



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

Certification Date: 17 Jun 2016  
Expiration Date: 17 Jun 2021

# Certificate of Inspection

For ships of international tonnage this certificate labels the requirements of SOLAS, TO an amended, regulation 1/14, for a SAFE MARINE DOCUMENT.

|             |                 |            |           |            |
|-------------|-----------------|------------|-----------|------------|
| Vessel Name | Official Number | IMO Number | Call Sign | Service    |
| HSC 301     | 1232433         |            |           | Tank Barge |

|               |               |           |            |
|---------------|---------------|-----------|------------|
| Home Port     | Hull Material | Homestead | Propulsion |
| HOUMA, LA     | Steel         |           |            |
| UNITED STATES |               |           |            |

|                        |               |                |            |          |     |         |
|------------------------|---------------|----------------|------------|----------|-----|---------|
| Home State             | Delivery Date | Keel Laid Date | Gross Tonn | Net Tonn | GR1 | Length  |
| MORGAN CITY, Louisiana | 08Jun2011     | 01Aug2010      | 61010      | 61010    |     | 142.07m |
| UNITED STATES          |               |                |            |          |     |         |

|  |  |
|--|--|
| Owner  | Operator   |
| CENAC MARINE SERVICES LLC<br>PO BOX 2617<br>HOUMA, LA 70361<br>UNITED STATES | CENAC MARINE SERVICES LLC<br>742 HIGHWAY 182 PO BOX 2017<br>Houma, LA 70364<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 Master                   | 0 Licensed Mate     | 0 Chief Engineer             | 0 Qualified Marine Engineer Deck |
| 0 Chief Mate               | 0 First Class Pilot | 0 First Assistant Engineer   | 0 Deck                           |
| 0 Second Mate              | 0 Radio Officer     | 0 Second Assistant Engineer  | 0 Crew Members                   |
| 0 Third Mate               | 0 Able Seaman       | 0 Third Assistant Engineer   |                                  |
| 0 Master First Class Pilot | 0 Ordinary Seaman   | 0 Licensed Engineer          |                                  |
| 0 Able First Class Pilot   | 0 Deckhand          | 0 Non Licensed/Engineer Deck |                                  |

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 plus Limited Coastwise---  
ALSO, ON FAIR WEATHER VOYAGED ONLY, NOT MORE THAN TWELVE (12) MILES FROM SHORE BETWEEN ST. MARKS, FLORIDA AND CARRABELLE, FLORIDA.

THIS VESSEL HAS BEEN GRANTED A FRESH WATER SERVICE EXAMINATION INTERVAL IN ACCORDANCE WITH 46 CFR 31.10-21(a)(2). IF THIS VESSEL IS OPERATED IN SALT WATER MORE THAN 6 MONTHS IN ANY 12 MONTH PERIOD, THE VESSEL MUST BE INSPECTED USING SALT WATER INTERVALS PER 46 CFR.

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

With this Inspection for Certification having been completed at Port Arthur Texas UNITED STATES, the Officer in Charge, Marine Inspection, Marine Safety Unit Port Arthur 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 |       |       |             |
|-------------------------------|-------|-------|-------------|
| Date                          | Zone  | A/P/R | Signature   |
| 21 Jun 17                     | PTMS  | N     | [Signature] |
| 27 Feb 18                     | HOUMA | P     | [Signature] |
| 7 Jul 18                      | TRSP  | A     | [Signature] |

This certificate issued by *John 702*  
L. T. O'BRIEN, CDR, USCG, by direction  
Officer in Charge, Marine Inspection  
Marine Safety Unit Port Arthur  
Inspection Zone



# Certificate of Inspection

Vessel Name: HBC 301

31.10-21(a)(1) AND THE COGNIZANT OCMI NOTIFIED IN WRITING AS SOON AS THIS CHANGE IN STATUS OCCURS.

**---Hull Exams---**

| Exam Type          | Next Exam | Last Exam | Prior Exam |
|--------------------|-----------|-----------|------------|
| DryDock            | 08Jul2021 | 08Jul2011 |            |
| Internal Structure | 17Jun2021 | 17Jun2016 | 08Jul2011  |

**---Stability---**

| Type   | issued Date | Office |
|--------|-------------|--------|
| Book   | None Valid  |        |
| Letter | None Valid  |        |

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

Authorization: FLAMMABLE, COMBUSTIBLE AND SPECIFIED HAZARDOUS CARGOES

| Total Capacity | Units  | Highest Grade Type | Part151 Regulated | Part153 Regulated | Part154 Regulated |
|----------------|--------|--------------------|-------------------|-------------------|-------------------|
| 30000          | Barrel | A                  | Yes               | No                | No                |

**\*Hazardous Bulk Solids Authority\***

Not Authorized

**\*Loading Constraints - Structural\***

| Tank Number | Maximum Load (short tons) | Maximum Density (lbs/gal) |
|-------------|---------------------------|---------------------------|
| #1 P/S      | 816                       | 15                        |
| # 2 P/S     | 813                       | 15                        |
| # 3 P/S     | 681                       | 15                        |

