

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

Certification Date: 22 Nov 2023 **Expiration Date:** 22 Nov 2024

Temporary 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.

| This Temporary Certificate of Inspection receipt on board | d said vessel of the original certif | | | | | | |
|---|--|-------------|--------------------|-------------|--|--------------|------------------|
| Vessel Name | Official Nun | nber | IMO Numi | per | Call Sign | Service | |
| KIRBY 28028 | 113904 | -0 | | | | Tank B | arge |
| | | | | | | | |
| Day B. A | | | | | | | |
| Hailing Port | Hu | II Material | Horse | power | Propulsion | | |
| WILMINGTON, DE | S | teel | | | | | |
| UNITED STATES | | | | | | | |
| ONITED STATES | | | | | | | |
| | | | | | | | |
| Place Built | Deliver | y Date | Keel Laid Date | Gross Tons | Net Tons | DWT | Length |
| GALVESTON, TX | 01A | ug2003 | 09Apr2003 | R-1616 | R-1616 | | R-297.0 |
| UNITED STATES | ~//·* | -9 | | I- | F | | 1-0 |
| OMITED OTHER | | | | | | | |
| | | | | | | | |
| Owner KIRBY INLAND MARINE I | D | | Operato | | MARINE, LP | | |
| 55 WAUGH DR STE 1000 | | | | 0 MARKET | The state of the s | | |
| HOUSTON, TX 77007 | | | | | , TX 77530 | | |
| UNITED STATES | | | UNIT | ED STATE | S | | |
| | | | | | | | |
| This vessel must be manne 0 Certified Lifeboatmen, 0 | | | | | | nich there m | ust be |
| 0 Masters | 0 Licensed Mates | 0 Chief | Engineers | 0.0 | ilers | | |
| 0 Chief Mates | 0 First Class Pilots | 0 First A | Assistant Enginee | rs | | | |
| 0 Second Mates | 0 Radio Officers | 0 Secon | nd Assistant Engir | neers | | | |
| 0 Third Mates | 0 Able Seamen | 0 Third | Assistant Engine | ers | | | |
| 0 Master First Class Pilot | 0 Ordinary Seamen | 0 Licens | sed Engineers | | | | |
| 0 Mate First Class Pilots | 0 Deckhands | 0 Qualif | ied Member Engir | neer | | | |
| In addition, this vessel may Persons allowed: 0 | carry 0 Passengers, | 0 Other | Persons in cre | ew, 0 Perso | ns in addition to | crew, and r | no Others. Total |
| Route Permitted And Co | onditions Of Operati | on: | | | | | |
| Lakes, Bays, and | | | | | | | |
| This vessel has been grevessel is operated in sealt water intervals pechange in status occurs | alt water more than r 46 CFR 31.10-21(a | n 6 mon | ths in any 12 | month per | iod, the vesse | el must be | inspected using |
| This tank barge is part (TBSIP). Inspection act Inspection issues conce | ivities aboard this | s barge | shall be con | ducted per | its Tank Bard | ge Action F | spection Program |
| ***SEE NEXT PAGE FO | R ADDITIONAL CE | RTIFIC | ATE INFORM | 1ATION*** | | | |

With this Inspection for Certification having been completed at Channelview, TX, 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/Peri | odic/Re-Inspe | ction | This certificate issued by: Ja J. Wacdman |
|------|-------------|---------------|-----------|--|
| Date | Zone | A/P/R | Signature | L. L. WOODMAN, CDR, USCG, By direction |
| | | | | Officer in Charge, Marine Inspection Marine Safety Unit Port Arthur |
| | | | | Inspection Zone |



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

Certification Date: 22 Nov 2023 **Expiration Date:** 22 Nov 2024

Temporary Certificate of Inspection

Vessei Name KIRBY 28028

---Hull Exams---

Exam Type Next Exam Last Exam

Prior Exam

DryDock

30Nov2033 22Nov2023 23Sep2013

Internal Structure

30Nov2028

22Nov2023

06Dec2018

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

Authorization:

FLAMMABLE/COMBUSTIBLE LIQUIDS AND SPECIFIED HAZARDOUS CARGOES

Total Capacity

Units

Highest Grade Type Part151 Regulated Part153 Regulated

Part154 Regulated

31972

Barrel

Yes

Nο

No

Hazardous Bulk Solids Authority

Loading Constraints - Structural

| Tank Location Description | Max Cargo Weight per Tank ishort tons. | Maximum Density (lbs:gal) |
|---------------------------|--|---------------------------|
| 1 P/S | 749 | 13.6 |
| 2 P/S | 747 | 13.6 |
| 3 P/S | 749 | 13.6 |

Loading Constraints - Stability

| Hull Type | Maximum Load (short tons) | Maximum Draft (ft/in) | Max Density (lbs/gal) | Route Description |
|-----------|---------------------------|--------------------------|--------------------------|-------------------|
| II | 4276 | 11ft 0in | 13.6 | R. LBS |
| Ш | 4276 | 11ft 0in | 13.6 | R. LBS |

Conditions Of Carriage

Only those specified hazardous cargoes named in the vessel's Cargo Authority Attachment (CAA), serial # C2-0305145, dated 21 May 2003, may be carried. The specified hazardous cargoes may be carried 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 number from the "Compat Group No" column is listed in the vessel's CAA.

When the vessel is carrying cargoes containing 0.5% or greater benzene by volume, the person in charge is responsible for ensuring the provisions of 46 CFR 197, Subpart C, are applied.

