

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

Certification Date: 24 Jul 2019
Expiration Date: 24 Jul 2024

Certificate of Inspection

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

Vessel Name							
	Official N		IMO Num	ber	Call Sign	Service	
KIRBY 13023B	12182	296				Tank	Barge
	and the state of t			and he			
Halling Port		full Material	Horse	epower 1	Propulsion		
WILMINGTON, DE		Steel			Propulation		
UNITED STATES	Marie Constitution	J.CC.					
ONITED STATES							madely bears
Place Built		Parket.	711. N. 11. 1986		Bright Back	atta estat.	ALASTON .
ASHLAND CITY, TN	Deliv	ery Date	Keel Laid Date	Gross Tons	Net Tons	DWT	Length
	221	May2009	06Apr2009	R-802	R-802 I-		R-147.5
UNITED STATES		52.0					
Owner KIRBY INLAND MARINE	1.0		Operato		MARINE		
55 WAUGH DR STE 100				O MARKET	MARINE LP		
HOUSTON, TX 77007					, TX 77530		
UNITED STATES				ED STATE			
This vaccal must be many	and with the following	er layer or					New Control
This vessel must be mann 0 Certified Lifeboatmen, 0	Certified Tankerme	n, 0 HSC	Type Rating, a	and 0 GMD:	. Included in v SS Operators.	/nich there n	nust be
0 Masters	0 Licensed Mates	Mary or recognishment of the	Engineers	00	TO STATE OF THE PARTY OF THE PA		P. Balletin B.
0 Chief Mates	0 First Class Pilots	0 First A	Assistant Enginee	rs			
0 Second Mates	0 Radio Officers	0 Secon	d Assistant Engir	neers			
0 Third Mates	0 Able Seamen	0 Third	Assistant Enginee	ers			
0 Master First Class Pilot	0 Ordinary Seamen	0 Licens	sed Engineers		10.544		
0 Mate First Class Pilots	0 Deckhands		ied Member Engir	THE RESERVE OF THE PARTY OF THE			ara di
In addition, this vessel ma Persons allowed: 0	y carry 0 Passengers	s, 0 Other	Persons in cre	w, 0 Perso	ns in addition t	o crew, and	no Others. Total
The State St			The Art of the State of the Sta		and the second second	eranic film, octor	AND THE PERSON NAMED IN

Route Permitted And Conditions Of Operation:

---Lakes, Bays, and Sounds plus Limited Coastwise---

Also, in fair weather only, not more than twelve (12) miles from shore between St. Marks 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 six (6) months in any twelve (12) month period, the vessel must be inspected using salt water intervals and the cognizant QCMT notified in writing as soon as this change in status occurs.

This tank barge is participating in the Eighth and Ninth Coast Guard District's Tank Barge Streamlined

SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION

With this Inspection for Certification having been completed at Port Arthur, 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.

1111	Annual/Period	ic/Re-in	spection	This certificate issued by
Date	Zone	A/P/R	Signature	J.J. ANDREW, CDR, USCG, By direction
6/17/20	TRSIP	A	ShawN McKINNON	
526-21	BPL	A	Steph Cel 145	Marine Safety Unit Port Arthur
5.3.22	HOUSTUN	P	JAKE FRANCIS	Inspection Zone
S-11-2023	BTRANTBYP	A	Daniel Gordin	



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

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Inspection Program (TBSIP). Inspection activities aboard this barge shall be conducted in accordance with its Tank Barge Action Plan (TAP). Inspection issues concerning this barge should be directed to OCMI Houston-Galveston, TX.

---Hull Exams---

Exam Type

Next Exam

Last Exam

Prior Exam

DryDock

31May2029

24Jul2019

22May2009

Internal Structure

30Jun2024

24Jul2019

09Jun2014

--- 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

14000

Barrels

Yes

No

No

Hazardous Bulk Solids Authority

Not Authorized

Loading Constraints - Structural

Tank Number	Max Cargo Weight per Tank (short tons)	Maximum Density (lbs/gal)
1 P/S	662	13.60
2 P/S	602	13.60

Loading Constraints - Stability

Hull Type	Maximum Load (short tons)	Maximum Draft (ft/in)	Max Density (lbs/gal)	Route Description
II	1610	8ft 6in	13.60	R
II	1610	8ft 6in	13.60	LBS
III	2420	11ft 9in	13.60	R
III	2420	11ft 9in	13.60	LBS

Conditions Of Carriage

Only those cargoes named in the vessel's Cargo Authority Attachment (CAA), serial #C1-0901134, dated 10APR09, may be carried and then only in the tanks indicated.

