | 1/2 | 13,477 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 88,351 | 3/4 | 73,310 | 3/4 | 58,269 | 3/4 | 43,233 | 3/4 | 28,205 | 3/4 | 13,164 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 1 | 88,038 | 1 | 72,997 | 1 | 57,956 | 1 | 42,920 | 1 | 27,891 | 1 | 12,851 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1/4 | 87,725 | 1/4 | 72,683 | 1/4 | 57,642 | 1/4 | 42,607 | 1/4 | 27,578 | 1/4 | 12,537 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 87,411 | 1/2 | 72,370 | 1/2 | 57,329 | 1/2 | 42,294 | 1/2 | 27,265 | 1/2 | 12,224 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 87,098 | 3/4 | 72,057 | 3/4 | 57,016 | 3/4 | 41,981 | 3/4 | 26,951 | 3/4 | 11,911 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 2 | 86,785 | 2 | 71,743 | 2 | 56,702 | 2 | 41,669 | 2 | 26,638 | 2 | 11,597 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1/4 | 86,471 | 1/4 | 71,430 | 1/4 | 56,389 | 1/4 | 41,356 | 1/4 | 26,325 | 1/4 | 11,284 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 86,158 | 1/2 | 71,117 | 1/2 | 56,075 | 1/2 | 41,043 | 1/2 | 26,011 | 1/2 | 10,971 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 85,845 | 3/4 | 70,803 | 3/4 | 55,762 | 3/4 | 40,730 | 3/4 | 25,698 | 3/4 | 10,657 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 3 | 85,531 | 3 | 70,490 | 3 | 55,449 | 3 | 40,417 | 3 | 25,385 | 3 | 10,344 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 1/4 | 85,218 | 1/4 | 70,177 | 1/4 | 55,135 | 1/4 | 40,104 | 1/4 | 25,071 | 1/4 | 10,030 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 84,904 | 1/2 | 69,863 | 1/2 | 54,822 | 1/2 | 39,791 | 1/2 | 24,758 | 1/2 | 9,717 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 84,591 | 3/4 | 69,550 | 3/4 | 54,509 | 3/4 | 39,479 | 3/4 | 24,445 | 3/4 | 9,404 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 4 | 84,278 | 4 | 69,237 | 4 | 54,195 | 4 | 39,166 | 4 | 24,131 | 4 | 9,090 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1/4 | 83,964 | 1/4 | 68,923 | 1/4 | 53,882 | 1/4 | 38,853 | 1/4 | 23,818 | 1/4 | 8,777 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 83,651 | 1/2 | 68,610 | 1/2 | 53,569 | 1/2 | 38,540 | 1/2 | 23,505 | 1/2 | 8,464 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 83,338 | 3/4 | 68,296 | 3/4 | 53,255 | 3/4 | 38,227 | 3/4 | 23,191 | 3/4 | 8,150 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 5 | 83,024 | 5 | 67,983 | 5 | 52,942 | 5 | 37,914 | 5 | 22,878 | 5 | 7,837 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1/4 | 82,711 | 1/4 | 67,670 | 1/4 | 52,629 | 1/4 | 37,601 | 1/4 | 22,564 | 1/4 | 7,524 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 82,398 | 1/2 | 67,356 | 1/2 | 52,315 | 1/2 | 37,288 | 1/2 | 22,251 | 1/2 | 7,210 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 82,084 | 3/4 | 67,043 | 3/4 | 52,002 | 3/4 | 36,976 | 3/4 | 21,938 | 3/4 | 6,897 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 6 | 81,771 | 6 | 66,730 | 6 | 51,688 | 6 | 36,663 | 6 | 21,624 | 6 | 6,584 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 1/4 | 81,458 | 1/4 | 66,416 | 1/4 | 51,375 | 1/4 | 36,350 | 1/4 | 21,311 | 1/4 | 6,270 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 81,144 | 1/2 | 66,103 | 1/2 | 51,062 | 1/2 | 36,037 | 1/2 | 20,998 | 1/2 | 5,957 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 80,831 | 3/4 | 65,790 | 3/4 | 50,748 | 3/4 | 35,724 | 3/4 | 20,684 | 3/4 | 5,644 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 7 | 80,517 | 7 | 65,476 | 7 | 50,435 | 7 | 35,411 | 7 | 20,371 | 7 | 5,331 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 1/4 | 80,204 | 1/4 | 65,163 | 1/4 | 50,122 | 1/4 | 35,098 | 1/4 | 20,058 | 1/4 | 5,017 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 79,891 | 1/2 | 64,850 | 1/2 | 49,808 | 1/2 | 34,785 | 1/2 | 19,744 | 1/2 | 4,704 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 79,577 | 3/4 | 64,536 | 3/4 | 49,495 | 3/4 | 34,472 | 3/4 | 19,431 | 3/4 | 4,391 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 8 | 79,264 | 8 | 64,223 | 8 | 49,182 | 8 | 34,158 | 8 | 19,118 | 8 | 4,079 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 1/4 | 78,951 | 1/4 | 63,909 | 1/4 | 48,868 | 1/4 | 33,845 | 1/4 | 18,804 | 1/4 | 3,767 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 78,637 | 1/2 | 63,596 | 1/2 | 48,555 | 1/2 | 33,532 | 1/2 | 18,491 | 1/2 | 3,454 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 78,324 | 3/4 | 63,283 | 3/4 | 48,241 | 3/4 | 33,218 | 3/4 | 18,178 | 3/4 | 3,142 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 9 | 78,011 | 9 | 62,969 | 9 | 47,928 | 9 | 32,905 | 9 | 17,864 | 9 | 2,849 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 1/4 | 77,697 | 1/4 | 62,656 | 1/4 | 47,615 | 1/4 | 32,592 | 1/4 | 17,551 | 1/4 | 2,556 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 77,384 | 1/2 | 62,343 | 1/2 | 47,302 | 1/2 | 32,278 | 1/2 | 17,238 | 1/2 | 2,263 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 77,071 | 3/4 | 62,029 | 3/4 | 46,989 | 3/4 | 31,965 | 3/4 | 16,924 | 3/4 | 1,970 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 10 | 76,757 | 10 | 61,716 | 10 | 46,675 | 10 | 31,652 | 10 | 16,611 | 10 | 1,735 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 1/4 | 76,444 | 1/4 | 61,403 | 1/4 | 46,362 | 1/4 | 31,338 | 1/4 | 16,297 | 1/4 | 1,500 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 76,130 | 1/2 | 61,089 | 1/2 | 46,049 | 1/2 | 31,025 | 1/2 | 15,984 | 1/2 | 1,265 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 75,817 | 3/4 | 60,776 | 3/4 | 45,736 | 3/4 | 30,712 | 3/4 | 15,671 | 3/4 | 1,030 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 11 | 75,504 | 11 | 60,462 | 11 | 45,423 | 11 | 30,398 | 11 | 15,357 | 11 | | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 1/4 | 75,190 | 1/4 | 60,149 | 1/4 | 45,110 | 1/4 | 30,085 | 1/4 | 15,044 | 1/4 | | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 74,877 | 1/2 | 59,836 | 1/2 | 44,797 | 1/2 | 29,771 | 1/2 | 14,731 | 1/2 | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 74,564 | 3/4 | 59,522 | 3/4 | 44,484 | 3/4 | 29,458 | 3/4 | 14,417 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 08/06/2013 SW
CALCULATED: 08/06/2013 CL
PRINTED: 08/06/2013 CL

