



United States of America  
Department of Homeland Security  
United States Coast Guard

Certification Date: 07 Aug 2024  
Expiration Date: 07 Aug 2029

# Certificate of Inspection

For ships on international voyages this certificate fulfills the requirements of SOLAS 74 as amended, regulation V/14, for a SAFE MANNING DOCUMENT.

|   |   |                |            |            |     |         |
|---|---|----------------|------------|------------|-----|---------|
| Vessel Name   | Official Number   | IMO Number     | Call Sign  | Service    |     |         |
| CCL 403   | 1231311   |                |            | Tank Barge |     |         |
| Hailing Port  | Hull Material   | Horsepower     | Propulsion |            |     |         |
| NEW ORLEANS, LA   | Steel   |                |            |            |     |         |
| UNITED STATES   |   |                |            |            |     |         |
| Place Built   | Delivery Date   | Keel Laid Date | Gross Tons | Net Tons   | DWT | Length  |
| ASHLAND CITY, TN  | 22Feb2011   | 28Jan2011      | R-1619     | R-1619     |     | R-297.5 |
| UNITED STATES   |   |                | I-         | I-         |     | I-0     |
| Owner   | Operator  |                |            |            |     |         |
| CHEM CARRIERS LLC<br>1237 HIGHWAY 75<br>SUNSHINE, LA 70780<br>UNITED STATES | CHEM CARRIERS LLC<br>1237 HIGHWAY 75<br>SUNSHINE, LA 70780<br>UNITED STATES |                |            |            |     |         |

This vessel must be manned with the following licensed and unlicensed Personnel. Included in which there must be 0 Certified Lifeboatmen, 0 Certified Tankermen, 0 HSC Type Rating, and 0 GMDSS Operators.

|                            |                      |                              |          |
|----------------------------|----------------------|------------------------------|----------|
| 0 Masters                  | 0 Licensed Mates     | 0 Chief Engineers            | 0 Oilers |
| 0 Chief Mates              | 0 First Class Pilots | 0 First Assistant Engineers  |          |
| 0 Second Mates             | 0 Radio Officers     | 0 Second Assistant Engineers |          |
| 0 Third Mates              | 0 Able Seamen        | 0 Third Assistant Engineers  |          |
| 0 Master First Class Pilot | 0 Ordinary Seamen    | 0 Licensed Engineers         |          |
| 0 Mate First Class Pilots  | 0 Deckhands          | 0 Qualified Member Engineer  |          |

In addition, this vessel may carry 0 Passengers, 0 Other Persons in crew, 0 Persons in addition to crew, and no Others. Total Persons allowed: 0

## Route Permitted And Conditions Of Operation:

---Lakes, Bays, and Sounds---

Also, in fair weather only, coastwise, not more than twelve (12) miles from shore between St. Marks and Carrabelle, Florida.

This vessel has been granted fresh water hull examination intervals in accordance with 46 CFR table 31.10-21(b). If this vessel has been operated in salt water more than six (6) months in any twelve (12) month period, the vessel must be inspected using salt water intervals and the cognizant OCMI notified in writing as soon as this change in status occurs.

\*\*\*SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION\*\*\*

With this Inspection for Certification having been completed at New Orleans, LA, UNITED STATES, the Officer in Charge, Marine Inspection, Sector New Orleans certified the vessel, in all respects, is in conformity with the applicable vessel inspection laws and the rules and regulations prescribed thereunder.

|                               |              |       |                    |   |
|-------------------------------|--------------|-------|--------------------|---|
| Annual/Periodic/Re-Inspection |              |       |                    | This certificate issued by<br><b>D. VELEZ COMMANDER</b> , By direction<br>Officer in Charge, Marine Inspection<br>Sector New Orleans<br>Inspection Zone |
| Date                          | Zone         | A/P/R | Signature          |   |
| 16 SEP 2025                   | SEC. HOU/GAL | A     | <i>[Signature]</i> |   |
|                               |              |       |                    |   |
|                               |              |       |                    |   |



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|--|---|------------------------------|------------|--------------------------------------|-----|---------|
| Vessel Name  | Official Number   | IMO Number                   | Call Sign  | Service                              |     |         |
| CCL 403  | 1231311   |                              |            | Tank Barge                           |     |         |
| Hailing Port   | Hull Material   | Horsepower                   | Propulsion |                                      |     |         |
| NEW ORLEANS, LA  | Steel   |                              |            |                                      |     |         |
| UNITED STATES  |   |                              |            |                                      |     |         |
| Place Built  | Delivery Date   | Keel Laid Date               | Gross Tons | Net Tons                             | DWT | Length  |
| ASHLAND CITY, TN   | 22Feb2011   | 28Jan2011                    | R-1619     | R-1619                               |     | R-297.5 |
| UNITED STATES  |   |                              | I-         | I-                                   |     | I-0     |
| Owner  | Operator  |                              |            |                                      |     |         |
| CHEM CARRIERS LLC<br>1237 HIGHWAY 75<br>SUNSHINE, LA 70780<br>UNITED STATES  | CHEM CARRIERS LLC<br>1237 HIGHWAY 75<br>SUNSHINE, LA 70780<br>UNITED STATES |                              |            |                                      |     |         |
| This vessel must be manned with the following licensed and unlicensed Personnel. Included in which there must be<br>0 Certified Lifeboatmen, 0 Certified Tankermen, 0 HSC Type Rating, and 0 GMDSS Operators.  |   |                              |            |                                      |     |         |
| 0 Masters  | 0 Licensed Mates  | 0 Chief Engineers            | 0 Oilers   |                                      |     |         |
| 0 Chief Mates  | 0 First Class Pilots  | 0 First Assistant Engineers  |            |                                      |     |         |
| 0 Second Mates   | 0 Radio Officers  | 0 Second Assistant Engineers |            |                                      |     |         |
| 0 Third Mates  | 0 Able Seamen   | 0 Third Assistant Engineers  |            |                                      |     |         |
| 0 Master First Class Pilot   | 0 Ordinary Seamen   | 0 Licensed Engineers         |            |                                      |     |         |
| 0 Mate First Class Pilots  | 0 Deckhands   | 0 Qualified Member Engineer  |            |                                      |     |         |
| In addition, this vessel may carry 0 Passengers, 0 Other Persons in crew, 0 Persons in addition to crew, and no Others. Total<br>Persons allowed: 0  |   |                              |            |                                      |     |         |
| Route Permitted And Conditions Of Operation:<br><b>---Lakes, Bays, and Sounds---</b><br><br>Also, in fair weather only, coastwise, not more than twelve (12) miles from shore between St. Marks and<br>Carrabelle, Florida.<br><br>This vessel has been granted fresh water hull examination intervals in accordance with 46 CFR table 31.10-<br>21(b). If this vessel has been operated in salt water more than six (6) months in any twelve (12) month<br>period, the vessel must be inspected using salt water intervals and the cognizant OCMI notified in writing as<br>soon as this change in status occurs.<br><br>***SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION*** |   |                              |            |                                      |     |         |
| With this Inspection for Certification having been completed at New Orleans, LA, UNITED STATES, the Officer in Charge, Marine<br>Inspection, Sector New Orleans certified the vessel, in all respects, is in conformity with the applicable vessel inspection laws and<br>the rules and regulations prescribed thereunder.   |   |                              |            |                                      |     |         |
| Annual/Periodic/Re-Inspection  |   |                              |            | This certificate issued by:          |     |         |
| Date   | Zone  | A/P/R                        | Signature  | D. VELEZ COMMANDER, By direction     |     |         |
|  |   |                              |            | Officer in Charge, Marine Inspection |     |         |
|  |   |                              |            | Sector New Orleans                   |     |         |
|  |   |                              |            | Inspection Zone                      |     |         |



# Certificate of Inspection

Vessel Name: CCL 403

## ---Hull Exams---

| Exam Type          | Next Exam | Last Exam | Prior Exam |
|--------------------|-----------|-----------|------------|
| DryDock            | 30Nov2029 | 19Nov2019 | 22Feb2011  |
| Internal Structure | 25Jul2029 | 25Jul2024 | 19Nov2019  |

## --- Liquid/Gas/Solid Cargo Authority/Conditions ---

Authorization: GRADE "A" AND LOWER AND SPECIFIED HAZARDOUS CARGOES.

| Total Capacity | Units   | Highest Grade Type | Part151 Regulated | Part153 Regulated | Part154 Regulated |
|----------------|---------|--------------------|-------------------|-------------------|-------------------|
| 29700          | Barrels | A                  | Yes               | No                | No                |

### \*Hazardous Bulk Solids Authority\*

Not Authorized

### \*Loading Constraints - Structural\*

| Tank Number | Max Cargo Weight per Tank (short tons) | Maximum Density (lbs/gal) |
|-------------|--|---------------------------|
| 1 P/S       | 816                                    | 13.60                     |
| 2 P/S       | 828                                    | 13.60                     |
| 3 P/S       | 764                                    | 13.60                     |

### \*Loading Constraints - Stability\*

| Hull Type | Maximum Load<br>(short tons) | Maximum Draft<br>(ft/in) | Max Density<br>(lbs/gal) | Route Description |
|-----------|------------------------------|--------------------------|--------------------------|-------------------|
| II        | 3840                         | 10ft 3in                 | 13.60                    | R, LBS, LC 0-12   |
| III       | 4588                         | 11ft 9in                 | 13.60                    | R, LBS, LC 0-12   |

### \*Conditions Of Carriage\*

Only those cargoes named in the vessel's Cargo Authority Attachment, serial #C1-1100183, dated 21-Jan-11 and Grade "A" and lower cargoes may be carried, and then only in the tanks indicated.

Per 46 CFR 150.130, the Person in Charge of the vessel is responsible for ensuring the compatibility requirements of 46 CFR 150 are met. Cargoes must be checked for compatibility using figures, tables, and appendices of 46 CFR 150 in conjunction with the reactive group numbers from the "COMPAT GRP" column listed in the vessel's CAA.

When the vessel is carrying cargoes containing greater than 0.5% benzene, the Person in Charge is responsible for ensuring the provisions of 46 CFR Part 197, Subpart C are applied.

### \*Stability and Trim\*

Cargo tanks must be loaded uniformly whenever a 46 CFR Subchapter "O" cargo is carried; for trim purposes, the weight of cargo in each tank may exceed the uniformly loaded tank cargo weight by at most 5 percent.

The maximum design density of cargo which may be filled to the tank top is 8.74 lbs/gal. Cargoes with higher densities, up to 13.6 lbs/gal, may be carried as slack loads, but shall not exceed the tank weight limits as listed above.

### \*Vapor Control Authorization\*

In accordance with 46 CFR part 39, excluding part 39.4000, this vessel's vapor control system has been inspected to the plans approved by Marine Safety Center letter serial #C1-1100183, dated 21-Jan-11, and found acceptable for collection of bulk liquid cargo vapors annotated with "Yes" in the VCS column of the vessel's Cargo Authority Attachment.



# Certificate of Inspection

Vessel Name: CCL 403

## --- Inspection Status ---

### \*Fuel Tanks\*

| Tank ID            | Internal Examinations |           |      |
|--------------------|-----------------------|-----------|------|
|                    | Previous              | Last      | Next |
| Aft Machinery Deck | -                     | 22Feb2011 | -    |

### \*Cargo Tanks\*

| Tank Id | Internal Exam |           |           | External Exam |      |      |
|---------|---------------|-----------|-----------|---------------|------|------|
|         | Previous      | Last      | Next      | Previous      | Last | Next |
| 1 P/S   | 22Feb2011     | 19Nov2019 | 30Nov2029 | -             | -    | -    |
| 2 P/S   | 22Feb2011     | 19Nov2019 | 30Nov2029 | -             | -    | -    |
| 3 P/S   | 22Feb2011     | 19Nov2019 | 30Nov2029 | -             | -    | -    |

### Hydro Test

| Tank Id | Safety Valves | Previous | Last      | Next |
|---------|---------------|----------|-----------|------|
| 1 P/S   | -             | -        | 22Feb2011 | -    |
| 2 P/S   | -             | -        | 22Feb2011 | -    |
| 3 P/S   | -             | -        | 22Feb2011 | -    |

## ---Conditional Portable Fire Extinguisher Requirements---

Required Only During Transfer of Cargo or Operation of Barge Machinery

## --- Fire Fighting Equipment ---

### \*Fire Extinguishers - Hand portable and semi-portable\*

| Quantity | Class Type |
|----------|------------|
| 2        | 40-B       |

\*\*\*END\*\*\*





# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: CCL 403

Official #: 1231311

Shipyard: Trinity Ashland City

Hull #: 4772

### 46 CFR 151 Tank Group Characteristics

| Tank Group Information |                   | Cargo Identification |        |       | Hull Type | Cargo Seg Tank | Tanks            |      |        | Cargo Transfer |      | Environmental Control |                | Fire Protection Provided | Special Requirements  |   | Elec Haz | Temp Cont |
|------------------------|-------------------|----------------------|--------|-------|-----------|----------------|------------------|------|--------|----------------|------|-----------------------|----------------|--------------------------|---|---|----------|-----------|
| Tnk Grp                | Tanks in Group    | Density              | Press. | Temp. |           |                | Type             | Vent | Gauge  | Pipe Class     | Cont | Tanks                 | Handling Space |                          | General   | Materials of Construction   |          |           |
| A                      | #1P/S,#2P/S,#3P/S | 13.6                 | Atmos. | Elev  | II        | 1ii<br>2ii     | Integral Gravity | PV   | Closed | II             | G-1  | NR                    | NA             | Portable                 | 40-1(f)(1), .50-60, .50-70(a), .50-70(b), .50-73, .50-81(a), .50-81(b), | 55-1(b), (c), (e), (f), (j), 56-1(a), (b), (c), (d), (e), (f), (g). | NR       | Yes       |

Notes: 1. Under Environmental Control, Tanks, NR means that the tank group is suitable only for those cargoes which require no environmental control in the cargo tanks.  
2. Under Environmental Control, Handling Space, NR means that the tank group is suitable only for those cargoes which require no environmental control in the cargo handling space. NA means that the vessel does not have a cargo control space, and this requirement is not applied.  
3. Under Electrical Hazard Class, NA means that the tank group is suitable only for those cargoes which have no electrical hazard class requirement. NR means that the vessel has no electrical equipment located in a hazardous location.

### List of Authorized Cargoes

| Cargo Identification |              |                    |                |       |              | Conditions of Carriage |                   |                 |  |  |                 |
|----------------------|--------------|--------------------|----------------|-------|--------------|------------------------|-------------------|-----------------|--|--|-----------------|
| Name                 | Chem<br>Code | Compat<br>Group No | Sub<br>Chapter | Grade | Hull<br>Type | Tank<br>Group          | Vapor Recovery    |                 | Special Requirements in 46 CFR<br>151 General and Mat'l's of |  | Insp.<br>Period |
|                      |              |                    |                |       |              |                        | App'd<br>(Y or N) | VCS<br>Category |  |  |                 |

#### Authorized Subchapter O Cargoes

|  |     |                 |   |     |     |   |     |     |                                 |  |   |
|--|-----|-----------------|---|-----|-----|---|-----|-----|---------------------------------|--|---|
| Acetonitrile   | ATN | 37              | O | C   | III | A | Yes | 3   | No                              |  | G |
| Acrylonitrile  | ACN | 15 <sup>2</sup> | O | C   | II  | A | Yes | 4   | .50-70(a), .55-1(e)             |  | G |
| Adiponitrile   | ADN | 37              | O | E   | II  | A | Yes | 1   | No                              |  | G |
| Alkyl(C7-C9) nitrates  | AKN | 34 <sup>2</sup> | O | NA  | III | A | No  | N/A | .50-81, .50-86                  |  | G |
| Aminoethylethanolamine   | AEE | 8               | O | E   | III | A | Yes | 1   | .55-1(b)                        |  | G |
| Ammonium bisulfite solution (70% or less)  | ABX | 43 <sup>2</sup> | O | NA  | III | A | No  | N/A | .50-73, .56-1(a), (b), (c)      |  | G |
| Ammonium hydroxide (28% or less NH3)   | AMH | 6               | O | NA  | III | A | No  | N/A | .56-1(a), (b), (c), (f), (g)    |  | G |
| Anthracene oil (Coal tar fraction)   | AHO | 33              | O | NA  | II  | A | No  | N/A | No                              |  | G |
| Benzene  | BNZ | 32              | O | C   | III | A | Yes | 1   | .50-60                          |  | G |
| Benzene or hydrocarbon mixtures (having 10% Benzene or more)                     | BHB | 32 <sup>2</sup> | O | C   | III | A | Yes | 1   | .50-60                          |  | G |
| Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)   | BHA | 32 <sup>2</sup> | O | C   | III | A | Yes | 1   | .50-60, .56-1(b), (d), (f), (g) |  | G |
| Benzene, Toluene, Xylene mixtures (10% Benzene or more)                          | BTX | 32              | O | B/C | III | A | Yes | 1   | .50-60                          |  | G |
| Butyl acrylate (all isomers)   | BAR | 14              | O | D   | III | A | Yes | 2   | .50-70(a), .50-81(a), (b)       |  | G |
| Butyl methacrylate   | BMH | 14              | O | D   | III | A | Yes | 2   | .50-70(a), .50-81(a), (b)       |  | G |
| Butyraldehyde (all isomers)  | BAE | 19              | O | C   | III | A | Yes | 1   | .55-1(h)                        |  | G |
| Camphor oil (light)  | CPO | 18              | O | D   | II  | A | No  | N/A | No                              |  | G |
| Carbon tetrachloride   | CBT | 36              | O | NA  | III | A | No  | N/A | No                              |  | G |
| Caustic potash solution  | CPS | 5 <sup>2</sup>  | O | NA  | III | A | No  | N/A | .50-73, .55-1(j)                |  | G |
| Caustic soda solution  | CSS | 5 <sup>2</sup>  | O | NA  | III | A | No  | N/A | .50-73, .55-1(j)                |  | G |
| Chemical Oil (refined, containing phenolics)                                     | COD | 21              | O | E   | II  | A | No  | N/A | .50-73                          |  | G |
| Chlorobenzene  | CRB | 36              | O | D   | III | A | Yes | 1   | No                              |  | G |
| Chloroform   | CRF | 36              | O | NA  | III | A | Yes | 3   | No                              |  | G |
| Coal tar naphtha solvent   | NCT | 33              | O | D   | III | A | Yes | 1   | .50-73                          |  | G |
| Coal tar pitch (molten)  | CTP | 33              | O | E   | III | A | No  | N/A | .50-73                          |  | G |
| Creosote   | CCW | 21 <sup>2</sup> | O | E   | III | A | Yes | 1   | No                              |  | G |
| Cresols (all isomers)  | CRS | 21              | O | E   | III | A | Yes | 1   | No                              |  | G |
| Cresylate spent caustic  | CSC | 5               | O | NA  | III | A | No  | N/A | .50-73, .55-1(b)                |  | G |
| Cresylic acid tar  | CRX |                 | O | E   | III | A | Yes | 1   | .55-1(f)                        |  | G |
| Crotonaldehyde   | CTA | 19 <sup>2</sup> | O | C   | II  | A | Yes | 4   | .55-1(h)                        |  | G |
| Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein) | CHG |                 | O | C   | III | A | No  | N/A | No                              |  | G |
| Cyclohexanone  | CCH | 18              | O | D   | III | A | Yes | 1   | .56-1(a), (b)                   |  | G |
| Cyclohexanone, Cyclohexanol mixture  | CYX | 18 <sup>2</sup> | O | E   | III | A | Yes | 1   | .56-1 (b)                       |  | G |



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: CCL 403

Official #: 1231311

Page 2 of 8

Shipyard: Trinity Ashland City

Hull #: 4772

| Cargo Identification  |           |                 |             |       |           | Conditions of Carriage |                                  |              |  |              |
|---|-----------|-----------------|-------------|-------|-----------|------------------------|----------------------------------|--------------|--|--------------|
| Name  | Chem Code | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group             | Vapor Recovery<br>App'd (Y or N) | VCS Category | Special Requirements in 46 CFR 151 General and Mat'ls of | Insp. Period |
| Cyclohexylamine   | CHA       | 7               | O           | D     | III       | A                      | Yes                              | 1            | .56-1(a), (b), (c), (g)                                  | G            |
| Cyclopentadiene, Styrene, Benzene mixture                         | CSB       | 30              | O           | D     | III       | A                      | Yes                              | 1            | .50-60, .56-1(b)   | G            |
| iso-Decyl acrylate  | IAI       | 14              | O           | E     | III       | A                      | Yes                              | 2            | .50-70(a), .50-81(a), (b), .55-1(c)                      | G            |
| Dichlorobenzene (all isomers)                                     | DBX       | 36              | O           | E     | III       | A                      | Yes                              | 3            | .56-1(a), (b)  | G            |
| 1,1-Dichloroethane  | DCH       | 36              | O           | C     | III       | A                      | Yes                              | 1            | No   | G            |
| 2,2'-Dichloroethyl ether  | DEE       | 41              | O           | D     | II        | A                      | Yes                              | 1            | .55-1(f)   | G            |
| Dichloromethane   | DCM       | 36              | O           | NA    | III       | A                      | Yes                              | 5            | No   | G            |
| 2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution      | DDE       | 43              | O           | E     | III       | A                      | No                               | N/A          | .56-1(a), (b), (c), (g)                                  | G            |
| 2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution       | DAD       | 0 1,2           | O           | A     | III       | A                      | No                               | N/A          | .56-1(a), (b), (c), (g)                                  | G            |
| 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution | DTI       | 43 2            | O           | E     | III       | A                      | No                               | N/A          | .56-1(a), (b), (c), (g)                                  | G            |
| 1,1-Dichloropropane   | DPB       | 36              | O           | C     | III       | A                      | Yes                              | 3            | No   | G            |
| 1,2-Dichloropropane   | DPP       | 36              | O           | C     | III       | A                      | Yes                              | 3            | No   | G            |
| 1,3-Dichloropropane   | DPC       | 36              | O           | C     | III       | A                      | Yes                              | 3            | No   | G            |
| 1,3-Dichloropropene   | DPU       | 15              | O           | D     | II        | A                      | Yes                              | 4            | No   | G            |
| Dichloropropene, Dichloropropane mixtures                         | DMX       | 15              | O           | C     | II        | A                      | Yes                              | 1            | No   | G            |
| Diethanolamine  | DEA       | 8               | O           | E     | III       | A                      | Yes                              | 1            | .55-1(c)   | G            |
| Diethylamine  | DEN       | 7               | O           | C     | III       | A                      | Yes                              | 3            | .55-1(c)   | G            |
| Diethylenetriamine  | DET       | 7 2             | O           | E     | III       | A                      | Yes                              | 1            | .55-1(c)   | G            |
| Diisobutylamine   | DBU       | 7               | O           | D     | III       | A                      | Yes                              | 3            | .55-1(c)   | G            |
| Diisopropanolamine  | DIP       | 8               | O           | E     | III       | A                      | Yes                              | 1            | .55-1(c)   | G            |
| Diisopropylamine  | DIA       | 7               | O           | C     | II        | A                      | Yes                              | 3            | .55-1(c)   | G            |
| N,N-Dimethylacetamide   | DAC       | 10              | O           | E     | III       | A                      | Yes                              | 3            | .56-1(b)   | G            |
| Dimethylethanolamine  | DMB       | 8               | O           | D     | III       | A                      | Yes                              | 1            | .56-1(b), (c)  | G            |
| Dimethylformamide   | DMF       | 10              | O           | D     | III       | A                      | Yes                              | 1            | .55-1(e)   | G            |
| Di-n-propylamine  | DNA       | 7               | O           | C     | II        | A                      | Yes                              | 3            | .55-1(c)   | G            |
| Dodecyldimethylamine, Tetradecyldimethylamine mixture             | DOT       | 7               | O           | E     | III       | A                      | No                               | N/A          | .56-1(b)   | G            |
| Dodecyl diphenyl ether disulfonate solution                       | DOS       | 43              | O           | #     | II        | A                      | No                               | N/A          | No   | G            |
| EE Glycol Ether Mixture   | EEG       | 40              | O           | D     | III       | A                      | No                               | N/A          | No   | G            |
| Ethanolamine  | MEA       | 8               | O           | E     | III       | A                      | Yes                              | 1            | .55-1(c)   | G            |
| Ethyl acrylate  | EAC       | 14              | O           | C     | III       | A                      | Yes                              | 2            | .50-70(a), .50-81(a), (b)                                | G            |
| Ethylamine solution (72% or less)                                 | EAN       | 7               | O           | A     | II        | A                      | Yes                              | 6            | .55-1(b)   | G            |
| N-Ethylbutylamine   | EBA       | 7               | O           | D     | III       | A                      | Yes                              | 3            | .55-1(b)   | G            |
| N-Ethylcyclohexylamine  | ECC       | 7               | O           | D     | III       | A                      | Yes                              | 1            | .55-1(b)   | G            |
| Ethylene cyanohydrin  | ETC       | 20              | O           | E     | III       | A                      | Yes                              | 1            | No   | G            |
| Ethylenediamine   | EDA       | 7 2             | O           | D     | III       | A                      | Yes                              | 1            | .55-1(c)   | G            |
| Ethylene dichloride   | EDC       | 36 2            | O           | C     | III       | A                      | Yes                              | 1            | No   | G            |
| Ethylene glycol hexyl ether                                       | EGH       | 40              | O           | E     | III       | A                      | No                               | N/A          | No   | G            |
| Ethylene glycol monoalkyl ethers                                  | EGC       | 40              | O           | D/E   | III       | A                      | Yes                              | 1            | No   | G            |
| Ethylene glycol propyl ether                                      | EGP       | 40              | O           | E     | III       | A                      | Yes                              | 1            | No   | G            |
| 2-Ethylhexyl acrylate   | EAI       | 14              | O           | E     | III       | A                      | Yes                              | 2            | .50-70(a), .50-81(a), (b)                                | G            |
| Ethyl methacrylate  | ETM       | 14              | O           | D/E   | III       | A                      | Yes                              | 2            | .50-70(a)  | G            |
| 2-Ethyl-3-propylacrolein  | EPA       | 19 2            | O           | E     | III       | A                      | Yes                              | 1            | No   | G            |
| Formaldehyde solution (37% to 50%)                                | FMS       | 19 2            | O           | D/E   | III       | A                      | Yes                              | 1            | .55-1(h)   | G            |
| Furfural  | FFA       | 19              | O           | D     | III       | A                      | Yes                              | 1            | .55-1(h)   | G            |
| Glutaraldehyde solution (50% or less)                             | GTA       | 19              | O           | NA    | III       | A                      | No                               | N/A          | No   | G            |
| Hexamethylenediamine solution                                     | HMC       | 7               | O           | E     | III       | A                      | Yes                              | 1            | .55-1(c)   | G            |
| Hexamethyleneimine  | HMI       | 7               | O           | C     | II        | A                      | Yes                              | 1            | .56-1(b), (c)  | G            |
| Hydrocarbon 5-9   | HFN       |                 | O           | C     | III       | A                      | Yes                              | 1            | .50-70(a), .50-81(a), (b)                                | G            |