Per 46 CFR 150.130, the person in charge of the vessel is responsible for ensuring the compatibility requirements of 46 CFR 150 are met. Cargoes must be checked for compatibility using figures, tables, and appendices of 46 CFR 150 in conjunction with the reactive group 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.

VAPOR CONTROL AUTHORIZATION

Per 46 CFR 39, excluding part 39.40, this vessel's vapor control system (VCS) has been inspected to the plans approved by Marine Safety Center letter serial #C1-0901134, dated 10APR09, and found acceptable for collection of bulk liquid cargo vapors annotated with "Yes" in the CAA's VCS column.

STABILITY AND TRIM

The maximum design density of cargo which may be filled to the tank top is 8.74 lbs/gal. Cargoes with higher densities, up to



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13.60 lbs/gal, may be carried as slack loads, but shall not exceed the tank weight limits as listed above.

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

	Internal Exam			External Exam	ı	
Tank Id	Previous	Last	Next	Previous	Last	Next
1 P/S	22May2009	24Jul2019	31May2029	3	-	-
2 P/S	22May2009	24Jul2019	31May2029	-	= 2	-
			Hydro Test	1 h 12		
Tank Id	Safety Valves		Previous	Last	Next	
1 P/S	- 2 ₁₋₇			-	-	
2 P/S	-		-	-		

---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

B-II

END



Onited States Coast Guard

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 13023B

Official #: 1218296

Shipyard: TRINITY

Serial #: C2-0901134

10-Apr-09

Hull #: 4635

Tank Group Information		tion Cargo Identification				Cargo	Tanks			Cargo Transfer		Environmental Control		Fire	Special Requirements			
Tnk Grp	Tanks in Group	Density	Press.	Temp.	Hull Typ	Seq	Туре	Vent	Gauge	Pipe Class	Cont	Tanks	Handling Space	Protection Provided	General	Materials of Construction	Elec Haz	Temp Cont
\	#1&2 P/S	13.6	Atmos.	Amb.	II	1ii 2ii	Integral Gravity	PV .	Closed	П	G-1	NR	NA	Portable	.50-60, .50-70(a), .50-70(b), .50-73, .50-81(a), .50- 81(b),	55-1(b), (c), (e), (f), (h), (j), 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	Insp. Period
Authorized Subchapter O Cargoes										
Acetonitrile	ATN	37	0	С	Ш	Α	Yes	3	No	G