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2013

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



BARGE "HFL 423"

FUEL TANK ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 4'-06"

| 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 | 480 | 0 | 340 | 0 | 177 | 0 | 37 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 1/4 | 1/4 | 477 | 1/4 | 337 | 1/4 | 174 | 1/4 | 35 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 1/2 | 475 | 1/2 | 333 | 1/2 | 170 | 1/2 | 33 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 3/4 | 473 | 3/4 | 330 | 3/4 | 167 | 3/4 | 31 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 1 | 1 | 470 | 1 | 327 | 1 | 164 | 1 | 29 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| 1/4 | 1/4 | 468 | 1/4 | 323 | 1/4 | 161 | 1/4 | 27 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 1/2 | 465 | 1/2 | 320 | 1/2 | 157 | 1/2 | 25 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 3/4 | 463 | 3/4 | 316 | 3/4 | 154 | 3/4 | 23 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 2 | 2 | 460 | 2 | 313 | 2 | 151 | 2 | 21 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| 1/4 | 1/4 | 458 | 1/4 | 310 | 1/4 | 148 | 1/4 | 19 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 1/2 | 455 | 1/2 | 306 | 1/2 | 144 | 1/2 | 17 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 3/4 | 453 | 3/4 | 303 | 3/4 | 141 | 3/4 | 15 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 3 | 3 | 450 | 3 | 300 | 3 | 138 | 3 | 13 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 3 |
| 1/4 | 1/4 | 447 | 1/4 | 296 | 1/4 | 135 | 1/4 | 12 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 1/2 | 444 | 1/2 | 293 | 1/2 | 132 | 1/2 | 10 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 3/4 | 442 | 3/4 | 289 | 3/4 | 129 | 3/4 | 9 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 4 | 4 | 439 | 4 | 286 | 4 | 125 | 4 | 7 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 | 4 |
| 1/4 | 1/4 | 436 | 1/4 | 282 | 1/4 | 122 | 1/4 | 6 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 1/2 | 433 | 1/2 | 279 | 1/2 | 119 | 1/2 | 5 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 3/4 | 430 | 3/4 | 276 | 3/4 | 116 | 3/4 | 4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 5 | 5 | 428 | 5 | 272 | 5 | 113 | 5 | 3 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 |
| 1/4 | 1/4 | 425 | 1/4 | 269 | 1/4 | 110 | 1/4 | 2 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 1/2 | 422 | 1/2 | 265 | 1/2 | 107 | 1/2 | 1 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 3/4 | 419 | 3/4 | 262 | 3/4 | 104 | 3/4 | 1 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 6 | 517 | 6 | 416 | 6 | 259 | 6 | 101 | 6 | 0 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 |
| 1/4 | 516 | 1/4 | 413 | 1/4 | 255 | 1/4 | 98 | 1/4 | | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 516 | 1/2 | 410 | 1/2 | 252 | 1/2 | 95 | 1/2 | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 515 | 3/4 | 407 | 3/4 | 248 | 3/4 | 92 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 7 | 514 | 7 | 404 | 7 | 245 | 7 | 89 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 | 7 |
| 1/4 | 513 | 1/4 | 401 | 1/4 | 241 | 1/4 | 87 | 1/4 | | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 512 | 1/2 | 398 | 1/2 | 238 | 1/2 | 84 | 1/2 | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 511 | 3/4 | 395 | 3/4 | 235 | 3/4 | 81 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 8 | 510 | 8 | 392 | 8 | 231 | 8 | 78 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 | 8 |
| 1/4 | 508 | 1/4 | 388 | 1/4 | 228 | 1/4 | 75 | 1/4 | | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 507 | 1/2 | 385 | 1/2 | 224 | 1/2 | 73 | 1/2 | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 505 | 3/4 | 382 | 3/4 | 221 | 3/4 | 70 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 9 | 504 | 9 | 379 | 9 | 217 | 9 | 67 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 | 9 |
| 1/4 | 502 | 1/4 | 376 | 1/4 | 214 | 1/4 | 64 | 1/4 | | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 500 | 1/2 | 373 | 1/2 | 211 | 1/2 | 62 | 1/2 | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 498 | 3/4 | 369 | 3/4 | 207 | 3/4 | 59 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 10 | 496 | 10 | 366 | 10 | 204 | 10 | 57 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 | 10 |
| 1/4 | 494 | 1/4 | 363 | 1/4 | 201 | 1/4 | 54 | 1/4 | | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 492 | 1/2 | 360 | 1/2 | 197 | 1/2 | 52 | 1/2 | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 490 | 3/4 | 356 | 3/4 | 194 | 3/4 | 49 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |
| 11 | 488 | 11 | 353 | 11 | 190 | 11 | 47 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 | 11 |
| 1/4 | 486 | 1/4 | 350 | 1/4 | 187 | 1/4 | 44 | 1/4 | | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 | 1/4 |
| 1/2 | 484 | 1/2 | 347 | 1/2 | 184 | 1/2 | 42 | 1/2 | | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 | 1/2 |
| 3/4 | 482 | 3/4 | 343 | 3/4 | 180 | 3/4 | 40 | 3/4 | | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 | 3/4 |

