

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

Certification Date: 21 Oct 2019 Expiration Date: 21 Oct 2024

Certificate of Inspection

Vessel Harne Official Number AND Number Call Sign Service **KIRBY 27736** 1245359 Tank Barge Heiling Port **Hull Material** HOUMA, LA **Norsecours** Propulsion Steel UNITED STATES Place Bult Delivery Date Keef Leid Date Gross Tons Not Tons MADISONVILLE, LA DWT Langth R-1619 R-1618 R-297 6 22Aug2014 14Jul2014 **UNITED STATES** ы Opposite KIRBY INLAND MARINE LP KIRBY INLAND MARINE LP 55 WAUGH DRIVE SUITE 1000 18350 Market Street HOUSTON, TX 77007 Channelview, TX 77530 UNITED STATES **UNITED STATES** This vessel must be manned with the following licensed and unlicensed Personnel. Included in which there must be 0 Certified Lifeboatmen, 0 Certified Tankermen, 0 HSC Type Rating, and 0 GMDSS Operators. **0 Masters** O Licensed Mates 0 Chief Engineers D Chief Mates 0 First Class Pilots **0 First Assistant Engineers G-Second Mates** 0 Radio Officers O Second Assistant Engineers O Third Mates 0 Able Seamen O Third Assistant Engineers D Master First Class Pilot O Ordinary Seamen **0 Licensed Engineers** 0 Mate First Class Pilots **0** Deckhands 0 Qualified Member Engineer in addition, this vessel may carry 0 Passengers, 0 Other Persons in crew, 0 Persons in addition to crew, and no Others. Total Persons allowed: 0 Route Permitted And Conditions Of Operation: ---Lakes, Bays, and Sounds plus Limited Coastwise---Also, in fair weather only, not more than twelve (12) miles from shore between St. Harks and Carrabelle, Florida. This vessel has been granted a fresh water ecrvico examination interval per 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 31.10-21(a)(1) and the cognizant OCHI notified in writing as soon as this change in status occurs. This tank barge is participating in the Eighth Coast Guard District's Tank Barge Stroamlined Inspection Program ***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. Annual/Periodic/Re-Inspection This certificate issued by COR J.J. ANDREW, CDR, USCG, By direction A/P/R Dale Zone Signature 9-30-2014 HOU TUSIY Officer in Charge, Marine Inspection BALK -11-21 Marine Safety Unit Port Arthur David Warren 2502140160 HOV Inspection Zone

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

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Vessel Name: KIRBY 27736

(TBSIP). Inspection activities aboard this barge shall be conducted per its Tank Barge Action Plan (TAP). Inspection issues concerning this barge should be directed to OCMI Houston-Galveston.

---Hull Exams---

Exam Type

Next Exam

Last Exam

Prior Exam

DryDock

31Aug2024

22Aug2014

Internal Structure

31Aug2024

21Oct2019

22Aug2014

--- 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

28575

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	865	13.66
2 P/S	822	13.66
3 P/S	740	13.66

Slop C

Loading Constraints - Stability

Hull Type	Maximum Load (short tons)	Maximum Draft (ft/in)	Max Density (lbs/gal)	Route Description
II	3751	10ft 0in	13.66	
Ш	4623	11ft 9in	13.66	

Conditions Of Carriage

Only those cargoes named in the vessel's Cargo Authority Attachment (CAA), Serial# C1-1400007, dated 10-JAN-14, 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 that the compatibility requirements of 46 CFR 150 are met. Cargoes must be checked for compatibility using the figures, tables, and appendices of 46 CFR 150 in conjunction with the compatibility group numbers from the "COMPAT GRP NO" column listed in the vessel's CAA.

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

Thermal fluid heater and generator set may only be operated when carrying grade "E" cargoes.

Vapor Control Authorization

In accordance with 46 CFR 39, excluding part 39.4000, this vessel's vapor collection system (VCS) has been inspected to the plans approved by Marine Safety Center letter Serial No. C1-1400007 dated January 10, 2014, and has been found acceptable for the collection of bulk liquid cargo vapors annotated with "Yes" in the CAA's VCS column.

The VCS system has been approved with a pressure side 1.5 psig P/V valve with Coast Guard Approval 162.017/144/03. The cargo tank top is suitable for a maximum allowable working pressure (MAWP) of 3.0 psi.



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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

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 8.74 lbs/gal. Cargoes with higher densities, up to 13.66 lbs/gal, may be carried as slack loads, but shall not exceed the tank weight limits as listed above.