Acrylonitrile	ACN	15 ²	0	С	11	Α	Yes	4	.50-70(a), .55-1(e)	G
Adiponitrile	ADN	37	0	E	11	Α	Yes	1	No	G
Alkyl(C7-C9) nitrates	AKN	34 2	0	NA	III	Α	No	N/A	.50-81, .50-86	G
Aminoethylethanolamine	AEE	8	0	E	III	Α	Yes	1	.55-1(b)	G
Ammonium bisulfite solution (70% or less)	ABX	43 2	0	NA	111	Α	No	N/A	.50-73, .56-1(a), (b), (c)	G
Ammonium hydroxide (28% or less NH3)	AMH	6	0	NA	III	Α	No	N/A	.56-1(a), (b), (c), (f), (g)	G
Anthracene oil (Coal tar fraction)	AHO	33	0	NA	11	Α	No	N/A	No	G
Benzene	BNZ	32	0	С	III	Α	Yes	1	.50-60	G
Benzene or hydrocarbon mixtures (having 10% Benzene or more)	внв	32 ²	0	С	Ш	Α	Yes	1	.50-60	G
Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)	ВНА	32 ²	0	С	Ш	Α	Yes	1	.50-60, .56-1(b), (d), (f), (g)	G
Benzene, Toluene, Xylene mixtures (10% Benzene or more)	BTX	32	0	B/C	111	Α	Yes	1	.50-60	G
Butyl acrylate (all isomers)	BAR	14	0	D	Ш	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
Butyl methacrylate	ВМН	14	0	D	111	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
Butyraldehyde (all isomers)	BAE	19	0	С	111	Α	Yes	1	.55-1(h)	G
Camphor oil (light)	CPO	18	0	D	II	Α	No	N/A	No	G
Carbon tetrachloride	CBT	36	0	NA	Ш	Α	No	N/A	No	G
Caustic potash solution	CPS	5 ²	0	NA	III	Α	No	N/A	.50-73, .55-1(j)	G
Caustic soda solution	CSS	5 ²	0	NA	Ш	Α	No	N/A	.50-73, .55-1(j)	G
Chemical Oil (refined, containing phenolics)	COD	21	0	E	II	Α	No	N/A	.50-73	G
Chlorobenzene	CRB	36	0	D	III	Α	Yes	1	No	G
Chloroform	CRF	36	0	NA .	III	Α	Yes	3	No	G
Coal tar naphtha solvent	NCT	33	0	D	111	Α	Yes	1	.50-73	G
Creosote	ccw	21 ²	0	E	Ш	Α	Yes	1	No	G
Cresols (all isomers)	CRS	21	0	E	III	Α	Yes	1	No	G
Cresylate spent caustic	CSC	5	0	NA	Ш	Α	No	N/A	.50-73, .55-1(b)	G
Cresylic acid tar	CRX		0	Е	III	Α	Yes	1	.55-1(f)	G
Crotonaldehyde	СТА	19 ²	0	С	Ш	Α	Yes	4	.55-1(h)	G
Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein)	CHG		0	С	Ш	Α	No	N/A	No	G
Cyclohexanone	ССН	18	0	D	Ш	Α	Yes	1	.56-1(a), (b)	G
Cyclohexanone, Cyclohexanol mixture	CYX	18 ²	0	E	111	Α	Yes	1	.56-1 (b)	G
Cyclohexylamine	CHA	7	0	D	111	Α	Yes	1	.56-1(a), (b), (c), (g)	G
Cyclopentadiene, Styrene, Benzene mixture	CSB	30	0	D	Ш	Α	Yes	1	.50-60, .56-1(b)	G
iso-Decyl acrylate	IAI	14	0	E	Ш	Α	Yes	2	.50-70(a), .50-81(a), (b), .55-1(c)	G