Per 46 CFR, 39, excluding Part 39.4000, this vessel's vapor control system (VCS) has been inspected to the plans approved by Marine Safety Center letter serial # C2-9904654, dated 27 Jul 1999, and Serial #C2-0101081, dated 03 Apr 2000, and found acceptable for collection of bulk liquid cargo vapors annotated with "Yes" in the CAA's VCS column.

Per 46 CFR Part 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.

Per 46 CFR 151.10(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.

The maximum design density of cargo which may be filled to the tank top is 10.00 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.

Deck slop tank is authorized for Grade "A" and lower and specified hazardous cargoes.



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

Certification Date: 22 Nov 2023 Expiration Date: 22 Nov 2024

Temporary Certificate of Inspection

Vessel Name: KIRBY 28028

--- Inspection Status ---

Cargo Tanks

| | Internal Exam | | | External Exar | n | |
|---------|---------------|-----------|------------|---------------|------|------|
| Tank ld | Previous | Last | Next | Previous | Last | Next |
| 1 P/S | 23Sep2013 | 22Nov2023 | 30Nov2033 | - | - | - |
| 2 P/S | 23Sep2013 | 22Nov2023 | 30Nov2033 | - | - | - |
| 3 P/S | 23Sep2013 | 22Nov2023 | 30Nov2033 | - | - | - |
| | | | Hydro Test | | | |
| Tank Id | Safety Valves | 3 | Previous | Last | Next | |
| 1 P/S | - | | - | 01Aug2003 | - | |
| 2 P/S | - | | - | 01Aug2003 | - | |
| 3 P/S | _ | | - | 01Aug2003 | - | |

--- 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



C2-0305145 21-May-03

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 28028

Official #: 1139040

Shipyard: West Gulf Marine

Hull #: 135

| 46 | CFR | 151 | Tank | Group | Characte | ristics |
|----|-----|-----|------|-------|----------|---------|
| | | | | | | |

| Tank Group Information | Cargo Id | dentification | on | | Cargo | | Tanks | | Caro | | Environ Control | Environmental Control Fi | | Control | | Special Regulrements | | ments | | |
|----------------------------|----------|---------------|-------|-------------|-------------|---------------------|-------|--------|---------------|------|--------------------|-----------------------------|------------------------|---|---|----------------------|--------------|-------|--|--|
| Trik Grp Tanks in Group | Density | Press. | Temp. | Hull Typ | Seg Tank | Туре | Vent | Gauge | Pipe Class | Cont | Tanks | | Protection Provided | General | Materials of Construction | Elec Haz | Temp Cont | | | |
| A all | 13.6 | Atmos. | Amb. | . 11 | 1ii 2ii | Integral Gravity | PV | Closed | II | G-1 | NR | NA | Portable | .50-5, .50-60, .50-70(a), .50-70(b), .50-73, .50-81(a), | 55-1(b), (c), (e), (f), (h), 56-1(a), (b), (c), (d), (e), (f), (g). | 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 | | | | | | | |
|--|--------------|------------------------|----------------|-------|--------------|---------------|-------------------|-----------------|--|
| | | | | | | | Vapor R | | |
| Name | Chem Code | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group | App'd (Y or N) | VCS Category | Special Requirements in 46 CFR 151 General and Mat'ls of Construction |
| Authorized Subchapter O Cargoes | | | | | | | | | |
| Acetonitrile | ATN | 37 | 0 | С | 111 | Α | Yes | 3 | No |
| Acrylonitrile | ACN | 15 ² | 0 | С | - 11 | Α | Yes | 4 | .50-70(a), .55-1(e) |
| Adiponitrile | ADN | 37 | 0 | E | - 11 | Α | Yes | 1 | No |
| Alkyl(C7-C9) nitrates | AKN | 34 ² | 0 | NA | Ш | Α | No | N/A | .50-81, .50-86 |
| Aminoethylethanolamine | AEE | 8 | 0 | Е | III | Α | Yes | 1 | .55-1(b) |
| Ammonium bisulfite solution (70% or less) | ABX | 43 ² | 0 | NA | 111 | Α | No | N/A | .50-73, .56-1(a), (b), (c) |
| Ammonium hydroxide (28% or less NH3) | АМН | 6 | 0 | NA | Ш | Α | No | N/A | .56-1(a), (b), (c), (f), (g) |
| Anthracene oil (Coal tar fraction) | AHC | 33 | 0 | NA | П | Α | No | N/A | No |
| Benzene | BNZ | - 32 | 0. | С | Ш | Α | Yes | 1 | .50-60 |
| Benzene or hydrocarbon mixtures (having 10% Benzene or more) | ВНВ | 32 ² | 0 | NA | Ш | Α | Yes | 1 | .50-60 |
| Benzene or hydrocarbon mixtures (containing Acetylene and 10% | ВНА | 32 ² | 0 | NA | Ш | Α | Yes | 1 | .50-60, .56-1(b), (d), (f), (g) |
| Benzene or more) | | | | | | | | | |
| Benzene, Toluene, Xylene mixtures (10% Benzene or more) | BTX | 32 | 0 | B/C | 111 | Α | Yes | 1 | .50-60 |
| Butyl acrylate (all isomers) | BAR | 14 | 0 | D | 111 | Α | Yes | 2 | .50-70(a), .50-81(a), (b) |
| Butyl methacrylate | BMH | 14 | 0 | D | III | Α | Yes | 2 | .50-70(a), .50-81(a), (b) |
| Butyraldehyde (all isomers) | BAE | 19 | 0 | С | Ш | Α | Yes | 1 | .55-1(h) |
| Camphor oil (light) | CPO | 18 | 0 | D | Ш | Α | No | N/A | No |
| Carbon tetrachloride | CBT | 36 | 0 | NA | Ш | Α | No | N/A | No |
| Chemical Oil (refined, containing phenolics) | COD | 21 | 0 | Е | Ш | Α | No | N/A | .50-73 |
| Chlorobenzene | CRB | 36 | 0 | D | Ш | Α | Yes | 1 | No |
| Chloroform | CRF | 36 | 0 | Е | 111 | Α | Yes | 3 | No |
| Coal tar naphtha solvent | NCT | 33 | 0 | D | Ш | Α | Yes | 1 | .50-73 |
| Creosote | CCV | V 21 ² | 0 | Ε | Ш | Α | Yes | 1 | No |
| Cresols (all isomers) | CRS | 21 | 0 | Е | Ш | Α | Yes | 1 | No |
| Cresylate spent caustic | CSC | 5 | 0 | NA | III | Α | No | N/A | .50-73, .55-1(b) |
| Cresylic acid tar | CRX | | 0 | | 111 | Α | Yes | 1 | .55-1(f) |
| Crotonaldehyde | CTA | 19 ² | 0 | С | П | Α | Yes | 4 | .55-1(h) |
| Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein) | CHG | i | 0 | | Ш | , A | No | N/A | No |
| Cyclohexanone | ССН | 18 | 0 | D | Ш | Α | Yes | 1 | .56-1(a), (b) |
| Cyclohexanone, Cyclohexanol mixture | CYX | 18 ² | 0 | Е | - 111 | Α | Yes | 1 | .56-1 (b) |
| Cyclohexylamine | CHA | 7 | 0 | D | Ш | Α | Yes | 1 | .56-1(a), (b), (c), (g) |
| Cyclopentadiene, Styrene, Benzene mixture | CSB | 30 | 0 | D | Ш | Α | Yes | 1 | .50-60, .56-1(b) |
| | IAI | 14 | 0 | Е | 111 | | | | .50-70(a), .50-81(a), (b), .55-1(c) |