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: CCL 403

Official #: 1231311

Page 3 of 8

Shipyard: Trinity Ashland City

Hull #: 4772

| Cargo Identification   |           |                  |             |       |           | Conditions of Carriage |                                  |              |  |              |
|--|-----------|------------------|-------------|-------|-----------|------------------------|----------------------------------|--------------|--|--------------|
| Name   | Chem Code | Compat Group No  | Sub Chapter | Grade | Hull Type | Tank Group             | Vapor Recovery<br>App'd (Y or N) | VCS Category | Special Requirements in 46 CFR<br>151 General and Mat's of | Insp. Period |
| Isoprene   | IPR       | 30               | O           | A     | III       | A                      | Yes                              | 7            | .50-70(a), .50-81(a), (b)                                  | G            |
| Isoprene, Pentadiene mixture   | IPN       |                  | O           | B     | III       | A                      | No                               | N/A          | .50-70(a), .55-1(c)  | G            |
| Kraft pulping liquors (free alkali content 3% or more)(including: Black, Green, or White liquor) | KPL       | 5                | O           | NA    | III       | A                      | No                               | N/A          | .50-73, .56-1(a), (c), (g)                                 | G            |
| Mesityl oxide  | MSO       | 18 <sup>2</sup>  | O           | D     | III       | A                      | Yes                              | 1            | No   | G            |
| Methyl acrylate  | MAM       | 14               | O           | C     | III       | A                      | Yes                              | 2            | .50-70(a), .50-81(a), (b)                                  | G            |
| Methylcyclopentadiene dimer  | MCK       | 30               | O           | C     | III       | A                      | Yes                              | 1            | No   | G            |
| Methyl diethanolamine  | MDE       | 8                | O           | E     | III       | A                      | Yes                              | 1            | .56-1(b), (c)  | G            |
| 2-Methyl-5-ethylpyridine   | MEP       | 9                | O           | E     | III       | A                      | Yes                              | 1            | .55-1(e)   | G            |
| Methyl methacrylate  | MMM       | 14               | O           | C     | III       | A                      | Yes                              | 2            | .50-70(a), .50-81(a), (b)                                  | G            |
| 2-Methylpyridine   | MPR       | 9                | O           | D     | III       | A                      | Yes                              | 3            | .55-1(c)   | G            |
| alpha-Methylstyrene  | MSR       | 30               | O           | D     | III       | A                      | Yes                              | 2            | .50-70(a), .50-81(a), (b)                                  | G            |
| Morpholine   | MPL       | 7 <sup>2</sup>   | O           | D     | III       | A                      | Yes                              | 1            | .55-1(c)   | G            |
| Nitroethane  | NTE       | 42               | O           | D     | II        | A                      | No                               | N/A          | .50-81, .56-1(b)   | G            |
| 1- or 2-Nitropropane   | NPM       | 42               | O           | D     | III       | A                      | Yes                              | 1            | .50-81   | G            |
| 1,3-Pentadiene   | PDE       | 30               | O           | A     | III       | A                      | Yes                              | 7            | .50-70(a), .50-81  | G            |
| Perchloroethylene  | PER       | 36               | O           | NA    | III       | A                      | No                               | N/A          | No   | G            |
| Phthalic anhydride (molten)  | PAN       | 11               | O           | E     | III       | A                      | Yes                              | 1            | No   | G            |
| Polyethylene polyamines  | PEB       | 7 <sup>2</sup>   | O           | E     | III       | A                      | Yes                              | 1            | .55-1(e)   | G            |
| iso-Propanolamine  | MPA       | 8                | O           | E     | III       | A                      | Yes                              | 1            | .55-1(c)   | G            |
| Propanolamine (iso-, n-)   | PAX       | 8                | O           | E     | III       | A                      | Yes                              | 1            | .56-1(b), (c)  | G            |
| iso-Propylamine  | IPP       | 7                | O           | A     | II        | A                      | Yes                              | 5            | .55-1(c)   | G            |
| Pyridine   | PRD       | 9                | O           | C     | III       | A                      | Yes                              | 1            | .55-1(e)   | G            |
| Sodium acetate, Glycol, Water mixture (3% or more Sodium Hydroxide)                              | SAP       |                  | O           |       | III       | A                      | No                               | N/A          | .50-73, .55-1(j)   | G            |
| Sodium aluminate solution (45% or less)  | SAU       | 5                | O           | NA    | III       | A                      | No                               | N/A          | .50-73, .56-1(a), (b), (c)                                 | G            |
| Sodium chlorate solution (50% or less)   | SDD       | 0 <sup>1,2</sup> | O           | NA    | III       | A                      | No                               | N/A          | .50-73   | G            |
| Sodium hypochlorite solution (20% or less)   | SHQ       | 5                | O           | NA    | III       | A                      | No                               | N/A          | .50-73, .56-1(a), (b)                                      | G            |
| Sodium sulfide, hydrosulfide solution (H2S 15 ppm or less)                                       | SSH       | 0 <sup>1,2</sup> | O           | NA    | III       | A                      | Yes                              | 1            | .50-73, .55-1(b)   | G            |
| Sodium sulfide, hydrosulfide solution (H2S greater than 15 ppm but less than 200 ppm)            | SSI       | 0 <sup>1,2</sup> | O           | NA    | III       | A                      | No                               | N/A          | .50-73, .55-1(b)   | G            |
| Sodium sulfide, hydrosulfide solution (H2S greater than 200 ppm)                                 | SSJ       | 0 <sup>1,2</sup> | O           | NA    | II        | A                      | No                               | N/A          | .50-73, .55-1(b)   | G            |
| Styrene (crude)  | STX       |                  | O           | D     | III       | A                      | Yes                              | 2            | No   | G            |
| Styrene monomer  | STY       | 30               | O           | D     | III       | A                      | Yes                              | 2            | .50-70(a), .50-81(a), (b)                                  | G            |
| 1,1,2,2-Tetrachloroethane  | TEC       | 36               | O           | NA    | III       | A                      | No                               | N/A          | No   | G            |
| Tetraethylenepentamine   | TTP       | 7                | O           | E     | III       | A                      | Yes                              | 1            | .55-1(c)   | G            |
| Tetrahydrofuran  | THF       | 41               | O           | C     | III       | A                      | Yes                              | 1            | .50-70(b)  | G            |
| Toluenediamine   | TDA       | 9                | O           | E     | II        | A                      | No                               | N/A          | .50-73, .56-1(a), (b), (c), (g)                            | G            |
| 1,2,4-Trichlorobenzene   | TCB       | 36               | O           | E     | III       | A                      | Yes                              | 1            | No   | G            |
| 1,1,2-Trichloroethane  | TCM       | 36               | O           | NA    | III       | A                      | Yes                              | 1            | .50-73, .56-1(a)   | G            |
| Trichloroethylene  | TCL       | 36 <sup>2</sup>  | O           | NA    | III       | A                      | Yes                              | 1            | No   | G            |
| 1,2,3-Trichloropropane   | TCN       | 36               | O           | E     | II        | A                      | Yes                              | 3            | .50-73, .56-1(a)   | G            |
| Triethanolamine  | TEA       | 8 <sup>2</sup>   | O           | E     | III       | A                      | Yes                              | 1            | .55-1(b)   | G            |
| Triethylamine  | TEN       | 7                | O           | C     | II        | A                      | Yes                              | 3            | .55-1(e)   | G            |
| Triethylenetetramine   | TET       | 7 <sup>2</sup>   | O           | E     | III       | A                      | Yes                              | 1            | .55-1(b)   | G            |
| Triphenylborane (10% or less), caustic soda solution   | TPB       | 5                | O           | NA    | III       | A                      | No                               | N/A          | .56-1(a), (b), (c)   | G            |
| Trisodium phosphate solution   | TSP       | 5                | O           | NA    | III       | A                      | No                               | N/A          | .50-73, .56-1(a), (c)                                      | G            |
| Urea, Ammonium nitrate solution (containing more than 2% NH3)                                    | UAS       | 6                | O           | NA    | III       | A                      | No                               | N/A          | .56-1(b)   | G            |
| Vanillin black liquor (free alkali content, 3% or more),   | VLB       | 5                | O           | NA    | III       | A                      | No                               | N/A          | .50-73, .56-1(a), (c), (g)                                 | G            |



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: CCL 403

Official #: 1231311

Page 4 of 8

Shipyard: Trinity Ashland City

Hull #: 4772

| Cargo Identification |           |                 |             |       |           | Conditions of Carriage |                |              |  |              |
|----------------------|-----------|-----------------|-------------|-------|-----------|------------------------|----------------|--------------|--|--------------|
| Name                 | Chem Code | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group             | Vapor Recovery |              | Special Requirements in 46 CFR 151 General and Mat'ls of | Insp. Period |
|                      |           |                 |             |       |           |                        | App'd (Y or N) | VCS Category |  |              |
| Vinyl acetate        | VAM       | 13              | O           | C     | III       | A                      | Yes            | 2            | .50-70(a), .50-81(a), (b)                                | G            |
| Vinyl neodecanate    | VND       | 13              | O           | E     | III       | A                      | No             | N/A          | .50-70(a), .50-81(a), (b)                                | G            |
| Vinyltoluene         | VNT       | 13              | O           | D     | III       | A                      | Yes            | 2            | .50-70(a), .50-81, .56-1(a), (b), (c), (                 | G            |

### Subchapter D Cargoes Authorized for Vapor Control

|   |     |                 |   |     |  |   |     |   |  |  |
|---|-----|-----------------|---|-----|--|---|-----|---|--|--|
| Acetone   | ACT | 18 <sup>2</sup> | D | C   |  | A | Yes | 1 |  |  |
| Acetophenone  | ACP | 18              | D | E   |  | A | Yes | 1 |  |  |
| Alcohol(C12-C16) poly(1-6)ethoxylates   | APU | 20              | D | E   |  | A | Yes | 1 |  |  |
| Alcohol(C6-C17)(secondary) poly(7-12)ethoxylates  | AEB | 20              | D | E   |  | A | Yes | 1 |  |  |
| Amyl acetate (all isomers)  | AEC | 34              | D | D   |  | A | Yes | 1 |  |  |
| Amyl alcohol (iso-, n-, sec-, primary)  | AAI | 20              | D | D   |  | A | Yes | 1 |  |  |
| Benzyl alcohol  | BAL | 21              | D | E   |  | A | Yes | 1 |  |  |
| Brake fluid base mixtures (containing Poly(2-8)alkylene(C2-C3) glycols, Polyalkylene(C2-C10) glycol monoalkyl(C1-C4) ethers, and their borate esters) | BFX | 20              | D | E   |  | A | Yes | 1 |  |  |
| Butyl acetate (all isomers)   | BAX | 34              | D | D   |  | A | Yes | 1 |  |  |
| Butyl alcohol (iso-)  | IAL | 20 <sup>2</sup> | D | D   |  | A | Yes | 1 |  |  |
| Butyl alcohol (n-)  | BAN | 20 <sup>2</sup> | D | D   |  | A | Yes | 1 |  |  |
| Butyl alcohol (sec-)  | BAS | 20 <sup>2</sup> | D | C   |  | A | Yes | 1 |  |  |
| Butyl alcohol (tert-)   | BAT |                 | D | C   |  | A | Yes | 1 |  |  |
| Butyl benzyl phthalate  | BPH | 34              | D | E   |  | A | Yes | 1 |  |  |
| Butyl toluene   | BUE | 32              | D | D   |  | A | Yes | 1 |  |  |
| Caprolactam solutions   | CLS | 22              | D | E   |  | A | Yes | 1 |  |  |
| Cyclohexane   | CHX | 31              | D | C   |  | A | Yes | 1 |  |  |
| Cyclohexanol  | CHN | 20              | D | E   |  | A | Yes | 1 |  |  |
| 1,3-Cyclopentadiene dimer (molten)  | CPD | 30              | D | D/E |  | A | Yes | 2 |  |  |
| p-Cymene  | CMP | 32              | D | D   |  | A | Yes | 1 |  |  |
| iso-Decaldehyde   | IDA | 19              | D | E   |  | A | Yes | 1 |  |  |
| n-Decaldehyde   | DAL | 19              | D | E   |  | A | Yes | 1 |  |  |
| Decene  | DCE | 30              | D | D   |  | A | Yes | 1 |  |  |
| Decyl alcohol (all isomers)   | DAX | 20 <sup>2</sup> | D | E   |  | A | Yes | 1 |  |  |
| n-Decylbenzene, see Alkyl(C9+)benzenes  | DBZ | 32              | D | E   |  | A | Yes | 1 |  |  |
| Diacetone alcohol   | DAA | 20 <sup>2</sup> | D | D   |  | A | Yes | 1 |  |  |
| ortho-Dibutyl phthalate   | DPA | 34              | D | E   |  | A | Yes | 1 |  |  |
| Diethylbenzene  | DEB | 32              | D | D   |  | A | Yes | 1 |  |  |
| Diethylene glycol   | DEG | 40 <sup>2</sup> | D | E   |  | A | Yes | 1 |  |  |
| Diisobutylene   | DBL | 30              | D | C   |  | A | Yes | 1 |  |  |
| Diisobutyl ketone   | DIK | 18              | D | D   |  | A | Yes | 1 |  |  |
| Diisopropylbenzene (all isomers)  | DIX | 32              | D | E   |  | A | Yes | 1 |  |  |
| Dimethyl phthalate  | DTL | 34              | D | E   |  | A | Yes | 1 |  |  |
| Diethyl phthalate   | DOP | 34              | D | E   |  | A | Yes | 1 |  |  |
| Dipentene   | DPN | 30              | D | D   |  | A | Yes | 1 |  |  |
| Diphenyl  | DIL | 32              | D | D/E |  | A | Yes | 1 |  |  |
| Diphenyl, Diphenyl ether mixtures   | DDO | 33              | D | E   |  | A | Yes | 1 |  |  |
| Diphenyl ether  | DPE | 41              | D | {E} |  | A | Yes | 1 |  |  |
| Dipropylene glycol  | DPG | 40              | D | E   |  | A | Yes | 1 |  |  |
| Distillates: Flashed feed stocks  | DFF | 33              | D | E   |  | A | Yes | 1 |  |  |
| Distillates: Straight run   | DSR | 33              | D | E   |  | A | Yes | 1 |  |  |
| Dodecene (all isomers)  | DOZ | 30              | D | D   |  | A | Yes | 1 |  |  |





# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: CCL 403

Official #: 1231311

Page 5 of 8

Shipyard: Trinity Ashland City

Hull #: 4772

| Cargo Identification  |           |                 |             |       |           | Conditions of Carriage |                |              |  |              |
|---|-----------|-----------------|-------------|-------|-----------|------------------------|----------------|--------------|--|--------------|
| Name  | Chem Code | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group             | Vapor Recovery |              | Special Requirements in 46 CFR 151 General and Mat'ts of | Insp. Period |
|   |           |                 |             |       |           |                        | App'd (Y or N) | VCS Category |  |              |
| Dodecylbenzene, see Alkyl(C9+)benzenes                                  | DDB       | 32              | D           | E     |           | A                      | Yes            | 1            |  |              |
| 2-Ethoxyethyl acetate   | EEA       | 34              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Ethoxy triglycol (crude)  | ETG       | 40              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Ethyl acetate   | ETA       | 34              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Ethyl acetoacetate  | EAA       | 34              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Ethyl alcohol   | EAL       | 20 <sup>2</sup> | D           | C     |           | A                      | Yes            | 1            |  |              |
| Ethylbenzene  | ETB       | 32              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Ethyl butanol   | EBT       | 20              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Ethyl tert-butyl ether  | EBE       | 41              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Ethyl butyrate  | EBR       | 34              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Ethyl cyclohexane   | ECY       | 31              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Ethylene glycol   | EGL       | 20 <sup>2</sup> | D           | E     |           | A                      | Yes            | 1            |  |              |
| Ethylene glycol butyl ether acetate                                     | EMA       | 34              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Ethylene glycol diacetate   | EGY       | 34              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Ethylene glycol phenyl ether  | EPE       | 40              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Ethyl-3-ethoxypropionate  | EEP       | 34              | D           | D     |           | A                      | Yes            | 1            |  |              |
| 2-Ethylhexanol  | EHX       | 20              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Ethyl propionate  | EPR       | 34              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Ethyl toluene   | ETE       | 32              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Formamide   | FAM       | 10              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Furfuryl alcohol  | FAL       | 20 <sup>2</sup> | D           | E     |           | A                      | Yes            | 1            |  |              |
| Gasoline blending stocks: Alkylates                                     | GAK       | 33              | D           | A/C   |           | A                      | Yes            | 1            |  |              |
| Gasoline blending stocks: Reformates                                    | GRF       | 33              | D           | A/C   |           | A                      | Yes            | 1            |  |              |
| Gasolines: Automotive (containing not over 4.23 grams lead per gallon)  | GAT       | 33              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Gasolines: Aviation (containing not over 4.86 grams of lead per gallon) | GAV       | 33              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Gasolines: Casinghead (natural)   | GCS       | 33              | D           | A/C   |           | A                      | Yes            | 1            |  |              |
| Gasolines: Polymer  | GPL       | 33              | D           | A/C   |           | A                      | Yes            | 1            |  |              |
| Gasolines: Straight run   | GSR       | 33              | D           | A/C   |           | A                      | Yes            | 1            |  |              |
| Glycerine   | GCR       | 20 <sup>2</sup> | D           | E     |           | A                      | Yes            | 1            |  |              |
| Heptane (all isomers), see Alkanes (C6-C9) (all isomers)                | HMX       | 31              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Heptanoic acid  | HEP       | 4               | D           | E     |           | A                      | Yes            | 1            |  |              |
| Heptanol (all isomers)  | HTX       | 20              | D           | D/E   |           | A                      | Yes            | 1            |  |              |
| Heptene (all isomers)   | HPX       | 30              | D           | C     |           | A                      | Yes            | 2            |  |              |
| Heptyl acetate  | HPE       | 34              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Hexane (all isomers), see Alkanes (C6-C9)                               | HXS       | 31 <sup>2</sup> | D           | B/C   |           | A                      | Yes            | 1            |  |              |
| Hexanoic acid   | HXO       | 4               | D           | E     |           | A                      | Yes            | 1            |  |              |
| Hexanol   | HXN       | 20              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Hexene (all isomers)  | HEX       | 30              | D           | C     |           | A                      | Yes            | 2            |  |              |
| Hexylene glycol   | HXG       | 20              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Isophorone  | IPH       | 18 <sup>2</sup> | D           | E     |           | A                      | Yes            | 1            |  |              |
| Jet fuel: JP-4  | JPF       | 33              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Jet fuel: JP-5 (kerosene, heavy)  | JPV       | 33              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Kerosene  | KRS       | 33              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Methyl acetate  | MTT       | 34              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Methyl alcohol  | MAL       | 20 <sup>2</sup> | D           | C     |           | A                      | Yes            | 1            |  |              |
| Methylamyl acetate  | MAC       | 34              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Methylamyl alcohol  | MAA       | 20              | D           | D     |           | A                      | Yes            | 1            |  |              |

\*\*\* This document is only valid when attached to, and referenced by a current, valid Certificate of Inspection. \*\*\*



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: CCL 403

Official #: 1231311

Page 6 of 8

Shipyard: Trinity Ashland City

Hull #: 4772

| Cargo Identification                                    |           |                 |             |       |           | Conditions of Carriage |                |              |  |              |
|---|-----------|-----------------|-------------|-------|-----------|------------------------|----------------|--------------|--|--------------|
| Name  | Chem Code | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group             | Vapor Recovery |              | Special Requirements in 46 CFR 151 General and Mat'ls of | Insp. Period |
|   |           |                 |             |       |           |                        | App'd (Y or N) | VCS Category |  |              |
| Methyl amyl ketone                                      | MAK       | 18              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Methyl tert-butyl ether                                 | MBE       | 41 <sup>2</sup> | D           | C     |           | A                      | Yes            | 1            |  |              |
| Methyl butyl ketone                                     | MBK       | 18              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Methyl butyrate   | MBU       | 34              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Methyl ethyl ketone                                     | MEK       | 18 <sup>2</sup> | D           | C     |           | A                      | Yes            | 1            |  |              |
| Methyl heptyl ketone                                    | MHK       | 18              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Methyl isobutyl ketone                                  | MIK       | 18 <sup>2</sup> | D           | C     |           | A                      | Yes            | 1            |  |              |
| Methyl naphthalene (molten)                             | MNA       | 32              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Mineral spirits   | MNS       | 33              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Myrcene   | MRE       | 30              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Naphtha: Heavy  | NAG       | 33              | D           | #     |           | A                      | Yes            | 1            |  |              |
| Naphtha: Petroleum                                      | PTN       | 33              | D           | #     |           | A                      | Yes            | 1            |  |              |
| Naphtha: Solvent  | NSV       | 33              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Naphtha: Stoddard solvent                               | NSS       | 33              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Naphtha: Varnish makers and painters (75%)              | NVM       | 33              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Nonane (all isomers), see Alkanes (C6-C9)               | NAX       | 31              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Nonene (all isomers)                                    | NON       | 30              | D           | D     |           | A                      | Yes            | 2            |  |              |
| Nonyl alcohol (all isomers)                             | NNS       | 20 <sup>2</sup> | D           | E     |           | A                      | Yes            | 1            |  |              |
| Nonyl phenol  | NNP       | 21              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Nonyl phenol poly(4+)ethoxylates                        | NPE       | 40              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Octane (all isomers), see Alkanes (C6-C9)               | OAX       | 31              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Octanoic acid (all isomers)                             | OAY       | 4               | D           | E     |           | A                      | Yes            | 1            |  |              |
| Octanol (all isomers)                                   | OCX       | 20 <sup>2</sup> | D           | E     |           | A                      | Yes            | 1            |  |              |
| Octene (all isomers)                                    | OTX       | 30              | D           | C     |           | A                      | Yes            | 2            |  |              |
| Oil, fuel: No. 2  | OTW       | 33              | D           | D/E   |           | A                      | Yes            | 1            |  |              |
| Oil, fuel: No. 2-D                                      | OTD       | 33              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Oil, fuel: No. 4  | OFR       | 33              | D           | D/E   |           | A                      | Yes            | 1            |  |              |
| Oil, fuel: No. 5  | OFV       | 33              | D           | D/E   |           | A                      | Yes            | 1            |  |              |
| Oil, fuel: No. 6  | OSX       | 33              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Oil, misc: Crude  | OIL       | 33              | D           | C/D   |           | A                      | Yes            | 1            |  |              |
| Oil, misc: Diesel                                       | ODS       | 33              | D           | D/E   |           | A                      | Yes            | 1            |  |              |
| Oil, misc: Gas, high pour                               | OGP       | 33              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Oil, misc: Lubricating                                  | OLB       | 33              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Oil, misc: Residual                                     | ORL       | 33              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Oil, misc: Turbine                                      | OTB       | 33              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Pentane (all isomers)                                   | PTY       | 31              | D           | A     |           | A                      | Yes            | 5            |  |              |
| Pentene (all isomers)                                   | PTX       | 30              | D           | A     |           | A                      | Yes            | 5            |  |              |
| n-Pentyl propionate                                     | PPE       | 34              | D           | D     |           | A                      | Yes            | 1            |  |              |
| alpha-Pinene  | PIO       | 30              | D           | D     |           | A                      | Yes            | 1            |  |              |
| beta-Pinene   | PIP       | 30              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether         | PAG       | 40              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate | PAF       | 34              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Polybutene  | PLB       | 30              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Polypropylene glycol                                    | PGC       | 40              | D           | E     |           | A                      | Yes            | 1            |  |              |
| iso-Propyl acetate                                      | IAC       | 34              | D           | C     |           | A                      | Yes            | 1            |  |              |
| n-Propyl acetate  | PAT       | 34              | D           | C     |           | A                      | Yes            | 1            |  |              |
| iso-Propyl alcohol                                      | IPA       | 20 <sup>2</sup> | D           | C     |           | A                      | Yes            | 1            |  |              |
| n-Propyl alcohol  | PAL       | 20 <sup>2</sup> | D           | C     |           | A                      | Yes            | 1            |  |              |



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: CCL 403

Official #: 1231311

Page 7 of 8

Shipyard: Trinity Ashland City

Hull #: 4772

| Cargo Identification                                   |           |                 |             |       |           | Conditions of Carriage |                |              |  |              |
|--|-----------|-----------------|-------------|-------|-----------|------------------------|----------------|--------------|--|--------------|
| Name   | Chem Code | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group             | Vapor Recovery |              | Special Requirements in 46 CFR 151 General and Mat'ls of | Insp. Period |
|  |           |                 |             |       |           |                        | App'd (Y or N) | VCS Category |  |              |
| Propylbenzene (all isomers)                            | PBY       | 32              | D           | D     |           | A                      | Yes            | 1            |  |              |
| iso-Propylcyclohexane                                  | IPX       | 31              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Propylene glycol                                       | PPG       | 20 <sup>2</sup> | D           | E     |           | A                      | Yes            | 1            |  |              |
| Propylene glycol methyl ether acetate                  | PGN       | 34              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Propylene tetramer                                     | PTT       | 30              | D           | D     |           | A                      | Yes            | 1            |  |              |
| Sulfolane  | SFL       | 39              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Tetraethylene glycol                                   | TTG       | 40              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Tetrahydronaphthalene                                  | THN       | 32              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Toluene  | TOL       | 32              | D           | C     |           | A                      | Yes            | 1            |  |              |
| Tricresyl phosphate (less than 1% of the ortho isomer) | TCP       | 34              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Triethylbenzene  | TEB       | 32              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Triethylene glycol                                     | TEG       | 40              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Triethyl phosphate                                     | TPS       | 34              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Trimethylbenzene (all isomers)                         | TRE       | 32              | D           | {D}   |           | A                      | Yes            | 1            |  |              |
| Trixylenyl phosphate                                   | TRP       | 34              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Undecene   | UDC       | 30              | D           | D/E   |           | A                      | Yes            | 1            |  |              |
| 1-Undecyl alcohol                                      | UND       | 20              | D           | E     |           | A                      | Yes            | 1            |  |              |
| Xylenes (ortho-, meta-, para-)                         | XLX       | 32              | D           | D     |           | A                      | Yes            | 1            |  |              |



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: CCL 403

Official #: 1231311

Page 8 of 8

Shipyard: Trinity Ashland

Hull #: 4772

### Explanation of terms & symbols used in the Table:

#### Cargo Identification

|  |  |
|--|--|
| Name   | The proper shipping name as listed in 46 CFR Table 30.25-1, 46 CFR Table 151.05, and 46 CFR Part 153 Table 2.  |
| Chem Code<br>none                                    | The three letter designation assigned to the cargo in the Chemical Hazards Response Information System (CHRIS) Manual. Certain mixtures of cargoes may not have a CHRIS Code assigned.   |
| Compatability Group No.                              | The cargo reactive group number assigned for compatibility determinations in 46 CFR Part 150 Tables I and II. In accordance with 46 CFR 150.130, the Person-in-Charge of the barge is responsible for ensuring that the compatibility requirements of 46 CFR Part 150 are met. Cargoes must be checked for compatibility using the figures, tables, and appendices of 46 CFR 150 in conjunction with the assigned reactive group number.   |
| Note 1   | Because of the very high reactivity or unusual conditions of carriage or potential compatibility problems, this product is not assigned to a specific group in the Compatibility Chart. For additional compatibility information, contact Commandant (CG-3PSO-3), U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593-0001. Telephone (202) 372-1425.   |
| Note 2   | See Appendix I to 46 CFR Part 150 - exceptions to the compatibility chart.   |
| Subchapter<br>Subchapter D<br>Subchapter O<br>Note 3 | The subchapter in Title 46 Code of Federal Regulations under which the cargo has been classified.<br>Those flammable and combustible liquids listed in 46 CFR Table 30.25-1.<br>Those hazardous cargoes listed in 46 CFR Table 151.05 and 46 CFR Part 153 Table 2.<br>Those cargoes listed in 46 CFR Part 153 Table 2 are non-regulated cargoes when carried in bulk on non-oceangoing barges.   |
| Grade  | The cargo classification assigned to each flammable or combustible liquid. Grades inside of "{ }" indicate a provisional assignment based upon literature sources which were not verified by manufacturers data. The Person-in-Charge shall verify the cargo grade based on Manufacturers data and ensure that the barge is authorized for carriage of that grade of cargo.  |
| A, B, C<br>D, E<br>Note 4                            | Flammable liquid cargoes, as defined in 46 CFR 30-10.22.<br>Combustible liquid cargoes, as defined in 46 CFR 30-10.15.<br>The flammability/combustibility grade of these cargoes may vary depending upon the flashpoint and Reid vapor pressure. The Person-in-Charge shall verify the cargo grade based on Manufacturers data and ensure that the barge is authorized for carriage of that grade of cargo.  |
| NA<br>#  | Those subchapter O cargoes which are not classified as a flammable or combustible liquid.<br>No flammability/combustibility grade has been assigned yet, as the necessary flash point/vapor pressure data for such assignments are presently not available.  |
| Hull Type<br>I<br>II<br>III<br>NA                    | The required barge hull classification for carriage of the specified Subchapter O hazardous material cargo, see 46 CFR 151.10-1.<br>Designed to carry products which require the maximum preventive measures to preclude the uncontrolled release of the cargo. See 46 CFR 151.10-1(b)(1).<br>Designed to carry products which require significant preventive measures to preclude the uncontrolled release of cargo. See 46 CFR 151.10-1(b)(3).<br>Designed to carry products of sufficient hazard to require a moderate degree of control. See 46 CFR 151.10-1(b)(4).<br>Not applicable to barges certificated under Subchapter D. |

#### Conditions of Carriage

|                                     |  |
|-------------------------------------|--|
| Tank Group                          | The vessel's tank group (as defined in Section 4) which is authorized for carriage of the named cargo.   |
| Vapor Recovery<br>Approved (Y or N) | Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cargo.<br>No: The vessel's VCS has been reviewed and is not approved by the MSC to control vapors of the specified cargo. |