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Cargo Authority Attachment

Vessel Name: KIRBY 13023B

Official #: 1218296

Page 2 of 8

Shipyard: TRINITY

Serial #: C2-0901134

Cargo Identification	Conditions of Carriage									
		T					Vapor R	ecovery		
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	Insp. Period
Dichlorobenzene (all isomers)	DBX	36	0	E	111	Α	Yes	3	.56-1(a), (b)	G
1,1-Dichloroethane	DCH	36	0	С	111	Α	Yes	1	No	G
2,2'-Dichloroethyl ether	DEE	41	0	D	Ш	Α	Yes	1	.55-1(f)	G
Dichloromethane	DCM	36	0	NA	Ш	Α	Yes	5	No	G
2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution	DDE	43	0	E	Ш	Α	No	N/A	.56-1(a), (b), (c), (g)	G
2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution	DAD	0 1,2	0	Α	111	Α	No	N/A	.56-1(a), (b), (c), (g)	G
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution	DTI	43 ²	0	Ε	111	Α	No	N/A	.56-1(a), (b), (c), (g)	G
1,1-Dichloropropane	DPB	36	0	С	111	Α	Yes	3	No	G
1,2-Dichloropropane	DPP	36	0	С	Ш	Α	Yes	3	No	G
1,3-Dichloropropane	DPC	36	0	С	111	Α	Yes	3	No	G
1,3-Dichloropropene	DPU	15	0	D	11	Α	Yes	4	No	G
Dichloropropene, Dichloropropane mixtures	DMX	15	0	С	П	Α	Yes	1	No	G
Diethanolamine	DEA	8	0	Ε	III	Α	Yes	1	.55-1(c)	G
Diethylamine	DEN	7	0	С	Ш	Α	Yes	3	.55-1(c)	G
Diethylenetriamine	DET	7 2	0	E	Ш	Α	Yes	1	.55-1(c)	G
Diisobutylamine	DBU	7	0	D	Ш	Α	Yes	3	.55-1(c)	G
Diisopropanolamine	DIP	8	0	E	Ш	Α	Yes	1	.55-1(c)	G
Diisopropylamine	DIA	7	0	С	11	Α	Yes	3	.55-1(c)	G
N,N-Dimethylacetamide	DAC	10	0	Е	Ш	Α	Yes	3	.56-1(b)	G
Dimethylethanolamine	DMB	8	0	D	Ш	Α	Yes	1	.56-1(b), (c)	G
Dimethylformamide	DMF	10	0	D	III	Α	Yes	1	.55-1(e)	G
Di-n-propylamine	DNA	7	0	С	II	Α	Yes	3	.55-1(c)	G
Dodecyldimethylamine, Tetradecyldimethylamine mixture	DOT	7	0	E	111	Α	No	N/A	.56-1(b)	G
Dodecyl diphenyl ether disulfonate solution	DOS	43	0	#	II	Α	No	N/A	No	G
EE Glycol Ether Mixture	EEG	40	0	D	Ш	Α	No	N/A	No	G
Ethanolamine	MEA	8	0	E	(1)	Α	Yes	1	.55-1(c)	G
Ethyl acrylate	EAC	14	0	С	III	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
Ethylamine solution (72% or less)	EAN	7	0	Α	11	Α	Yes	6	.55-1(b)	G
N-Ethylbutylamine	EBA	7	0	D	111	Α	Yes	3	.55-1(b)	G
N-Ethylcyclohexylamine	ECC	7	0	D	III	Α	Yes	1	.55-1(b)	G
Ethylene cyanohydrin	ETC	20	0	E	III	Α	Yes	1	No	G
Ethylenediamine	EDA	7 2	0	D	111	Α	Yes	1	.55-1(c)	G
Ethylene dichloride	EDC	36 ²	0	С	Ш	Α	Yes	1	No	G
Ethylene glycol hexyl ether	EGH	40	0	E	111	A	No	N/A	No	G
Ethylene glycol monoalkyl ethers	EGC	40	0	D/E	III	Α	Yes	1	No	G
Ethylene glycol propyl ether	EGP	40	0	E	111	A	Yes	1	No	G
2-Ethylhexyl acrylate	EAI	14	0	E	111	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Ethyl methacrylate	ETM	14	0	D/E	III	Α	Yes	2	.50-70(a)	G
2-Ethyl-3-propylacrolein	EPA	19 ²	0	E	III	A	Yes	1	No	G
Formaldehyde solution (37% to 50%)	FMS	19 ²	0	D/E	III	Α	Yes	1	.55-1(h)	G
Furfural	FFA	19	0	D	 	A	Yes	1	.55-1(h)	G
Glutaraldehyde solution (50% or less)	GTA	19	0	NA	III	Α	No	N/A	No	G
Hexamethylenediamine solution	НМС		0	E	III	A	Yes	1	.55-1(c)	G
Hexamethyleneimine	НМІ	7	0	C	II	A	Yes	1	.56-1(b), (c)	G
Hydrocarbon 5-9	HFN		0	C		A	Yes	1	.50-70(a), .50-81(a), (b)	G
Isoprene	IPR	30	0	A	111	A	Yes	7	.50-70(a), .50-81(a), (b)	G
Isoprene, Pentadiene mixture	IPN		0	В	111	Α	No	N/A	.50-70(a), .55-1(c)	G
Kraft pulping liquors (free alkali content 3% or more)(including: Black, Green, or White liquor)	KPL	5	0	NA	-111	A	No	N/A	.50-73, .56-1(a), (c), (g)	G
Mesityl oxide	MSO	18 ²	0	D	111	Α	Yes	1	No	G
Methyl acrylate	MAM		0	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G
							, 03			