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Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 28028

Official #: 1139040

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Shipyard: West Gulf Marine

| Cargo Identification | | | | | | | Co | nditio | ns of Carriage |
|---|--------------|--------------------|----------------|-------|--------------|---------------|-------------------|-----------------|---|
| | | | | | | | Vapor R | | |
| Name | Chem Code | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group | App'd (Y or N) | VCS Category | Special Requirements in 46 CFR 151 General and Mat'ls of Construction |
| Dichlorobenzene (all isomers) | DBX | 36 | 0 | E | Ш | Α | Yes | 3 | .56-1(a), (b) |
| 1,1-Dichloroethane | DCH | 36 | 0 | С | 111 | Α | Yes | 1 | No |
| 2,2'-Dichloroethyl ether | DEE | 41 | 0 | D | II | Α | Yes | 1 | .55-1(f) |
| Dichloromethane | DCM | 1 36 | 0 | NA | - | Α | No | N/A | No |
| 2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution | DDE | 43 | 0 | NA | - 111 | Α | No | N/A | .56-1(a), (b), (c), (g) |
| 2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution | DAD | 0 1,2 | 2 0 | NA | III | Α | No | N/A | .56-1(a), (b), (c), (g) |
| 2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution (70% or less) | DDA | 1/4 | 0 | | []] | Α | No | N/A | .55-1(b) |
| 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution | DTI | 43 ² | 0 | NA | 111 | Α | No | N/A | .56-1(a), (b), (c), (g) |
| 1,1-Dichloropropane | DPB | 36 | 0 | С | III | Α | Yes | 3 | No |
| 1,2-Dichloropropane | DPP | 36 | 0 | С | Ш | Α | Yes | 3 | No |
| 1,3-Dichloropropane | DPC | 36 | 0 | С | 111 | Α | Yes | 3 | No |
| 1,3-Dichloropropene | DPU | 15 | 0 | D | - II | A | Yes | 4 | No |
| Dichloropropene, Dichloropropane mixtures | DMX | 15 | 0 | NA | - 11 | Α | Yes | 1 | No |
| Diethanolamine | DEA | 8 | 0 | E | III | A | Yes | 1 | .55-1(c) |
| Diethylamine | DEN | 7 | 0 | С | 111 | A | Yes | 3 | .55-1(c) |
| Diethylenetriamine | DET | 7 2 | 0 | E | Ш | A | Yes | 1 | .55-1(c) |
| Diisobutylamine | DBU | | 0 | | III | A | Yes | 3 | .55-1(c) |
| Diisopropanolamine | DIP | 8 | 0 | E | III | A | Yes | 1 | .55-1(c) |
| Diisopropylamine | DIA | 7 | 0 | C | 11 | A | Yes | 3 | .55-1(c) |
| N,N-Dimethylacetamide | DAC | | 0 | E | | A | Yes | 3 | .56-1(b) |
| Dimethylethanolamine | DMB | | 0 | | III | A | Yes | 1 | .56-1(b), (c) |
| Dimethylformamide | DMF | 10 | 0 | D | 111 | A | Yes | 1 | .55-1(e) |
| Di-n-propylamine | DNA | | 0 | C | | A | Yes | 3 | .55-1(c) |
| Dodecyldimethylamine, Tetradecyldimethylamine mixture | DOT | 7 | 0 | E | 111 | A | No | N/A | .56-1(b) |
| Ethanolamine | MEA | 8 | 0 | E | 111 | A | Yes | 1 | .55-1(c) |
| Ethyl acrylate | EAC | 14 | - | C | 111 | A | Yes | 2 | .50-70(a), .50-81(a), (b) |
| Ethylamine solution (72% or less) | EAN | 7 | 0 | - A | 11 | A | No | N/A | .55-1(b) |
| N-Ethylbutylamine | EBA | 7 | - | D | 111 | A | Yes | 3 | .55-1(b) |
| N-Ethylcyclohexylamine | ECC | | 0 | | III | . A | Yes | 1 | .55-1(b) |
| Ethylene cyanohydrin | ETC | 20 | 0 | E | 111 | A | Yes | 1 | No |
| Ethylenediamine | EDA | 7 ² | 0 | | 111 | A | Yes | 1 | .55-1(c) |
| Ethylene dichloride | EDC | | 0 | C | 111 | A | Yes | 1 | No |
| Ethylene glycol hexyl ether | EGH | 40 | 0 | E | 111 | A | No | N/A | No |
| Ethylene glycol monoalkyl ethers | EGC | 40 | | D/E | 111 | A | Yes | 1 | No |
| Ethylene glycol monoarkyr ethers Ethylene glycol propyl ether | EGP | 40 | | E | 111 | A | Yes | 1 | No |
| | EAI | 14 | - 0 | E | III | A | Yes | 2 | .50-70(a), .50-81(a), (b) |
| 2-Ethylhexyl acrylate | ETM | 14 | 0 | D/E | III | A | Yes | 2 | .50-70(a) |
| Ethyl methacrylate | EPA | 19 ² | 0 | E | | A | Yes | 1 | No |
| 2-Ethyl-3-propylacrolein | FMS | 19 ² | 0 | D/E | 111 | A | Yes | . 1 | .55-1(h) |
| Formaldehyde solution (37% to 50%) | FFA | | 0 | E | 111 | A | Yes | 1 | .55-1(h) |
| Furfural | GTA | | 0 | NA | 111 | A | No | N/A | No |
| Glutaraldehyde solution (50% or less) | HMC | | 0 | E | 111 | A | Yes | 1 | .55-1(c) |
| Hexamethylenediamine solution | HMI | 7 | 0 | C | 111 | A | Yes | 1 | .56-1(b), (c) |
| Hexamethyleneimine | HFN | | 0 | | 111 | A | Yes | 1 | .50-70(a), .50-81(a), (b) |
| Hydrocarbon 5-9 | IPR | | | ^ | HI | A | No | N/A | .50-70(a), .50-81(a), (b) |
| Isoprene | IPN | 30 | 0 | Α | HI | | No | N/A | .50-70(a), .55-1(c) |
| Isoprene, Pentadiene mixture | IPN | | | | 111 | A | NO | 19774 | |