#### Conditions of Carriage

|                                     |  |
|-------------------------------------|--|
| Tank Group                          | The vessel's tank group (as defined under the "46 CFR Tank Group Characteristics" listed on page 1) which is authorized for carriage of the named cargo.   |
| Vapor Recovery<br>Approved (Y or N) | Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cargo.<br>No: The vessel's VCS has been reviewed and is not approved by the MSC to control vapors of the specified cargo.   |
| VCS Category:                       | The specified cargo's provisional classification for vapor control systems.  |
| Category 1                          | (No additional VCS requirements above those for benzene, gasolines and crude oil) All requirements applying to the handling of oil and hazardous materials in Titles 33 and 46 Code of Federal Regulations (CFR) apply to these cargoes. Those specifically dealing with vapor control systems are in 33 CFR 155.750, 33 CFR 156.120, 33 CFR 156.170, 46 CFR 35.35 and 46 CFR 39. The cargo tank venting system calculations (46 CFR 39.20-11) and the pressure drop calculations (46 CFR 39.30-1(b)) must use appropriate friction factors, vapor densities and vapor growth rates.   |
| Category 2                          | (Polymerizes) Polymerization and residue build-up of these cargoes can adversely affect the vessel by fouling safety components and restricting vapor flow which could lead to cargo tank overpressurization. The vessel's owner must develop a method of ensuring all VCS safety components are functional and polymer build-up is not causing an unsafe condition due to increased pressure in the vapor control piping and cargo tanks. The method shall be acceptable to the local Officer in Charge, Marine Inspection. This is in addition to the requirements of Category 1. Please note that a material not normally considered a monomer can be a problem in detonation arrester. |
| Category 3                          | (Highly toxic) VCSs for these toxic cargoes cannot use a spill valve or rupture disk as the primary means to meet the overfill protection requirement of 46 CFR 39.20-9. This requirement is in addition to the requirements of Category 1.  |
| Category 4                          | (Polymerizes and highly toxic) Must comply with requirements of Categories 1, 2 and 3.   |
| Category 5                          | (High vapor pressure) VCS pressure drop calculations for cargoes with a vapor pressure greater than 14.7 psia at 115 F must take into account increased vapor-air mixture densities and vapor growth rates as compared to Category 1 cargoes. Consult the Marine Safety Center's VCS Guidelines for further information. This requirement is in addition to the requirements of Category 1.  |
| Category 6                          | (High vapor pressure and highly toxic) Must comply with requirements of Categories 1, 3 and 5.   |
| Category 7                          | (High vapor pressure and polymerizes) Must comply with requirements of Categories 1, 2 and 5.  |
| none                                | The cargo has not been evaluated/classified for use in vapor control systems.  |





# UNITED STATES OF AMERICA

DEPARTMENT OF HOMELAND SECURITY  
UNITED STATES COAST GUARD

NATIONAL VESSEL DOCUMENTATION CENTER

## CERTIFICATE OF DOCUMENTATION

|   |                             |   |                                       |                             |  |
|---|-----------------------------|---|---------------------------------------|-----------------------------|--|
| VESSEL NAME<br>CCL 403  |                             | OFFICIAL NUMBER<br>1231311                        | IMO OR OTHER NUMBER<br>4772           | YEAR COMPLETED<br>2011      |  |
| HAILING PORT<br>NEW ORLEANS LA  |                             | HULL MATERIAL<br>STEEL                            |                                       | MECHANICAL PROPULSION<br>NO |  |
| GROSS TONNAGE<br><br>1619 GRT   | NET TONNAGE<br><br>1619 NRT | LENGTH<br><br>297.5                               | BREADTH<br><br>54.0                   | DEPTH<br><br>12.0           |  |
| PLACE BUILT<br><br>ASHLAND CITY TN  |                             |   |                                       |                             |  |
| OWNERS<br>CHEM CARRIERS LLC<br>COMPRISED OF ONE MEMBER                      |                             |   | OPERATIONAL ENDORSEMENTS<br>COASTWISE |                             |  |
| MANAGING OWNER<br>CHEM CARRIERS LLC<br>1237 HIGHWAY 75<br>SUNSHINE LA 70780 |                             |   |                                       |                             |  |
| RESTRICTIONS<br>NONE  |                             |   |                                       |                             |  |
| ENTITLEMENTS<br>NONE  |                             |   |                                       |                             |  |
| REMARKS<br>NONE   |                             |   |                                       |                             |  |
| ISSUE DATE<br>NOVEMBER 18, 2025   |                             | THIS CERTIFICATE EXPIRES<br><br>DECEMBER 31, 2026 |                                       |                             |  |
|   |                             | DIRECTOR, NATIONAL VESSEL DOCUMENTATION CENTER    |                                       |                             |  |




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| VESEL NAME  | VESEL TYPE  | HULL TYPE | GROSS TONNAGE | COFR NUMBER | EFFECTIVE DATE | EXPIRATION DATE | COFR APPLICANT       | VIN      | INSURANCE CANCEL FLAG |
|---|-------------|-----------|---------------|-------------|----------------|-----------------|----------------------|----------|-----------------------|
|  CCL 403 | TANKBARGE D |           | 1691          | 841310 - 21 | 2/8/2023       | 2/8/2026        | CHEM CARRIERS, L.L.C | D1231311 |                       |

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## BARGE PIPING LETTER

INSTURCTIONS: ALL FIELDS ARE REQUIRED. USE N/A ON ANY NON-APPLICABLE LINE.

BARGE OWNER/BARGE NAME: ChemCarriers / CCL 403

Letter expiration date (one year from test date): 5-5-26

NOTE: Test results are valid for (1) year from the date of test.

1. Cargo Piping and Valves (actual date of test): 5-5-25

Test Pressure (188 psi): 188 psi

2. Cargo Relief Valve (actual date of test): 5-5-25

Test Pressure (125 psi): 125 psi

3. Cargo Pressure Gauge (actual date of test): 5-5-25

Percent of Accuracy (%): 98%

4. Steam Piping and Relief Valves (actual date of test): N/A

Test Pressure (125 psi): N/A

Signature of Tester:

Joshua Mojarró

Printed Name of Tester:

Joshua Mojarró

Company/Location of Tester:

K-solv / Channelview TX.



## BARGE VAPOR TIGHTNESS LETTER

NOTE: Test results are valid for (1) one year from date of test

- Test date: 5-5-25
- Barge owner: Chem Carriers
- Barge Name/Official Number: CCL 403 / 1231311
- Maximum load rate (BPH): 5,000 (BPH)

→ Pressure cargo tanks and vapor system to (28) twenty-eight inches of water using a Manometer to record the time and pressure. Close all valves and allow the vessel to Remain pressure for (30) thirty minutes. Use soap to test and inspect for leaks. After (30) thirty minutes, record pressure and times.

→ Test cargo tanks and Vapor System to 28" inches of water.

→ Start Time: 13:00 Beginning Pressure: 28"

→ End Time: 13:30 Ending Pressure: 27.5"

- ✓ This vessel has been tested in accordance with Section 61.304f and has been found to to be vapor tight.

|  |                       |
|--|-----------------------|
| Company of Tester:                     | Location:             |
| <u>E-solv</u>                          | <u>channelview tx</u> |
| Name of Tester (Print):                | Signature of Tester:  |
| <u>Joshua Mojarro</u>                  | <u>Joshua Mojarro</u> |
| Name of Witness (Print):               | Signature of Witness: |
| <u>Edgar Quiroz</u>                    | <u>Edgar Quiroz</u>   |
| Affiliation/Company of Witness (Print) |                       |
| <u>Supervisor / K-solv</u>             |                       |









## Marine Safety Center Vapor Control System (VCS) Plan Review Information Sheet (PRIS)



Vessel Name CCL 403 & CCL 404

Shipyard Trinity Ashland City

Official Number Pending

Hull Number 4772 & 4773

1. This sheet consolidates critical VCS parameters for MSC Staff Engineers and CG Field Inspectors dealing with Vapor Control Systems. CG Inspectors should verify the vessel's VCS design is consistent with the information listed in boxes 2, 6, 7 & 8 prior to updating the vapor control endorsement on the vessel's Certificate of Inspection. For cases where the information in the VCS PRIS does not reflect the vessel's design the CG Inspector should contact the MSC's Cargo Authority branch.

2. Tank Maximum Design Working Pressure 6.50 psig Raised Trunk ☒ Flush Deck ☐

3. Authorized Maximum Cargo Transfer Rate(s) 5000 bbl/hr loading  
5000 bbl/hr discharging

4. Authorized Maximum Cargo Density 0.443 lbm/ft<sup>3</sup>

5. Authorized VCS Categories 1 through 7

6. Cargoes with the highest vapor density and/or pressure drop:

a. Cargo Name PENTANE

b. Cargo Name PENTANE

7. Pressure Vacuum Valve:

Manufacturer ERL  
Size Superac Model II, 6 Inch  
CG Approval 162.017/167/3

Settings in psig:

Pressure-side 6

Vacuum-side 3

8. VCS Pipe Sizes:

Approx. Inside Diameter

Longitudinal Header (inches) 8

Transverse Header (Inches) 8

Required Venting Capacity of Pressure-Side of P/V valve 16434 bbl/hr (air)

Required Venting Capacity of Vacuum-Side of P/V valve 5000 bbl/hr (air)

9. Tank Overfill Protection System (check appropriate box or boxes)

a. High Level/Tank Overfill Alarm ☒

Type ERL Level Alert II

b. Overfill Control Shutdown ☒

Type ERL Level Alert II

c. Spill Valve ☐

Type N/A

d. Rupture Disk ☐

Type N/A

Meets ASTM F1271

Setting in psig

N/A

10. Closed Gauging Verify the vessel has closed gauging that satisfies 46 CFR 39.20-3 and 151.15-10(c).

11. Instructions/Guidelines for the OCMI:

11a. The following is the Marine Safety Center's recommended COI endorsement:

In accordance with 46 CFR Part 39, excluding part 39.40, this vessel's vapor collection system has been inspected to the plans approved by Marine Safety Center letter Serial # C1-110183 dated 21 January 2011, and has been found acceptable for the collection of bulk liquid cargo vapors annotated with "Yes" in the VCS column of the vessel's Cargo Authority Attachment, Serial # C1-1100183 dated 21 January 2011.

When the vessel is carrying cargoes containing greater than 0.5% benzene, the person in charge is responsible for ensuring the provisions of 46 US Code of Federal Regulations Part 197, Subpart C are applied.

11b. The MSC approval letter/s must be available at the OCMI's request.

11c. Verify isolation valve at the vapor connection flange is manually operable and designed in a way it is "clearly" open or closed.

11d. Previous applicable approval letters: None

VCS Approval Letter C1-1100183

MSC Plan Reviewer

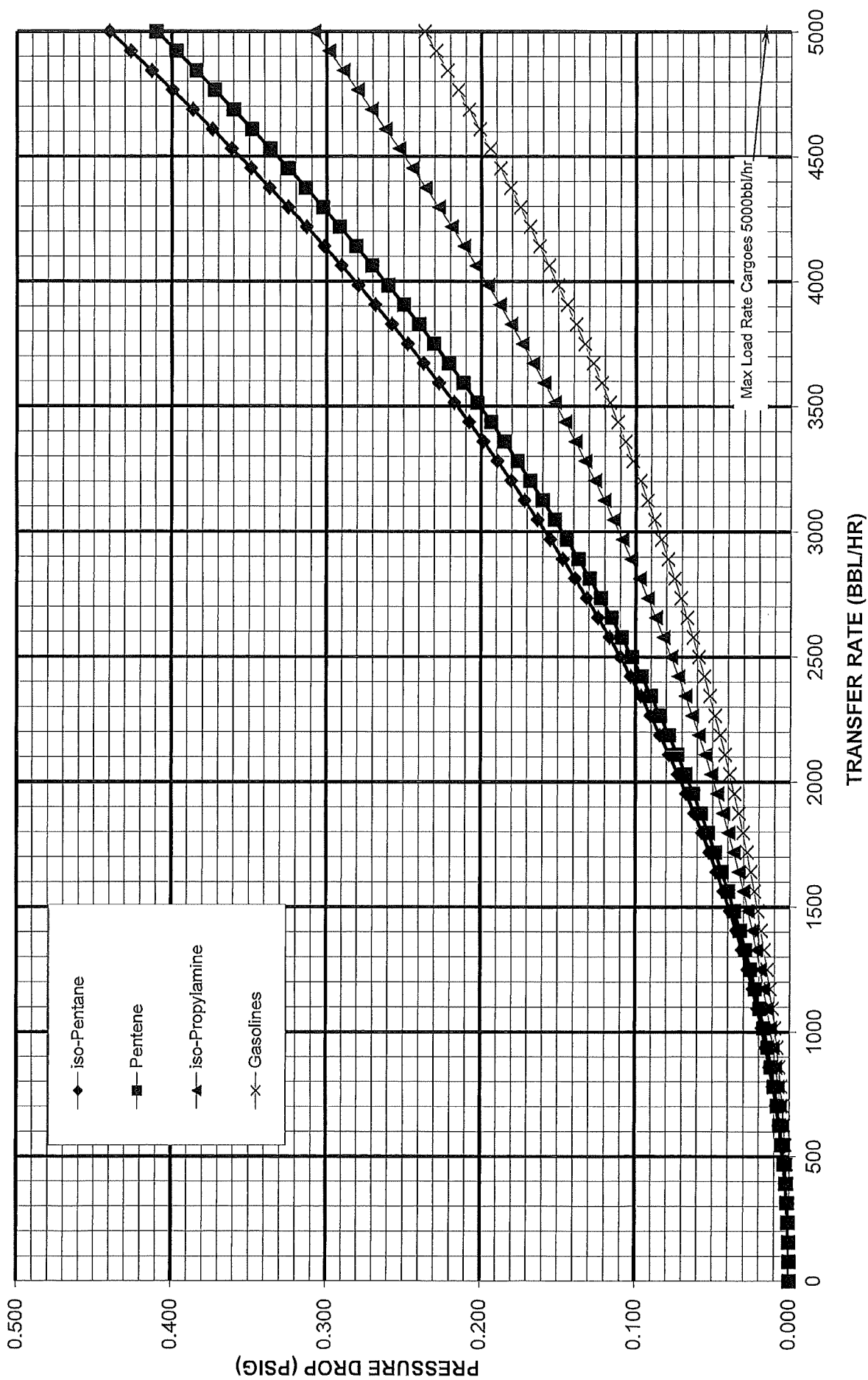
Mr. Marcus Ewardo

CCL 403 & CCL 404

LIQUID TRANSFER RATE vs PRESSURE DROP

BASED ON PRESSURE DROP FROM

CARGO TANK #1 TO FACILITY CONNECTION





# **CARGO TRANSFER PROCEDURES**

## ***CHEM CARRIERS L.L.C.***

### **TRANSFER FROM BARGE TO DOCK**

#### **PARTS**

1. **PRODUCTS TRANSFERRED**
  2. **DESCRIPTION OF SYSTEM**
  3. **PERSONS ON DUTY**
  4. **PERSONS IN CHARGE**
  5. **EMERGENCY SHUTDOWN**
  6. **TOPPING OFF PROCEDURE**
  7. **COMPLETION OF TRANSFER**
  8. **REPORTING CARGO SPILLS**
  9. **VESSEL CLOSURES**
  10. **PRODUCT DATA**
  11. **Vapor Control Procedures**
- Barge CCL 403**

#### **PARTS 1.                      PRODUCTS TRANSFERRED**

33 CFR 155.750 (a) (1) (i)

**This vessel is certificated for the carriage of grades "A" and lower Sub-Chapter (D) and (O) Products. It has also been certified to carry vapor products. Reference Certificate of Inspection.**

#### **PARTS 2.                      DESCRIPTION OF CARGO TRANSFER SYSTEM**

33 CFR 155.750 (a) (2) (i) (ii)

The cargo transfer procedures apply to all Chem Carrier L.L.C. owned or leased tank barges. In most cases other than series built barges, the cargo piping arrangement is usually slightly different on every barge, and for this reason, the piping diagram must be studied before loading or discharging a barge. The basic concept for loading and discharging is fairly standard depending on the location of the pump.

A.     (Reference the piping diagram for transfer system arrangement.)

B.     **PROCEDURES FOR THE CONTAINMENT SYSTEM**

33 CFR 155.310 (a) (1) (iv)

33 CFR 155.750 (a) (2) (iii)

- 1).    The containment pans are equipped with a drain for the removal of slops to shore facilities:

NEVER DRAIN THE CONTAINMENT TANKS ONTO THE DECK.

- 2).    CCL 403 is equipped with a separate containment area for the cargo trunk top and the aft deck area. Each containment area

is equipped with drains and scupper plugs. Plugs should be installed prior to cargo transfer and removed after the cargo transfer is complete. PIC should notify Chem Carriers when containment areas need cleaning or if scupper plugs need replacing. **Never Drain Product captured in containment area overboard.**

### **PARTS 3.                    PERSONS ON DUTY DURING TRANSFER**

33 CFR 155.750    (a)   (3)

Number of persons required on duty during transfer operations:

- A.    At no time during the transfer operation will be less than one responsible person on duty. The certified tankerman assigned shall be in charge and responsible for the safe transfer of cargo.

### **PARTS 4.                    PERSONS IN CHARGE**

The tankerman (person in charge) is responsible for transferring cargo and carrying out related operations on board in an efficient, safe, and pollution free manner. The tankerman whether employed by the towboat, owner, operator, a shore tankerman service, or Chem Carriers L.L.C., shall comply with all Coast Guard, State and local regulations. Tankerman's responsibility shall include but not be limited to the following:

- A.    To have on his/her person a valid merchant marine document endorsed as tankerman, certified to handle the grade of cargo to be transferred.
- B.    Make a thorough inspection of the barge prior to the start of transfer operation.
- C.    To have proper connection of the grounding cable.
- D.    The vessel's moorings are adequate to hold during all expected conditions of surge, current, wind, tide, ect., and lines are long enough to allow for surge, tide, wind, changes in draft ect.
- E.    Proper hose sizes, lengths, support, and connections.
- F.    The condition of fire extinguishers and required number.
- G.    The person in charge of transfer operations on the transferring vessel or facility and the person in charge of transferring operations on the receiving vessel or facility agree to begin the transfer operations.
- H.    The transfer operation between tank barges and dock facilities should be lighted between sunset and sunrise to comply with the U. S. Coast Guard regulation pertaining to the displaying of lights on barges as required by Title 33.
- I.    The PIC (PERSON IN CHARGE) will be responsible for the DOI (declaration of inspection) and DOS (declaration of security).
- J.    Always maintain communications with dock or shore personnel with an agreed upon approved system.

## **PARTS 5:           EMERGENCY SHUTDOWN**

33 CFR 155.750 (a) (6)

THE EMERGENCY SHUTDOWN IS LOCATED NEAR THE CENTER OF THE BARGE.

- A. In the event of an emergency, transfer operations can be stopped by pulling the remote shutdown cable.
- B. Familiarize yourself with its location and operation prior to transfer.

## **PARTS 6;                   TOPPING OFF PROCEDURES**

33 CFR 155.750 (a) (7)

In the process of topping off, tanks should be loaded at different levels to top off one at a time. Extra care should be taken to avoid over pressuring the connections, and hoses by closing valves against the receiving line. Since barges and facilities vary in their systems, no standard for topping off exist, but the following should be considered:

- A. The closing of one tank increases the rate of flow to other tanks on the same line.
- B. Always consider temperature and cargo in accordance with the amount of expansion that should be allowed.
- C. Always maintain communications with dock or shore personnel.
- D. A set of dipstick overfill devices have been installed on the CCL 403. Dipsticks can be made operational by releasing the covers or caps. Dipsticks should be used as a visual aid for overfill protection.

## **PARTS 7:           COMPLETION OF TRANSFER**

33 CFR 155.750 (a) (8)

Upon the completion of the transfer all pipelines should be drained into cargo tanks. The header valve used during the operation should then be closed, sealed off with a blind flange and shore personnel should seal lines and hatches on vessel.

## **PARTS 8:                   REPORTING CARGO SPILLS**

33 CFR 155.750 (a) (9)

Should an accidental discharge of product occur, you should consider the following:

- A. Locate the source of the spill and try to stop it, if possible, and safe to do so.

- B. Make an attempt to contain the product if possible.
- C. Notify the Coast Guard. The national Response Center at 1-800-424-8802.
- E. Notify Chem Carriers L.L.C. at (225) 642-0060
- F. If loading, transfer the cargo from the leaking tank to an adjacent tank or back to the dock if safe to do so.
- G. If discharging, pump the product from the leaking tank as quickly as possible if safe to do so.

**\*When reporting a spill, the tankerman should provide the following information:**

- A. Name (his or her)
- B. Name of Company: (employed by; (contracted by;
- C. Name of Barge.
- D. Spill Location
- E. Specify Product.
- F. Estimate Quantity of Spill
- G. Weather, Tide, Sea and Current Conditions.
- H. Cause of Spill.
- I. Action Being Taken to Contain and Stop Spill

## **PART 9**

### **CLOSURES ON VESSELS**

Upon completion of cargo transfer operations, all tank hatch covers, ullage covers, and gauging device covers shall be dogged down and secured. In addition, the vent drain valves, if installed, should be secured and left in the proper position. All drain valves should be closed, and drip pan covers, if installed, should be made up tight. Covers for void spaces, bow and stern compartments shall be secured at all times and checked for tightness. Closing devices on clean-out hatches and clean-out opening should be checked, especially when the barge is loaded.

## **PART 10**

### **PRODUCT DATA**

See specific MSDS sheets provided with these procedures.

In case of any other emergency, immediately shut down and notify the transferring facility, and Chem Carriers L.L.C. (225) 642-0060 24 Hour Line.

## **PART 11**

### **VAPOR CONTROL PROCEDURES**

This is a guide only and is not intended to replace experience, sound judgment, and a proper assessment of the task at hand.

The tankerman on duty is the acting Designated Person In Charge (PIC) and is responsible for cargo transfer operations and carrying out related operations on barges.

1. Vapor Recovery Transfer Maximum Rate is 4000 BBLS/HR for

subchapter "D" Cargoes and 4000 BBLS/Hr for subchapter "O" Cargoes.

- 1.1 Transfer rates, which exceed these maximums, must be approved by Chem Carriers.
- 1.2 Transfer rates for each cargo tank should not exceed the maximum transfer rate.

## **2. Pre-transfer Inspection For Vapor Recovery Operations**

2.1 Follow the procedures outlined below in addition to the procedures utilized during normal transfers:

2.1.1 Wear personal protective equipment (PPE) as needed for the cargo in the barge when testing P/V and, hooking up hoses, or draining low points.

2.1.2 Ensure that a Certificate of Vapor Tightness is onboard and valid.

2.1.3 Close the low point drain on the port/starboard vapor header, if applicable.

2.1.4 Close the low point drain near the vent stack, if applicable.

2.1.5 Close valve to the vent riser if applicable.

2.1.7 Blinds used for the vapor control manifold should have a hole to accommodate the ½" stud located in the vapor header.

2.1.8 Each cargo tank is fitted with a liquid level gauge stick. Remove the cap, raise the stick, This stick can be monitored visually to avoid overfilling.

2.1.9 Ensure that the last one meter (3.3 feet) of vapor piping before the vapor connection is painted red/yellow/red.

2.1.10 The cross-header should be stenciled with the word "VAPOR" in black letters at least 2" high.

2.1.11 The vapor connection flange should be fixed with a 1" long by 1/2" diameter stud projecting outward from the face of the flange, midway between bolt holes.

2.1.12 The high level alarms/shutdowns are installed near the center of each cargo tank. Dock alarm/shutdown should be connected prior to loading, and plugs located near the forward end of the barge Port and Starboard should be labeled "ALARM/SHUTDOWN SENSOR." High level alarms are set to alarm at 90% of the cargo tanks capacity and Shut downs are set to shut transfer down at 95% of each tanks capacity.

2.1.13 Ensure that the P/V relief valve flame screen, if required, is in place and in good condition prior to testing.

2.1.14 Ensure that the facility has a Letter of Adequacy endorsed as meeting the requirements of 33 CFR Subpart E.



### **3. Vapor Piping**

3.1 The PIC checks the vapor piping diagram.

3.2 Characteristics of a vapor header:

3.2.1 The vapor collection piping system on tank barges is permanently installed and located as close as practical to the loading manifold. The piping system is electrically bonded to the hull and electrically continuous.

3.2.2 The last one meter (3.3 feet) of vapor piping prior to the valve before the vapor connection is painted red/yellow/red. The red bands are 4" wide and the yellow band is 32" wide.

3.2.3 The vapor header is stenciled with the word "VAPOR" in black letters at least 2" high.

3.2.4 The vapor connection flange is to be fixed with a 1" by 1/2" diameter stud projecting outward from the face of the flange. This stud is located at the top of the flange, midway between bolt holes.

3.2.5 When not in use, blank off the vapor headers using a blind flange with a bolt in every hole. Each blind flange used on the vapor piping has a hole drilled to accommodate the pin.

### **4. Inspection And Verification Of Vent Lines**

4.1 The Person in Charge performs the following steps:

4.1.1 Checks the Certificate of Inspection on board the barge;

4.1.2 Locates polymerizing or inhibited cargoes in the section of the COI marked *Specific Hazardous Cargo Authority*;

4.1.3 Refers to the MSDS or Chemical Data Guide on board the vessel to determine what cargoes are subject to polymerization, or what cargoes are inhibited;

4.1.4 Locates the MSDS for the cargo and determines its toxicity and whether or not it is a polymerizing or inhibited cargo; and,

4.1.5 Notifies the Dispatcher and Field Supervisor when polymerization is suspected.

5. Any problems with the Vapor Control system must be reported immediately to the person in charge and Chem Carriers.

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commandant  
United States Coast Guard

2703 Martin Luther King Jr. Ave SE  
Stop 7516  
Washington, DC 20593-7516  
Staff Symbol: CG-MER-4 (VRP)  
Phone: (202) 372-1005  
Fax: (202) 372-8376  
Email: vrp@uscg.mil

16460  
March 12, 2025

Chem Carriers, L.L.C.  
C/O: FOREFRONT EMERGENCY MANAGEMENT, LP  
ATTN: ALLIE MARTIN  
1730 COTEAU ROAD  
HOUMA, LA 70364

Dear Sir or Madam:

Your Vessel Response Plan (Control Number 56041), submitted to meet the requirements of Title 33, Code of Federal Regulations (CFR), Part 155, Subparts D and I, is **approved**. Approval will remain valid until **March 21, 2030**.

The CCL 403 (1231311) is authorized to operate only in the ports or geographic areas indicated in the Captain of the Port zones listed below. If carrying oil as cargo, the vessel is prohibited from handling, storing, transporting, transferring, or lightering oil unless it is operating in full compliance with this plan. Compliance includes ensuring that required resources have been identified and planned for or are in place and available through contract or other approved means. If applicable to your routes, this includes the dispersant and aerial observation requirements of 33 CFR 155.1050.

You are reminded that your chosen salvage and marine firefighting resource provider may have submitted waivers from meeting one or more of the specified response times in accordance with 33 CFR 155.4055. If so, this may be rescinded by the U.S. Coast Guard if the appropriate response resources are not available when the approved waiver expires. You shall continue to assess the adequacy of your chosen salvors and firefighters as required by 33 CFR 155.4050.

The vessel must keep a copy of this approval letter onboard in addition to the minimum sections of the plan as required by 33 CFR 155.1030. In accordance with 33 CFR 155.1070, you are required to review your plan annually and submit plan amendments for approval. As per 33 CFR 155.1070(b), the entire plan must be resubmitted for a comprehensive review and approval six (6) months prior to the expiration date.

**APPROVED CAPTAIN OF THE PORT ZONES**

CORPUS CHRISTI  
HOUMA  
HOUSTON-GALVESTON

LOWER MISSISSIPPI RIVER OHIO VALLEY  
(MEMPHIS)  
MOBILE  
NEW ORLEANS

UPPER MISSISSIPPI RIVER  
(ST. LOUIS)  
PORT ARTHUR AND LAKE  
CHARLES

Sincerely,



CHARRON MCCOMBS

Lieutenant Commander

Acting Chief, Domestic Preparedness & Planning Division

U.S. Coast Guard

By direction

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commanding Officer  
United States Coast Guard  
Marine Safety Center

US Coast Guard Stop 7430  
2703 Martin Luther King Jr. Ave. SE  
Washington, DC 20593-7430  
Staff Symbol: MSC-5  
Phone: (202) 795-6729  
Email: securityplaninfo@uscg.mil

16710  
VS-326893  
December 3, 2024

Chem Carriers, LLC  
Attn: Robert Banta  
1237 Hwy 75  
Sunshine, LA 70780  
robert@chemcarriers.com

Subj: CHEM CARRIERS, LLC VESSELS  
VESSEL SECURITY PLAN APPROVAL WITH AMENDMENTS

Ref: (a) Your correspondence dated November 6, 2024  
(b) Title 33 Code of Federal Regulations (CFR) Part 104  
(c) MSC Vessel Security Plan Approval letter dated October 16, 2024

Dear Mr. Banta:

We have conducted a review of the Vessel Security Plan (VSP) submitted with reference (a) in accordance with reference (b) and it is **"Approved."**

Your vessel must operate in compliance with this approved VSP and the requirements contained in reference (b). You are reminded to immediately report any deviation from this approved plan to the local Captain of the Port (COTP)/Officer in Charge, Marine Inspection (OCMI).

This approval will remain valid until five years from the date of reference (c) unless rescinded in writing by the local COTP/OCMI. You must review your plan annually and submit any amendments to this office for approval. Please ensure that a copy of the VSP is maintained on board the vessel if manned, or, if unmanned, at a suitable secure location so that it is readily available during an emergency or security incident. You shall make available to the Coast Guard, upon request, this letter, the VSP and any information related to the implementation of the VSP. Our Case Number for this plan is 326893. Please ensure that all future correspondence includes this Case Number.