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C2-0901134

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Official #: 1218296

Page 3 of 8

Shipyard: TRINITY

Name lethylcyclopentadiene dimer lethyl diethanolamine -Methyl-5-ethylpyridine lethyl methacrylate -Methylpyridine lethylstyrene lorpholine - or 2-Nitropropane 3-Pentadiene erchloroethylene olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine odium acetate, Glycol, Water mixture (3% or more Sodium	Chem Code MCK MDE MMP MMR MSR MPL NPM PDE PER PEB MPA PAX IPP PRD SAP	Compat Group No 30 8 9 14 9 30 7 2 42 30 36 7 2 8 8	Sub Chapter O O O O O O O O O O O O O O O O O O	Grade C E E C D D D A NA E	Hull Type III III III III III III III III III I	Tank Group A A A A A A A A A A A A A A A A A A	Vapor R App'd (Y or N) Yes Yes Yes Yes Yes Yes Yes Yes Yes Ye	VCS Category 1 1 2 3 2 1	Special Requirements in 46 CFR 151 General and Mat'ls of No .56-1(b), (c) .55-1(e) .50-70(a), 50-81(a), (b) .55-1(c) .50-70(a), 50-81(a), (b) .55-1(c) .50-81	Insp. Perio G G G G G
lethylcyclopentadiene dimer lethyl diethanolamine -Methyl-5-ethylpyridine lethyl methacrylate -Methylpyridine pha-Methylstyrene orpholine - or 2-Nitropropane 3-Pentadiene erchloroethylene olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine	MCK MDE MEP MMM MPR MSR MPL NPM PDE PER PEB MPA PAX IPP PRD	30 8 9 1 14 9 30 7 2 42 30 36 7 2 8 8	O O O O O O O O O O O O O O O O O O O	C E E C D D D A NA E	Type III III III III III III III III III I	A A A A A A A	Yes	1 1 1 2 3 2 1	151 General and Mat'ls of No .56-1(b), (c) .55-1(e) .50-70(a), .50-81(a), (b) .55-1(c) .50-70(a), .50-81(a), (b) .55-1(c)	G G G G G G
lethyl diethanolamine -Methyl-5-ethylpyridine lethyl methacrylate -Methylpyridine pha-Methylstyrene lorpholine - or 2-Nitropropane 3-Pentadiene erchloroethylene lolyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine	MDE MEP MMM MPR MSR MPL NPM PDE PER PEB MPA PAX IPP PRD	8 9 1 14 9 30 7 2 42 30 36 7 2 8 8 8	0 0 0 0 0 0 0 0	E E C D D D A NA E		A A A A A A	Yes Yes Yes Yes Yes Yes Yes Yes Yes	1 1 2 3 2 1	.56-1(b), (c) .55-1(e) .50-70(a), 50-81(a), (b) .55-1(c) .50-70(a), 50-81(a), (b) .55-1(c)	G G G G
Methyl-5-ethylpyridine lethyl methacrylate Methylpyridine pha-Methylstyrene lorpholine or 2-Nitropropane 3-Pentadiene erchloroethylene lolyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine	MEP MMM MPR MSR MPL NPM PDE PER PEB MPA PAX IPP PRD	9 1 14 9 30 7 2 42 30 36 7 2 8	0 0 0 0 0 0 0	E C D D D A NA E	111 111 111 111 111 111	A A A A A	Yes Yes Yes Yes Yes Yes Yes	1 2 3 2 1	.55-1(e) .50-70(a), .50-81(a), (b) .55-1(c) .50-70(a), .50-81(a), (b) .55-1(c)	G G G
lethyl methacrylate -Methylpyridine pha-Methylstyrene lorpholine - or 2-Nitropropane 3-Pentadiene erchloroethylene olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine	MMMM MPR MSR MPL NPM PDE PER PEB MPA PAX IPP PRD	1 14 9 30 7 2 42 30 36 7 2 8	0 0 0 0 0 0 0	C D D A NA E	111 111 111 111 111	A A A A A	Yes Yes Yes Yes Yes	2 3 2 1	.50-70(a), .50-81(a), (b) .55-1(c) .50-70(a), .50-81(a), (b) .55-1(c)	G G G
Methylpyridine pha-Methylstyrene lorpholine - or 2-Nitropropane 3-Pentadiene erchloroethylene olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine	MPR MSR MPL NPM PDE PER PEB MPA PAX IPP PRD	9 30 7 ² 42 30 36 7 ² 8	0 0 0 0 0 0 0	D D D A NA E	111 111 111 111	A A A A	Yes Yes Yes Yes	3 2 1 1	.55-1(c) .50-70(a), .50-81(a), (b) .55-1(c)	G G
pha-Methylstyrene orpholine - or 2-Nitropropane 3-Pentadiene erchloroethylene olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine	MSR MPL NPM PDE PER PEB MPA PAX IPP	30 7 ² 42 30 36 7 ² 8	0 0 0 0 0 0	D D D A NA E	111 111 111 111	A A A	Yes Yes Yes	2 1 1	.50-70(a), .50-81(a), (b)	G G