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 OF 2" DIAMETER PIPE.

STRAPPED: 08/06/2013 SW
CALCULATED: 08/06/2013 CL
PRINTED: 08/06/2013 CL

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2013

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



BARGE "HFL 423"

PORT SLOP ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 6'-00 1/4"

| 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 | |
| 0 | | 0 | | 0 | 4,739 | 0 | 3,584 | 0 | 2,430 | 0 | 1,275 | 0 | 120 | 0 | | 0 | | 0 | | 0 | |
| 1/4 | | 1/4 | | 1/4 | 4,715 | 1/4 | 3,560 | 1/4 | 2,406 | 1/4 | 1,251 | 1/4 | 96 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,691 | 1/2 | 3,536 | 1/2 | 2,382 | 1/2 | 1,227 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,667 | 3/4 | 3,512 | 3/4 | 2,358 | 3/4 | 1,203 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 1 | | 1 | | 1 | 4,643 | 1 | 3,488 | 1 | 2,334 | 1 | 1,179 | 1 | 1 | 1 | | 1 | | 1 | | 1 | |
| 1/4 | | 1/4 | | 1/4 | 4,619 | 1/4 | 3,464 | 1/4 | 2,310 | 1/4 | 1,155 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,595 | 1/2 | 3,440 | 1/2 | 2,286 | 1/2 | 1,131 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,570 | 3/4 | 3,415 | 3/4 | 2,262 | 3/4 | 1,107 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 2 | | 2 | | 2 | 4,546 | 2 | 3,391 | 2 | 2,238 | 2 | 1,083 | 2 | 2 | 2 | | 2 | | 2 | | 2 | |
| 1/4 | | 1/4 | | 1/4 | 4,522 | 1/4 | 3,367 | 1/4 | 2,214 | 1/4 | 1,059 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,498 | 1/2 | 3,343 | 1/2 | 2,190 | 1/2 | 1,035 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,474 | 3/4 | 3,319 | 3/4 | 2,165 | 3/4 | 1,011 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 3 | | 3 | | 3 | 4,450 | 3 | 3,295 | 3 | 2,141 | 3 | 987 | 3 | 3 | 3 | | 3 | | 3 | | 3 | |
| 1/4 | | 1/4 | | 1/4 | 4,426 | 1/4 | 3,271 | 1/4 | 2,117 | 1/4 | 963 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,402 | 1/2 | 3,247 | 1/2 | 2,093 | 1/2 | 938 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,378 | 3/4 | 3,223 | 3/4 | 2,069 | 3/4 | 914 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 4 | | 4 | | 4 | 4,354 | 4 | 3,199 | 4 | 2,045 | 4 | 890 | 4 | 4 | 4 | | 4 | | 4 | | 4 | |
| 1/4 | | 1/4 | | 1/4 | 4,330 | 1/4 | 3,175 | 1/4 | 2,021 | 1/4 | 866 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,306 | 1/2 | 3,151 | 1/2 | 1,997 | 1/2 | 842 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,282 | 3/4 | 3,127 | 3/4 | 1,973 | 3/4 | 818 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 5 | | 5 | | 5 | 4,258 | 5 | 3,103 | 5 | 1,949 | 5 | 794 | 5 | 5 | 5 | | 5 | | 5 | | 5 | |
| 1/4 | | 1/4 | | 1/4 | 4,234 | 1/4 | 3,079 | 1/4 | 1,925 | 1/4 | 770 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,210 | 1/2 | 3,054 | 1/2 | 1,901 | 1/2 | 746 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,185 | 3/4 | 3,030 | 3/4 | 1,877 | 3/4 | 722 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 6 | | 6 | | 6 | 4,161 | 6 | 3,006 | 6 | 1,853 | 6 | 698 | 6 | 6 | 6 | | 6 | | 6 | | 6 | |