--- Inspection Status ---

Fuel Tanks

Examinations

Tank ID	Previous	Last	Next
AFT	-	22Aug2014	

Cargo Tanks

ı	3979						
		Internal Exam			External Exam	1	
	Tank Id	Previous	Last	Next	Previous	Last	Next
	1 P/S	-	22Aug2014	22Aug2024	-	-	_
	2 P/S	-	22Aug2014	22Aug2024	p a	-	_
	3 P/S	-	22Aug2014	22Aug2024	=	-	-
	Slop C	-	22Aug2014	22Aug2024	-	Œ	
				Hydro Test			
I	Tank Id	Safety Valves		Previous	Last	Next	
	1 P/S	-		-	-	-	
	2 P/S	=		-	-	_	
	3 P/S	-		-		_	
	Slop C	-		-	-	_	

--- 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 3 B-II

END





Certificate of Inspection

Cargo Authority Attachment

Serial #:

Dated:

C1-1400007

10-Jan-14

Vessel Name: Kirby 27736 Shipyard: Trinity Madisonville
Official #: 1245359 Hull #: 2215-10

46 CFR 151 Tank C	Froup (Chara	cteris	tics													
Tank Group Information	Cargo I	dentificat	ion		Cargo		Tanks	200000000000000000000000000000000000000	Carg		Enviror Contro	nmental	Fire	Special Require	ments		
Tnk Grp Tanks in Group	Density	Press.	Temp.	Hull Typ	Seq	_	Vent	Gauge	Pipe Class	Cont	Tanks	Handling Space	Protection Provided	General	Materials of Construction	Elec Haz	Temp Cont
A #1P/S, #2 P/S, #3 P/S	13.7	Atmos.	Elev	Н	1ii 2ii	Integral Gravity	PV	Closed	II	G-1	NR	NA	Portable	40-1(f)(1), .50-60, .50-70(a), .50-70(b), .50-73, .50-81(a), .50-81(b),	55-1(b), (c), (e), (f), (j), 56-1(a), (b), (c), (d), (e), (f), (g),	NR	Yes

Notes: 1. Under Environmental Control, Tanks, NR means that the tank group is suitable only for those cargoes which require no environmental control in the cargo tanks.

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

List of Authorized Cargoes

Cargo Identificatio	n					Conditions of Carriage					
							Vapor Re	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	
Authorized Subchapter O Cargoes											
Acetonitrile	ATN	37	0	С	Ш	Α	Yes	3	No	G	
Acrylonitrile	ACN	15 ²	0	С	II	Α	Yes	4	.50-70(a), .55-1(e)	G	
Adiponitrile	ADN	37	0	E	II	Α	Yes	1	No	G	
Alkyl(C7-C9) nitrates	AKN	34 ²	0	NA	111	Α	No	N/A	.50-81, .50-86	G	
Aminoethylethanolamine	AEE	8	0	E	Ш	Α	Yes	1	.55-1(b)	G	
Ammonium bisulfite solution (70% or less)	ABX	43 2	0	NA	Ш	Α	No	N/A	.50-73, .56-1(a), (b), (c)	G	
Ammonium hydroxide (28% or less NH3)	AMH	6	0	NA	Ш	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	111	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	Ш	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	Ш	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	11	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	111	Α	No	N/A	.50-73, .55-1(j)	G	
Caustic soda solution	CSS	5 ²	0	NA	111	Α	No	N/A	.50-73, .55-1(j)	G	
Chemical Oil (refined, containing phenolics)	COD	21	0	E	11	Α	No	N/A	.50-73	G	
Chlorobenzene	CRB	36	0	D	Ш	Α	Yes	1	No	G	
Chloroform	CRF	36	0	NA	111	Α	Yes	3	No	G	
Coal tar naphtha solvent	NCT	33	0	D	Ш	Α	Yes	1	.50-73	G	
Coal tar pitch (molten)	CTP	33	0	E	Ш	Α	No	N/A	.50-73	G	
Creosote	CCW	21 ²	0	E	Ш	Α	Yes	1	No	G	
Cresols (all isomers)	CRS	21	0	E	111	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	E	111	Α	Yes	1	.55-1(f)	G	
Crotonaldehyde	CTA	19 ²	0	С	11	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	111	Α	Yes	1	.56-1(a), (b)	G	
Cyclohexanone, Cyclohexanol mixture	CYX	18 ²	0	Е	111	Α	Yes	1	.56-1 (b)	G	



Serial #: C1-1400007 10-Jan-14

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: Kirby 27736 Official #: 1245359

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Shipyard: Trinity Madisonville