orpholine - or 2-Nitropropane 3-Pentadiene erchloroethylene olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine	MPL NPM PDE PER PEB MPA PAX IPP PRD	7 ² 42 30 36 7 ² 8	0 0 0 0 0	D D A NA E	111 111 111	A A A	Yes Yes	1	.55-1(c)	G
or 2-Nitropropane 3-Pentadiene erchloroethylene olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine	NPM PDE PER PEB MPA PAX IPP PRD	42 30 36 7 ² 8 8	0 0 0 0	D A NA E	111	A A	Yes	1		
3-Pentadiene erchloroethylene olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine	PDE PER PEB MPA PAX IPP PRD	30 36 7 ² 8 8	0 0 0	A NA E	III	Α			.50-81	G
erchloroethylene olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine	PER PEB MPA PAX IPP PRD	36 7 ² 8 8	0 0	NA E		Α				
olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine	PEB MPA PAX IPP PRD	7 ² 8 8	0	NA E				7	.50-70(a), .50-81	G
olyethylene polyamines o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine	PEB MPA PAX IPP PRD	7 ² 8 8	0	E			No	N/A	No	G
o-Propanolamine ropanolamine (iso-, n-) o-Propylamine yridine	MPA PAX IPP PRD	8	0		111	A	Yes	1	.55-1(e)	G
ropanolamine (iso-, n-) o-Propylamine yridine	PAX IPP PRD	8		E	111	A	Yes	1	.55-1(c)	G
o-Propylamine yridine	IPP PRD		0	E	111	A	Yes	1	.56-1(b), (c)	G
yridine	PRD		0	A		A	Yes	5	.55-1(c)	G
		9	0	C	111	A	Yes	1	.55-1(e)	G
ydroxide)		3	0		III	A	No	N/A	.50-73, .55-1(j)	G
odium aluminate solution (45% or less)	SAU	5	0	NA	III	Α	No	N/A	.50-73, .56-1(a), (b), (c)	G
odium chlorate solution (50% or less)	SDD	0 1,2		NA	III	A	No	N/A	.50-73	G
odium hypochlorite solution (20% or less)	SHQ	5	0	NA	111	A	No	N/A	.50-73, .56-1(a), (b)	G
odium sulfide, hydrosulfide solution (H2S 15 ppm or less)	SSH	0 1,2		NA	III	A	Yes	1	.50-73, .55-1(b)	G
odium sulfide, hydrosulfide solution (H2S greater than 15 ppm but ss than 200 ppm)	SSI	0 1,2		NA	III	A	No	N/A	.50-73, .55-1(b)	G
odium sulfide, hydrosulfide solution (H2S greater than 200 ppm)	SSJ	0 1,2	0	NA	11	A	No	N/A	.50-73, .55-1(b)	G
tyrene (crude)	STX		0	D	111	Α	Yes	2	No	G
yrene monomer	STY	30	0	D	III	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
1,2,2-Tetrachloroethane	TEC	36	0	NA	III	Α	No	N/A	No	G
etraethylenepentamine	TTP	7	0	E	111	A	Yes	1	.55-1(c)	G
etrahydrofuran	THF	41	0		111	A	Yes	1	.50-70(b)	G
bluenediamine	TDA	9	0	E	II	A	No	N/A	.50-73, .56-1(a), (b), (c), (g)	G
2,4-Trichlorobenzene	TCB	36	0	 E		A	Yes	1	No	G
1,2-Trichloroethane	TCM	36	0	NA	 		Yes	1	.50-73, .56-1(a)	G
ichloroethylene	TCL	36 ²	0	NA	111		Yes	1	No	G
2,3-Trichloropropane	TCN	36	0	E	 II	A	Yes	3	.50-73, .56-1(a)	G
iethanolamine	TEA	8 ²	0	E			Yes	1	.55-1(b)	G
iethylamine	TEN	7	0	C			Yes	3	.55-1(e)	G
iethylenetetramine	TET	7 2	0		- 111		Yes	1	.55-1(b)	G
	TPB	5	0	NA NA	111				.56-1(a), (b), (c)	G
iphenylborane (10% or less), caustic soda solution isodium phosphate solution	TSP	5	0		111	A	No	N/A	.50-7(a), (b), (c)	G
	UAS	6	0	NA	111	A	No	N/A	.56-1(b)	
rea, Ammonium nitrate solution (containing more than 2% NH3) anillin black liquor (free alkali content, 3% or more).	VBL		0	NA		Α	No	N/A	.50-73, .56-1(a), (c), (g)	G
	Markey Committee Com	5		NA		A .	No	N/A	.50-70(a), .50-81(a), (b)	G
nyl poddoconeto	VAM	13	0		111	A	Yes	2	.50-70(a), .50-81(a), (b)	G
nyl neodecanate	VND	13	0	E	111	A	No	N/A	.50-70(a), .50-81(a), (b) .50-70(a), .50-81, .56-1(a), (b), (c), (G
nyltoluene	VNT	13	0	D	111	Α	Yes	2	.50-70(a), .50-0 1, .50-1(a), (b), (c), (G
bchapter D Cargoes Authorized for Vapor Contr	ol ACT	18 ²	D	С		A	Yes	1		
			D	E				1		
cetophenone	ACP	18			-	Α	Yes		7	
cohol(C12-C16) poly(1-6)ethoxylates	APU	20	D	E		A	Yes	1		
cohol(C6-C17)(secondary) poly(7-12)ethoxylates myl acetate (all isomers)	AEB	20 34	D D	E D		A	Yes	1		-