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Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 28028

Official #: 1139040

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Shipyard: West Gulf Marine

| Cargo Identification | | | è | | | | Co | nditio | ns of Carriage |
|--|--------------|--------------------|----------------|-------|--------------|---------------|-------------------|-----------------|---|
| | | _ | | | | | Vapor R | | |
| Name | Chem Code | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group | App'd (Y or N) | VCS Category | Special Requirements in 46 CFR 151 General and Mat'ls of Construction |
| Kraft pulping liquors (free alkali content 3% or more)(including: Black, Green, or White liquor) | KPL | 5 | 0 | NA | Ш | Α | No | N/A | .50-73, .56-1(a), (c), (g) |
| Mesityl oxide | MSO | 18 ² | 0 | D | III | Α | Yes | 1 | No |
| Methyl acrylate | MAM | 14 | . 0 | С | Ш | Α | Yes | 2 | .50-70(a), .50-81(a), (b) |
| Methylcyclopentadiene dimer | MCK | 30 | 0 | С | III | Α | Yes | 1 | No |
| Methyl diethanolamine | MDE | 8 | 0 | E | 111 | Α | Yes | 1 | .56-1(b), (c) |
| 2-Methyl-5-ethylpyridine | MEP | 9 | 0 | E | Ш | Α | Yes | 1 | .55-1(e) |
| Methyl methacrylate | MMM | 14 | 0 | С | III | Α | Yes | 2 | .50-70(a), .50-81(a), (b) |
| 2-Methylpyridine | MPR | 9 | 0 | D | 111 | Α | Yes | 3 | .55-1(c) |
| alpha-Methylstyrene | MSR | 30 | 0 | . D | Ш | Α | Yes | 2 | .50-70(a), .50-81(a), (b) |
| Morpholine | MPL | 7 ² | 0 | D | . III | Α | Yes | 1 | .55-1(c) |
| 1- or 2-Nitropropane | NPM | 42 | 0 | D | 111 | Α | Yes | 1 | .50-81 |
| 1,3-Pentadiene | PDE | 30 | 0 | Α | Ш | Α | No | N/A | .50-70(a), .50-81 |
| Perchloroethylene | PER | 36 | 0 | NA | III | Α | No | N/A | No |
| Polyethylene polyamines | PEB | 7 ² | 0 | Е | 111 | Α | Yes | 1 | .55-1(e) |
| iso-Propanolamine | MPA | . 8 | 0 | E | 111 | Α | Yes | 1 | .55-1(c) |
| Propanolamine (iso-, n-) | PAX | 8 | 0 | Ε | | Α | Yes | 1 | .56-1(b), (c) |
| iso-Propylamine | IPP | 7 | 0 | Α | 11 - | A | No | N/A | .55-1(c) |
| Pyridine | PRD | 9 | 0 | С | Ш | A | Yes | 1 | .55-1(e) |
| Sodium aluminate solution (45% or less) | SAU | . 5 | 0 | NA | Ш | A | No | N/A | .50-73, .56-1(a), (b), (c) |
| Sodium chlorate solution (50% or less) | SDD | 0 1,2 | | NA | III | A | No | N/A | .50-73 |
| Sodium, hypochlorite solution (20% or less) | SHQ | 5 | 0 | NA | III | A | No | N/A | .50-73, .56-1(a), (b) |
| Sodium sulfide, hydrosulfide solution (H2S 15 ppm or less) | SSH | 0 1,2 | | NA | 111 | A | Yes | 1 | .50-73, .55-1(b) |
| Sodium sulfide, hydrosulfide solution (H2S greater than 15 ppm but less than 200 ppm) | SSI | 0 1,2 | | NA | Ш | Α | No | N/A | .50-73, .55-1(b) |
| Sodium sulfide, hydrosulfide solution (H2S greater than 200 ppm) | SSJ | 0 1,2 | 2 0 | NA | | A | No | N/A | .50-73, .55-1(b) |
| Styrene (crude) | STX | | 0 | D | 111 | A | Yes | 2 | No |
| Styrene monomer | STY | 30 | 0 | D | 111 | A | Yes | <u>-</u> 2 | .50-70(a), .50-81(a), (b) |
| 1,1,2,2-Tetrachloroethane | TEC | 36 | 0 | NA | 111 | A | No | N/A | No |
| Tetraethylenepentamine | TTP | 7 | 0 | E | | A | Yes | 1 | .55-1(c) |
| Tetrahydrofuran | THE | 41 | 0 | | | A | Yes | 1 | .50-70(b) |
| Toluenediamine | TDA | 9 | | E | | A | No | N/A | .50-73, .56-1(a), (b), (c), (g) |
| o-Toluidine | TLI | 9 | | E | 11 | A | Yes | 3 | .50-5, .50-73 |
| 1.2.4-Trichlorobenzene | TCB | 36 | 0 | E | | A | Yes | 1 | No |
| 1,1,2-Trichloroethane | TCM | 36 | | NA. | 111 | A | Yes | 1 | .50-73, .56-1(a) |
| Trichloroethylene | TCL | 36 ² | 0 | NA | 111 | A | Yes | 1 | No |
| 1,2,3-Trichloropropane | TCN | 36 | | E | 11 | A | Yes | 3 | .50-73, .56-1(a) |
| Triethanolamine | TEA | 8 ² | 0 | E | 111 | A | Yes | 1 | .55-1(b) |
| | TEN | 7 | 0 | C | - 11 | A | Yes | 3 | .55-1(e) |
| Triethylamine Triethylamine | TET | 7 2 | 0 | E | 111 | A | Yes | 1 | .55-1(b) |
| Triethylenetetramine | TPB | 5 | 0 | NA NA | . 111 | A | No | N/A | .56-1(a), (b), (c) |
| Triphenylborane (10% or less), caustic soda solution | TSP | 5 | 0 | | 111 | | No | N/A | .50-73, .56-1(a), (c). |
| Trisodium phosphate solution | | | | NA | | A . | | | .56-1(b) |
| Urea, Ammonium nitrate solution (containing more than 2% NH3) | UAS | 6 | 0 | NA | 111 | A . | No | N/A | .50-7(b) |
| Vanillin black liquor (free alkali content, 3% or more). | VBL | 5 | 0 | NA | 111 | A . | No | N/A | .50-70(a), .50-81(a), (b) |
| Vinyl acetate | VAM | 13 | 0 | С | 111 | A | Yes | 2 | .50-70(a), .50-81(a), (b) |
| Vinyl neodecanate | VND | 13 | 0 | E | III | A | No | N/A | .50-70(a), .50-81, .56-1(a), (b), (c), (g) |
| Vinyltoluene | VNT | 13 | 0 | D | 111 | A | Yes | 2 | .55-, 5(a), .50-01, .50-1(a), (b), (c), (g) |



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Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 28028