| 1/4 | | 1/4 | | 1/4 | 4,137 | 1/4 | 2,982 | 1/4 | 1,829 | 1/4 | 674 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,113 | 1/2 | 2,958 | 1/2 | 1,805 | 1/2 | 650 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,089 | 3/4 | 2,934 | 3/4 | 1,780 | 3/4 | 626 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 7 | | 7 | | 7 | 4,065 | 7 | 2,910 | 7 | 1,756 | 7 | 602 | 7 | 7 | 7 | | 7 | | 7 | | 7 | |
| 1/4 | | 1/4 | 5,140 | 1/4 | 4,041 | 1/4 | 2,886 | 1/4 | 1,732 | 1/4 | 578 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | 5,128 | 1/2 | 4,017 | 1/2 | 2,862 | 1/2 | 1,708 | 1/2 | 553 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | 5,117 | 3/4 | 3,993 | 3/4 | 2,838 | 3/4 | 1,684 | 3/4 | 529 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 8 | | 8 | 5,105 | 8 | 3,969 | 8 | 2,814 | 8 | 1,660 | 8 | 505 | 8 | 8 | 8 | | 8 | | 8 | | 8 | |
| 1/4 | | 1/4 | 5,093 | 1/4 | 3,945 | 1/4 | 2,790 | 1/4 | 1,636 | 1/4 | 481 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | 5,070 | 1/2 | 3,921 | 1/2 | 2,766 | 1/2 | 1,612 | 1/2 | 457 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | 5,046 | 3/4 | 3,897 | 3/4 | 2,742 | 3/4 | 1,588 | 3/4 | 433 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 9 | | 9 | 5,023 | 9 | 3,873 | 9 | 2,718 | 9 | 1,564 | 9 | 409 | 9 | 9 | 9 | | 9 | | 9 | | 9 | |
| 1/4 | | 1/4 | 4,999 | 1/4 | 3,849 | 1/4 | 2,694 | 1/4 | 1,540 | 1/4 | 385 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | 4,975 | 1/2 | 3,825 | 1/2 | 2,670 | 1/2 | 1,516 | 1/2 | 361 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | 4,952 | 3/4 | 3,800 | 3/4 | 2,646 | 3/4 | 1,492 | 3/4 | 337 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 10 | | 10 | 4,928 | 10 | 3,776 | 10 | 2,622 | 10 | 1,468 | 10 | 313 | 10 | 10 | 10 | | 10 | | 10 | | 10 | |
| 1/4 | | 1/4 | 4,904 | 1/4 | 3,752 | 1/4 | 2,597 | 1/4 | 1,444 | 1/4 | 289 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | 4,881 | 1/2 | 3,728 | 1/2 | 2,574 | 1/2 | 1,419 | 1/2 | 265 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | 4,857 | 3/4 | 3,704 | 3/4 | 2,550 | 3/4 | 1,395 | 3/4 | 241 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 11 | | 11 | 4,833 | 11 | 3,680 | 11 | 2,526 | 11 | 1,371 | 11 | 217 | 11 | 11 | 11 | | 11 | | 11 | | 11 | |
| 1/4 | | 1/4 | 4,810 | 1/4 | 3,656 | 1/4 | 2,502 | 1/4 | 1,347 | 1/4 | 193 | 1/4 | | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | 4,786 | 1/2 | 3,632 | 1/2 | 2,478 | 1/2 | 1,323 | 1/2 | 168 | 1/2 | | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | 4,762 | 3/4 | 3,608 | 3/4 | 2,454 | 3/4 | 1,299 | 3/4 | 144 | 3/4 | | 3/4 | | 3/4 | | 3/4 | | 3/4 | |

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 THREADS ON "MMC" VALVE.