Name Cyclohexylamine Cyclopentadiene, Styrene, Benzene mixture so-Decyl acrylate Interpretation of the properties of	Chem Code CHA CSB IAI DBX DCH DEE DCM DDE DAD DTI DPB DPP DPC DPU	Compat Group No 7 30 14 36 36 41 36 43 0 1.2 43 2 36 36	Sub Chapter O O O O O O O O O	Grade D D E E C D NA E A E	Hull Type	Tank Group A A A A A A A A	Vapor Re	vcs	Special Requirements in 46 CFR 151 General and Mat'ls of .56-1(a), (b), (c), (g) .50-60, .56-1(b) .50-70(a), .50-81(a), (b), .55-1(c) .56-1(a), (b) No .55-1(f)	Insp. Period G G G G
Name Cyclohexylamine Cyclopentadiene, Styrene, Benzene mixture so-Decyl acrylate Dichlorobenzene (all isomers) 1,1-Dichloroethane 2,2'-Dichloroethyl ether Dichloromethane 2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution 2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1,1-Dichloropropane 1,2-Dichloropropane 1,3-Dichloropropane	CODE CHA CSB IAI DBX DCH DEE DCM DDE DAD DTI DPB DPC DPC	7 30 14 36 36 41 36 43 0 1.2 43 2 36 36	Chapter O O O O O O O O O O O O O O O O O O O	D E E C D NA E A E	Type III III III III III III III III III I	A A A A A A A	Yes	1 1 2 3 1 1 5	151 General and Mat'ls of .56-1(a), (b), (c), (g) .50-60, .56-1(b) .50-70(a), .50-81(a), (b), .55-1(c) .56-1(a), (b) No .55-1(f)	Period G G G G G
Cyclopentadiene, Styrene, Benzene mixture so-Decyl acrylate Dichlorobenzene (all isomers) 1,1-Dichloroethane 2,2'-Dichloroethyl ether Cichloromethane 2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution 2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1,1-Dichloropropane 1,2-Dichloropropane 1,3-Dichloropropane	CSB IAI DBX DCH DEE DCM DDE DAD DTI DPB DPP DPC	30 14 36 36 41 36 43 0 1.2 43 2 36 36	0 0 0 0 0 0	D E E C D NA E A	111 111 111 111 111 111	A A A A A	Yes Yes Yes Yes Yes Yes Yes	1 2 3 1 1 5	.50-60, .56-1(b) .50-70(a), .50-81(a), (b), .55-1(c) .56-1(a), (b) No .55-1(f)	G G G G
so-Decyl acrylate Dichlorobenzene (all isomers) 1,1-Dichloroethane 2,2'-Dichloroethyl ether Dichloromethane 2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution 2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1,1-Dichloropropane 1,2-Dichloropropane 1,3-Dichloropropane	IAI DBX DCH DEE DCM DDE DAD DTI DPB DPP DPC	14 36 36 41 36 43 0 1.2 43 2 36 36	0 0 0 0 0 0	E E C D NA E A	111 111 111 11 111 111	A A A A A	Yes Yes Yes Yes Yes Yes	2 3 1 1 5	.50-70(a), .50-81(a), (b), .55-1(c) .56-1(a), (b) No .55-1(f)	G G G
Dichlorobenzene (all isomers) 1,1-Dichloroethane 2,2'-Dichloroethyl ether Dichloromethane 2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution 2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1,1-Dichloropropane 1,2-Dichloropropane 1,3-Dichloropropane 1,3-Dichloropropane	DBX DCH DEE DCM DDE DAD DTI DPB DPP DPC	36 36 41 36 43 0 1.2 43 2 36 36	0 0 0 0 0 0	E C D NA E A		A A A A	Yes Yes Yes Yes	3 1 1 5	.56-1(a), (b) No .55-1(f)	G G G
1,1-Dichloroethane 2,2'-Dichloroethyl ether Cichloromethane 2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution Cichlorophenoxyacetic acid, dimethylamine salt solution Cichlorophenoxyacetic acid, triisopropanolamine salt solution 1,1-Dichloropropane 1,2-Dichloropropane 1,3-Dichloropropane 1,3-Dichloropropane 1,3-Dichloropropane 1,3-Dichloropropane	DCH DEE DCM DDE DAD DTI DPB DPP	36 41 36 43 0 1,2 43 2 36 36	0 0 0 0 0	C D NA E A	111 11 111 111	A A A	Yes Yes Yes	1 1 5	No .55-1(f)	G G