**\*Loading Constraints - Stability\***

| Hull Type | Max Cargo Weight/Tank (short tons) | Maximum Draft (Ft/In) | Max Density (lbs/gal) | Route Description             |
|-----------|------------------------------------|-----------------------|-----------------------|-------------------------------|
| III       | 4401                               | 11ft 0in              | 15                    | Lakes Bays and Sounds plus LC |
| II        | 3692                               | 9ft 6in               | 15                    | Lakes Bays and Sounds plus LC |

**\*Conditions Of Carriage\***

ONLY THOSE CARGOES NAMED IN THE VESSEL'S CARGO AUTHORITY ATTACHMENT (CAA), SERIAL # C1-1100353, DATED 09-FEB-11, MAY BE CARRIED, AND THEN ONLY IN THE TANKS INDICATED.

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 197, SUBPART C, ARE APPLIED.

PER 46 CFR 150.130, THE PERSON IN CHARGE OF THE VESSEL IS RESPONSIBLE FOR ENSURING THAT THE COMPATIBILITY REQUIREMENTS OF 46 CFR 150 ARE MET. CARGOES MUST BE CHECKED FOR COMPATIBILITY USING FIGURES, TABLES, AND APPENDICIES OF 46 CFR 150 IN CONJUNCTION WITH THE REACTIVE GROUP NUMBERS FROM THE "COMPAT GROUP NO" COLUMN LISTED IN THE VESSELS CAA.

**\*VAPOR CONTROL AUTHORIZATION\***

PER 46 CFR 39, EXCLUDING PART 39.40, THIS VESSEL'S VAPOR COLLECTION SYSTEM (VCS) HAS BEEN INSPECTED TO THE PLANS APPROVED BY THE MARINE SAFETY CENTER LETTERS SERIAL # C2-0902035 DATED JULY 14, 2009 AND EXTENDED BY SERIAL # C1-1100353 DATED FEBRUARY 8, 2011, AND HAS BEEN FOUND



# Certificate of Inspection

Vessel Name: HBC 301

ACCEPTIBLE FOR THE COLLECTION OF BULK LIQUID VAPORS ANNOTATED WITH "YES" IN THE CAA'S VCS COLUMN.

PER 46 CFR 39.1017 AND 39.5000(e), THIS VESSEL'S VCS HAS BEEN EVALUATED AND APPROVED FOR MULTI-BREASTED TANDEM LOADING WITH OTHER VESSELS SPECIFICALLY APPROVED TO TANDEM LOAD WITH THIS VESSEL.

\*STABILITY AND TRIM\*

THE MAXIMUM DESIGN DENSITY OF CARGO WHICH MAY BE FILLED TO THE TANK TOP IS 6.34 LBS/GAL. THE MAX DENSITY OF CARGO THAT CAN BE CARRIED AS SLACK LOAD IS 15.00 LBS/GAL.

PER 46 CFR 151.10-15(c)(2), THE MAXIMUM TANK WEIGHTS LISTED ABOVE REFLECT UNIFORM (WITHIN 5%) LOADING AT THE DEEPEST DRAFT ALLOWED. WHEN CARRYING SUBCHAPTER "O" CARGOES AT SHALLOWER DRAFTS, THE BARGE SHOULD ALWAYS BE LOADED UNIFORMLY.

### --- Inspection Status ---

#### \*Cargo Tanks\*

| Tank Id | Internal Exam |           |           | External Exam |           |           |
|---------|---------------|-----------|-----------|---------------|-----------|-----------|
|         | Previous      | Last      | Next      | Previous      | Last      | Next      |
| #1 P/S  | -             | 08Jul2011 | 08Jul2021 | 08Jul2011     | 17Jun2016 | 17Jun2021 |
| # 2 P/S | -             | 08Jul2011 | 08Jul2021 | 08Jul2011     | 17Jun2016 | 17Jun2021 |
| # 3 P/S | -             | 08Jul2011 | 08Jul2021 | 08Jul2011     | 17Jun2016 | 17Jun2021 |

#### Hydro Test

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

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

Required Only During Transfer of Cargo or Operation of Barge Machinery

### --- Fire Fighting Equipment ---

Number of Fireman Outfits - 0                      Number of Fire Pumps - 0

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

| Quantity | Class Type |
|----------|------------|
| 2        | B-II       |

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



# Certificate of Inspection

## Cargo Authority Attachment

Vessel Name: **HBC 301**  
Official #: 1232433

Shipyard: Conrad Shipbuilding  
Hull #: C-927

### 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 | 15                   | Atmos. | Amb.  | II        | 1ii<br>2ii     | Integral Gravity | PV   | Closed | II             | G-1  | Vent N                | NA             | Portable                 |                      |                           | NR       | No        |