STRAPPED: 08/06/2013 SW
CALCULATED: 08/06/2013 CL
PRINTED: 08/06/2013 CL

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2013

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



BARGE "HFL 423"

STBD SLOP ULLAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 6'-01 1/4"

| 0 FT. | | 1 FT. | | 2 FT. | | 3 FT. | | 4 FT. | | 5 FT. | | 6 FT. | | 7 FT. | | 8 FT. | | 9 FT. | |
|-------|-----|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|-------|-----|-------|-----|-------|-----|
| IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT | IN | OUT |
| 0 | | 0 | | 0 | 4,833 | 0 | 3,680 | 0 | 2,526 | 0 | 1,371 | 0 | 217 | 0 | | 0 | | 0 | |
| 1/4 | | 1/4 | | 1/4 | 4,810 | 1/4 | 3,656 | 1/4 | 2,502 | 1/4 | 1,347 | 1/4 | 193 | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,786 | 1/2 | 3,632 | 1/2 | 2,478 | 1/2 | 1,323 | 1/2 | 168 | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,762 | 3/4 | 3,608 | 3/4 | 2,454 | 3/4 | 1,299 | 3/4 | 144 | 3/4 | | 3/4 | | 3/4 | |
| 1 | | 1 | | 1 | 4,739 | 1 | 3,584 | 1 | 2,430 | 1 | 1,275 | 1 | 120 | 1 | | 1 | | 1 | |
| 1/4 | | 1/4 | | 1/4 | 4,715 | 1/4 | 3,560 | 1/4 | 2,406 | 1/4 | 1,251 | 1/4 | 96 | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,691 | 1/2 | 3,536 | 1/2 | 2,382 | 1/2 | 1,227 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,667 | 3/4 | 3,512 | 3/4 | 2,358 | 3/4 | 1,203 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 2 | | 2 | | 2 | 4,643 | 2 | 3,488 | 2 | 2,334 | 2 | 1,179 | 2 | 2 | 2 | | 2 | | 2 | |
| 1/4 | | 1/4 | | 1/4 | 4,619 | 1/4 | 3,464 | 1/4 | 2,310 | 1/4 | 1,155 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,595 | 1/2 | 3,440 | 1/2 | 2,286 | 1/2 | 1,131 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,570 | 3/4 | 3,415 | 3/4 | 2,262 | 3/4 | 1,107 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 3 | | 3 | | 3 | 4,546 | 3 | 3,391 | 3 | 2,238 | 3 | 1,083 | 3 | 3 | 3 | | 3 | | 3 | |
| 1/4 | | 1/4 | | 1/4 | 4,522 | 1/4 | 3,367 | 1/4 | 2,214 | 1/4 | 1,059 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,498 | 1/2 | 3,343 | 1/2 | 2,190 | 1/2 | 1,035 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,474 | 3/4 | 3,319 | 3/4 | 2,165 | 3/4 | 1,011 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 4 | | 4 | | 4 | 4,450 | 4 | 3,295 | 4 | 2,141 | 4 | 987 | 4 | 4 | 4 | | 4 | | 4 | |
| 1/4 | | 1/4 | | 1/4 | 4,426 | 1/4 | 3,271 | 1/4 | 2,117 | 1/4 | 963 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,402 | 1/2 | 3,247 | 1/2 | 2,093 | 1/2 | 938 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,378 | 3/4 | 3,223 | 3/4 | 2,069 | 3/4 | 914 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 5 | | 5 | | 5 | 4,354 | 5 | 3,199 | 5 | 2,045 | 5 | 890 | 5 | 5 | 5 | | 5 | | 5 | |
| 1/4 | | 1/4 | | 1/4 | 4,330 | 1/4 | 3,175 | 1/4 | 2,021 | 1/4 | 866 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,306 | 1/2 | 3,151 | 1/2 | 1,997 | 1/2 | 842 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,282 | 3/4 | 3,127 | 3/4 | 1,973 | 3/4 | 818 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 6 | | 6 | | 6 | 4,258 | 6 | 3,103 | 6 | 1,949 | 6 | 794 | 6 | 6 | 6 | | 6 | | 6 | |