Official #: 1139040

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Shipyard: West Gulf Marine

| Cargo Identification | | | | | | | | | ons of Carriage |
|---|--------------|--------------------|----------------|-------|--------------|---------------|------------------------------|-----|--|
| Name | Chem Code | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group | Vapor R App'd (Y or N) | VCS | Special Requirements in 46 CFR 151 General and Mat'ls of Construction |
| Subshantar D. Cargoon Authorized for Vener Control | | | | | | | | | |
| Subchapter D Cargoes Authorized for Vapor Control | ACT | 18 ² | D | С | | Α | Yes | 1 | |
| Acetone | ACP | 18 | D | E | | A | Yes | 1 | |
| Acetophenone | APU | 20 | D | E | | | Yes | 1 | |
| Alcohol(C12-C16) poly(1-6)ethoxylates | AEB | 20 | D | E | | A | Yes | 1 | |
| Alcohol(C6-C17)(secondary) poly(7-12)ethoxylates | AEC | | D | D | | A | Yes | 1 | |
| Amyl alcohol (iso- n- sec- primary) | AAI | 20 | D | D | | | Yes | 1 | |
| Amyr alcohor (130-, 11-, 3ec-, primary) | BAL | 21 | D | E | | A | Yes | 1 | |
| Benzyl alcohol | BFX | | 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) | BFA | 20 | | | | ^ | 165 | | |
| Butyl acetate (all isomers) | BAX | 34 | D | D | | Α | Yes | 1 | |
| Butyl alcohol (iso-) | IAL | 20 ² | D | D | | Α | Yes | 1 | |
| Butyl alcohol (n-) | BAN | | D | D | | Α | Yes | 1 | |
| Butyl alcohol (sec-) | BAS | | D | С | | Α | Yes | 1 | |
| Butyl alcohol (tert-) | BAT | - | D | С | | Α | Yes | - 1 | |
| Butyl benzyl phthalate | BPH | 34 | D | Ε | | Α | Yes | 1 | |
| Butyl toluene | BUE | 32 | D | D | | Α | Yes | 1 | |
| Caprolactam solutions | CLS | 22 | D | Е | , | Α | Yes | 1 | |
| Cyclohexane | CHX | 31 | D | С | | Α | Yes | 1 | |
| Cyclohexanol | CHN | 20 | D | E | | Α | Yes | 1 | |
| 1,3-Cyclopentadiene dimer (molten) | CPD | 30 | D | D/E | | Α | Yes | . 2 | |
| p-Cymene | CMP | 32 | D | D | | Α | Yes | 1 | |
| iso-Decaldehyde | IDA | 19 | D | Е | | Α | Yes | 1 | |
| n-Decaldehyde | DAL | 19 | D | E | | Α | Yes | 1 | |
| Decene | DCE | | D | D | | Α | Yes | 1 | |
| Decyl alcohol (all isomers) | DAX | 20 ² | D | E | | Α | Yes | 1 | - |
| n-Decylbenzene, see Alkyl(C9+)benzenes | DBZ | 32 | D | E | | Α | Yes | 1 | |
| Diacetone alcohol | DAA | 20 ² | D | Ε | | Α | Yes | 1 | |
| ortho-Dibutyl phthalate | DPA | 34 | D | E | | Α | Yes | 1 | |
| Diethylbenzene | DEB | 32 | D | D | | Α | Yes | 1 | |
| Diethylene glycol | DEG | 40 ² | D | Е | | Α | Yes | 1 | |
| Diisobutylene | DBL | 30 | D | С | | Α | Yes | 1 | |
| Diisobutyl ketone | DIK | 18 | D | D | | Α | Yes | 1 | |
| Diisopropylbenzene (all isomers) | DIX | 32 | D | Е | | A | Yes | 1 | |
| Dimethyl phthalate | DTL | 34 | D | E | | Α | Yes | 1 | b b |
| Dioctyl phthalate | DOP | | D · | E | | A | Yes | 1 | |
| Dipentene | DPN | | D | D | | Α | Yes | 1 | |
| Diphenyl | DIL | 32 | D | D/E | | A | Yes | 1 | |
| Diphenyl, Diphenyl ether mixtures | DDC | | D | E. | | Α | Yes | 1 | |
| Diphenyl ether | DPE | | D | {E} | | A | Yes | 1 | |
| Dipropylene glycol | DPG | | D | E | | A | Yes | 1 | |
| Distillates: Flashed feed stocks | DFF | | D | E | | A | Yes | 1 1 | |
| Distillates: Straight run | DSR | | D | Е | | A | Yes | 1 | |
| Dodecene (all isomers) | DOZ | | D | D | | A | Yes | 1 | |
| Dodecylbenzene, see Alkyl(C9+)benzenes | DDB | | D | Е | | A | Yes | 1 | |
| 2-Ethoxyethyl acetate | EEA | | D | D | | Ά | Yes | 1 | |
| Ethoxy triglycol (crude) | ETG | 40 | D | E | | Α | Yes | 11 | |
| | | | | | | | | | |