Sincerely,

K. C. WILLIAMS  
Lieutenant Commander, U.S. Coast Guard  
Chief, Vessel Security Division  
By direction

Enclosures: (1) List of Vessel Security Plan Amendments  
(2) List of Vessels Covered

**List of Vessels Covered**

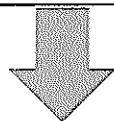
| <u>Vessel Name</u> | <u>Official Number (O.N.)</u> |
|--------------------|-------------------------------|
| CCL-1              | 518612                        |
| CCL 2              | 510107                        |
| CCL-3              | 296363                        |
| CCL 4              | 512519                        |
| CCL-5              | 512520                        |
| CCL-6              | 530996                        |
| CCL7               | 551980                        |
| CCL 8              | 551982                        |
| CCL 9              | 551983                        |
| CCL 10             | 551979                        |
| CCL 11             | 551976                        |
| CCL 14             | 1164451                       |
| CCL 15             | 1164452                       |
| CCL 16             | 1164666                       |
| CCL 17             | 1166179                       |
| CCL 18             | 1168981                       |
| CCL 19             | 1168980                       |
| CCL 20             | 1191598                       |
| CCL 21             | 1191599                       |
| CCL 22             | 1191600                       |
| CCL 23             | 1191601                       |
| CCL 24             | 1196547                       |
| CCL 25             | 1196548                       |
| CCL 26             | 1203816                       |
| CCL 27             | 1203817                       |
| CCL 28             | 1212828                       |
| CCL 29             | 1212829                       |
| CCL 30             | 1305871                       |
| CCL 31             | 1305870                       |
| CCL 32             | 1305869                       |
| CCL 33             | 1305868                       |
| CCL 401            | 1216671                       |
| CCL 402            | 1219910                       |
| CCL 403            | 1231311                       |
| CCL 404            | 1231312                       |
| CCL 405            | 1236867                       |
| CCL 406            | 1236866                       |
| CCL 407            | 1246320                       |
| CCL 408            | 1246097                       |
| CCL 409            | 1246098                       |
| CCL 410            | 1255906                       |
| CCL 411            | 1255907                       |
| CCL 414-L          | 1262941                       |
| CCL 415-T          | 1262942                       |



| <u>Vessel Name</u> | <u>Official Number (O.N.)</u> |
|--------------------|-------------------------------|
| CCL 416-T          | 1264691                       |
| CCL 417 T          | 1298307                       |
| CCL 418-L          | 1306896                       |
| CCL 419-L          | 1306897                       |
| CCL 420-T          | 1348560                       |
| CCL 421-T          | CG1843359                     |
| CCL 3202           | 1089031                       |
| HFL 413            | 1237482                       |
| HFL 415            | 1237483                       |
| HFL 435            | 1236563                       |
| HFL 605            | 1237484                       |

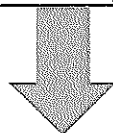
# VESSEL INCIDENT / ACCIDENT NOTIFICATION CHART

Incidents that involve injury or illness, spill / pollution or a probable discharge, significant equipment failure, property damage, cargo related issues, service delays or any accident involving a Chem Carriers Towing, LLC vessel or crewmember shall be immediately called into the Chem Carriers Towing, LLC 24-hour Emergency Hotline at **225-642-0060**



## Master Standing the Watch

Once the situation has been stabilized and all safety issues have been addressed, immediately contact the Chem Carriers Towing, LLC Emergency Hotline (225-642-0060)  
Any serious marine incident, or any incident that has the potential to become a serious marine incident, alcohol testing shall be conducted on all involved crewmembers within 2 hours, whether onboard the vessel or at a testing facility.



### NATIONAL Response Center

1-800-424-8802

or

1-202-267-2675

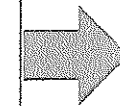
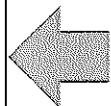
**MADANTORY** for all pollution incidents on CCT equipment

### Chem Carriers Towing, LLC Emergency Hotline



**Qualified Individual (QI)**

**225-642-0060**



### State Notifications

Louisiana 225-925-6595  
Mississippi 601-987-1212  
Texas 409-924-5400



### USCG COTP ZONES

Baton Rouge 225-298-5400  
New Orleans 504-365-2200  
Morgan City 985-380-5320  
Lake Charles 337-721-5741

**Oil Spill Removal Organization  
Customer  
Internal**

Reference Emergency Response Guidelines for  
a Complete List of Required Notifications



# **BARGE "CCL 403"** INNAGE TRIM TABLE

|        | 1 FT.      |              | 2 FT.      |              | 3 FT.      |              | 4 FT.      |              | 5 FT.      |              | 6 FT.      |              |
|--------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|------------|--------------|
|        | <u>BOW</u> | <u>STERN</u> | <u>BOW</u> | <u>STERN</u> | <u>BOW</u> | <u>STERN</u> | <u>BOW</u> | <u>STERN</u> | <u>BOW</u> | <u>STERN</u> | <u>BOW</u> | <u>STERN</u> |
| 1 PORT | - 00-0/8   | 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       | - 00-0/8   | 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 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     |
| 2 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     |
| 3 PORT | 00-0/8     | - 00-0/8     | 00-0/8     | - 00-0/8     | 00-0/8     | - 00-0/8     | 00-1/8     | - 00-1/8     | 00-1/8     | - 00-1/8     | 00-1/8     | - 00-1/8     |
| 3 STBD | 00-0/8     | - 00-0/8     | 00-0/8     | - 00-0/8     | 00-0/8     | - 00-0/8     | 00-1/8     | - 00-1/8     | 00-1/8     | - 00-1/8     | 00-1/8     | - 00-1/8     |

(ALL MEASUREMENTS ABOVE ARE IN INCHES)

EXAMPLE FOR ABOVE TRIM CORRECTIONS:

FWD. DRAFT = 2'-00"  
 AFT DRAFT = 5'-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 INNAGE GAUGE OF 4'-00" ON 1 PORT, THE TRIM CORRECTED INNAGE IS 4'-00 1/8"

LENGTH BETWEEN DRAFT MARKS: 237'-06"

January 14, 2011

PRECISION MEASUREMENT

& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588

<http://www.pmacorp.net>



# BARGE "CCL 403"

## 1 PORT INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 1/2"

| IN  | 0 FT.  | IN  | 1 FT.  | IN  | 2 FT.  | IN  | 3 FT.  | IN  | 4 FT.  | IN  | 5 FT.  | IN  | 6 FT.   | IN  | 7 FT.   | IN  | 8 FT.   | IN  | 9 FT.   |
|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------|-----|---------|-----|---------|-----|---------|
| 0   | 789    | 0   | 13,128 | 0   | 27,877 | 0   | 42,830 | 0   | 57,835 | 0   | 72,867 | 0   | 87,899  | 0   | 102,930 | 0   | 117,962 | 0   | 132,987 |
| 1/4 | 950    | 1/4 | 13,420 | 1/4 | 28,191 | 1/4 | 43,141 | 1/4 | 58,149 | 1/4 | 73,180 | 1/4 | 88,212  | 1/4 | 103,244 | 1/4 | 118,275 | 1/4 | 133,300 |
| 1/2 | 1,111  | 1/2 | 13,711 | 1/2 | 28,504 | 1/2 | 43,452 | 1/2 | 58,462 | 1/2 | 73,493 | 1/2 | 88,525  | 1/2 | 103,557 | 1/2 | 118,588 | 1/2 | 133,613 |
| 3/4 | 1,272  | 3/4 | 14,003 | 3/4 | 28,817 | 3/4 | 43,763 | 3/4 | 58,775 | 3/4 | 73,807 | 3/4 | 88,838  | 3/4 | 103,870 | 3/4 | 118,902 | 3/4 | 133,926 |
| 1   | 1,432  | 1   | 14,295 | 1   | 29,130 | 1   | 44,074 | 1   | 59,088 | 1   | 74,120 | 1   | 89,151  | 1   | 104,183 | 1   | 119,215 | 1   | 134,240 |
| 1/4 | 1,652  | 1/4 | 14,591 | 1/4 | 29,443 | 1/4 | 44,385 | 1/4 | 59,401 | 1/4 | 74,433 | 1/4 | 89,465  | 1/4 | 104,496 | 1/4 | 119,528 | 1/4 | 134,553 |
| 1/2 | 1,872  | 1/2 | 14,887 | 1/2 | 29,756 | 1/2 | 44,697 | 1/2 | 59,714 | 1/2 | 74,746 | 1/2 | 89,778  | 1/2 | 104,809 | 1/2 | 119,841 | 1/2 | 134,866 |
| 3/4 | 2,091  | 3/4 | 15,182 | 3/4 | 30,070 | 3/4 | 45,008 | 3/4 | 60,027 | 3/4 | 75,059 | 3/4 | 90,091  | 3/4 | 105,123 | 3/4 | 120,154 | 3/4 | 135,179 |
| 2   | 2,311  | 2   | 15,478 | 2   | 30,383 | 2   | 45,319 | 2   | 60,341 | 2   | 75,372 | 2   | 90,404  | 2   | 105,436 | 2   | 120,467 | 2   | 135,492 |
| 1/4 | 2,563  | 1/4 | 15,778 | 1/4 | 30,696 | 1/4 | 45,631 | 1/4 | 60,654 | 1/4 | 75,685 | 1/4 | 90,717  | 1/4 | 105,749 | 1/4 | 120,780 | 1/4 | 135,805 |
| 1/2 | 2,814  | 1/2 | 16,077 | 1/2 | 31,009 | 1/2 | 45,942 | 1/2 | 60,967 | 1/2 | 75,999 | 1/2 | 91,030  | 1/2 | 106,062 | 1/2 | 121,093 | 1/2 | 136,118 |
| 3/4 | 3,066  | 3/4 | 16,377 | 3/4 | 31,322 | 3/4 | 46,254 | 3/4 | 61,280 | 3/4 | 76,312 | 3/4 | 91,344  | 3/4 | 106,375 | 3/4 | 121,406 | 3/4 | 136,431 |
| 3   | 3,318  | 3   | 16,677 | 3   | 31,635 | 3   | 46,566 | 3   | 61,593 | 3   | 76,625 | 3   | 91,657  | 3   | 106,688 | 3   | 121,719 | 3   | 136,744 |
| 1/4 | 3,575  | 1/4 | 16,980 | 1/4 | 31,948 | 1/4 | 46,878 | 1/4 | 61,906 | 1/4 | 76,938 | 1/4 | 91,970  | 1/4 | 107,002 | 1/4 | 122,032 | 1/4 | 137,057 |
| 1/2 | 3,832  | 1/2 | 17,284 | 1/2 | 32,260 | 1/2 | 47,190 | 1/2 | 62,220 | 1/2 | 77,251 | 1/2 | 92,283  | 1/2 | 107,315 | 1/2 | 122,345 | 1/2 | 137,370 |
| 3/4 | 4,088  | 3/4 | 17,587 | 3/4 | 32,573 | 3/4 | 47,502 | 3/4 | 62,533 | 3/4 | 77,564 | 3/4 | 92,596  | 3/4 | 107,628 | 3/4 | 122,658 | 3/4 | 137,683 |
| 4   | 4,345  | 4   | 17,891 | 4   | 32,886 | 4   | 47,814 | 4   | 62,846 | 4   | 77,878 | 4   | 92,909  | 4   | 107,941 | 4   | 122,971 | 4   | 137,996 |
| 1/4 | 4,606  | 1/4 | 18,198 | 1/4 | 33,196 | 1/4 | 48,127 | 1/4 | 63,159 | 1/4 | 78,191 | 1/4 | 93,222  | 1/4 | 108,254 | 1/4 | 123,284 | 1/4 | 138,309 |
| 1/2 | 4,867  | 1/2 | 18,505 | 1/2 | 33,507 | 1/2 | 48,441 | 1/2 | 63,472 | 1/2 | 78,504 | 1/2 | 93,536  | 1/2 | 108,567 | 1/2 | 123,597 | 1/2 | 138,622 |
| 3/4 | 5,128  | 3/4 | 18,813 | 3/4 | 33,818 | 3/4 | 48,754 | 3/4 | 63,785 | 3/4 | 78,817 | 3/4 | 93,849  | 3/4 | 108,881 | 3/4 | 123,910 | 3/4 | 138,935 |
| 5   | 5,389  | 5   | 19,120 | 5   | 34,129 | 5   | 49,067 | 5   | 64,099 | 5   | 79,130 | 5   | 94,162  | 5   | 109,194 | 5   | 124,223 | 5   | 139,248 |
| 1/4 | 5,653  | 1/4 | 19,431 | 1/4 | 34,439 | 1/4 | 49,380 | 1/4 | 64,412 | 1/4 | 79,443 | 1/4 | 94,475  | 1/4 | 109,507 | 1/4 | 124,536 | 1/4 | 139,561 |
| 1/2 | 5,918  | 1/2 | 19,742 | 1/2 | 34,750 | 1/2 | 49,693 | 1/2 | 64,725 | 1/2 | 79,757 | 1/2 | 94,788  | 1/2 | 109,820 | 1/2 | 124,849 | 1/2 | 139,874 |
| 3/4 | 6,183  | 3/4 | 20,052 | 3/4 | 35,061 | 3/4 | 50,006 | 3/4 | 65,038 | 3/4 | 80,070 | 3/4 | 95,101  | 3/4 | 110,133 | 3/4 | 125,162 | 3/4 | 140,187 |
| 6   | 6,448  | 6   | 20,363 | 6   | 35,372 | 6   | 50,320 | 6   | 65,351 | 6   | 80,383 | 6   | 95,415  | 6   | 110,446 | 6   | 125,475 | 6   | 140,500 |
| 1/4 | 6,716  | 1/4 | 20,676 | 1/4 | 35,682 | 1/4 | 50,633 | 1/4 | 65,664 | 1/4 | 80,696 | 1/4 | 95,728  | 1/4 | 110,759 | 1/4 | 125,788 | 1/4 | 140,813 |
| 1/2 | 6,985  | 1/2 | 20,989 | 1/2 | 35,993 | 1/2 | 50,946 | 1/2 | 65,978 | 1/2 | 81,009 | 1/2 | 96,041  | 1/2 | 111,073 | 1/2 | 126,101 | 1/2 | 141,126 |
| 3/4 | 7,254  | 3/4 | 21,302 | 3/4 | 36,304 | 3/4 | 51,259 | 3/4 | 66,291 | 3/4 | 81,322 | 3/4 | 96,354  | 3/4 | 111,386 | 3/4 | 126,414 | 3/4 | 141,439 |
| 7   | 7,522  | 7   | 21,614 | 7   | 36,615 | 7   | 51,572 | 7   | 66,604 | 7   | 81,636 | 7   | 96,667  | 7   | 111,699 | 7   | 126,727 | 7   | 141,752 |
| 1/4 | 7,795  | 1/4 | 21,928 | 1/4 | 36,926 | 1/4 | 51,885 | 1/4 | 66,917 | 1/4 | 81,949 | 1/4 | 96,980  | 1/4 | 112,012 | 1/4 | 127,040 | 1/4 | 142,065 |
| 1/2 | 8,067  | 1/2 | 22,241 | 1/2 | 37,236 | 1/2 | 52,198 | 1/2 | 67,230 | 1/2 | 82,262 | 1/2 | 97,294  | 1/2 | 112,325 | 1/2 | 127,353 | 1/2 | 142,378 |
| 3/4 | 8,340  | 3/4 | 22,554 | 3/4 | 37,547 | 3/4 | 52,512 | 3/4 | 67,543 | 3/4 | 82,575 | 3/4 | 97,607  | 3/4 | 112,638 | 3/4 | 127,666 | 3/4 | 142,691 |
| 8   | 8,613  | 8   | 22,867 | 8   | 37,858 | 8   | 52,825 | 8   | 67,856 | 8   | 82,888 | 8   | 97,920  | 8   | 112,952 | 8   | 127,979 | 8   | 143,004 |
| 1/4 | 8,889  | 1/4 | 23,180 | 1/4 | 38,169 | 1/4 | 53,138 | 1/4 | 68,170 | 1/4 | 83,201 | 1/4 | 98,233  | 1/4 | 113,265 | 1/4 | 128,292 | 1/4 | 143,317 |
| 1/2 | 9,165  | 1/2 | 23,493 | 1/2 | 38,479 | 1/2 | 53,451 | 1/2 | 68,483 | 1/2 | 83,515 | 1/2 | 98,546  | 1/2 | 113,578 | 1/2 | 128,605 | 1/2 | 143,630 |
| 3/4 | 9,442  | 3/4 | 23,807 | 3/4 | 38,790 | 3/4 | 53,764 | 3/4 | 68,796 | 3/4 | 83,828 | 3/4 | 98,859  | 3/4 | 113,891 | 3/4 | 128,918 | 3/4 | 143,943 |
| 9   | 9,718  | 9   | 24,120 | 9   | 39,101 | 9   | 54,077 | 9   | 69,109 | 9   | 84,141 | 9   | 99,173  | 9   | 114,204 | 9   | 129,231 | 9   | 144,256 |
| 1/4 | 9,998  | 1/4 | 24,433 | 1/4 | 39,412 | 1/4 | 54,391 | 1/4 | 69,422 | 1/4 | 84,454 | 1/4 | 99,486  | 1/4 | 114,517 | 1/4 | 129,544 | 1/4 | 144,569 |
| 1/2 | 10,279 | 1/2 | 24,746 | 1/2 | 39,722 | 1/2 | 54,704 | 1/2 | 69,735 | 1/2 | 84,767 | 1/2 | 99,799  | 1/2 | 114,831 | 1/2 | 129,857 | 1/2 | 144,882 |
| 3/4 | 10,559 | 3/4 | 25,059 | 3/4 | 40,033 | 3/4 | 55,017 | 3/4 | 70,049 | 3/4 | 85,080 | 3/4 | 100,112 | 3/4 | 115,144 | 3/4 | 130,170 | 3/4 | 145,195 |
| 10  | 10,839 | 10  | 25,372 | 10  | 40,344 | 10  | 55,330 | 10  | 70,362 | 10  | 85,393 | 10  | 100,425 | 10  | 115,457 | 10  | 130,483 | 10  | 145,508 |
| 1/4 | 11,123 | 1/4 | 25,685 | 1/4 | 40,655 | 1/4 | 55,643 | 1/4 | 70,675 | 1/4 | 85,707 | 1/4 | 100,738 | 1/4 | 115,770 | 1/4 | 130,796 | 1/4 | 145,821 |
| 1/2 | 11,407 | 1/2 | 25,999 | 1/2 | 40,965 | 1/2 | 55,956 | 1/2 | 70,988 | 1/2 | 86,020 | 1/2 | 101,051 | 1/2 | 116,083 | 1/2 | 131,109 | 1/2 | 146,134 |
| 3/4 | 11,692 | 3/4 | 26,312 | 3/4 | 41,276 | 3/4 | 56,270 | 3/4 | 71,301 | 3/4 | 86,333 | 3/4 | 101,365 | 3/4 | 116,396 | 3/4 | 131,422 | 3/4 | 146,447 |
| 11  | 11,976 | 11  | 26,625 | 11  | 41,587 | 11  | 56,583 | 11  | 71,614 | 11  | 86,646 | 11  | 101,678 | 11  | 116,710 | 11  | 131,735 | 11  | 146,760 |
| 1/4 | 12,264 | 1/4 | 26,938 | 1/4 | 41,898 | 1/4 | 56,896 | 1/4 | 71,928 | 1/4 | 86,959 | 1/4 | 101,991 | 1/4 | 117,023 | 1/4 | 132,048 | 1/4 | 147,073 |
| 1/2 | 12,552 | 1/2 | 27,251 | 1/2 | 42,209 | 1/2 | 57,209 | 1/2 | 72,241 | 1/2 | 87,272 | 1/2 | 102,304 | 1/2 | 117,336 | 1/2 | 132,361 | 1/2 | 147,386 |
| 3/4 | 12,840 | 3/4 | 27,564 | 3/4 | 42,519 | 3/4 | 57,522 | 3/4 | 72,554 | 3/4 | 87,586 | 3/4 | 102,617 | 3/4 | 117,649 | 3/4 | 132,674 | 3/4 | 147,699 |

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 INNAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE.

GAUGE POINT: (HERMETIC) LOCATED 12'-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 "CCL 403"

## 1 PORT INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 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   | 148,012 | 0   | 163,036 | 0   | 177,993 | 0   | 192,929 | 0   | 207,801 | 0   |        | 0   |        | 0   |        | 0   |        | 0   |        |
| 1/4 | 148,325 | 1/4 | 163,349 | 1/4 | 178,304 | 1/4 | 193,241 | 1/4 | 208,092 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 148,638 | 1/2 | 163,662 | 1/2 | 178,615 | 1/2 | 193,552 | 1/2 | 208,383 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 148,951 | 3/4 | 163,975 | 3/4 | 178,926 | 3/4 | 193,863 | 3/4 | 208,675 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 1   | 149,264 | 1   | 164,288 | 1   | 179,237 | 1   | 194,174 | 1   | 208,966 | 1   |        | 1   |        | 1   |        | 1   |        | 1   |        |
| 1/4 | 149,577 | 1/4 | 164,601 | 1/4 | 179,549 | 1/4 | 194,485 | 1/4 | 209,225 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 149,890 | 1/2 | 164,914 | 1/2 | 179,860 | 1/2 | 194,796 | 1/2 | 209,485 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 150,203 | 3/4 | 165,227 | 3/4 | 180,171 | 3/4 | 195,108 | 3/4 | 209,745 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 2   | 150,516 | 2   | 165,540 | 2   | 180,482 | 2   | 195,419 | 2   | 210,005 | 2   |        | 2   |        | 2   |        | 2   |        | 2   |        |
| 1/4 | 150,829 | 1/4 | 165,853 | 1/4 | 180,793 | 1/4 | 195,730 | 1/4 | 210,212 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 151,142 | 1/2 | 166,165 | 1/2 | 181,104 | 1/2 | 196,041 | 1/2 | 210,420 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 151,455 | 3/4 | 166,478 | 3/4 | 181,416 | 3/4 | 196,352 | 3/4 | 210,627 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 3   | 151,768 | 3   | 166,790 | 3   | 181,727 | 3   | 196,663 | 3   | 210,835 | 3   |        | 3   |        | 3   |        | 3   |        | 3   |        |
| 1/4 | 152,081 | 1/4 | 167,101 | 1/4 | 182,038 | 1/4 | 196,975 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 152,394 | 1/2 | 167,413 | 1/2 | 182,349 | 1/2 | 197,286 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 152,707 | 3/4 | 167,724 | 3/4 | 182,660 | 3/4 | 197,597 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 4   | 153,020 | 4   | 168,035 | 4   | 182,972 | 4   | 197,908 | 4   |         | 4   |        | 4   |        | 4   |        | 4   |        | 4   |        |
| 1/4 | 153,333 | 1/4 | 168,346 | 1/4 | 183,283 | 1/4 | 198,219 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 153,646 | 1/2 | 168,657 | 1/2 | 183,594 | 1/2 | 198,531 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 153,959 | 3/4 | 168,968 | 3/4 | 183,905 | 3/4 | 198,842 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 5   | 154,272 | 5   | 169,280 | 5   | 184,216 | 5   | 199,153 | 5   |         | 5   |        | 5   |        | 5   |        | 5   |        | 5   |        |
| 1/4 | 154,585 | 1/4 | 169,591 | 1/4 | 184,527 | 1/4 | 199,464 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 154,898 | 1/2 | 169,902 | 1/2 | 184,839 | 1/2 | 199,775 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 155,211 | 3/4 | 170,213 | 3/4 | 185,150 | 3/4 | 200,086 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 6   | 155,524 | 6   | 170,524 | 6   | 185,461 | 6   | 200,398 | 6   |         | 6   |        | 6   |        | 6   |        | 6   |        | 6   |        |
| 1/4 | 155,837 | 1/4 | 170,836 | 1/4 | 185,772 | 1/4 | 200,709 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 156,150 | 1/2 | 171,147 | 1/2 | 186,083 | 1/2 | 201,020 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 156,463 | 3/4 | 171,458 | 3/4 | 186,395 | 3/4 | 201,331 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 7   | 156,776 | 7   | 171,769 | 7   | 186,706 | 7   | 201,642 | 7   |         | 7   |        | 7   |        | 7   |        | 7   |        | 7   |        |
| 1/4 | 157,089 | 1/4 | 172,080 | 1/4 | 187,017 | 1/4 | 201,954 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 157,402 | 1/2 | 172,391 | 1/2 | 187,328 | 1/2 | 202,265 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 157,715 | 3/4 | 172,703 | 3/4 | 187,639 | 3/4 | 202,576 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 8   | 158,028 | 8   | 173,014 | 8   | 187,950 | 8   | 202,887 | 8   |         | 8   |        | 8   |        | 8   |        | 8   |        | 8   |        |
| 1/4 | 158,341 | 1/4 | 173,325 | 1/4 | 188,262 | 1/4 | 203,198 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 158,654 | 1/2 | 173,636 | 1/2 | 188,573 | 1/2 | 203,509 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 158,967 | 3/4 | 173,947 | 3/4 | 188,884 | 3/4 | 203,821 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 9   | 159,280 | 9   | 174,259 | 9   | 189,195 | 9   | 204,132 | 9   |         | 9   |        | 9   |        | 9   |        | 9   |        | 9   |        |
| 1/4 | 159,593 | 1/4 | 174,570 | 1/4 | 189,506 | 1/4 | 204,443 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 159,906 | 1/2 | 174,881 | 1/2 | 189,818 | 1/2 | 204,754 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 160,219 | 3/4 | 175,192 | 3/4 | 190,129 | 3/4 | 205,065 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 10  | 160,532 | 10  | 175,503 | 10  | 190,440 | 10  | 205,376 | 10  |         | 10  |        | 10  |        | 10  |        | 10  |        | 10  |        |
| 1/4 | 160,845 | 1/4 | 175,814 | 1/4 | 190,751 | 1/4 | 205,684 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 161,158 | 1/2 | 176,126 | 1/2 | 191,062 | 1/2 | 205,992 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 161,471 | 3/4 | 176,437 | 3/4 | 191,373 | 3/4 | 206,300 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 11  | 161,784 | 11  | 176,748 | 11  | 191,685 | 11  | 206,608 | 11  |         | 11  |        | 11  |        | 11  |        | 11  |        | 11  |        |
| 1/4 | 162,097 | 1/4 | 177,059 | 1/4 | 191,996 | 1/4 | 206,906 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 162,410 | 1/2 | 177,370 | 1/2 | 192,307 | 1/2 | 207,204 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 162,723 | 3/4 | 177,681 | 3/4 | 192,618 | 3/4 | 207,503 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 01/13/2011 CL - SW  
CALCULATED: 01/14/2011 CL  
PRINTED: 01/14/2011 CLCANCELS AND SUPERCEDES  
ALL PRIOR TO 01/2011PRECISION MEASUREMENT  
& ANALYSIS, INC.  
P.O. Box 2092  
Pearland, Texas 77588  
<http://www.pmacorp.net>