Serial #: C2-0901134

10-Apr-09

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 13023B

Official #: 1218296

Page 4 of 8

Shipyard: TRINITY

Cargo Identification	Conditions of Carriage									
8								Recovery		
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	Insp. Period
Amyl alcohol (iso-, n-, sec-, primary)	AAI	20	D	D		Α	Yes	1		
Benzyl alcohol	BAL	21	D	E		Α	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		Α	Yes	1		
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	E		Α	Yes	1		
Butyl toluene	BUE	32	D	D		Α	Yes	1		
Caprolactam solutions	CLS	22	D	E		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	E		Α	Yes	1		
n-Decaldehyde	DAL	19	D	E		Α	Yes	1		
Decene	DCE	30	D	D		Α	Yes	1		
Decyl alcohol (all isomers)	DAX	20 ²	D	E		A	Yes	1		
n-Decylbenzene, see Alkyl(C9+)benzenes	DBZ	32	D	E		Α	Yes	1		
Diacetone alcohol	DAA	20 ²	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 ²	D	E		A	Yes	1		
Diisobutylene	DBL	30	D	C	erenteren innerenden	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			Yes	1		
Dipentene	DPN	30	D	D		Ä	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							
	DPG	40	D	{E}		A	Yes	1		
Dipropylene glycol Distillates: Flashed feed stocks	DFF					Α	Yes	1		
		33	D	E		A	Yes	1		
Distillates: Straight run	DSR	33	D	E		Α	Yes	1		
Dodecene (all isomers)	DOZ	30	D	D	-	Α	Yes	1		
Dodecylbenzene, see Alkyl(C9+)benzenes	DDB	32	D	E		Α	Yes	1		
2-Ethoxyethyl acetate	EEA	34	D	D		A	Yes	1		
Ethoxy triglycol (crude)	ETG	40	D	E		Α	Yes	1		
Ethyl acetate	ETA	34	D	C		A	Yes	1		
Ethyl acetoacetate	EAA	34	D	E		A	Yes	1		
Ethyl alcohol	EAL	20 ²	D	С		Α	Yes	1		
Ethylbenzene	ETB	32	D	С		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 2	D	E		Α	Yes	1		



Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 13023B

Official #: 1218296

Page 5 of 8

Shipyard: TRINITY

C2-0901134

10-Apr-09

Cargo Identification	1	e				Conditions of Carriage					
							Vapor	Recovery			
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	Insp. Period	
Ethylene glycol butyl ether acetate	EMA	34	D	E		Α	Yes	1			
Ethylene glycol diacetate	EGY	34	D	Е		Α	Yes	1			
Ethylene glycol phenyl ether	EPE	40	D	E		Α	Yes	1			
Ethyl-3-ethoxypropionate	EEP	34	D	D		Α	Yes	1			
2-Ethylhexanol	EHX	20	D	Е		Α	Yes	1			
Ethyl propionate	EPR	34	D	С		Α	Yes	1			
Ethyl toluene	ETE	32	D	D		Α	Yes	1			
Formamide	FAM	10	D	Е		Α	Yes	1			
Furfuryl alcohol	FAL	20 ²	D	E		Α	Yes	1			
Gasoline blending stocks: Alkylates	GAK	33	D	A/C		Α	Yes	1			
Gasoline blending stocks: Reformates	GRF	33	D	A/C		Α	Yes	1			
Gasolines: Automotive (containing not over 4.23 grams lead per gallon)	GAT	33	D	С		Α	Yes	1		2	
Gasolines: Aviation (containing not over 4.86 grams of lead per gallon)	GAV	33	D.	С		Α	Yes	1			
Gasolines: Casinghead (natural)	GCS	33	D	A/C		Α	Yes	1			
Gasolines: Polymer	GPL	33	D	A/C		Α	Yes	1			
Gasolines: Straight run	GSR	33	D	A/C		Α	Yes	1			
Glycerine	GCR	20 2	D	Е		Α	Yes	1			
Heptane (all isomers), see Alkanes (C6-C9) (all isomers)	HMX	31	D	С		Α	Yes	1			
Heptanoic acid	HEP	4	D	E		Α	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	E		Α	Yes	1			
Hexane (all isomers), see Alkanes (C6-C9)	HXS	31 ²	D	B/C		Α	Yes	1			
Hexanoic acid	НХО	4	D	E		Α	Yes	1			
Hexanol	HXN	20	D	D		Α	Yes	1			
Hexene (all isomers)	HEX	30	D	С		Α	Yes	2			
Hexylene glycol	HXG	20	D	E		Α	Yes	1			
Isophorone	IPH	18 ²	D	E		Α	Yes	1			
Jet fuel: JP-4	JPF	33	D	E		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		Α	Yes	1			
Methylamyl alcohol	MAA	20	D	D		Α	Yes	1			
Methyl amyl ketone	MAK	18	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		Α	Yes	1			
Methyl ethyl ketone	MEK	18 ²	D	С		Α	Yes	1			
Methyl heptyl ketone	MHK	18	D	D		Α	Yes	1			
Methyl isobutyl ketone	MIK	18 ²	D	С		Α	Yes	1			
Methyl naphthalene (molten)	MNA	32	D	Е		Α	Yes	1			
Mineral spirits	MNS	33	D	D		Α	Yes	1			
Myrcene	MRE	30	D	D		Α	Yes	1			
Naphtha: Heavy	NAG	33	D	#		Α	Yes	1			
Naphtha: Petroleum	PTN	33	D	#		Α	Yes	1			
Naphtha: Solvent	NSV	33	D	D		Α	Yes	1			
			D	D		Α	Yes	1			