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Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 28028 Official #: 1139040

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Shipyard: West Gulf Marine

| Cargo Identification | | | | | | | Co | nditio | ns of Carriage |
|---|------|--------------------|----------------|-------|--------------|---------------|-------------------|-----------------|---|
| | | | | | | | Vapor R | | |
| Name | Chem | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group | App'd (Y or N) | VCS Category | Special Requirements in 46 CFR 151 General and Mat'ls of Construction |
| Ivaille | Code | Group No | Chapter | | Туре | Gloup | (1 01 14) | Category | General and Matis of Constitution |
| Ethyl acetate | ETA | 34 | D | С | | Α | Yes | 1 | |
| Ethyl acetoacetate | EAA | 34 | D | E | | A | Yes | 1 | |
| Ethyl alcohol | EAL | 20 ² | | 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 | | D | | | | Yes | 1 | |
| Ethyl cyclohexane | ECY | 31 | D | D | | A | Yes | 1 | |
| Ethylene glycol | EGL | 20 ² | 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 | |
| | | 34 | D | E | | A | Yes | 1 | |
| Ethyl-3-ethoxypropionate | EEP | | | | | | | | |
| 2-Ethylhexanol | EHX | 20 | D | E | | A | Yes | 1 | |
| Ethyl propionate | EPR | 34 | D | | | A | Yes | 11 | |
| Ethyl toluene | ETE | 32 | D | E | | A | Yes | 1 | |
| Formamide | FAM | | D | E | | A | Yes | 1 | |
| Furfuryl alcohol | FAL | 20 2 | D | E | | A | Yes | 1 | |
| Gasoline blending stocks: Alkylates | GAK | | D | A/C | | Α | Yes | 1 | |
| Gasoline blending stocks: Reformates | GRF | | D | A/C | | A | Yes | 1 | |
| Gasolines: Automotive (containing not over 4.23 grams lead per gallon) | GAT | 33 | D | С | | A | Yes | 1 | |
| Gasolines: Aviation (containing not over 4.86 grams of lead per gallon) | GAV | 33 | D | С | | Α | Yes | 1 | |
| Gasolines: Casinghead (natural) | GCS | | D | A/C | | A | Yes | 1 | |
| Gasolines: Polymer | GPL | 33 | D | A/C | | Α | Yes | 1 | |
| Gasolines: Straight run | GSR | | D | A/C | | A | Yes | 1 | |
| Glycerine | GCR | | D | E | | A | Yes | 1 | |
| Heptane (all isomers), see Alkanes (C6-C9) (all isomers) | HMX | | D | С | | A | Yes | 1 | |
| Heptanoic acid | HEP | 4 | D | E | | A | Yes | 1 | |
| Heptanol (all isomers) | HTX | 20 | D | D/E | | Α | Yes | 1 | |
| Heptene (all isomers) | HPX | 30 | D | С | | Α | Yes | 2 | |
| Heptyl acetate | HPE | 34 | D | D | | Α | Yes | 1 | |
| Hexane (all isomers), see Alkanes (C6-C9) | HXS | 31 ² | D | B/C | | Α | Yes | 1 | |
| Hexanoic acid | HXO | 4 | D | Е | | Α | Yes | 1 | |
| Hexanol | HXN | 20 | D | D | | Α | Yes | 1 | |
| Hexene (all isomers) | HEX | 30 | D | С | | A | Yes | 2 | |
| Hexylene glycol | HXG | 20 | D | Е | | Α | Yes | 1 | |
| Isophorone | IPH | 18 ² | D | E | | A | Yes | 1 | |
| Jet fuel: JP-4 | JPF | 33 | D | Е | | Α | Yes | 1 | |
| Jet fuel: JP-5 (kerosene, heavy) | JPV | 33 | D | D | | Α | Yes | 1 | |
| Kerosene | KRS | 33 | D | D | | Α | Yes | 1 | = |
| Methyl acetate | MTT | 34 | D | D | | Α | Yes | 1 | |
| Methyl alcohol | MAL | 20 ² | D | С | | Α | Yes | . 1 | |
| Methylamyl acetate | MAC | 34 | D | D | | A. | Yes | 1 | |
| Methylamyl alcohol | MAA | 20 | D | D | | Α | Yes | 1 | |
| Methyl tert-butyl ether | MBE | 41 ² | D | С | | Α | Yes | 1 | |
| Methyl butyl ketone | MBK | 18 | D | С | | Α | Yes | 1 | |
| Methyl butyrate | MBU | 34 | D | С | | . A | Yes | 1 | |
| Methyl ethyl ketone | MEK | 18 ² | D | С | | Α | Yes | 1 | |
| | | | | | | | | | |