# BARGE "CCL 403"

1 STBD  
INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 1/4"

| IN  | 0 FT.  | IN  | 1 FT.  | IN  | 2 FT.  | IN  | 3 FT.  | IN  | 4 FT.  | IN  | 5 FT.  | IN  | 6 FT.   | IN  | 7 FT.   | IN  | 8 FT.   | IN  | 9 FT.   |
|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------|-----|---------|-----|---------|-----|---------|
| 0   | 789    | 0   | 13,128 | 0   | 27,877 | 0   | 42,866 | 0   | 57,890 | 0   | 72,921 | 0   | 87,953  | 0   | 102,985 | 0   | 118,017 | 0   | 133,042 |
| 1/4 | 950    | 1/4 | 13,420 | 1/4 | 28,191 | 1/4 | 43,178 | 1/4 | 58,203 | 1/4 | 73,235 | 1/4 | 88,266  | 1/4 | 103,298 | 1/4 | 118,330 | 1/4 | 133,355 |
| 1/2 | 1,111  | 1/2 | 13,711 | 1/2 | 28,504 | 1/2 | 43,490 | 1/2 | 58,516 | 1/2 | 73,548 | 1/2 | 88,579  | 1/2 | 103,611 | 1/2 | 118,643 | 1/2 | 133,668 |
| 3/4 | 1,272  | 3/4 | 14,003 | 3/4 | 28,817 | 3/4 | 43,802 | 3/4 | 58,829 | 3/4 | 73,861 | 3/4 | 88,893  | 3/4 | 103,924 | 3/4 | 118,956 | 3/4 | 133,981 |
| 1   | 1,432  | 1   | 14,295 | 1   | 29,130 | 1   | 44,114 | 1   | 59,142 | 1   | 74,174 | 1   | 89,206  | 1   | 104,237 | 1   | 119,269 | 1   | 134,294 |
| 1/4 | 1,652  | 1/4 | 14,591 | 1/4 | 29,443 | 1/4 | 44,426 | 1/4 | 59,456 | 1/4 | 74,487 | 1/4 | 89,519  | 1/4 | 104,551 | 1/4 | 119,582 | 1/4 | 134,607 |
| 1/2 | 1,872  | 1/2 | 14,887 | 1/2 | 29,756 | 1/2 | 44,739 | 1/2 | 59,769 | 1/2 | 74,800 | 1/2 | 89,832  | 1/2 | 104,864 | 1/2 | 119,895 | 1/2 | 134,920 |
| 3/4 | 2,091  | 3/4 | 15,182 | 3/4 | 30,070 | 3/4 | 45,051 | 3/4 | 60,082 | 3/4 | 75,114 | 3/4 | 90,145  | 3/4 | 105,177 | 3/4 | 120,209 | 3/4 | 135,233 |
| 2   | 2,311  | 2   | 15,478 | 2   | 30,383 | 2   | 45,363 | 2   | 60,395 | 2   | 75,427 | 2   | 90,458  | 2   | 105,490 | 2   | 120,522 | 2   | 135,546 |
| 1/4 | 2,563  | 1/4 | 15,778 | 1/4 | 30,696 | 1/4 | 45,676 | 1/4 | 60,708 | 1/4 | 75,740 | 1/4 | 90,772  | 1/4 | 105,803 | 1/4 | 120,835 | 1/4 | 135,859 |
| 1/2 | 2,814  | 1/2 | 16,077 | 1/2 | 31,009 | 1/2 | 45,990 | 1/2 | 61,021 | 1/2 | 76,053 | 1/2 | 91,085  | 1/2 | 106,116 | 1/2 | 121,148 | 1/2 | 136,172 |
| 3/4 | 3,066  | 3/4 | 16,377 | 3/4 | 31,322 | 3/4 | 46,303 | 3/4 | 61,335 | 3/4 | 76,366 | 3/4 | 91,398  | 3/4 | 106,430 | 3/4 | 121,461 | 3/4 | 136,485 |
| 3   | 3,318  | 3   | 16,677 | 3   | 31,635 | 3   | 46,616 | 3   | 61,648 | 3   | 76,679 | 3   | 91,711  | 3   | 106,743 | 3   | 121,774 | 3   | 136,798 |
| 1/4 | 3,575  | 1/4 | 16,980 | 1/4 | 31,948 | 1/4 | 46,929 | 1/4 | 61,961 | 1/4 | 76,993 | 1/4 | 92,024  | 1/4 | 107,056 | 1/4 | 122,087 | 1/4 | 137,111 |
| 1/2 | 3,832  | 1/2 | 17,284 | 1/2 | 32,261 | 1/2 | 47,242 | 1/2 | 62,274 | 1/2 | 77,306 | 1/2 | 92,337  | 1/2 | 107,369 | 1/2 | 122,400 | 1/2 | 137,424 |
| 3/4 | 4,088  | 3/4 | 17,587 | 3/4 | 32,574 | 3/4 | 47,555 | 3/4 | 62,587 | 3/4 | 77,619 | 3/4 | 92,651  | 3/4 | 107,682 | 3/4 | 122,713 | 3/4 | 137,737 |
| 4   | 4,345  | 4   | 17,891 | 4   | 32,887 | 4   | 47,869 | 4   | 62,900 | 4   | 77,932 | 4   | 92,964  | 4   | 107,995 | 4   | 123,026 | 4   | 138,050 |
| 1/4 | 4,606  | 1/4 | 18,198 | 1/4 | 33,198 | 1/4 | 48,182 | 1/4 | 63,213 | 1/4 | 78,245 | 1/4 | 93,277  | 1/4 | 108,309 | 1/4 | 123,339 | 1/4 | 138,363 |
| 1/2 | 4,867  | 1/2 | 18,505 | 1/2 | 33,510 | 1/2 | 48,495 | 1/2 | 63,527 | 1/2 | 78,558 | 1/2 | 93,590  | 1/2 | 108,622 | 1/2 | 123,652 | 1/2 | 138,676 |
| 3/4 | 5,128  | 3/4 | 18,813 | 3/4 | 33,822 | 3/4 | 48,808 | 3/4 | 63,840 | 3/4 | 78,871 | 3/4 | 93,903  | 3/4 | 108,935 | 3/4 | 123,965 | 3/4 | 138,989 |
| 5   | 5,389  | 5   | 19,120 | 5   | 34,134 | 5   | 49,121 | 5   | 64,153 | 5   | 79,185 | 5   | 94,216  | 5   | 109,248 | 5   | 124,278 | 5   | 139,302 |
| 1/4 | 5,653  | 1/4 | 19,431 | 1/4 | 34,446 | 1/4 | 49,434 | 1/4 | 64,466 | 1/4 | 79,498 | 1/4 | 94,530  | 1/4 | 109,561 | 1/4 | 124,591 | 1/4 | 139,615 |
| 1/2 | 5,918  | 1/2 | 19,742 | 1/2 | 34,758 | 1/2 | 49,748 | 1/2 | 64,779 | 1/2 | 79,811 | 1/2 | 94,843  | 1/2 | 109,874 | 1/2 | 124,904 | 1/2 | 139,928 |
| 3/4 | 6,183  | 3/4 | 20,052 | 3/4 | 35,069 | 3/4 | 50,061 | 3/4 | 65,092 | 3/4 | 80,124 | 3/4 | 95,156  | 3/4 | 110,188 | 3/4 | 125,217 | 3/4 | 140,241 |
| 6   | 6,448  | 6   | 20,363 | 6   | 35,381 | 6   | 50,374 | 6   | 65,406 | 6   | 80,437 | 6   | 95,469  | 6   | 110,501 | 6   | 125,530 | 6   | 140,554 |
| 1/4 | 6,716  | 1/4 | 20,676 | 1/4 | 35,693 | 1/4 | 50,687 | 1/4 | 65,719 | 1/4 | 80,750 | 1/4 | 95,782  | 1/4 | 110,814 | 1/4 | 125,843 | 1/4 | 140,867 |
| 1/2 | 6,985  | 1/2 | 20,989 | 1/2 | 36,005 | 1/2 | 51,000 | 1/2 | 66,032 | 1/2 | 81,064 | 1/2 | 96,095  | 1/2 | 111,127 | 1/2 | 126,156 | 1/2 | 141,180 |
| 3/4 | 7,254  | 3/4 | 21,302 | 3/4 | 36,317 | 3/4 | 51,313 | 3/4 | 66,345 | 3/4 | 81,377 | 3/4 | 96,408  | 3/4 | 111,440 | 3/4 | 126,469 | 3/4 | 141,493 |
| 7   | 7,522  | 7   | 21,614 | 7   | 36,629 | 7   | 51,627 | 7   | 66,658 | 7   | 81,690 | 7   | 96,722  | 7   | 111,753 | 7   | 126,782 | 7   | 141,806 |
| 1/4 | 7,795  | 1/4 | 21,928 | 1/4 | 36,941 | 1/4 | 51,940 | 1/4 | 66,971 | 1/4 | 82,003 | 1/4 | 97,035  | 1/4 | 112,066 | 1/4 | 127,095 | 1/4 | 142,119 |
| 1/2 | 8,067  | 1/2 | 22,241 | 1/2 | 37,252 | 1/2 | 52,253 | 1/2 | 67,285 | 1/2 | 82,316 | 1/2 | 97,348  | 1/2 | 112,380 | 1/2 | 127,408 | 1/2 | 142,432 |
| 3/4 | 8,340  | 3/4 | 22,554 | 3/4 | 37,564 | 3/4 | 52,566 | 3/4 | 67,598 | 3/4 | 82,629 | 3/4 | 97,661  | 3/4 | 112,693 | 3/4 | 127,721 | 3/4 | 142,745 |
| 8   | 8,613  | 8   | 22,867 | 8   | 37,876 | 8   | 52,879 | 8   | 67,911 | 8   | 82,943 | 8   | 97,974  | 8   | 113,006 | 8   | 128,034 | 8   | 143,058 |
| 1/4 | 8,889  | 1/4 | 23,180 | 1/4 | 38,188 | 1/4 | 53,192 | 1/4 | 68,224 | 1/4 | 83,256 | 1/4 | 98,287  | 1/4 | 113,319 | 1/4 | 128,347 | 1/4 | 143,371 |
| 1/2 | 9,165  | 1/2 | 23,493 | 1/2 | 38,500 | 1/2 | 53,506 | 1/2 | 68,537 | 1/2 | 83,569 | 1/2 | 98,601  | 1/2 | 113,632 | 1/2 | 128,660 | 1/2 | 143,684 |
| 3/4 | 9,442  | 3/4 | 23,807 | 3/4 | 38,812 | 3/4 | 53,819 | 3/4 | 68,850 | 3/4 | 83,882 | 3/4 | 98,914  | 3/4 | 113,945 | 3/4 | 128,973 | 3/4 | 143,997 |
| 9   | 9,718  | 9   | 24,120 | 9   | 39,123 | 9   | 54,132 | 9   | 69,164 | 9   | 84,195 | 9   | 99,227  | 9   | 114,259 | 9   | 129,286 | 9   | 144,310 |
| 1/4 | 9,998  | 1/4 | 24,433 | 1/4 | 39,435 | 1/4 | 54,445 | 1/4 | 69,477 | 1/4 | 84,508 | 1/4 | 99,540  | 1/4 | 114,572 | 1/4 | 129,599 | 1/4 | 144,623 |
| 1/2 | 10,279 | 1/2 | 24,746 | 1/2 | 39,747 | 1/2 | 54,758 | 1/2 | 69,790 | 1/2 | 84,822 | 1/2 | 99,853  | 1/2 | 114,885 | 1/2 | 129,912 | 1/2 | 144,936 |
| 3/4 | 10,559 | 3/4 | 25,059 | 3/4 | 40,059 | 3/4 | 55,071 | 3/4 | 70,103 | 3/4 | 85,135 | 3/4 | 100,166 | 3/4 | 115,198 | 3/4 | 130,225 | 3/4 | 145,249 |
| 10  | 10,839 | 10  | 25,372 | 10  | 40,371 | 10  | 55,384 | 10  | 70,416 | 10  | 85,448 | 10  | 100,480 | 10  | 115,511 | 10  | 130,538 | 10  | 145,562 |
| 1/4 | 11,123 | 1/4 | 25,685 | 1/4 | 40,683 | 1/4 | 55,698 | 1/4 | 70,729 | 1/4 | 85,761 | 1/4 | 100,793 | 1/4 | 115,824 | 1/4 | 130,851 | 1/4 | 145,875 |
| 1/2 | 11,407 | 1/2 | 25,999 | 1/2 | 40,994 | 1/2 | 56,011 | 1/2 | 71,042 | 1/2 | 86,074 | 1/2 | 101,106 | 1/2 | 116,138 | 1/2 | 131,164 | 1/2 | 146,188 |
| 3/4 | 11,692 | 3/4 | 26,312 | 3/4 | 41,306 | 3/4 | 56,324 | 3/4 | 71,356 | 3/4 | 86,387 | 3/4 | 101,419 | 3/4 | 116,451 | 3/4 | 131,477 | 3/4 | 146,501 |
| 11  | 11,976 | 11  | 26,625 | 11  | 41,618 | 11  | 56,637 | 11  | 71,669 | 11  | 86,701 | 11  | 101,732 | 11  | 116,764 | 11  | 131,790 | 11  | 146,814 |
| 1/4 | 12,264 | 1/4 | 26,938 | 1/4 | 41,930 | 1/4 | 56,950 | 1/4 | 71,982 | 1/4 | 87,014 | 1/4 | 102,045 | 1/4 | 117,077 | 1/4 | 132,103 | 1/4 | 147,127 |
| 1/2 | 12,552 | 1/2 | 27,251 | 1/2 | 42,242 | 1/2 | 57,263 | 1/2 | 72,295 | 1/2 | 87,327 | 1/2 | 102,359 | 1/2 | 117,390 | 1/2 | 132,416 | 1/2 | 147,440 |
| 3/4 | 12,840 | 3/4 | 27,564 | 3/4 | 42,554 | 3/4 | 57,577 | 3/4 | 72,608 | 3/4 | 87,640 | 3/4 | 102,672 | 3/4 | 117,703 | 3/4 | 132,729 | 3/4 | 147,753 |

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 INNAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE.

GAUGE POINT: (HERMETIC) LOCATED 12'-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 "CCL 403"

1 STBD  
INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 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   | 148,066 | 0   | 163,090 | 0   | 178,047 | 0   | 192,984 | 0   | 207,855 | 0   |        | 0   |        | 0   |        | 0   |        | 0   |        |
| 1/4 | 148,379 | 1/4 | 163,403 | 1/4 | 178,358 | 1/4 | 193,295 | 1/4 | 208,146 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 148,692 | 1/2 | 163,716 | 1/2 | 178,669 | 1/2 | 193,606 | 1/2 | 208,438 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 149,005 | 3/4 | 164,029 | 3/4 | 178,981 | 3/4 | 193,917 | 3/4 | 208,729 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 1   | 149,318 | 1   | 164,342 | 1   | 179,292 | 1   | 194,228 | 1   | 209,020 | 1   |        | 1   |        | 1   |        | 1   |        | 1   |        |
| 1/4 | 149,631 | 1/4 | 164,655 | 1/4 | 179,603 | 1/4 | 194,540 | 1/4 | 209,280 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 149,944 | 1/2 | 164,968 | 1/2 | 179,914 | 1/2 | 194,851 | 1/2 | 209,540 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 150,257 | 3/4 | 165,281 | 3/4 | 180,225 | 3/4 | 195,162 | 3/4 | 209,799 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 2   | 150,570 | 2   | 165,594 | 2   | 180,537 | 2   | 195,473 | 2   | 210,059 | 2   |        | 2   |        | 2   |        | 2   |        | 2   |        |
| 1/4 | 150,883 | 1/4 | 165,907 | 1/4 | 180,848 | 1/4 | 195,784 | 1/4 | 210,266 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 151,196 | 1/2 | 166,219 | 1/2 | 181,159 | 1/2 | 196,096 | 1/2 | 210,474 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 151,509 | 3/4 | 166,532 | 3/4 | 181,470 | 3/4 | 196,407 | 3/4 | 210,682 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 3   | 151,822 | 3   | 166,845 | 3   | 181,781 | 3   | 196,718 | 3   | 210,889 | 3   |        | 3   |        | 3   |        | 3   |        | 3   |        |
| 1/4 | 152,135 | 1/4 | 167,156 | 1/4 | 182,092 | 1/4 | 197,029 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 152,448 | 1/2 | 167,467 | 1/2 | 182,404 | 1/2 | 197,340 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 152,761 | 3/4 | 167,778 | 3/4 | 182,715 | 3/4 | 197,651 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 4   | 153,074 | 4   | 168,089 | 4   | 183,026 | 4   | 197,963 | 4   |         | 4   |        | 4   |        | 4   |        | 4   |        | 4   |        |
| 1/4 | 153,387 | 1/4 | 168,400 | 1/4 | 183,337 | 1/4 | 198,274 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 153,700 | 1/2 | 168,712 | 1/2 | 183,648 | 1/2 | 198,585 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 154,013 | 3/4 | 169,023 | 3/4 | 183,959 | 3/4 | 198,896 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 5   | 154,326 | 5   | 169,334 | 5   | 184,271 | 5   | 199,207 | 5   |         | 5   |        | 5   |        | 5   |        | 5   |        | 5   |        |
| 1/4 | 154,639 | 1/4 | 169,645 | 1/4 | 184,582 | 1/4 | 199,518 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 154,952 | 1/2 | 169,956 | 1/2 | 184,893 | 1/2 | 199,830 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 155,265 | 3/4 | 170,268 | 3/4 | 185,204 | 3/4 | 200,141 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 6   | 155,578 | 6   | 170,579 | 6   | 185,515 | 6   | 200,452 | 6   |         | 6   |        | 6   |        | 6   |        | 6   |        | 6   |        |
| 1/4 | 155,891 | 1/4 | 170,890 | 1/4 | 185,827 | 1/4 | 200,763 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 156,204 | 1/2 | 171,201 | 1/2 | 186,138 | 1/2 | 201,074 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 156,517 | 3/4 | 171,512 | 3/4 | 186,449 | 3/4 | 201,386 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 7   | 156,830 | 7   | 171,823 | 7   | 186,760 | 7   | 201,697 | 7   |         | 7   |        | 7   |        | 7   |        | 7   |        | 7   |        |
| 1/4 | 157,143 | 1/4 | 172,135 | 1/4 | 187,071 | 1/4 | 202,008 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 157,456 | 1/2 | 172,446 | 1/2 | 187,382 | 1/2 | 202,319 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 157,769 | 3/4 | 172,757 | 3/4 | 187,694 | 3/4 | 202,630 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 8   | 158,082 | 8   | 173,068 | 8   | 188,005 | 8   | 202,941 | 8   |         | 8   |        | 8   |        | 8   |        | 8   |        | 8   |        |
| 1/4 | 158,395 | 1/4 | 173,379 | 1/4 | 188,316 | 1/4 | 203,253 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 158,708 | 1/2 | 173,691 | 1/2 | 188,627 | 1/2 | 203,564 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 159,021 | 3/4 | 174,002 | 3/4 | 188,938 | 3/4 | 203,875 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 9   | 159,334 | 9   | 174,313 | 9   | 189,250 | 9   | 204,186 | 9   |         | 9   |        | 9   |        | 9   |        | 9   |        | 9   |        |
| 1/4 | 159,647 | 1/4 | 174,624 | 1/4 | 189,561 | 1/4 | 204,497 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 159,960 | 1/2 | 174,935 | 1/2 | 189,872 | 1/2 | 204,808 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 160,273 | 3/4 | 175,246 | 3/4 | 190,183 | 3/4 | 205,120 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 10  | 160,586 | 10  | 175,558 | 10  | 190,494 | 10  | 205,431 | 10  |         | 10  |        | 10  |        | 10  |        | 10  |        | 10  |        |
| 1/4 | 160,899 | 1/4 | 175,869 | 1/4 | 190,805 | 1/4 | 205,739 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 161,212 | 1/2 | 176,180 | 1/2 | 191,117 | 1/2 | 206,047 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 161,525 | 3/4 | 176,491 | 3/4 | 191,428 | 3/4 | 206,354 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 11  | 161,838 | 11  | 176,802 | 11  | 191,739 | 11  | 206,662 | 11  |         | 11  |        | 11  |        | 11  |        | 11  |        | 11  |        |
| 1/4 | 162,151 | 1/4 | 177,114 | 1/4 | 192,050 | 1/4 | 206,961 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 162,464 | 1/2 | 177,425 | 1/2 | 192,361 | 1/2 | 207,259 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 162,777 | 3/4 | 177,736 | 3/4 | 192,673 | 3/4 | 207,557 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 01/13/2011 CL - SW  
CALCULATED: 01/14/2011 CL  
PRINTED: 01/14/2011 CL

CANCELS AND SUPERCEDES  
ALL PRIOR TO 01/2011

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





# BARGE "CCL 403"

## 2 PORT INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 3/4"

| IN  | 0 FT.  | IN  | 1 FT.  | IN  | 2 FT.  | IN  | 3 FT.  | IN  | 4 FT.  | IN  | 5 FT.  | IN  | 6 FT.   | IN  | 7 FT.   | IN  | 8 FT.   | IN  | 9 FT.   |
|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------|-----|---------|-----|---------|-----|---------|
| 0   | 842    | 0   | 15,394 | 0   | 30,466 | 0   | 45,114 | 0   | 60,002 | 0   | 75,074 | 0   | 90,146  | 0   | 105,217 | 0   | 120,289 | 0   | 135,355 |
| 1/4 | 1,057  | 1/4 | 15,708 | 1/4 | 30,780 | 1/4 | 45,415 | 1/4 | 60,316 | 1/4 | 75,388 | 1/4 | 90,460  | 1/4 | 105,531 | 1/4 | 120,603 | 1/4 | 135,668 |
| 1/2 | 1,273  | 1/2 | 16,022 | 1/2 | 31,094 | 1/2 | 45,716 | 1/2 | 60,630 | 1/2 | 75,702 | 1/2 | 90,773  | 1/2 | 105,845 | 1/2 | 120,917 | 1/2 | 135,982 |
| 3/4 | 1,489  | 3/4 | 16,336 | 3/4 | 31,408 | 3/4 | 46,018 | 3/4 | 60,944 | 3/4 | 76,016 | 3/4 | 91,087  | 3/4 | 106,159 | 3/4 | 121,231 | 3/4 | 136,296 |
| 1   | 1,705  | 1   | 16,650 | 1   | 31,722 | 1   | 46,319 | 1   | 61,258 | 1   | 76,330 | 1   | 91,401  | 1   | 106,473 | 1   | 121,545 | 1   | 136,610 |
| 1/4 | 1,989  | 1/4 | 16,964 | 1/4 | 32,036 | 1/4 | 46,621 | 1/4 | 61,572 | 1/4 | 76,644 | 1/4 | 91,715  | 1/4 | 106,787 | 1/4 | 121,859 | 1/4 | 136,924 |
| 1/2 | 2,273  | 1/2 | 17,278 | 1/2 | 32,350 | 1/2 | 46,922 | 1/2 | 61,886 | 1/2 | 76,958 | 1/2 | 92,029  | 1/2 | 107,101 | 1/2 | 122,173 | 1/2 | 137,238 |
| 3/4 | 2,557  | 3/4 | 17,592 | 3/4 | 32,664 | 3/4 | 47,224 | 3/4 | 62,200 | 3/4 | 77,272 | 3/4 | 92,343  | 3/4 | 107,415 | 3/4 | 122,487 | 3/4 | 137,551 |
| 2   | 2,841  | 2   | 17,906 | 2   | 32,978 | 2   | 47,525 | 2   | 62,514 | 2   | 77,586 | 2   | 92,657  | 2   | 107,729 | 2   | 122,801 | 2   | 137,865 |
| 1/4 | 3,154  | 1/4 | 18,220 | 1/4 | 33,292 | 1/4 | 47,827 | 1/4 | 62,828 | 1/4 | 77,900 | 1/4 | 92,971  | 1/4 | 108,043 | 1/4 | 123,115 | 1/4 | 138,179 |
| 1/2 | 3,467  | 1/2 | 18,534 | 1/2 | 33,606 | 1/2 | 48,129 | 1/2 | 63,142 | 1/2 | 78,214 | 1/2 | 93,285  | 1/2 | 108,357 | 1/2 | 123,429 | 1/2 | 138,493 |
| 3/4 | 3,780  | 3/4 | 18,848 | 3/4 | 33,920 | 3/4 | 48,432 | 3/4 | 63,456 | 3/4 | 78,528 | 3/4 | 93,599  | 3/4 | 108,671 | 3/4 | 123,742 | 3/4 | 138,807 |
| 3   | 4,092  | 3   | 19,162 | 3   | 34,234 | 3   | 48,734 | 3   | 63,770 | 3   | 78,842 | 3   | 93,913  | 3   | 108,985 | 3   | 124,056 | 3   | 139,121 |
| 1/4 | 4,406  | 1/4 | 19,476 | 1/4 | 34,544 | 1/4 | 49,039 | 1/4 | 64,084 | 1/4 | 79,156 | 1/4 | 94,227  | 1/4 | 109,299 | 1/4 | 124,370 | 1/4 | 139,435 |
| 1/2 | 4,720  | 1/2 | 19,790 | 1/2 | 34,855 | 1/2 | 49,344 | 1/2 | 64,398 | 1/2 | 79,470 | 1/2 | 94,541  | 1/2 | 109,613 | 1/2 | 124,684 | 1/2 | 139,748 |
| 3/4 | 5,033  | 3/4 | 20,104 | 3/4 | 35,166 | 3/4 | 49,649 | 3/4 | 64,712 | 3/4 | 79,784 | 3/4 | 94,855  | 3/4 | 109,927 | 3/4 | 124,998 | 3/4 | 140,062 |
| 4   | 5,347  | 4   | 20,418 | 4   | 35,477 | 4   | 49,954 | 4   | 65,026 | 4   | 80,098 | 4   | 95,169  | 4   | 110,241 | 4   | 125,312 | 4   | 140,376 |
| 1/4 | 5,661  | 1/4 | 20,732 | 1/4 | 35,778 | 1/4 | 50,268 | 1/4 | 65,340 | 1/4 | 80,412 | 1/4 | 95,483  | 1/4 | 110,555 | 1/4 | 125,626 | 1/4 | 140,690 |
| 1/2 | 5,975  | 1/2 | 21,046 | 1/2 | 36,079 | 1/2 | 50,582 | 1/2 | 65,654 | 1/2 | 80,726 | 1/2 | 95,797  | 1/2 | 110,869 | 1/2 | 125,939 | 1/2 | 141,004 |
| 3/4 | 6,289  | 3/4 | 21,360 | 3/4 | 36,380 | 3/4 | 50,896 | 3/4 | 65,968 | 3/4 | 81,040 | 3/4 | 96,111  | 3/4 | 111,183 | 3/4 | 126,253 | 3/4 | 141,318 |
| 5   | 6,603  | 5   | 21,674 | 5   | 36,681 | 5   | 51,210 | 5   | 66,282 | 5   | 81,354 | 5   | 96,425  | 5   | 111,497 | 5   | 126,567 | 5   | 141,631 |
| 1/4 | 6,917  | 1/4 | 21,988 | 1/4 | 36,982 | 1/4 | 51,524 | 1/4 | 66,596 | 1/4 | 81,668 | 1/4 | 96,739  | 1/4 | 111,811 | 1/4 | 126,881 | 1/4 | 141,945 |
| 1/2 | 7,231  | 1/2 | 22,302 | 1/2 | 37,283 | 1/2 | 51,838 | 1/2 | 66,910 | 1/2 | 81,982 | 1/2 | 97,053  | 1/2 | 112,125 | 1/2 | 127,195 | 1/2 | 142,259 |
| 3/4 | 7,545  | 3/4 | 22,616 | 3/4 | 37,585 | 3/4 | 52,152 | 3/4 | 67,224 | 3/4 | 82,296 | 3/4 | 97,367  | 3/4 | 112,439 | 3/4 | 127,509 | 3/4 | 142,573 |
| 6   | 7,859  | 6   | 22,930 | 6   | 37,886 | 6   | 52,466 | 6   | 67,538 | 6   | 82,610 | 6   | 97,681  | 6   | 112,753 | 6   | 127,822 | 6   | 142,887 |
| 1/4 | 8,173  | 1/4 | 23,244 | 1/4 | 38,187 | 1/4 | 52,780 | 1/4 | 67,852 | 1/4 | 82,924 | 1/4 | 97,995  | 1/4 | 113,067 | 1/4 | 128,136 | 1/4 | 143,201 |
| 1/2 | 8,487  | 1/2 | 23,558 | 1/2 | 38,488 | 1/2 | 53,094 | 1/2 | 68,166 | 1/2 | 83,238 | 1/2 | 98,309  | 1/2 | 113,381 | 1/2 | 128,450 | 1/2 | 143,514 |
| 3/4 | 8,801  | 3/4 | 23,872 | 3/4 | 38,789 | 3/4 | 53,408 | 3/4 | 68,480 | 3/4 | 83,552 | 3/4 | 98,623  | 3/4 | 113,695 | 3/4 | 128,764 | 3/4 | 143,828 |
| 7   | 9,115  | 7   | 24,186 | 7   | 39,090 | 7   | 53,722 | 7   | 68,794 | 7   | 83,866 | 7   | 98,937  | 7   | 114,009 | 7   | 129,078 | 7   | 144,142 |
| 1/4 | 9,429  | 1/4 | 24,500 | 1/4 | 39,392 | 1/4 | 54,036 | 1/4 | 69,108 | 1/4 | 84,180 | 1/4 | 99,251  | 1/4 | 114,323 | 1/4 | 129,392 | 1/4 | 144,456 |
| 1/2 | 9,743  | 1/2 | 24,814 | 1/2 | 39,693 | 1/2 | 54,350 | 1/2 | 69,422 | 1/2 | 84,494 | 1/2 | 99,565  | 1/2 | 114,637 | 1/2 | 129,705 | 1/2 | 144,770 |
| 3/4 | 10,057 | 3/4 | 25,128 | 3/4 | 39,994 | 3/4 | 54,664 | 3/4 | 69,736 | 3/4 | 84,808 | 3/4 | 99,879  | 3/4 | 114,951 | 3/4 | 130,019 | 3/4 | 145,084 |
| 8   | 10,371 | 8   | 25,442 | 8   | 40,295 | 8   | 54,978 | 8   | 70,050 | 8   | 85,122 | 8   | 100,193 | 8   | 115,265 | 8   | 130,333 | 8   | 145,397 |
| 1/4 | 10,684 | 1/4 | 25,756 | 1/4 | 40,596 | 1/4 | 55,292 | 1/4 | 70,364 | 1/4 | 85,436 | 1/4 | 100,507 | 1/4 | 115,579 | 1/4 | 130,647 | 1/4 | 145,711 |
| 1/2 | 10,998 | 1/2 | 26,070 | 1/2 | 40,897 | 1/2 | 55,606 | 1/2 | 70,678 | 1/2 | 85,750 | 1/2 | 100,821 | 1/2 | 115,893 | 1/2 | 130,961 | 1/2 | 146,025 |
| 3/4 | 11,312 | 3/4 | 26,384 | 3/4 | 41,198 | 3/4 | 55,920 | 3/4 | 70,992 | 3/4 | 86,064 | 3/4 | 101,135 | 3/4 | 116,207 | 3/4 | 131,275 | 3/4 | 146,339 |
| 9   | 11,626 | 9   | 26,698 | 9   | 41,500 | 9   | 56,234 | 9   | 71,306 | 9   | 86,378 | 9   | 101,449 | 9   | 116,521 | 9   | 131,588 | 9   | 146,653 |
| 1/4 | 11,940 | 1/4 | 27,012 | 1/4 | 41,801 | 1/4 | 56,548 | 1/4 | 71,620 | 1/4 | 86,692 | 1/4 | 101,763 | 1/4 | 116,835 | 1/4 | 131,902 | 1/4 | 146,967 |
| 1/2 | 12,254 | 1/2 | 27,326 | 1/2 | 42,102 | 1/2 | 56,862 | 1/2 | 71,934 | 1/2 | 87,006 | 1/2 | 102,077 | 1/2 | 117,149 | 1/2 | 132,216 | 1/2 | 147,281 |
| 3/4 | 12,568 | 3/4 | 27,640 | 3/4 | 42,403 | 3/4 | 57,176 | 3/4 | 72,248 | 3/4 | 87,320 | 3/4 | 102,391 | 3/4 | 117,463 | 3/4 | 132,530 | 3/4 | 147,594 |
| 10  | 12,882 | 10  | 27,954 | 10  | 42,704 | 10  | 57,490 | 10  | 72,562 | 10  | 87,634 | 10  | 102,705 | 10  | 117,777 | 10  | 132,844 | 10  | 147,908 |
| 1/4 | 13,196 | 1/4 | 28,268 | 1/4 | 43,005 | 1/4 | 57,804 | 1/4 | 72,876 | 1/4 | 87,948 | 1/4 | 103,019 | 1/4 | 118,091 | 1/4 | 133,158 | 1/4 | 148,222 |
| 1/2 | 13,510 | 1/2 | 28,582 | 1/2 | 43,306 | 1/2 | 58,118 | 1/2 | 73,190 | 1/2 | 88,262 | 1/2 | 103,333 | 1/2 | 118,405 | 1/2 | 133,472 | 1/2 | 148,536 |
| 3/4 | 13,824 | 3/4 | 28,896 | 3/4 | 43,608 | 3/4 | 58,432 | 3/4 | 73,504 | 3/4 | 88,576 | 3/4 | 103,647 | 3/4 | 118,719 | 3/4 | 133,785 | 3/4 | 148,850 |
| 11  | 14,138 | 11  | 29,210 | 11  | 43,909 | 11  | 58,746 | 11  | 73,818 | 11  | 88,890 | 11  | 103,961 | 11  | 119,033 | 11  | 134,099 | 11  | 149,164 |
| 1/4 | 14,452 | 1/4 | 29,524 | 1/4 | 44,210 | 1/4 | 59,060 | 1/4 | 74,132 | 1/4 | 89,204 | 1/4 | 104,275 | 1/4 | 119,347 | 1/4 | 134,413 | 1/4 | 149,477 |
| 1/2 | 14,766 | 1/2 | 29,838 | 1/2 | 44,511 | 1/2 | 59,374 | 1/2 | 74,446 | 1/2 | 89,518 | 1/2 | 104,589 | 1/2 | 119,661 | 1/2 | 134,727 | 1/2 | 149,791 |
| 3/4 | 15,080 | 3/4 | 30,152 | 3/4 | 44,812 | 3/4 | 59,688 | 3/4 | 74,760 | 3/4 | 89,832 | 3/4 | 104,903 | 3/4 | 119,975 | 3/4 | 135,041 | 3/4 | 150,105 |

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 INNAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE.