| 1/4 | | 1/4 | | 1/4 | 4,234 | 1/4 | 3,079 | 1/4 | 1,925 | 1/4 | 770 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,210 | 1/2 | 3,054 | 1/2 | 1,901 | 1/2 | 746 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,185 | 3/4 | 3,030 | 3/4 | 1,877 | 3/4 | 722 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 7 | | 7 | | 7 | 4,161 | 7 | 3,006 | 7 | 1,853 | 7 | 698 | 7 | 7 | 7 | | 7 | | 7 | |
| 1/4 | | 1/4 | | 1/4 | 4,137 | 1/4 | 2,982 | 1/4 | 1,829 | 1/4 | 674 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | | 1/2 | 4,113 | 1/2 | 2,958 | 1/2 | 1,805 | 1/2 | 650 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | | 3/4 | 4,089 | 3/4 | 2,934 | 3/4 | 1,780 | 3/4 | 626 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 8 | | 8 | | 8 | 4,065 | 8 | 2,910 | 8 | 1,756 | 8 | 602 | 8 | 8 | 8 | | 8 | | 8 | |
| 1/4 | | 1/4 | 5,140 | 1/4 | 4,041 | 1/4 | 2,886 | 1/4 | 1,732 | 1/4 | 578 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | 5,128 | 1/2 | 4,017 | 1/2 | 2,862 | 1/2 | 1,708 | 1/2 | 553 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | 5,117 | 3/4 | 3,993 | 3/4 | 2,838 | 3/4 | 1,684 | 3/4 | 529 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 9 | | 9 | 5,105 | 9 | 3,969 | 9 | 2,814 | 9 | 1,660 | 9 | 505 | 9 | 9 | 9 | | 9 | | 9 | |
| 1/4 | | 1/4 | 5,093 | 1/4 | 3,945 | 1/4 | 2,790 | 1/4 | 1,636 | 1/4 | 481 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | 5,070 | 1/2 | 3,921 | 1/2 | 2,766 | 1/2 | 1,612 | 1/2 | 457 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | 5,046 | 3/4 | 3,897 | 3/4 | 2,742 | 3/4 | 1,588 | 3/4 | 433 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 10 | | 10 | 5,023 | 10 | 3,873 | 10 | 2,718 | 10 | 1,564 | 10 | 409 | 10 | 10 | 10 | | 10 | | 10 | |
| 1/4 | | 1/4 | 4,999 | 1/4 | 3,849 | 1/4 | 2,694 | 1/4 | 1,540 | 1/4 | 385 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | 4,975 | 1/2 | 3,825 | 1/2 | 2,670 | 1/2 | 1,516 | 1/2 | 361 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | 4,952 | 3/4 | 3,800 | 3/4 | 2,646 | 3/4 | 1,492 | 3/4 | 337 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |
| 11 | | 11 | 4,928 | 11 | 3,776 | 11 | 2,622 | 11 | 1,468 | 11 | 313 | 11 | 11 | 11 | | 11 | | 11 | |
| 1/4 | | 1/4 | 4,904 | 1/4 | 3,752 | 1/4 | 2,597 | 1/4 | 1,444 | 1/4 | 289 | 1/4 | | 1/4 | | 1/4 | | 1/4 | |
| 1/2 | | 1/2 | 4,881 | 1/2 | 3,728 | 1/2 | 2,574 | 1/2 | 1,419 | 1/2 | 265 | 1/2 | | 1/2 | | 1/2 | | 1/2 | |
| 3/4 | | 3/4 | 4,857 | 3/4 | 3,704 | 3/4 | 2,550 | 3/4 | 1,395 | 3/4 | 241 | 3/4 | | 3/4 | | 3/4 | | 3/4 | |

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 THREADS ON "MMC" VALVE.

STRAPPED: 08/06/2013 SW
CALCULATED: 08/06/2013 CL
PRINTED: 08/06/2013 CL

CANCELS AND SUPERCEDES
ALL PRIOR TO 08/2013

PRECISION MEASUREMENT
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