C2-0901134 10-Apr-09

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 13023B

Official #: 1218296

Page 6 of 8

Shipyard: TRINITY Hull #: 4635

Cargo Identifica	Conditions of Carriage									
							_	Recovery		$\overline{}$
Name	Chem	Compat Group No	Sub Chapte	Grade	Hull Type	Tank Group	App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period
Naphtha: Varnish makers and painters (75%)	NVM	33	D	С		Α	Yes	1		
Nonane (all isomers), see Alkanes (C6-C9)	NAX	31	D	D	-	Α	Yes	1		
Nonene (all isomers)	NON	30	D	D		Α	Yes	2		
Nonyl alcohol (all isomers)	NNS	20 ²	D	E		Α	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	С		A	Yes	1		
Octanoic acid (all isomers)	OAY	4	D	E		A	Yes	1		
Octanol (all isomers)	OCX	20 2	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/E			Yes	1		
Oil, fuel: No. 5	OFV	33	D	D/E						
Oil, fuel: No. 6	OSX	33		E		A	Yes	1		
Oil, misc: Crude	OIL	33	D	C/D			Yes	1		
Oil, misc: Diesel	ODS	33	D	D/E		Α	Yes	1		
Oil, misc: Gas, high pour	OGP	33	D			Α	Yes	1		
Oil, misc: Lubricating	OLB	33		E		Α	Yes	1		
Oil, misc: Residual			D	E		Α .	Yes	1		
Oil, misc: Turbine	ORL	33	D	E		Α	Yes	11		
Pentane (all isomers)	OTB	33	D	E		Α	Yes	1		
Pentene (all isomers)	PTY	31	D	Α		Α	Yes	5		
	PTX	30	D	Α		Α	Yes	5		
alpha-Pinene beta-Pinene	PIO	30	D -	D		Α	Yes	1		
	PIP	30	D	D	***	Α	Yes	1		
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether	PAG	40	D	E	-	Α	Yes	1		
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate	PAF	34	D	E		Α	Yes	1		
Polybutene	PLB	30	D	E		Α	Yes	1		
Polypropylene glycol	PGC	40	D	E		Α	Yes	1		
iso-Propyl acetate	IAC	34	D	С		Α	Yes	1		
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	15	Α	Yes	1		
Propylene glycol	PPG	20 2	D	E		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		A	Yes	1		
Tetraethylene glycol	TTG	40	D	E		Α	Yes	1		
Tetrahydronaphthalene	THN	32	D	E		Α	Yes	1		
Toluene	TOL	32	D	С		A	Yes	1		
Tricresyl phosphate (less than 1% of the ortho isomer)	TCP	34	D	E		Α	Yes	1		
Triethylbenzene	TEB	32	D	E		A	Yes	1		
Triethylene glycol	TEG	40	D	E		A	Yes	<u>.</u>		
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		E		A	Yes	1		
				-			100			





10-Apr-09

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 13023B Official #: 1218296

Page 7 of 8

Shipyard: TRINITY

Cargo Identification							Conditions of Carriage				
Name		Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	App'd	Recovery VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period
Xylenes (ortho-, meta-, para-)		XLX	32	D	D		Α	Yes	1		



Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 13023B

Official #: 1218296

Page 8 of 8

Shipyard: TRINITY

Dated

Hull #: 4635

C2-0901134

10-Apr-09

Explanation of terms & symbols used in the Table:

Cargo Identification

Chem Code

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.

none

Note 1

The three letter designation assigned to the cargo in the Chemical Hazards Response Information System (CHRIS) Manual. Certain mixtures of cargoes may not have a CHRIS Code assigned.

Compatability Group No.

The cargo reactive group number assigned for compatibility determinations in 46 CFR Part 150 Tables I and II. In accordance with 46 CFR 150.130, the Person-in-Charge of the barge is responsible for ensuring that the compatibility requirements of 46 CFR Part 150 are met. Cargoes must be checked for compatibility using the figures, tables and appendices of 46 CFR 150 in conjunction with the assigned reactive group number.

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 lart. For additional compatibility information, contact Commandant (CG-3PSO-3), U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593-0001. Telephone

Note 2 See Appendix I to 46 CFR Part 150 - exceptions to the compatability chart.

Subchapter Subchapter D

Subchapter O

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.

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

A, B, C Note 4

Flammable liquid cargoes, as defined in 46 CFR 30-10.22 Combustible liquid cargoes, as defined in 46 CFR 30-10.15.

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.

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.

Hull Type

NA

NA

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 Carriage

Tank Group 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 Carriage

Tank Group Vapor Recover Approved (Y or N) 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.

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 arrester.

Category 3

(Highly toxic) VCSs for these toxic cargoes cannot use a spill valve or rupture disk as the primary means to meet the overfill protection requirement of 46 CFR 39.20-9. This requirement is in addition to the requirements of Category 1.

(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 1cargoes. 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

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