GAUGE POINT: (HERMETIC) LOCATED 12'-09" OFF CENTERLINE AND 43'-00" FORWARD OF AFT BULKHEAD.

PRECISION MEASUREMENT  
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588

<http://www.pmacorp.net>





# BARGE "CCL 403"

## 2 PORT INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 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   | 150,419 | 0   | 165,483 | 0   | 180,480 | 0   | 195,457 | 0   | 210,369 | 0   |        | 0   |        | 0  |        | 0   |        | 0   |        |
| 1/4 | 150,733 | 1/4 | 165,797 | 1/4 | 180,792 | 1/4 | 195,769 | 1/4 | 210,661 | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 151,047 | 1/2 | 166,111 | 1/2 | 181,104 | 1/2 | 196,081 | 1/2 | 210,953 | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 151,360 | 3/4 | 166,425 | 3/4 | 181,416 | 3/4 | 196,393 | 3/4 | 211,245 | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 1   | 151,674 | 1   | 166,739 | 1   | 181,728 | 1   | 196,705 | 1   | 211,537 | 1   |        | 1   | 1      |    | 1      | 1   |        | 1   |        |
| 1/4 | 151,988 | 1/4 | 167,053 | 1/4 | 182,040 | 1/4 | 197,017 | 1/4 | 211,797 | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 152,302 | 1/2 | 167,366 | 1/2 | 182,352 | 1/2 | 197,329 | 1/2 | 212,058 | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 152,616 | 3/4 | 167,680 | 3/4 | 182,664 | 3/4 | 197,641 | 3/4 | 212,318 | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 2   | 152,930 | 2   | 167,994 | 2   | 182,976 | 2   | 197,953 | 2   | 212,579 | 2   |        | 2   | 2      |    | 2      | 2   |        | 2   |        |
| 1/4 | 153,244 | 1/4 | 168,307 | 1/4 | 183,288 | 1/4 | 198,265 | 1/4 | 212,787 | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 153,557 | 1/2 | 168,621 | 1/2 | 183,600 | 1/2 | 198,577 | 1/2 | 212,995 | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 153,871 | 3/4 | 168,934 | 3/4 | 183,912 | 3/4 | 198,889 | 3/4 | 213,203 | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 3   | 154,185 | 3   | 169,248 | 3   | 184,224 | 3   | 199,201 | 3   | 213,411 | 3   |        | 3   | 3      |    | 3      | 3   |        | 3   |        |
| 1/4 | 154,499 | 1/4 | 169,560 | 1/4 | 184,536 | 1/4 | 199,513 | 1/4 |         | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 154,813 | 1/2 | 169,872 | 1/2 | 184,848 | 1/2 | 199,825 | 1/2 |         | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 155,127 | 3/4 | 170,184 | 3/4 | 185,160 | 3/4 | 200,137 | 3/4 |         | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 4   | 155,440 | 4   | 170,496 | 4   | 185,472 | 4   | 200,449 | 4   |         | 4   |        | 4   | 4      |    | 4      | 4   |        | 4   |        |
| 1/4 | 155,754 | 1/4 | 170,808 | 1/4 | 185,784 | 1/4 | 200,761 | 1/4 |         | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 156,068 | 1/2 | 171,120 | 1/2 | 186,096 | 1/2 | 201,073 | 1/2 |         | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 156,382 | 3/4 | 171,432 | 3/4 | 186,408 | 3/4 | 201,385 | 3/4 |         | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 5   | 156,696 | 5   | 171,744 | 5   | 186,720 | 5   | 201,697 | 5   |         | 5   |        | 5   | 5      |    | 5      | 5   |        | 5   |        |
| 1/4 | 157,010 | 1/4 | 172,056 | 1/4 | 187,032 | 1/4 | 202,009 | 1/4 |         | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 157,323 | 1/2 | 172,368 | 1/2 | 187,344 | 1/2 | 202,321 | 1/2 |         | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 157,637 | 3/4 | 172,680 | 3/4 | 187,657 | 3/4 | 202,633 | 3/4 |         | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 6   | 157,951 | 6   | 172,992 | 6   | 187,969 | 6   | 202,945 | 6   |         | 6   |        | 6   | 6      |    | 6      | 6   |        | 6   |        |
| 1/4 | 158,265 | 1/4 | 173,304 | 1/4 | 188,281 | 1/4 | 203,257 | 1/4 |         | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 158,579 | 1/2 | 173,616 | 1/2 | 188,593 | 1/2 | 203,569 | 1/2 |         | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 158,893 | 3/4 | 173,928 | 3/4 | 188,905 | 3/4 | 203,881 | 3/4 |         | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 7   | 159,206 | 7   | 174,240 | 7   | 189,217 | 7   | 204,193 | 7   |         | 7   |        | 7   | 7      |    | 7      | 7   |        | 7   |        |
| 1/4 | 159,520 | 1/4 | 174,552 | 1/4 | 189,529 | 1/4 | 204,505 | 1/4 |         | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 159,834 | 1/2 | 174,864 | 1/2 | 189,841 | 1/2 | 204,817 | 1/2 |         | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 160,148 | 3/4 | 175,176 | 3/4 | 190,153 | 3/4 | 205,129 | 3/4 |         | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 8   | 160,462 | 8   | 175,488 | 8   | 190,465 | 8   | 205,441 | 8   |         | 8   |        | 8   | 8      |    | 8      | 8   |        | 8   |        |
| 1/4 | 160,776 | 1/4 | 175,800 | 1/4 | 190,777 | 1/4 | 205,753 | 1/4 |         | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 161,090 | 1/2 | 176,112 | 1/2 | 191,089 | 1/2 | 206,065 | 1/2 |         | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 161,403 | 3/4 | 176,424 | 3/4 | 191,401 | 3/4 | 206,377 | 3/4 |         | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 9   | 161,717 | 9   | 176,736 | 9   | 191,713 | 9   | 206,689 | 9   |         | 9   |        | 9   | 9      |    | 9      | 9   |        | 9   |        |
| 1/4 | 162,031 | 1/4 | 177,048 | 1/4 | 192,025 | 1/4 | 207,001 | 1/4 |         | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 162,345 | 1/2 | 177,360 | 1/2 | 192,337 | 1/2 | 207,313 | 1/2 |         | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 162,659 | 3/4 | 177,672 | 3/4 | 192,649 | 3/4 | 207,625 | 3/4 |         | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 10  | 162,973 | 10  | 177,984 | 10  | 192,961 | 10  | 207,937 | 10  |         | 10  |        | 10  | 10     |    | 10     | 10  |        | 10  |        |
| 1/4 | 163,286 | 1/4 | 178,296 | 1/4 | 193,273 | 1/4 | 208,246 | 1/4 |         | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 163,600 | 1/2 | 178,608 | 1/2 | 193,585 | 1/2 | 208,555 | 1/2 |         | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 163,914 | 3/4 | 178,920 | 3/4 | 193,897 | 3/4 | 208,864 | 3/4 |         | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |
| 11  | 164,228 | 11  | 179,232 | 11  | 194,209 | 11  | 209,173 | 11  |         | 11  |        | 11  | 11     |    | 11     | 11  |        | 11  |        |
| 1/4 | 164,542 | 1/4 | 179,544 | 1/4 | 194,521 | 1/4 | 209,472 | 1/4 |         | 1/4 |        | 1/4 | 1/4    |    | 1/4    | 1/4 |        | 1/4 |        |
| 1/2 | 164,856 | 1/2 | 179,856 | 1/2 | 194,833 | 1/2 | 209,771 | 1/2 |         | 1/2 |        | 1/2 | 1/2    |    | 1/2    | 1/2 |        | 1/2 |        |
| 3/4 | 165,169 | 3/4 | 180,168 | 3/4 | 195,145 | 3/4 | 210,070 | 3/4 |         | 3/4 |        | 3/4 | 3/4    |    | 3/4    | 3/4 |        | 3/4 |        |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 01/13/2011 CL - SW  
CALCULATED: 01/14/2011 CL  
PRINTED: 01/14/2011 CL

CANCELS AND SUPERCEDES  
ALL PRIOR TO 01/2011

PRECISION MEASUREMENT  
& ANALYSIS, INC.  
P.O. Box 2092  
Pearland, Texas 77588  
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# BARGE "CCL 403"

## 2 STBD INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 3/4"

| IN  | 0 FT.  | IN  | 1 FT.  | IN  | 2 FT.  | IN  | 3 FT.  | IN  | 4 FT.  | IN  | 5 FT.  | IN  | 6 FT.   | IN  | 7 FT.   | IN  | 8 FT.   | IN  | 9 FT.   |
|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------|-----|---------|-----|---------|-----|---------|
| 0   | 842    | 0   | 15,394 | 0   | 30,466 | 0   | 45,494 | 0   | 60,558 | 0   | 75,630 | 0   | 90,702  | 0   | 105,774 | 0   | 120,845 | 0   | 135,911 |
| 1/4 | 1,057  | 1/4 | 15,708 | 1/4 | 30,780 | 1/4 | 45,807 | 1/4 | 60,872 | 1/4 | 75,944 | 1/4 | 91,016  | 1/4 | 106,088 | 1/4 | 121,159 | 1/4 | 136,225 |
| 1/2 | 1,273  | 1/2 | 16,022 | 1/2 | 31,094 | 1/2 | 46,120 | 1/2 | 61,186 | 1/2 | 76,258 | 1/2 | 91,330  | 1/2 | 106,402 | 1/2 | 121,473 | 1/2 | 136,539 |
| 3/4 | 1,489  | 3/4 | 16,336 | 3/4 | 31,408 | 3/4 | 46,433 | 3/4 | 61,500 | 3/4 | 76,572 | 3/4 | 91,644  | 3/4 | 106,716 | 3/4 | 121,787 | 3/4 | 136,852 |
| 1   | 1,705  | 1   | 16,650 | 1   | 31,722 | 1   | 46,746 | 1   | 61,814 | 1   | 76,886 | 1   | 91,958  | 1   | 107,030 | 1   | 122,101 | 1   | 137,166 |
| 1/4 | 1,989  | 1/4 | 16,964 | 1/4 | 32,036 | 1/4 | 47,059 | 1/4 | 62,128 | 1/4 | 77,200 | 1/4 | 92,272  | 1/4 | 107,344 | 1/4 | 122,415 | 1/4 | 137,480 |
| 1/2 | 2,273  | 1/2 | 17,278 | 1/2 | 32,350 | 1/2 | 47,372 | 1/2 | 62,442 | 1/2 | 77,514 | 1/2 | 92,586  | 1/2 | 107,658 | 1/2 | 122,729 | 1/2 | 137,794 |
| 3/4 | 2,557  | 3/4 | 17,592 | 3/4 | 32,664 | 3/4 | 47,685 | 3/4 | 62,756 | 3/4 | 77,828 | 3/4 | 92,900  | 3/4 | 107,972 | 3/4 | 123,043 | 3/4 | 138,108 |
| 2   | 2,841  | 2   | 17,906 | 2   | 32,978 | 2   | 47,998 | 2   | 63,070 | 2   | 78,142 | 2   | 93,214  | 2   | 108,286 | 2   | 123,357 | 2   | 138,422 |
| 1/4 | 3,154  | 1/4 | 18,220 | 1/4 | 33,292 | 1/4 | 48,312 | 1/4 | 63,384 | 1/4 | 78,456 | 1/4 | 93,528  | 1/4 | 108,600 | 1/4 | 123,671 | 1/4 | 138,735 |
| 1/2 | 3,467  | 1/2 | 18,534 | 1/2 | 33,606 | 1/2 | 48,626 | 1/2 | 63,698 | 1/2 | 78,770 | 1/2 | 93,842  | 1/2 | 108,914 | 1/2 | 123,985 | 1/2 | 139,049 |
| 3/4 | 3,780  | 3/4 | 18,848 | 3/4 | 33,920 | 3/4 | 48,940 | 3/4 | 64,012 | 3/4 | 79,084 | 3/4 | 94,156  | 3/4 | 109,228 | 3/4 | 124,299 | 3/4 | 139,363 |
| 3   | 4,092  | 3   | 19,162 | 3   | 34,234 | 3   | 49,254 | 3   | 64,326 | 3   | 79,398 | 3   | 94,470  | 3   | 109,542 | 3   | 124,613 | 3   | 139,677 |
| 1/4 | 4,406  | 1/4 | 19,476 | 1/4 | 34,547 | 1/4 | 49,568 | 1/4 | 64,640 | 1/4 | 79,712 | 1/4 | 94,784  | 1/4 | 109,856 | 1/4 | 124,926 | 1/4 | 139,991 |
| 1/2 | 4,720  | 1/2 | 19,790 | 1/2 | 34,861 | 1/2 | 49,882 | 1/2 | 64,954 | 1/2 | 80,026 | 1/2 | 95,098  | 1/2 | 110,170 | 1/2 | 125,240 | 1/2 | 140,305 |
| 3/4 | 5,033  | 3/4 | 20,104 | 3/4 | 35,174 | 3/4 | 50,196 | 3/4 | 65,268 | 3/4 | 80,340 | 3/4 | 95,412  | 3/4 | 110,484 | 3/4 | 125,554 | 3/4 | 140,618 |
| 4   | 5,347  | 4   | 20,418 | 4   | 35,488 | 4   | 50,510 | 4   | 65,582 | 4   | 80,654 | 4   | 95,726  | 4   | 110,798 | 4   | 125,868 | 4   | 140,932 |
| 1/4 | 5,661  | 1/4 | 20,732 | 1/4 | 35,801 | 1/4 | 50,824 | 1/4 | 65,896 | 1/4 | 80,968 | 1/4 | 96,040  | 1/4 | 111,112 | 1/4 | 126,182 | 1/4 | 141,246 |
| 1/2 | 5,975  | 1/2 | 21,046 | 1/2 | 36,113 | 1/2 | 51,138 | 1/2 | 66,210 | 1/2 | 81,282 | 1/2 | 96,354  | 1/2 | 111,426 | 1/2 | 126,496 | 1/2 | 141,560 |
| 3/4 | 6,289  | 3/4 | 21,360 | 3/4 | 36,426 | 3/4 | 51,452 | 3/4 | 66,524 | 3/4 | 81,596 | 3/4 | 96,668  | 3/4 | 111,740 | 3/4 | 126,809 | 3/4 | 141,874 |
| 5   | 6,603  | 5   | 21,674 | 5   | 36,739 | 5   | 51,766 | 5   | 66,838 | 5   | 81,910 | 5   | 96,982  | 5   | 112,054 | 5   | 127,123 | 5   | 142,188 |
| 1/4 | 6,917  | 1/4 | 21,988 | 1/4 | 37,052 | 1/4 | 52,080 | 1/4 | 67,152 | 1/4 | 82,224 | 1/4 | 97,296  | 1/4 | 112,368 | 1/4 | 127,437 | 1/4 | 142,502 |
| 1/2 | 7,231  | 1/2 | 22,302 | 1/2 | 37,364 | 1/2 | 52,394 | 1/2 | 67,466 | 1/2 | 82,538 | 1/2 | 97,610  | 1/2 | 112,682 | 1/2 | 127,751 | 1/2 | 142,815 |
| 3/4 | 7,545  | 3/4 | 22,616 | 3/4 | 37,677 | 3/4 | 52,708 | 3/4 | 67,780 | 3/4 | 82,852 | 3/4 | 97,924  | 3/4 | 112,996 | 3/4 | 128,065 | 3/4 | 143,129 |
| 6   | 7,859  | 6   | 22,930 | 6   | 37,990 | 6   | 53,022 | 6   | 68,094 | 6   | 83,166 | 6   | 98,238  | 6   | 113,310 | 6   | 128,379 | 6   | 143,443 |
| 1/4 | 8,173  | 1/4 | 23,244 | 1/4 | 38,302 | 1/4 | 53,336 | 1/4 | 68,408 | 1/4 | 83,480 | 1/4 | 98,552  | 1/4 | 113,624 | 1/4 | 128,693 | 1/4 | 143,757 |
| 1/2 | 8,487  | 1/2 | 23,558 | 1/2 | 38,615 | 1/2 | 53,650 | 1/2 | 68,722 | 1/2 | 83,794 | 1/2 | 98,866  | 1/2 | 113,937 | 1/2 | 129,006 | 1/2 | 144,071 |
| 3/4 | 8,801  | 3/4 | 23,872 | 3/4 | 38,928 | 3/4 | 53,964 | 3/4 | 69,036 | 3/4 | 84,108 | 3/4 | 99,180  | 3/4 | 114,251 | 3/4 | 129,320 | 3/4 | 144,385 |
| 7   | 9,115  | 7   | 24,186 | 7   | 39,240 | 7   | 54,278 | 7   | 69,350 | 7   | 84,422 | 7   | 99,494  | 7   | 114,565 | 7   | 129,634 | 7   | 144,698 |
| 1/4 | 9,429  | 1/4 | 24,500 | 1/4 | 39,553 | 1/4 | 54,592 | 1/4 | 69,664 | 1/4 | 84,736 | 1/4 | 99,808  | 1/4 | 114,879 | 1/4 | 129,948 | 1/4 | 145,012 |
| 1/2 | 9,743  | 1/2 | 24,814 | 1/2 | 39,866 | 1/2 | 54,906 | 1/2 | 69,978 | 1/2 | 85,050 | 1/2 | 100,122 | 1/2 | 115,193 | 1/2 | 130,262 | 1/2 | 145,326 |
| 3/4 | 10,057 | 3/4 | 25,128 | 3/4 | 40,178 | 3/4 | 55,220 | 3/4 | 70,292 | 3/4 | 85,364 | 3/4 | 100,436 | 3/4 | 115,507 | 3/4 | 130,576 | 3/4 | 145,640 |
| 8   | 10,371 | 8   | 25,442 | 8   | 40,491 | 8   | 55,534 | 8   | 70,606 | 8   | 85,678 | 8   | 100,750 | 8   | 115,821 | 8   | 130,889 | 8   | 145,954 |
| 1/4 | 10,684 | 1/4 | 25,756 | 1/4 | 40,804 | 1/4 | 55,848 | 1/4 | 70,920 | 1/4 | 85,992 | 1/4 | 101,064 | 1/4 | 116,135 | 1/4 | 131,203 | 1/4 | 146,268 |
| 1/2 | 10,998 | 1/2 | 26,070 | 1/2 | 41,116 | 1/2 | 56,162 | 1/2 | 71,234 | 1/2 | 86,306 | 1/2 | 101,378 | 1/2 | 116,449 | 1/2 | 131,517 | 1/2 | 146,581 |
| 3/4 | 11,312 | 3/4 | 26,384 | 3/4 | 41,429 | 3/4 | 56,476 | 3/4 | 71,548 | 3/4 | 86,620 | 3/4 | 101,692 | 3/4 | 116,763 | 3/4 | 131,831 | 3/4 | 146,895 |
| 9   | 11,626 | 9   | 26,698 | 9   | 41,742 | 9   | 56,790 | 9   | 71,862 | 9   | 86,934 | 9   | 102,006 | 9   | 117,077 | 9   | 132,145 | 9   | 147,209 |
| 1/4 | 11,940 | 1/4 | 27,012 | 1/4 | 42,054 | 1/4 | 57,104 | 1/4 | 72,176 | 1/4 | 87,248 | 1/4 | 102,320 | 1/4 | 117,391 | 1/4 | 132,459 | 1/4 | 147,523 |
| 1/2 | 12,254 | 1/2 | 27,326 | 1/2 | 42,367 | 1/2 | 57,418 | 1/2 | 72,490 | 1/2 | 87,562 | 1/2 | 102,634 | 1/2 | 117,705 | 1/2 | 132,772 | 1/2 | 147,837 |
| 3/4 | 12,568 | 3/4 | 27,640 | 3/4 | 42,680 | 3/4 | 57,732 | 3/4 | 72,804 | 3/4 | 87,876 | 3/4 | 102,948 | 3/4 | 118,019 | 3/4 | 133,086 | 3/4 | 148,151 |
| 10  | 12,882 | 10  | 27,954 | 10  | 42,992 | 10  | 58,046 | 10  | 73,118 | 10  | 88,190 | 10  | 103,262 | 10  | 118,333 | 10  | 133,400 | 10  | 148,464 |
| 1/4 | 13,196 | 1/4 | 28,268 | 1/4 | 43,305 | 1/4 | 58,360 | 1/4 | 73,432 | 1/4 | 88,504 | 1/4 | 103,576 | 1/4 | 118,647 | 1/4 | 133,714 | 1/4 | 148,778 |
| 1/2 | 13,510 | 1/2 | 28,582 | 1/2 | 43,618 | 1/2 | 58,674 | 1/2 | 73,746 | 1/2 | 88,818 | 1/2 | 103,890 | 1/2 | 118,961 | 1/2 | 134,028 | 1/2 | 149,092 |
| 3/4 | 13,824 | 3/4 | 28,896 | 3/4 | 43,930 | 3/4 | 58,988 | 3/4 | 74,060 | 3/4 | 89,132 | 3/4 | 104,204 | 3/4 | 119,275 | 3/4 | 134,342 | 3/4 | 149,406 |
| 11  | 14,138 | 11  | 29,210 | 11  | 44,243 | 11  | 59,302 | 11  | 74,374 | 11  | 89,446 | 11  | 104,518 | 11  | 119,589 | 11  | 134,655 | 11  | 149,720 |
| 1/4 | 14,452 | 1/4 | 29,524 | 1/4 | 44,556 | 1/4 | 59,616 | 1/4 | 74,688 | 1/4 | 89,760 | 1/4 | 104,832 | 1/4 | 119,903 | 1/4 | 134,969 | 1/4 | 150,034 |
| 1/2 | 14,766 | 1/2 | 29,838 | 1/2 | 44,869 | 1/2 | 59,930 | 1/2 | 75,002 | 1/2 | 90,074 | 1/2 | 105,146 | 1/2 | 120,217 | 1/2 | 135,283 | 1/2 | 150,348 |
| 3/4 | 15,080 | 3/4 | 30,152 | 3/4 | 45,181 | 3/4 | 60,244 | 3/4 | 75,316 | 3/4 | 90,388 | 3/4 | 105,460 | 3/4 | 120,531 | 3/4 | 135,597 | 3/4 | 150,661 |

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 INNAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE.

GAUGE POINT: (HERMETIC) LOCATED 12'-09" OFF CENTERLINE AND 43'-00" FORWARD OF AFT BULKHEAD.