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Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 28028
Official #: 1139040

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Shipyard: West Gulf Marine

| Cargo Identification | | | | | | | Co | onditio | ons of Carriage |
|---|-------|--------------------|----------------|-------|--------------|---------------|-------------------|-----------------|---|
| | 01 | 0 | C-+ | | 1.15.40 | Tarel | | Recovery VCS | Special Decriptoments in 46 CER 151 |
| Name | Chem | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group | App'd (Y or N) | Category | Special Requirements in 46 CFR 151 General and Mat'ls of Construction |
| Methyl hantil listers | MHK | (18 | D | D | | А | Yes | 1 | |
| Methyl heptyl ketone Methyl isobutyl ketone | MIK | 18 ² | D | C | | A | Yes | 1 | |
| | MNA | | | E | | A | Yes | 1 | |
| Methyl naphthalene (molten) Mineral spirits | MNS | | D D | | | A | Yes | 1 | |
| | MRE | | D | | | A | Yes | 1 | |
| Myrcene | NAG | | D | # | | A | Yes | 1 | |
| Naphtha: Heavy | PTN | 33 | D | # | | A | Yes | 1 | |
| Naphtha: Petroleum | NSV | | D | | | | Yes | 1 | |
| Naphtha: Solvent | NSS | | D | D | | A | Yes | 1 | |
| Naphtha: Stoddard solvent | NVIV | | D | C | | | Yes | 1 | |
| Naphtha: Varnish makers and painters (75%) | NAX | | D | D | | A | Yes | | |
| Nonane (all isomers), see Alkanes (C6-C9) | | | D D | D | | A | Yes | 2 | |
| Nonene (all isomers) | NON | | | | | | | 1 | |
| Nonyl alcohol (all isomers) | NNS | | D | E | | A | Yes | | <u>.</u> |
| Nonyl phenol | NNP | | D | E | | Α | Yes | 1 | |
| Nonyl phenol poly(4+)ethoxylates | NPE | | D | E | | Α | Yes | 1 | |
| Octane (all isomers), see Alkanes (C6-C9) | OAX | · | D | C | | .A | Yes | 1 | |
| Octanoic acid (all isomers) | OAY | | D | E | | A | Yes | 1 | |
| Octanol (all isomers) | OCX | | D | E | | Α | Yes | 1 | |
| Octene (all isomers) | ОТХ | 30 | D | С | | Α_ | Yes | 2 | |
| Oil, fuel: No. 2 | OTV | / 33 | D | D/E | | A | Yes | 11 | |
| Oil, fuel: No. 4 | OFR | 33 | D | D/E | | Α | Yes | 1 | |
| Oil, fuel: No. 5 | OFV | 33 | · D | D/E | | A | Yes | 1 | |
| Oil, fuel: No. 6 | OSX | | D | E | | Α | Yes | 1 | 2 |
| Oil, misc: Crude | OIL | 33 | D | C/D | | A | Yes | 1 | |
| Oil, misc: Diesel | ODS | 33 | D | D/E | | A | Yes | 1 | |
| Oil, misc: Lubricating | OLB | 33 | D | E | | A | Yes | 1 | |
| Oil, misc: Turbine | ОТВ | 33 | D | E | | A | Yes | 1 | |
| alpha-Pinene | PIO | 30 | D | D | | A | Yes | 1 | |
| beta-Pinene | PIP | 30 | D | D | | Α | 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 | | Α | Yes | 1 | |
| Polybutene | PLB | 30 | D | E | | A | Yes | 1 | |
| Polypropylene glycol | PGC | 40 | D | E | | Α | Yes | 11 | |
| iso-Propyl acetate | IAC | 34 | D | С | | Α | Yes | 11 | |
| n-Propyl acetate | PAT | 34 | D | С | | Α | Yes | 1 | |
| iso-Propyl alcohol | IPA | 20 ² | D | С | | Α | Yes | 1 | |
| n-Propyl alcohol | · PAL | 20 ² | D | С | | Α | Yes | 1 | |
| Propylbenzene (all isomers) | PBY | 32 | D | D | | Α | Yes | 1 | |
| iso-Propylcyclohexane | IPX | 31 | D | D | | Α | Yes | 1 | |
| Propylene glycol | PPG | 20 ² | D | Е | | Α | Yes | 1 | |
| Propylene glycol methyl ether acetate | PGN | 34 | D | D | | Α | Yes | 1 | |
| Propylene tetramer | PTT | 30 | D | D | | Α | Yes | 1 | |
| Sulfolane | SFL | 39 | D | E | | Α | Yes | 1 - | |
| Tetraethylene glycol | TTG | 40 | D | E | | Α | Yes | 1 | |
| Tetrahydronaphthalene | THN | 32 | D | E | | Α | Yes | 1 | |
| Toluene | TOL | 32 | D | С | | Α | Yes | 1 | |
| Tricresyl phosphate (less than 1% of the ortho isomer) | TCP | 34 | D | E | | Α | Yes | 1 | |
| Triethylbenzene | TEB | 32 | D | Е | _ | Α | Yes | 1 | |
| | | | | | | | | | |