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

#### Authorized Subchapter O Cargoes

|  |     |                 |   |     |     |   |     |     |                         |   |
|--|-----|-----------------|---|-----|-----|---|-----|-----|-------------------------|---|
| Acetonitrile   | ATN | 37              | O | C   | III | A | Yes | 3   | No                      | 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 |
| 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, 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 |
| 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 |
| 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 |
| 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 |
| 1,1-Dichloroethane   | DCH | 36              | O | C   | III | A | Yes | 1   | No                      | G |
| Dichloromethane  | DCM | 36              | O | NA  | III | A | Yes | 5   | No                      | 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 |
| 1,4-Dioxane  | DOX | 41              | O | C   | II  | A | Yes | 1   | No                      | 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 |
| Ethyl acrylate   | EAC | 14              | O | C   | III | A | Yes | 2   | 50-70(a), 50-81(a), (b) | G |
| Ethylene cyanohydrin   | ETC | 20              | O | E   | III | A | Yes | 1   | No                      | G |
| Ethylene dichloride  | EDC | 36 <sup>2</sup> | O | C   | III | A | Yes | 1   | No                      | G |
| Ethylene glycol hexyl ether  | EGH | 40              | O | E   | III | A | No  | N/A | No                      | G |

\*\*\* 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: **HBC 301**  
Official #: 1232433

Page 2 of 6

Shipyard: Conrad Shipbuilding  
Hull #: C-927

| 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 |  |              |  |
| 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 <sup>2</sup>  | O           | E     | III       | A          | Yes                    | 1            | No   | G            |  |
| Formaldehyde solution (37% to 50%)     | FMS       | 19 <sup>2</sup>  | 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            |  |
| Hydrocarbon 5-9                        | HFN       |                  | O           | C     | III       | A          | Yes                    | 1            | .50-70(a), .50-81(a), (b)                                | G            |  |
| isoprene                               | IPR       | 30               | O           | A     | III       | A          | Yes                    | 7            | .50-70(a), .50-81(a), (b)                                | 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 methacrylate                    | MMM       | 14               | O           | C     | III       | A          | Yes                    | 2            | .50-70(a), .50-81(a), (b)                                | G            |  |
| alpha-Methylstyrene                    | MSR       | 30               | O           | D     | III       | A          | Yes                    | 2            | .50-70(a), .50-81(a), (b)                                | G            |  |
| 1- or 2-Nitropropane                   | NPM       | 42               | O           | D     | III       | A          | Yes                    | 1            | .50-81   | G            |  |
| Pentachloroethane                      | PCE       | 36               | O           | NA    | III       | A          | No                     | N/A          | No   | 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            |  |
| iso-Propyl ether                       | IPE       | 41               | O           | C     | III       | A          | Yes                    | 1            | .50-70(a)  | G            |  |
| Sodium chlorate solution (50% or less) | SDD       | 0 <sup>1,2</sup> | O           | NA    | III       | A          | No                     | N/A          | .50-73   | 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            |  |
| Tetrahydrofuran                        | THF       | 41               | O           | C     | III       | A          | Yes                    | 1            | .50-70(b)  | G            |  |
| 1,2,4-Trichlorobenzene                 | TCB       | 36               | O           | E     | III       | A          | Yes                    | 1            | No   | G            |  |
| Trichloroethylene                      | TCL       | 36 <sup>2</sup>  | O           | NA    | III       | A          | Yes                    | 1            | No   | G            |  |
| Valeraldehyde (all isomers)            | VAK       | 19               | O           | D     | III       | A          | Yes                    | 1            | No   | G            |  |
| 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            |  |

### 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 |  |  |

\*\*\* 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: **HBC 301**  
Official #: 1232433

Page 3 of 6

Shipyard: Conrad Shipbuilding  
Hull #: C-927

| 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 |  |              |
| 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            |  |              |
| Dioctyl 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            |  |              |
| 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            |  |              |

\*\*\* 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: **HRC 301**  
Official #: 1232433

Page 4 of 6

Shipyard: Conrad Shipbuilding  
Hull #: C-927

| 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 |  |              |  |
| 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            |  |              |  |
| 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            |  |              |  |

\*\*\* 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: **HBC 301**  
Official #: 1232433

Page 5 of 6

Shipyard: Conrad Shipbuilding  
Hull #: C-927

| 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's of | Insp. Period |
|   |           |                 |             |       |           |                        | App'd (Y or N) | VCS Category |   |              |
| 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            |   |              |
| 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            |   |              |
| 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: **HBC 301**  
Official #: 1232433

Page 6 of 6

Shipyard: Conrad Shipbu  
Hull #: C-927

### 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.   |
| Compatibility 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. |
| Category 3                          | (Highly toxic) VCSs for these toxic cargoes cannot use a spill valve or rupture disk as the primary means to meet the overflow 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.   |

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