PRECISION MEASUREMENT  
& ANALYSIS, INC.  
P.O. Box 2092  
Pearland, Texas 77588  
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# BARGE "CCL 403"

## 2 STBD INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 3/4"

| CAPACITIES GIVEN IN WHOLE GALLONS            |         |     |         |     |         |     |         |     |         |     |        |     |        |     |        |     |        |     |        |
|--|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|
| 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  | 150,975 | 0   | 166,040 | 0   | 181,036 | 0   | 196,013 | 0   | 210,925 | 0   |        | 0   |        | 0   |        | 0   |        | 0   |        |
| 1/4  | 151,289 | 1/4 | 166,353 | 1/4 | 181,348 | 1/4 | 196,325 | 1/4 | 211,217 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 151,603 | 1/2 | 166,667 | 1/2 | 181,660 | 1/2 | 196,637 | 1/2 | 211,509 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 151,917 | 3/4 | 166,981 | 3/4 | 181,972 | 3/4 | 196,949 | 3/4 | 211,801 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 1  | 152,231 | 1   | 167,295 | 1   | 182,284 | 1   | 197,261 | 1   | 212,093 | 1   |        | 1   |        | 1   |        | 1   |        | 1   |        |
| 1/4  | 152,544 | 1/4 | 167,609 | 1/4 | 182,596 | 1/4 | 197,573 | 1/4 | 212,354 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 152,858 | 1/2 | 167,923 | 1/2 | 182,909 | 1/2 | 197,885 | 1/2 | 212,614 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 153,172 | 3/4 | 168,236 | 3/4 | 183,221 | 3/4 | 198,197 | 3/4 | 212,875 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 2  | 153,486 | 2   | 168,550 | 2   | 183,533 | 2   | 198,509 | 2   | 213,135 | 2   |        | 2   |        | 2   |        | 2   |        | 2   |        |
| 1/4  | 153,800 | 1/4 | 168,864 | 1/4 | 183,845 | 1/4 | 198,821 | 1/4 | 213,343 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 154,114 | 1/2 | 169,177 | 1/2 | 184,157 | 1/2 | 199,133 | 1/2 | 213,551 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 154,427 | 3/4 | 169,490 | 3/4 | 184,469 | 3/4 | 199,445 | 3/4 | 213,759 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 3  | 154,741 | 3   | 169,804 | 3   | 184,781 | 3   | 199,757 | 3   | 213,968 | 3   |        | 3   |        | 3   |        | 3   |        | 3   |        |
| 1/4  | 155,055 | 1/4 | 170,116 | 1/4 | 185,093 | 1/4 | 200,069 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 155,369 | 1/2 | 170,428 | 1/2 | 185,405 | 1/2 | 200,381 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 155,683 | 3/4 | 170,740 | 3/4 | 185,717 | 3/4 | 200,693 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 4  | 155,997 | 4   | 171,052 | 4   | 186,029 | 4   | 201,005 | 4   |         | 4   |        | 4   |        | 4   |        | 4   |        | 4   |        |
| 1/4  | 156,311 | 1/4 | 171,364 | 1/4 | 186,341 | 1/4 | 201,317 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 156,624 | 1/2 | 171,676 | 1/2 | 186,653 | 1/2 | 201,629 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 156,938 | 3/4 | 171,988 | 3/4 | 186,965 | 3/4 | 201,941 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 5  | 157,252 | 5   | 172,300 | 5   | 187,277 | 5   | 202,253 | 5   |         | 5   |        | 5   |        | 5   |        | 5   |        | 5   |        |
| 1/4  | 157,566 | 1/4 | 172,612 | 1/4 | 187,589 | 1/4 | 202,566 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 157,880 | 1/2 | 172,924 | 1/2 | 187,901 | 1/2 | 202,878 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 158,194 | 3/4 | 173,236 | 3/4 | 188,213 | 3/4 | 203,190 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 6  | 158,507 | 6   | 173,548 | 6   | 188,525 | 6   | 203,502 | 6   |         | 6   |        | 6   |        | 6   |        | 6   |        | 6   |        |
| 1/4  | 158,821 | 1/4 | 173,860 | 1/4 | 188,837 | 1/4 | 203,814 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 159,135 | 1/2 | 174,172 | 1/2 | 189,149 | 1/2 | 204,126 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 159,449 | 3/4 | 174,484 | 3/4 | 189,461 | 3/4 | 204,438 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 7  | 159,763 | 7   | 174,796 | 7   | 189,773 | 7   | 204,750 | 7   |         | 7   |        | 7   |        | 7   |        | 7   |        | 7   |        |
| 1/4  | 160,077 | 1/4 | 175,108 | 1/4 | 190,085 | 1/4 | 205,062 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 160,390 | 1/2 | 175,420 | 1/2 | 190,397 | 1/2 | 205,374 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 160,704 | 3/4 | 175,732 | 3/4 | 190,709 | 3/4 | 205,686 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 8  | 161,018 | 8   | 176,044 | 8   | 191,021 | 8   | 205,998 | 8   |         | 8   |        | 8   |        | 8   |        | 8   |        | 8   |        |
| 1/4  | 161,332 | 1/4 | 176,356 | 1/4 | 191,333 | 1/4 | 206,310 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 161,646 | 1/2 | 176,668 | 1/2 | 191,645 | 1/2 | 206,622 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 161,960 | 3/4 | 176,980 | 3/4 | 191,957 | 3/4 | 206,934 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 9  | 162,273 | 9   | 177,292 | 9   | 192,269 | 9   | 207,246 | 9   |         | 9   |        | 9   |        | 9   |        | 9   |        | 9   |        |
| 1/4  | 162,587 | 1/4 | 177,604 | 1/4 | 192,581 | 1/4 | 207,558 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 162,901 | 1/2 | 177,916 | 1/2 | 192,893 | 1/2 | 207,870 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 163,215 | 3/4 | 178,228 | 3/4 | 193,205 | 3/4 | 208,182 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 10   | 163,529 | 10  | 178,540 | 10  | 193,517 | 10  | 208,494 | 10  |         | 10  |        | 10  |        | 10  |        | 10  |        | 10  |        |
| 1/4  | 163,843 | 1/4 | 178,852 | 1/4 | 193,829 | 1/4 | 208,803 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 164,157 | 1/2 | 179,164 | 1/2 | 194,141 | 1/2 | 209,111 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 164,470 | 3/4 | 179,476 | 3/4 | 194,453 | 3/4 | 209,420 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 11   | 164,784 | 11  | 179,788 | 11  | 194,765 | 11  | 209,729 | 11  |         | 11  |        | 11  |        | 11  |        | 11  |        | 11  |        |
| 1/4  | 165,098 | 1/4 | 180,100 | 1/4 | 195,077 | 1/4 | 210,028 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2  | 165,412 | 1/2 | 180,412 | 1/2 | 195,389 | 1/2 | 210,327 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4  | 165,726 | 3/4 | 180,724 | 3/4 | 195,701 | 3/4 | 210,626 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| SEESEPIR CHART FOR THE ABOVE NAMED TANK ONLY |         |     |         |     |         |     |         |     |         |     |        |     |        |     |        |     |        |     |        |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 01/13/2011 CL - SW  
CALCULATED: 01/14/2011 CL  
PRINTED: 01/14/2011 CL

CANCELS AND SUPERCEDES  
ALL PRIOR TO 01/2011

PRECISION MEASUREMENT  
& ANALYSIS, INC.  
P.O. Box 2092  
Pearland, Texas 77588  
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# BARGE "CCL 403"

## 3 PORT INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 1/2"

| IN  | 0 FT.  | IN  | 1 FT.  | IN  | 2 FT.  | IN  | 3 FT.  | IN  | 4 FT.  | IN  | 5 FT.  | IN  | 6 FT.   | IN  | 7 FT.   | IN  | 8 FT.   | IN  | 9 FT.   |
|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------|-----|---------|-----|---------|-----|---------|
| 0   | 838    | 0   | 15,310 | 0   | 30,292 | 0   | 44,885 | 0   | 59,727 | 0   | 74,697 | 0   | 89,636  | 0   | 104,582 | 0   | 119,540 | 0   | 134,467 |
| 1/4 | 1,053  | 1/4 | 15,622 | 1/4 | 30,604 | 1/4 | 45,188 | 1/4 | 60,039 | 1/4 | 75,009 | 1/4 | 89,947  | 1/4 | 104,894 | 1/4 | 119,851 | 1/4 | 134,776 |
| 1/2 | 1,268  | 1/2 | 15,934 | 1/2 | 30,917 | 1/2 | 45,491 | 1/2 | 60,351 | 1/2 | 75,321 | 1/2 | 90,258  | 1/2 | 105,205 | 1/2 | 120,163 | 1/2 | 135,085 |
| 3/4 | 1,483  | 3/4 | 16,247 | 3/4 | 31,229 | 3/4 | 45,794 | 3/4 | 60,663 | 3/4 | 75,633 | 3/4 | 90,569  | 3/4 | 105,517 | 3/4 | 120,475 | 3/4 | 135,393 |
| 1   | 1,698  | 1   | 16,559 | 1   | 31,541 | 1   | 46,097 | 1   | 60,975 | 1   | 75,945 | 1   | 90,880  | 1   | 105,829 | 1   | 120,786 | 1   | 135,702 |
| 1/4 | 1,980  | 1/4 | 16,871 | 1/4 | 31,853 | 1/4 | 46,400 | 1/4 | 61,287 | 1/4 | 76,256 | 1/4 | 91,191  | 1/4 | 106,140 | 1/4 | 121,098 | 1/4 | 136,010 |
| 1/2 | 2,263  | 1/2 | 17,183 | 1/2 | 32,165 | 1/2 | 46,703 | 1/2 | 61,599 | 1/2 | 76,568 | 1/2 | 91,501  | 1/2 | 106,452 | 1/2 | 121,409 | 1/2 | 136,319 |
| 3/4 | 2,546  | 3/4 | 17,495 | 3/4 | 32,477 | 3/4 | 47,006 | 3/4 | 61,911 | 3/4 | 76,880 | 3/4 | 91,812  | 3/4 | 106,763 | 3/4 | 121,721 | 3/4 | 136,628 |
| 2   | 2,829  | 2   | 17,807 | 2   | 32,789 | 2   | 47,310 | 2   | 62,222 | 2   | 77,192 | 2   | 92,123  | 2   | 107,075 | 2   | 122,033 | 2   | 136,936 |
| 1/4 | 3,140  | 1/4 | 18,119 | 1/4 | 33,101 | 1/4 | 47,613 | 1/4 | 62,534 | 1/4 | 77,504 | 1/4 | 92,433  | 1/4 | 107,387 | 1/4 | 122,344 | 1/4 | 137,245 |
| 1/2 | 3,452  | 1/2 | 18,431 | 1/2 | 33,413 | 1/2 | 47,917 | 1/2 | 62,846 | 1/2 | 77,816 | 1/2 | 92,744  | 1/2 | 107,698 | 1/2 | 122,656 | 1/2 | 137,554 |
| 3/4 | 3,763  | 3/4 | 18,744 | 3/4 | 33,725 | 3/4 | 48,221 | 3/4 | 63,158 | 3/4 | 78,127 | 3/4 | 93,055  | 3/4 | 108,010 | 3/4 | 122,967 | 3/4 | 137,862 |
| 3   | 4,074  | 3   | 19,056 | 3   | 34,037 | 3   | 48,525 | 3   | 63,470 | 3   | 78,439 | 3   | 93,365  | 3   | 108,321 | 3   | 123,279 | 3   | 138,171 |
| 1/4 | 4,386  | 1/4 | 19,368 | 1/4 | 34,345 | 1/4 | 48,830 | 1/4 | 63,782 | 1/4 | 78,750 | 1/4 | 93,677  | 1/4 | 108,633 | 1/4 | 123,590 | 1/4 | 138,480 |
| 1/2 | 4,698  | 1/2 | 19,680 | 1/2 | 34,653 | 1/2 | 49,136 | 1/2 | 64,094 | 1/2 | 79,062 | 1/2 | 93,988  | 1/2 | 108,945 | 1/2 | 123,902 | 1/2 | 138,788 |
| 3/4 | 5,010  | 3/4 | 19,992 | 3/4 | 34,961 | 3/4 | 49,442 | 3/4 | 64,406 | 3/4 | 79,373 | 3/4 | 94,299  | 3/4 | 109,256 | 3/4 | 124,213 | 3/4 | 139,097 |
| 4   | 5,322  | 4   | 20,304 | 4   | 35,269 | 4   | 49,748 | 4   | 64,717 | 4   | 79,684 | 4   | 94,610  | 4   | 109,568 | 4   | 124,525 | 4   | 139,406 |
| 1/4 | 5,634  | 1/4 | 20,616 | 1/4 | 35,570 | 1/4 | 50,060 | 1/4 | 65,029 | 1/4 | 79,995 | 1/4 | 94,922  | 1/4 | 109,880 | 1/4 | 124,836 | 1/4 | 139,714 |
| 1/2 | 5,946  | 1/2 | 20,928 | 1/2 | 35,870 | 1/2 | 50,371 | 1/2 | 65,341 | 1/2 | 80,306 | 1/2 | 95,233  | 1/2 | 110,191 | 1/2 | 125,148 | 1/2 | 140,023 |
| 3/4 | 6,258  | 3/4 | 21,241 | 3/4 | 36,170 | 3/4 | 50,683 | 3/4 | 65,653 | 3/4 | 80,617 | 3/4 | 95,545  | 3/4 | 110,503 | 3/4 | 125,459 | 3/4 | 140,332 |
| 5   | 6,571  | 5   | 21,553 | 5   | 36,470 | 5   | 50,995 | 5   | 65,965 | 5   | 80,928 | 5   | 95,857  | 5   | 110,814 | 5   | 125,771 | 5   | 140,640 |
| 1/4 | 6,883  | 1/4 | 21,865 | 1/4 | 36,770 | 1/4 | 51,307 | 1/4 | 66,277 | 1/4 | 81,239 | 1/4 | 96,168  | 1/4 | 111,126 | 1/4 | 126,082 | 1/4 | 140,950 |
| 1/2 | 7,195  | 1/2 | 22,177 | 1/2 | 37,071 | 1/2 | 51,619 | 1/2 | 66,589 | 1/2 | 81,550 | 1/2 | 96,480  | 1/2 | 111,438 | 1/2 | 126,394 | 1/2 | 141,260 |
| 3/4 | 7,507  | 3/4 | 22,489 | 3/4 | 37,371 | 3/4 | 51,931 | 3/4 | 66,900 | 3/4 | 81,861 | 3/4 | 96,792  | 3/4 | 111,749 | 3/4 | 126,705 | 3/4 | 141,569 |
| 6   | 7,819  | 6   | 22,801 | 6   | 37,671 | 6   | 52,243 | 6   | 67,212 | 6   | 82,172 | 6   | 97,103  | 6   | 112,061 | 6   | 127,017 | 6   | 141,879 |
| 1/4 | 8,131  | 1/4 | 23,113 | 1/4 | 37,971 | 1/4 | 52,555 | 1/4 | 67,524 | 1/4 | 82,483 | 1/4 | 97,415  | 1/4 | 112,373 | 1/4 | 127,328 | 1/4 | 142,191 |
| 1/2 | 8,443  | 1/2 | 23,426 | 1/2 | 38,272 | 1/2 | 52,866 | 1/2 | 67,836 | 1/2 | 82,794 | 1/2 | 97,726  | 1/2 | 112,684 | 1/2 | 127,640 | 1/2 | 142,504 |
| 3/4 | 8,755  | 3/4 | 23,738 | 3/4 | 38,572 | 3/4 | 53,178 | 3/4 | 68,148 | 3/4 | 83,105 | 3/4 | 98,038  | 3/4 | 112,996 | 3/4 | 127,951 | 3/4 | 142,816 |
| 7   | 9,068  | 7   | 24,050 | 7   | 38,872 | 7   | 53,490 | 7   | 68,460 | 7   | 83,416 | 7   | 98,350  | 7   | 113,307 | 7   | 128,263 | 7   | 143,129 |
| 1/4 | 9,380  | 1/4 | 24,362 | 1/4 | 39,172 | 1/4 | 53,802 | 1/4 | 68,772 | 1/4 | 83,727 | 1/4 | 98,661  | 1/4 | 113,619 | 1/4 | 128,574 | 1/4 | 143,441 |
| 1/2 | 9,692  | 1/2 | 24,674 | 1/2 | 39,473 | 1/2 | 54,114 | 1/2 | 69,084 | 1/2 | 84,038 | 1/2 | 98,973  | 1/2 | 113,931 | 1/2 | 128,886 | 1/2 | 143,754 |
| 3/4 | 10,004 | 3/4 | 24,986 | 3/4 | 39,773 | 3/4 | 54,426 | 3/4 | 69,395 | 3/4 | 84,349 | 3/4 | 99,285  | 3/4 | 114,242 | 3/4 | 129,197 | 3/4 | 144,066 |
| 8   | 10,316 | 8   | 25,298 | 8   | 40,073 | 8   | 54,738 | 8   | 69,707 | 8   | 84,660 | 8   | 99,596  | 8   | 114,554 | 8   | 129,509 | 8   | 144,379 |
| 1/4 | 10,628 | 1/4 | 25,610 | 1/4 | 40,373 | 1/4 | 55,049 | 1/4 | 70,019 | 1/4 | 84,971 | 1/4 | 99,908  | 1/4 | 114,866 | 1/4 | 129,820 | 1/4 | 144,691 |
| 1/2 | 10,940 | 1/2 | 25,923 | 1/2 | 40,674 | 1/2 | 55,361 | 1/2 | 70,331 | 1/2 | 85,282 | 1/2 | 100,219 | 1/2 | 115,177 | 1/2 | 130,132 | 1/2 | 145,004 |
| 3/4 | 11,252 | 3/4 | 26,235 | 3/4 | 40,974 | 3/4 | 55,673 | 3/4 | 70,643 | 3/4 | 85,593 | 3/4 | 100,531 | 3/4 | 115,489 | 3/4 | 130,443 | 3/4 | 145,316 |
| 9   | 11,565 | 9   | 26,547 | 9   | 41,274 | 9   | 55,985 | 9   | 70,955 | 9   | 85,904 | 9   | 100,843 | 9   | 115,800 | 9   | 130,755 | 9   | 145,629 |
| 1/4 | 11,877 | 1/4 | 26,859 | 1/4 | 41,574 | 1/4 | 56,297 | 1/4 | 71,267 | 1/4 | 86,215 | 1/4 | 101,154 | 1/4 | 116,112 | 1/4 | 131,066 | 1/4 | 145,941 |
| 1/2 | 12,189 | 1/2 | 27,171 | 1/2 | 41,874 | 1/2 | 56,609 | 1/2 | 71,578 | 1/2 | 86,526 | 1/2 | 101,466 | 1/2 | 116,424 | 1/2 | 131,376 | 1/2 | 146,254 |
| 3/4 | 12,501 | 3/4 | 27,483 | 3/4 | 42,175 | 3/4 | 56,921 | 3/4 | 71,890 | 3/4 | 86,837 | 3/4 | 101,777 | 3/4 | 116,735 | 3/4 | 131,687 | 3/4 | 146,567 |
| 10  | 12,813 | 10  | 27,795 | 10  | 42,475 | 10  | 57,233 | 10  | 72,202 | 10  | 87,148 | 10  | 102,089 | 10  | 117,047 | 10  | 131,998 | 10  | 146,879 |
| 1/4 | 13,125 | 1/4 | 28,107 | 1/4 | 42,775 | 1/4 | 57,544 | 1/4 | 72,514 | 1/4 | 87,459 | 1/4 | 102,401 | 1/4 | 117,358 | 1/4 | 132,307 | 1/4 | 147,192 |
| 1/2 | 13,437 | 1/2 | 28,420 | 1/2 | 43,076 | 1/2 | 57,856 | 1/2 | 72,826 | 1/2 | 87,770 | 1/2 | 102,712 | 1/2 | 117,670 | 1/2 | 132,615 | 1/2 | 147,504 |
| 3/4 | 13,750 | 3/4 | 28,732 | 3/4 | 43,377 | 3/4 | 58,168 | 3/4 | 73,138 | 3/4 | 88,081 | 3/4 | 103,024 | 3/4 | 117,982 | 3/4 | 132,924 | 3/4 | 147,817 |
| 11  | 14,062 | 11  | 29,044 | 11  | 43,677 | 11  | 58,480 | 11  | 73,450 | 11  | 88,392 | 11  | 103,336 | 11  | 118,293 | 11  | 133,233 | 11  | 148,129 |
| 1/4 | 14,374 | 1/4 | 29,356 | 1/4 | 43,979 | 1/4 | 58,792 | 1/4 | 73,762 | 1/4 | 88,703 | 1/4 | 103,647 | 1/4 | 118,605 | 1/4 | 133,541 | 1/4 | 148,442 |
| 1/2 | 14,686 | 1/2 | 29,668 | 1/2 | 44,281 | 1/2 | 59,104 | 1/2 | 74,073 | 1/2 | 89,014 | 1/2 | 103,959 | 1/2 | 118,917 | 1/2 | 133,850 | 1/2 | 148,754 |
| 3/4 | 14,998 | 3/4 | 29,980 | 3/4 | 44,583 | 3/4 | 59,416 | 3/4 | 74,385 | 3/4 | 89,325 | 3/4 | 104,270 | 3/4 | 119,228 | 3/4 | 134,159 | 3/4 | 149,067 |

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 INNAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE.

GAUGE POINT: (HERMETIC) LOCATED 12'-09" OFF CENTERLINE AND 42'-06" FORWARD OF AFT BULKHEAD.

PRECISION MEASUREMENT  
& ANALYSIS, INC.

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



# BARGE "CCL 403"

## 3 PORT INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 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   | 149,379 | 0   | 161,109 | 0   | 172,570 | 0   | 184,016 | 0   | 195,412 | 0   |        | 0   |        | 0   |        | 0   |        | 0   |        |
| 1/4 | 149,673 | 1/4 | 161,349 | 1/4 | 172,809 | 1/4 | 184,255 | 1/4 | 195,633 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 149,968 | 1/2 | 161,589 | 1/2 | 173,047 | 1/2 | 184,493 | 1/2 | 195,854 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 150,262 | 3/4 | 161,828 | 3/4 | 173,285 | 3/4 | 184,732 | 3/4 | 196,076 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 1   | 150,556 | 1   | 162,068 | 1   | 173,524 | 1   | 184,970 | 1   | 196,297 | 1   |        | 1   |        | 1   |        | 1   |        | 1   |        |
| 1/4 | 150,796 | 1/4 | 162,308 | 1/4 | 173,762 | 1/4 | 185,208 | 1/4 | 196,487 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 151,036 | 1/2 | 162,548 | 1/2 | 174,001 | 1/2 | 185,447 | 1/2 | 196,677 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 151,276 | 3/4 | 162,788 | 3/4 | 174,239 | 3/4 | 185,685 | 3/4 | 196,867 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 2   | 151,516 | 2   | 163,028 | 2   | 174,478 | 2   | 185,924 | 2   | 197,057 | 2   |        | 2   |        | 2   |        | 2   |        | 2   |        |
| 1/4 | 151,756 | 1/4 | 163,267 | 1/4 | 174,716 | 1/4 | 186,162 | 1/4 | 197,195 | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 151,995 | 1/2 | 163,507 | 1/2 | 174,955 | 1/2 | 186,401 | 1/2 | 197,333 | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 152,235 | 3/4 | 163,746 | 3/4 | 175,193 | 3/4 | 186,639 | 3/4 | 197,471 | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 3   | 152,475 | 3   | 163,985 | 3   | 175,432 | 3   | 186,878 | 3   | 197,609 | 3   |        | 3   |        | 3   |        | 3   |        | 3   |        |
| 1/4 | 152,715 | 1/4 | 164,224 | 1/4 | 175,670 | 1/4 | 187,116 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 152,955 | 1/2 | 164,462 | 1/2 | 175,909 | 1/2 | 187,355 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 153,195 | 3/4 | 164,701 | 3/4 | 176,147 | 3/4 | 187,593 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 4   | 153,434 | 4   | 164,939 | 4   | 176,385 | 4   | 187,832 | 4   |         | 4   |        | 4   |        | 4   |        | 4   |        | 4   |        |
| 1/4 | 153,674 | 1/4 | 165,178 | 1/4 | 176,624 | 1/4 | 188,070 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 153,914 | 1/2 | 165,416 | 1/2 | 176,862 | 1/2 | 188,308 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 154,154 | 3/4 | 165,655 | 3/4 | 177,101 | 3/4 | 188,547 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 5   | 154,394 | 5   | 165,893 | 5   | 177,339 | 5   | 188,785 | 5   |         | 5   |        | 5   |        | 5   |        | 5   |        | 5   |        |
| 1/4 | 154,634 | 1/4 | 166,132 | 1/4 | 177,578 | 1/4 | 189,024 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 154,873 | 1/2 | 166,370 | 1/2 | 177,816 | 1/2 | 189,262 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 155,113 | 3/4 | 166,609 | 3/4 | 178,055 | 3/4 | 189,501 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 6   | 155,353 | 6   | 166,847 | 6   | 178,293 | 6   | 189,739 | 6   |         | 6   |        | 6   |        | 6   |        | 6   |        | 6   |        |
| 1/4 | 155,593 | 1/4 | 167,085 | 1/4 | 178,532 | 1/4 | 189,978 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 155,833 | 1/2 | 167,324 | 1/2 | 178,770 | 1/2 | 190,216 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 156,073 | 3/4 | 167,562 | 3/4 | 179,008 | 3/4 | 190,455 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 7   | 156,312 | 7   | 167,801 | 7   | 179,247 | 7   | 190,693 | 7   |         | 7   |        | 7   |        | 7   |        | 7   |        | 7   |        |
| 1/4 | 156,552 | 1/4 | 168,039 | 1/4 | 179,485 | 1/4 | 190,932 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 156,792 | 1/2 | 168,278 | 1/2 | 179,724 | 1/2 | 191,170 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 157,032 | 3/4 | 168,516 | 3/4 | 179,962 | 3/4 | 191,408 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 8   | 157,272 | 8   | 168,755 | 8   | 180,201 | 8   | 191,647 | 8   |         | 8   |        | 8   |        | 8   |        | 8   |        | 8   |        |
| 1/4 | 157,511 | 1/4 | 168,993 | 1/4 | 180,439 | 1/4 | 191,885 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 157,751 | 1/2 | 169,232 | 1/2 | 180,678 | 1/2 | 192,124 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 157,991 | 3/4 | 169,470 | 3/4 | 180,916 | 3/4 | 192,362 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 9   | 158,231 | 9   | 169,709 | 9   | 181,155 | 9   | 192,601 | 9   |         | 9   |        | 9   |        | 9   |        | 9   |        | 9   |        |
| 1/4 | 158,471 | 1/4 | 169,947 | 1/4 | 181,393 | 1/4 | 192,839 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 158,711 | 1/2 | 170,185 | 1/2 | 181,632 | 1/2 | 193,078 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 158,950 | 3/4 | 170,424 | 3/4 | 181,870 | 3/4 | 193,316 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 10  | 159,190 | 10  | 170,662 | 10  | 182,108 | 10  | 193,554 | 10  |         | 10  |        | 10  |        | 10  |        | 10  |        | 10  |        |
| 1/4 | 159,430 | 1/4 | 170,901 | 1/4 | 182,347 | 1/4 | 193,790 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 159,670 | 1/2 | 171,139 | 1/2 | 182,585 | 1/2 | 194,026 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 159,910 | 3/4 | 171,378 | 3/4 | 182,824 | 3/4 | 194,262 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |
| 11  | 160,150 | 11  | 171,616 | 11  | 183,062 | 11  | 194,498 | 11  |         | 11  |        | 11  |        | 11  |        | 11  |        | 11  |        |
| 1/4 | 160,389 | 1/4 | 171,855 | 1/4 | 183,301 | 1/4 | 194,727 | 1/4 |         | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        | 1/4 |        |
| 1/2 | 160,629 | 1/2 | 172,093 | 1/2 | 183,539 | 1/2 | 194,955 | 1/2 |         | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        | 1/2 |        |
| 3/4 | 160,869 | 3/4 | 172,332 | 3/4 | 183,778 | 3/4 | 195,183 | 3/4 |         | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        | 3/4 |        |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 01/13/2011 CL - SW  
CALCULATED: 01/14/2011 CL  
PRINTED: 01/14/2011 CL