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Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 28028

Official #: 1139040

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Shipyard: West Gulf Marine

| Cargo Identification | | | | | | Conditions of Carriage | | | | |
|--------------------------------|--------------|--------------------|----------------|-------|--------------|------------------------|-------------------------------|-----|--|--|
| Name | Chem Code | Compat Group No | Sub Chapter | Grade | Hull Type | Tank Group | Vapor Ro App'd (Y or N) | VCS | Special Requirements in 46 CFR 151 General and Mat'ls of Construction | |
| Triethylene glycol | TEG | 40 | D | Е | | А | Yes | 1 | | |
| Triethyl phosphate | TPS | 34 | D | Е | | Α | Yes | 1 | | |
| Trimethylbenzene (all isomers) | TRE | 32 | D | {D} | | Α | Yes | 1 | | |
| Trixylenyl phosphate | TRP | 34 | D | Е | | Α | Yes | 1 | | |
| Undecene | UDC | 30 | D | D/E | | Α | Yes | 1 | | |
| 1-Undecyl alcohol | UND | 20 | D | Е | | Α | Yes | 1 | | |
| Xylenes (ortho-, meta-, para-) | XLX | 32 | D | D | | Α | Yes | 1 | | |



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

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Certificate of Inspection Cargo Authority Attachment

Vessel Name: KIRBY 28028

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Shipyard: West Gulf Mari

Hull #: 135

Explanation of terms & symbols used in the Table:

Cargo Identification

Name Chem Code

none

Compatability Group No.

Note 1

Note 2

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. 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 (G-MSO-3), U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593-0001. Telephone (202) 267-1217.

See Appendix I to 46 CFR Part 150 - exceptions to the compatability chart.

Subchapter D Subchapter C Note 3

Grade

NA

Hull Type

NA

The subchapter in Title 46 Code of Federal Regulations under which the cargo has been classified.

Those flammable and combustible liquids listed in 46 CFR Table 30.25-1. Those hazardous cargoes listed in 46 CFR Table 151.05 and 46 CFR Part 153 Table 2.

Those cargoes listed in 46 CFR Part 153 Table 2 are non-regulated cargoes when carried in bulk on non-oceangoing barges

Certain mixtures of cargoes may not have a CHRIS Code assigned

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

The three letter designation assigned to the cargo in the Chemical Hazards Response Information System (CHRIS) Manual

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 carnage of that grade of cargo Flammable liquid cargoes, as defined in 46 CFR 30-10.22 Combustible liquid cargoes, as defined in 46 CFR 30-10.15.

A, B, C D. E Note 4

The flammability/combustibility grade of these cargoes may vary depending upon the flashpoint and Reid vapor pressure. The Person-in-Charge shall verify the

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

cargo grade based on Manufacturers data and ensure that the barge is authorized for carriage of that grade of cargo.

Those subchapter O cargoes which are not classified as a flammable or combustible liquid.

No flammability/combustibility grade has been assigned yet as the necessary flash point/vapor pressure data for such assignments are presently not available.

The required barge hull classification for carriage of the specified Subchapter O hazardous material cargo, see 46 CFR 151.10-1. 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)

Designed to carry products which require significant preventive measures to preclude the uncontrolled release of cargo. See 46 CFR 151.10-1(b)(3). Designed to carry products of sufficeint hazard to require a moderate degree of control. See 46 CFR 151.10-1(b)(4).

Not applicable to barges certificated under Subchapter D.

Conditions of Carriag

Vapor Recovery Approved (Y or N) The vessel's tank group (as defined in Section 4) which is authorized for carriage of the named cargo

Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cargo No: The vessel's VCS has been reviewed and is not approved by the MSC to control vapors of the specified cargo.

Conditions of Carriag

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 Approved (Y or N)

Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cargo. 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 componenets 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 arreste

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

Category 4

requirement is in addition to the requirements of Category 1. (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. (High vapor pressure and polymerizes) Must comply with requirements of Categories 1, 2 and 5

Category 7 none

The cargo has not been evaluated/classified for use in vapor control systems