CANCELS AND SUPERCEDES  
ALL PRIOR TO 01/2011

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



# BARGE "CCL 403"

## 3 STBD INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 1/4"

| IN  | 0 FT.  | IN  | 1 FT.  | IN  | 2 FT.  | IN  | 3 FT.  | IN  | 4 FT.  | IN  | 5 FT.  | IN  | 6 FT.   | IN  | 7 FT.   | IN  | 8 FT.   | IN  | 9 FT.   |
|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|--------|-----|---------|-----|---------|-----|---------|-----|---------|
| 0   | 838    | 0   | 15,327 | 0   | 30,333 | 0   | 45,296 | 0   | 60,294 | 0   | 75,300 | 0   | 90,306  | 0   | 105,313 | 0   | 120,319 | 0   | 135,325 |
| 1/4 | 1,053  | 1/4 | 15,640 | 1/4 | 30,646 | 1/4 | 45,607 | 1/4 | 60,607 | 1/4 | 75,613 | 1/4 | 90,619  | 1/4 | 105,625 | 1/4 | 120,631 | 1/4 | 135,637 |
| 1/2 | 1,268  | 1/2 | 15,953 | 1/2 | 30,958 | 1/2 | 45,919 | 1/2 | 60,919 | 1/2 | 75,926 | 1/2 | 90,932  | 1/2 | 105,938 | 1/2 | 120,944 | 1/2 | 135,950 |
| 3/4 | 1,483  | 3/4 | 16,265 | 3/4 | 31,271 | 3/4 | 46,230 | 3/4 | 61,232 | 3/4 | 76,238 | 3/4 | 91,244  | 3/4 | 106,250 | 3/4 | 121,257 | 3/4 | 136,263 |
| 1   | 1,698  | 1   | 16,578 | 1   | 31,583 | 1   | 46,542 | 1   | 61,545 | 1   | 76,551 | 1   | 91,557  | 1   | 106,563 | 1   | 121,569 | 1   | 136,575 |
| 1/4 | 1,980  | 1/4 | 16,890 | 1/4 | 31,896 | 1/4 | 46,854 | 1/4 | 61,857 | 1/4 | 76,863 | 1/4 | 91,870  | 1/4 | 106,876 | 1/4 | 121,882 | 1/4 | 136,888 |
| 1/2 | 2,263  | 1/2 | 17,203 | 1/2 | 32,209 | 1/2 | 47,165 | 1/2 | 62,170 | 1/2 | 77,176 | 1/2 | 92,182  | 1/2 | 107,188 | 1/2 | 122,194 | 1/2 | 137,201 |
| 3/4 | 2,546  | 3/4 | 17,516 | 3/4 | 32,521 | 3/4 | 47,477 | 3/4 | 62,483 | 3/4 | 77,489 | 3/4 | 92,495  | 3/4 | 107,501 | 3/4 | 122,507 | 3/4 | 137,513 |
| 2   | 2,829  | 2   | 17,828 | 2   | 32,834 | 2   | 47,789 | 2   | 62,795 | 2   | 77,801 | 2   | 92,807  | 2   | 107,814 | 2   | 122,820 | 2   | 137,826 |
| 1/4 | 3,140  | 1/4 | 18,141 | 1/4 | 33,147 | 1/4 | 48,102 | 1/4 | 63,108 | 1/4 | 78,114 | 1/4 | 93,120  | 1/4 | 108,126 | 1/4 | 123,132 | 1/4 | 138,138 |
| 1/2 | 3,452  | 1/2 | 18,453 | 1/2 | 33,459 | 1/2 | 48,414 | 1/2 | 63,420 | 1/2 | 78,427 | 1/2 | 93,433  | 1/2 | 108,439 | 1/2 | 123,445 | 1/2 | 138,451 |
| 3/4 | 3,763  | 3/4 | 18,766 | 3/4 | 33,772 | 3/4 | 48,727 | 3/4 | 63,733 | 3/4 | 78,739 | 3/4 | 93,745  | 3/4 | 108,751 | 3/4 | 123,758 | 3/4 | 138,764 |
| 3   | 4,075  | 3   | 19,079 | 3   | 34,084 | 3   | 49,040 | 3   | 64,046 | 3   | 79,052 | 3   | 94,058  | 3   | 109,064 | 3   | 124,070 | 3   | 139,076 |
| 1/4 | 4,387  | 1/4 | 19,391 | 1/4 | 34,397 | 1/4 | 49,352 | 1/4 | 64,358 | 1/4 | 79,364 | 1/4 | 94,371  | 1/4 | 109,377 | 1/4 | 124,383 | 1/4 | 139,389 |
| 1/2 | 4,699  | 1/2 | 19,704 | 1/2 | 34,709 | 1/2 | 49,665 | 1/2 | 64,671 | 1/2 | 79,677 | 1/2 | 94,683  | 1/2 | 109,689 | 1/2 | 124,695 | 1/2 | 139,702 |
| 3/4 | 5,011  | 3/4 | 20,017 | 3/4 | 35,021 | 3/4 | 49,977 | 3/4 | 64,984 | 3/4 | 79,990 | 3/4 | 94,996  | 3/4 | 110,002 | 3/4 | 125,008 | 3/4 | 140,014 |
| 4   | 5,324  | 4   | 20,329 | 4   | 35,334 | 4   | 50,290 | 4   | 65,296 | 4   | 80,302 | 4   | 95,308  | 4   | 110,315 | 4   | 125,321 | 4   | 140,327 |
| 1/4 | 5,636  | 1/4 | 20,642 | 1/4 | 35,645 | 1/4 | 50,603 | 1/4 | 65,609 | 1/4 | 80,615 | 1/4 | 95,621  | 1/4 | 110,627 | 1/4 | 125,633 | 1/4 | 140,640 |
| 1/2 | 5,949  | 1/2 | 20,954 | 1/2 | 35,956 | 1/2 | 50,915 | 1/2 | 65,921 | 1/2 | 80,928 | 1/2 | 95,934  | 1/2 | 110,940 | 1/2 | 125,946 | 1/2 | 140,952 |
| 3/4 | 6,261  | 3/4 | 21,267 | 3/4 | 36,267 | 3/4 | 51,228 | 3/4 | 66,234 | 3/4 | 81,240 | 3/4 | 96,246  | 3/4 | 111,252 | 3/4 | 126,259 | 3/4 | 141,265 |
| 5   | 6,574  | 5   | 21,580 | 5   | 36,579 | 5   | 51,541 | 5   | 66,547 | 5   | 81,553 | 5   | 96,559  | 5   | 111,565 | 5   | 126,571 | 5   | 141,577 |
| 1/4 | 6,887  | 1/4 | 21,892 | 1/4 | 36,890 | 1/4 | 51,853 | 1/4 | 66,859 | 1/4 | 81,865 | 1/4 | 96,872  | 1/4 | 111,878 | 1/4 | 126,884 | 1/4 | 141,890 |
| 1/2 | 7,199  | 1/2 | 22,205 | 1/2 | 37,201 | 1/2 | 52,166 | 1/2 | 67,172 | 1/2 | 82,178 | 1/2 | 97,184  | 1/2 | 112,190 | 1/2 | 127,197 | 1/2 | 142,203 |
| 3/4 | 7,512  | 3/4 | 22,518 | 3/4 | 37,513 | 3/4 | 52,478 | 3/4 | 67,485 | 3/4 | 82,491 | 3/4 | 97,497  | 3/4 | 112,503 | 3/4 | 127,509 | 3/4 | 142,515 |
| 6   | 7,824  | 6   | 22,830 | 6   | 37,824 | 6   | 52,791 | 6   | 67,797 | 6   | 82,803 | 6   | 97,809  | 6   | 112,816 | 6   | 127,822 | 6   | 142,828 |
| 1/4 | 8,137  | 1/4 | 23,143 | 1/4 | 38,135 | 1/4 | 53,104 | 1/4 | 68,110 | 1/4 | 83,116 | 1/4 | 98,122  | 1/4 | 113,128 | 1/4 | 128,134 | 1/4 | 143,141 |
| 1/2 | 8,450  | 1/2 | 23,455 | 1/2 | 38,447 | 1/2 | 53,416 | 1/2 | 68,422 | 1/2 | 83,429 | 1/2 | 98,435  | 1/2 | 113,441 | 1/2 | 128,447 | 1/2 | 143,453 |
| 3/4 | 8,762  | 3/4 | 23,768 | 3/4 | 38,758 | 3/4 | 53,729 | 3/4 | 68,735 | 3/4 | 83,741 | 3/4 | 98,747  | 3/4 | 113,754 | 3/4 | 128,760 | 3/4 | 143,766 |
| 7   | 9,075  | 7   | 24,081 | 7   | 39,069 | 7   | 54,042 | 7   | 69,048 | 7   | 84,054 | 7   | 99,060  | 7   | 114,066 | 7   | 129,072 | 7   | 144,078 |
| 1/4 | 9,388  | 1/4 | 24,393 | 1/4 | 39,381 | 1/4 | 54,354 | 1/4 | 69,360 | 1/4 | 84,366 | 1/4 | 99,373  | 1/4 | 114,379 | 1/4 | 129,385 | 1/4 | 144,391 |
| 1/2 | 9,700  | 1/2 | 24,706 | 1/2 | 39,692 | 1/2 | 54,667 | 1/2 | 69,673 | 1/2 | 84,679 | 1/2 | 99,685  | 1/2 | 114,691 | 1/2 | 129,698 | 1/2 | 144,704 |
| 3/4 | 10,013 | 3/4 | 25,018 | 3/4 | 40,003 | 3/4 | 54,979 | 3/4 | 69,986 | 3/4 | 84,992 | 3/4 | 99,998  | 3/4 | 115,004 | 3/4 | 130,010 | 3/4 | 145,016 |
| 8   | 10,325 | 8   | 25,331 | 8   | 40,315 | 8   | 55,292 | 8   | 70,298 | 8   | 85,304 | 8   | 100,311 | 8   | 115,317 | 8   | 130,323 | 8   | 145,329 |
| 1/4 | 10,638 | 1/4 | 25,644 | 1/4 | 40,626 | 1/4 | 55,605 | 1/4 | 70,611 | 1/4 | 85,617 | 1/4 | 100,623 | 1/4 | 115,629 | 1/4 | 130,635 | 1/4 | 145,642 |
| 1/2 | 10,951 | 1/2 | 25,956 | 1/2 | 40,937 | 1/2 | 55,917 | 1/2 | 70,923 | 1/2 | 85,930 | 1/2 | 100,936 | 1/2 | 115,942 | 1/2 | 130,948 | 1/2 | 145,954 |
| 3/4 | 11,263 | 3/4 | 26,269 | 3/4 | 41,248 | 3/4 | 56,230 | 3/4 | 71,236 | 3/4 | 86,242 | 3/4 | 101,248 | 3/4 | 116,255 | 3/4 | 131,261 | 3/4 | 146,267 |
| 9   | 11,576 | 9   | 26,582 | 9   | 41,560 | 9   | 56,543 | 9   | 71,549 | 9   | 86,555 | 9   | 101,561 | 9   | 116,567 | 9   | 131,573 | 9   | 146,579 |
| 1/4 | 11,888 | 1/4 | 26,894 | 1/4 | 41,871 | 1/4 | 56,855 | 1/4 | 71,861 | 1/4 | 86,867 | 1/4 | 101,874 | 1/4 | 116,880 | 1/4 | 131,886 | 1/4 | 146,892 |
| 1/2 | 12,201 | 1/2 | 27,207 | 1/2 | 42,182 | 1/2 | 57,168 | 1/2 | 72,174 | 1/2 | 87,180 | 1/2 | 102,186 | 1/2 | 117,192 | 1/2 | 132,199 | 1/2 | 147,205 |
| 3/4 | 12,514 | 3/4 | 27,519 | 3/4 | 42,494 | 3/4 | 57,480 | 3/4 | 72,487 | 3/4 | 87,493 | 3/4 | 102,499 | 3/4 | 117,505 | 3/4 | 132,511 | 3/4 | 147,517 |
| 10  | 12,826 | 10  | 27,832 | 10  | 42,805 | 10  | 57,793 | 10  | 72,799 | 10  | 87,805 | 10  | 102,812 | 10  | 117,818 | 10  | 132,824 | 10  | 147,830 |
| 1/4 | 13,139 | 1/4 | 28,145 | 1/4 | 43,116 | 1/4 | 58,106 | 1/4 | 73,112 | 1/4 | 88,118 | 1/4 | 103,124 | 1/4 | 118,130 | 1/4 | 133,136 | 1/4 | 148,143 |
| 1/2 | 13,452 | 1/2 | 28,457 | 1/2 | 43,428 | 1/2 | 58,418 | 1/2 | 73,424 | 1/2 | 88,431 | 1/2 | 103,437 | 1/2 | 118,443 | 1/2 | 133,449 | 1/2 | 148,455 |
| 3/4 | 13,764 | 3/4 | 28,770 | 3/4 | 43,739 | 3/4 | 58,731 | 3/4 | 73,737 | 3/4 | 88,743 | 3/4 | 103,749 | 3/4 | 118,756 | 3/4 | 133,762 | 3/4 | 148,768 |
| 11  | 14,077 | 11  | 29,083 | 11  | 44,050 | 11  | 59,044 | 11  | 74,050 | 11  | 89,056 | 11  | 104,062 | 11  | 119,068 | 11  | 134,074 | 11  | 149,080 |
| 1/4 | 14,389 | 1/4 | 29,395 | 1/4 | 44,362 | 1/4 | 59,356 | 1/4 | 74,362 | 1/4 | 89,369 | 1/4 | 104,375 | 1/4 | 119,381 | 1/4 | 134,387 | 1/4 | 149,393 |
| 1/2 | 14,702 | 1/2 | 29,708 | 1/2 | 44,673 | 1/2 | 59,669 | 1/2 | 74,675 | 1/2 | 89,681 | 1/2 | 104,687 | 1/2 | 119,693 | 1/2 | 134,700 | 1/2 | 149,706 |
| 3/4 | 15,015 | 3/4 | 30,020 | 3/4 | 44,984 | 3/4 | 59,981 | 3/4 | 74,988 | 3/4 | 89,994 | 3/4 | 105,000 | 3/4 | 120,006 | 3/4 | 135,012 | 3/4 | 150,018 |

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 INNAGE GAUGES TAKEN WITH "HERMETIC" CLOSED GAUGING DEVICE.

GAUGE POINT: (HERMETIC) LOCATED 12'-09" OFF CENTERLINE AND 42'-06" FORWARD OF AFT BULKHEAD.

PRECISION MEASUREMENT  
& ANALYSIS, INC.  
P.O. Box 2092  
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# BARGE "CCL 403"

## 3 STBD INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 16'-02 1/4"

| CAPACITIES GIVEN IN WHOLE GALLONS |         |     |         |     |         |     |         |     |         |     |        |     |        |     |        |     |        |    |        |
|-----------------------------------|---------|-----|---------|-----|---------|-----|---------|-----|---------|-----|--------|-----|--------|-----|--------|-----|--------|----|--------|
| 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                                 | 150,331 | 0   | 162,066 | 0   | 173,584 | 0   | 185,101 | 0   | 196,615 | 0   |        | 0   |        | 0   |        | 0   |        | 0  |        |
| 1/4                               | 150,625 | 1/4 | 162,306 | 1/4 | 173,824 | 1/4 | 185,341 | 1/4 | 196,847 | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 150,920 | 1/2 | 162,546 | 1/2 | 174,064 | 1/2 | 185,581 | 1/2 | 197,079 | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 151,214 | 3/4 | 162,786 | 3/4 | 174,304 | 3/4 | 185,821 | 3/4 | 197,312 | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 1                                 | 151,509 | 1   | 163,026 | 1   | 174,544 | 1   | 186,061 | 1   | 197,544 | 1   |        | 1   | 1      | 1   |        | 1   | 1      |    |        |
| 1/4                               | 151,749 | 1/4 | 163,266 | 1/4 | 174,783 | 1/4 | 186,301 | 1/4 | 197,745 | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 151,989 | 1/2 | 163,506 | 1/2 | 175,023 | 1/2 | 186,541 | 1/2 | 197,946 | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 152,229 | 3/4 | 163,746 | 3/4 | 175,263 | 3/4 | 186,781 | 3/4 | 198,146 | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 2                                 | 152,469 | 2   | 163,986 | 2   | 175,503 | 2   | 187,021 | 2   | 198,347 | 2   |        | 2   | 2      | 2   |        | 2   | 2      |    |        |
| 1/4                               | 152,709 | 1/4 | 164,226 | 1/4 | 175,743 | 1/4 | 187,261 | 1/4 | 198,496 | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 152,948 | 1/2 | 164,466 | 1/2 | 175,983 | 1/2 | 187,501 | 1/2 | 198,645 | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 153,188 | 3/4 | 164,706 | 3/4 | 176,223 | 3/4 | 187,741 | 3/4 | 198,794 | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 3                                 | 153,428 | 3   | 164,946 | 3   | 176,463 | 3   | 187,980 | 3   | 198,942 | 3   |        | 3   | 3      | 3   |        | 3   | 3      |    |        |
| 1/4                               | 153,668 | 1/4 | 165,186 | 1/4 | 176,703 | 1/4 | 188,220 | 1/4 |         | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 153,908 | 1/2 | 165,426 | 1/2 | 176,943 | 1/2 | 188,460 | 1/2 |         | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 154,148 | 3/4 | 165,666 | 3/4 | 177,183 | 3/4 | 188,700 | 3/4 |         | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 4                                 | 154,388 | 4   | 165,906 | 4   | 177,423 | 4   | 188,940 | 4   |         | 4   |        | 4   | 4      | 4   |        | 4   | 4      |    |        |
| 1/4                               | 154,628 | 1/4 | 166,145 | 1/4 | 177,663 | 1/4 | 189,180 | 1/4 |         | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 154,868 | 1/2 | 166,385 | 1/2 | 177,903 | 1/2 | 189,420 | 1/2 |         | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 155,108 | 3/4 | 166,625 | 3/4 | 178,143 | 3/4 | 189,660 | 3/4 |         | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 5                                 | 155,348 | 5   | 166,865 | 5   | 178,383 | 5   | 189,900 | 5   |         | 5   |        | 5   | 5      | 5   |        | 5   | 5      |    |        |
| 1/4                               | 155,588 | 1/4 | 167,105 | 1/4 | 178,623 | 1/4 | 190,140 | 1/4 |         | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 155,828 | 1/2 | 167,345 | 1/2 | 178,863 | 1/2 | 190,380 | 1/2 |         | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 156,068 | 3/4 | 167,585 | 3/4 | 179,102 | 3/4 | 190,620 | 3/4 |         | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 6                                 | 156,308 | 6   | 167,825 | 6   | 179,342 | 6   | 190,860 | 6   |         | 6   |        | 6   | 6      | 6   |        | 6   | 6      |    |        |
| 1/4                               | 156,548 | 1/4 | 168,065 | 1/4 | 179,582 | 1/4 | 191,100 | 1/4 |         | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 156,788 | 1/2 | 168,305 | 1/2 | 179,822 | 1/2 | 191,340 | 1/2 |         | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 157,028 | 3/4 | 168,545 | 3/4 | 180,062 | 3/4 | 191,580 | 3/4 |         | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 7                                 | 157,268 | 7   | 168,785 | 7   | 180,302 | 7   | 191,820 | 7   |         | 7   |        | 7   | 7      | 7   |        | 7   | 7      |    |        |
| 1/4                               | 157,507 | 1/4 | 169,025 | 1/4 | 180,542 | 1/4 | 192,060 | 1/4 |         | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 157,747 | 1/2 | 169,265 | 1/2 | 180,782 | 1/2 | 192,299 | 1/2 |         | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 157,987 | 3/4 | 169,505 | 3/4 | 181,022 | 3/4 | 192,539 | 3/4 |         | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 8                                 | 158,227 | 8   | 169,745 | 8   | 181,262 | 8   | 192,779 | 8   |         | 8   |        | 8   | 8      | 8   |        | 8   | 8      |    |        |
| 1/4                               | 158,467 | 1/4 | 169,985 | 1/4 | 181,502 | 1/4 | 193,019 | 1/4 |         | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 158,707 | 1/2 | 170,225 | 1/2 | 181,742 | 1/2 | 193,259 | 1/2 |         | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 158,947 | 3/4 | 170,464 | 3/4 | 181,982 | 3/4 | 193,499 | 3/4 |         | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 9                                 | 159,187 | 9   | 170,704 | 9   | 182,222 | 9   | 193,739 | 9   |         | 9   |        | 9   | 9      | 9   |        | 9   | 9      |    |        |
| 1/4                               | 159,427 | 1/4 | 170,944 | 1/4 | 182,462 | 1/4 | 193,979 | 1/4 |         | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 159,667 | 1/2 | 171,184 | 1/2 | 182,702 | 1/2 | 194,219 | 1/2 |         | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 159,907 | 3/4 | 171,424 | 3/4 | 182,942 | 3/4 | 194,459 | 3/4 |         | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 10                                | 160,147 | 10  | 171,664 | 10  | 183,182 | 10  | 194,699 | 10  |         | 10  |        | 10  | 10     | 10  |        | 10  | 10     |    |        |
| 1/4                               | 160,387 | 1/4 | 171,904 | 1/4 | 183,422 | 1/4 | 194,939 | 1/4 |         | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 160,627 | 1/2 | 172,144 | 1/2 | 183,661 | 1/2 | 195,178 | 1/2 |         | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 160,867 | 3/4 | 172,384 | 3/4 | 183,901 | 3/4 | 195,418 | 3/4 |         | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |
| 11                                | 161,107 | 11  | 172,624 | 11  | 184,141 | 11  | 195,658 | 11  |         | 11  |        | 11  | 11     | 11  |        | 11  | 11     |    |        |
| 1/4                               | 161,347 | 1/4 | 172,864 | 1/4 | 184,381 | 1/4 | 195,897 | 1/4 |         | 1/4 |        | 1/4 | 1/4    | 1/4 |        | 1/4 | 1/4    |    |        |
| 1/2                               | 161,587 | 1/2 | 173,104 | 1/2 | 184,621 | 1/2 | 196,136 | 1/2 |         | 1/2 |        | 1/2 | 1/2    | 1/2 |        | 1/2 | 1/2    |    |        |
| 3/4                               | 161,826 | 3/4 | 173,344 | 3/4 | 184,861 | 3/4 | 196,376 | 3/4 |         | 3/4 |        | 3/4 | 3/4    | 3/4 |        | 3/4 | 3/4    |    |        |

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 01/13/2011 CL - SW  
CALCULATED: 01/14/2011 CL  
PRINTED: 01/14/2011 CL

CANCELS AND SUPERCEDES  
ALL PRIOR TO 01/2011

PRECISION MEASUREMENT  
& ANALYSIS, INC.  
P.O. Box 2092  
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# BARGE "CCL 403"

## FUEL TANK INNAGE TABLE

CAPACITIES GIVEN IN WHOLE GALLONS

GAUGE HEIGHT 4'-05 1/4"

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

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

OWNER: CHEM CARRIERS  
 DESCRIPTION: DOUBLE SKIN, RAKE TANK BARGE  
 SIZE: 297'-6"x54'-0"x12'-0"

CONTRACT: 96180  
 HULL: 4772  
 NAME: CCL 403  
 DATE: 3-Feb-11

VESSEL DISPLACEMENT AND CARGO DEADWEIGHT TABLE (FRESH WATER)

|              | DRAFT | 2 FT | 3 FT | 4 FT | 5 FT | 6 FT | 7 FT | 8 FT | 9 FT | 10 FT | 11 FT |
|--------------|-------|------|------|------|------|------|------|------|------|-------|-------|
| DISPLACEMENT | 0 IN  |      | 1370 | 1833 | 2303 | 2778 | 3259 | 3743 | 4232 | 4725  | 5222  |
| DEADWEIGHT   |       |      | 372  | 836  | 1306 | 1781 | 2261 | 2746 | 3234 | 3727  | 4224  |
| DISPLACEMENT | 1 IN  |      | 1408 | 1872 | 2343 | 2818 | 3299 | 3784 | 4273 | 4766  | 5263  |
| DEADWEIGHT   |       |      | 410  | 875  | 1345 | 1821 | 2301 | 2786 | 3275 | 3768  | 4266  |
| DISPLACEMENT | 2 IN  |      | 1446 | 1911 | 2382 | 2858 | 3339 | 3824 | 4314 | 4807  | 5305  |
| DEADWEIGHT   |       |      | 449  | 914  | 1384 | 1861 | 2341 | 2827 | 3316 | 3810  | 4307  |
| DISPLACEMENT | 3 IN  | 1026 | 1485 | 1950 | 2422 | 2898 | 3379 | 3865 | 4355 | 4849  | 5346  |
| DEADWEIGHT   |       | 29   | 487  | 953  | 1424 | 1900 | 2382 | 2867 | 3357 | 3851  | 4349  |
| DISPLACEMENT | 4 IN  | 1064 | 1523 | 1989 | 2461 | 2938 | 3420 | 3906 | 4396 | 4890  | 5388  |
| DEADWEIGHT   |       | 67   | 526  | 992  | 1463 | 1940 | 2422 | 2908 | 3398 | 3892  | 4390  |
| DISPLACEMENT | 5 IN  | 1102 | 1562 | 2028 | 2501 | 2978 | 3460 | 3946 | 4437 | 4931  | 5430  |
| DEADWEIGHT   |       | 105  | 564  | 1031 | 1503 | 1980 | 2462 | 2949 | 3439 | 3934  | 4432  |
| DISPLACEMENT | 6 IN  | 1140 | 1601 | 2068 | 2540 | 3018 | 3500 | 3987 | 4478 | 4973  | 5471  |
| DEADWEIGHT   |       | 143  | 603  | 1070 | 1543 | 2020 | 2503 | 2989 | 3480 | 3975  | 4474  |
| DISPLACEMENT | 7 IN  | 1178 | 1639 | 2107 | 2580 | 3058 | 3541 | 4028 | 4519 | 5014  | 5513  |
| DEADWEIGHT   |       | 181  | 642  | 1109 | 1582 | 2060 | 2543 | 3030 | 3521 | 4017  | 4516  |
| DISPLACEMENT | 8 IN  | 1216 | 1678 | 2146 | 2619 | 3098 | 3581 | 4069 | 4560 | 5056  | 5555  |
| DEADWEIGHT   |       | 219  | 680  | 1148 | 1622 | 2100 | 2584 | 3071 | 3562 | 4058  | 4557  |
| DISPLACEMENT | 9 IN  | 1255 | 1717 | 2185 | 2659 | 3138 | 3622 | 4109 | 4601 | 5097  | 5597  |
| DEADWEIGHT   |       | 257  | 719  | 1188 | 1662 | 2141 | 2624 | 3112 | 3604 | 4099  | 4599  |
| DISPLACEMENT | 10 IN | 1293 | 1756 | 2225 | 2699 | 3178 | 3662 | 4150 | 4642 | 5139  |       |
| DEADWEIGHT   |       | 295  | 758  | 1227 | 1701 | 2181 | 2665 | 3153 | 3645 | 4141  |       |
| DISPLACEMENT | 11 IN | 1331 | 1794 | 2264 | 2739 | 3218 | 3703 | 4191 | 4684 | 5180  |       |
| DEADWEIGHT   |       | 334  | 797  | 1266 | 1741 | 2221 | 2705 | 3193 | 3686 | 4182  |       |

DISPLACEMENT & DEADWEIGHT ARE IN SHORT TONS. ONE SHORT TON (S.TON) = 2000 POUNDS

LIGHTSHIP WEIGHT (LWT) IS DERIVED FROM FREEBOARD READINGS

LWT = 998 S.TON

NOTES:

- TABLE DATA IS BASED ON DRAFTS IN FRESH WATER AT 32.05 (CU. FT. PER S. TON) OR 62.4 (LBS PER CU. FT.).
- TO OBTAIN DISPLACEMENT IN SEA WATER AT 31.25 (CU. FT. PER S. TON) OR 64.0 (LBS PER CU. FT.), MULTIPLY THE TABLE DISPLACEMENT BY 1.025, TO OBTAIN THE CORRESPONDING CARGO DEADWEIGHT, SUBTRACT THE LIGHTSHIP WEIGHT (LWT) FROM THE CALCULATED DISPLACEMENT IN SEA WATER.
- ACTUAL DISPLACEMENTS AND DEADWEIGHTS MAY VARY DUE TO ACCURACY OF DRAFT READINGS, WEATHER CONDITIONS, SPECIFIC GRAVITY OF WATER, DECK LOADS, RESIDUE IN BILGES ALTERATIONS OR CHANGES TO THE VESSEL SINCE REFERENCE FREEBOARD READINGS WERE TAKEN, etc.
- ALL DATA IS BASED ON ZERO TRIM.

BY 1.025,  
IN SEA

WITY  
:



16710/P016203  
Serial: C1-1303247  
September 23, 2013

M. Dan Jones & Associates  
Attn: Mr. M. Dan Jones  
7519 Old Bridge Court  
Sugar Land, TX 77479  
Email: matdjones@aol.com

Subj: CCL 403, O.N. 1231311, Trinity Ashland City Hull 4772  
CCL 404, O.N. 1231312, Trinity Ashland City Hull 4773  
CCL 405, O.N. 1236867, Trinity Ashland City Hull 2196-1  
CCL 406, O.N. 1236866, Trinity Ashland City Hull 2199-1  
297' x 54' x 12' Unmanned Double Hull Type II/III Tank Barges (O/D)  
Grade A (max. 25 psia Reid) and Lower Flammable or Combustible Liquids Identified in  
46 CFR Table 30.25-1 or 46 CFR Part 153 Table 2 and Specified Hazardous Cargoes  
Design Density 8.7 lbs/gal; Maximum Density (slack load) 13.6 lbs/gal  
Rivers; Lakes, Bays, and Sounds; Limited Coastwise on unmanned fair weather voyages  
only, not more than 12 miles offshore between St. Marks and Carrabelle, Florida  
Multi-breasted Tandem Loading

Ref: (a) M. Dan Jones & Associates Doc. 13-36-2, "Vapor Collection Calculation on the Dual  
Loading of Trinity Marine Products, Inc. Hulls 2196 & 2199" dated September 16,  
2013  
(b) Marine Safety Center Letter Serial: C1-1100183, dated January 21, 2011  
(c) Marine Safety Center Letter Serial: C1-1103805, dated November 14, 2011  
(d) Marine Safety Center Letter Serial: C1-1103914, dated November 22, 2011

Dear Mr. Jones:

In response to your electronic submission dated September 16, 2013, we have reviewed the pressure drop calculations for multi-breasted tandem loading. Reference (a) is "**Examined**". Calculations such as these are not normally marked approved, but are used to verify that the system meets the applicable regulations.

These barges have vapor control systems previously approved by references (b) through (d), and are acceptable for dual loading operations. Based on the calculations in reference (a), tandem loading is limited to simultaneous collection of those cargoes listed in the vessels' CAA at a maximum transfer rate of **5000 bbl/hr** per barge.

For final approval you must submit your request to Commandant (CG-ENG-5) with the name of the facility where the vessels will be conducting dual loading operations. For more information, please email the Coast Guard Hazardous Materials Standards division at [HazmatStandards@uscg.mil](mailto:HazmatStandards@uscg.mil).

16710/P016203  
Serial: C1-1303247  
September 23, 2013

Subj: CCL 403, O.N. 1231311, Trinity Ashland City Hull 4772  
CCL 404, O.N. 1231312, Trinity Ashland City Hull 4773  
CCL 405, O.N. 1236867, Trinity Ashland City Hull 2196-1  
CCL 406, O.N. 1236866, Trinity Ashland City Hull 2199-1  
Multi-breasted Tandem Loading

If you have any questions concerning our review, please contact Lieutenant Ryan Mowbray at the number listed above.

Sincerely,

M. J. SEXTON  
Lieutenant, U. S. Coast Guard  
Assistant Chief, Tank Vessel and Offshore Division  
By direction

Copy: Supervisor, Coast Guard Marine Safety Detachment Nashville  
Commandant, U. S. Coast Guard (CG-ENG-5)