2,2'-Dichloroethyl ether Dichloromethane 2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution 2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1,1-Dichloropropane 1,2-Dichloropropane 1,3-Dichloropropane 1,3-Dichloropropane	DEE DCM DDE DAD DTI DPB DPP DPC	41 36 43 0 1,2 43 2 36 36	0 0 0 0	D NA E A		A A A	Yes Yes	1 5	.55-1(f)	G
Dichloromethane 2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution 2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1,1-Dichloropropane 2,2-Dichloropropane 3,3-Dichloropropane	DCM DDE DAD DTI DPB DPP DPC	36 43 0 1,2 43 2 36 36	0 0 0	NA E A E	111 111	A A	Yes Yes	5	0.00	
2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution 2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1,1-Dichloropropane 2,2-Dichloropropane 3,3-Dichloropropane 5,3-Dichloropropene	DDE DAD DTI DPB DPP DPC	43 0 1,2 43 2 36 36	0	E A E	III III	Α			No	-
2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution 2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution ,1-Dichloropropane ,2-Dichloropropane ,3-Dichloropropane ,3-Dichloropropene	DAD DTI DPB DPP DPC	0 ^{1,2} 43 ² 36 36	0	A E	Ш		No	N/Δ		G
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution ,1-Dichloropropane ,2-Dichloropropane ,3-Dichloropropane ,3-Dichloropropane	DTI DPB DPP DPC	43 ² 36 36	0	E				14/	.56-1(a), (b), (c), (g)	G
,1-Dichloropropane [] ,2-Dichloropropane [] ,3-Dichloropropane [] ,3-Dichloropropene []	DPB DPP DPC	36 36				Α	No	N/A	.56-1(a), (b), (c), (g)	G
,2-Dichloropropane C ,3-Dichloropropane C ,3-Dichloropropene C	DPP	36	0		Ш	Α	No	N/A	.56-1(a), (b), (c), (g)	G
,3-Dichloropropane C	DPC			С	Ш	Α	Yes	3	No	G
,3-Dichloropropene			0	С	III	Α	Yes	3	No	G
	DPU	36	0	С	111	Α	Yes	3	No	G
Dichloropropene, Dichloropropane mixtures		15	0	D	Н	Α	Yes	4	No	G
	DMX	15	0	С	11	Α	Yes	1	No	G
Diethanolamine	DEA	8	0	Е	111	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	OBU	7	0	D	III	Α	Yes	3	.55-1(c)	G
Diisopropanolamine	OIP	8	0	Е	III	A	Yes	1	.55-1(c)	G
liisopropylamine D	DIA	7	0	С	II	Α	Yes	3	.55-1(c)	G
,N-Dimethylacetamide D	DAC	10	0	E	111	Α	Yes	3	.56-1(b)	G
imethylethanolamine D	ОМВ	8	0	D	III	A	Yes	1	.56-1(b), (c)	G
imethylformamide D	OMF	10	0	D	Ш	Α	Yes	1	.55-1(e)	
i-n-propylamine D	DNA	7	0	С	II	Α	Yes	3	.55-1(c)	G
odecyldimethylamine, Tetradecyldimethylamine mixture D	OOT	7	0	E	Ш	Α	No	N/A	.56-1(b)	
	oos	43	0	#	11	Α	No	N/A	No	G
E Glycol Ether Mixture E	EG	40	0	D	III	A	No	N/A	No	
thanolamine M	ΛEA	8	0	E	Ш	Α	Yes	1	.55-1(c)	G
	AC	14	0	C	111	A	Yes	2	.50-70(a), .50-81(a), (b)	G
	AN	7	0	Α	II	Α	Yes	6	.55-1(b)	
	ВА	7	0	D	111	Α	Yes	3	.55-1(b)	G
	CC	7	0	D	III	Α	Yes	1	.55-1(b)	G
	TC	20	0	E	III	A	Yes	1	No	G
	DA	7 2	0		III	A	Yes	1	.55-1(c)	
	DC	36 ²	0	C	 III	A	Yes	1	No	G
	GH	40	0	E	111	Α	No	N/A	No	
	GC	40	0	D/E	III	A	Yes	1	No	
	GP	40	0	E	III	A	Yes	1	No	
	Al	14	0	E	111	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
	TM	14		D/E	111	A	Yes	2	.50-70(a)	
	PA	19 ²	0	E	111	A	Yes	1	No	
	MS	19 ²	0	D/E	III		Yes	1	.55-1(h)	
	FA	19	0	D	III	A	Yes	1	.55-1(h)	G
	TA	19		NA	III	A	No		No	
	MC	7		E	III		Yes	1	.55-1(c)	
	MI	7		С	11	A	Yes	1	.56-1(b), (c)	G
	FN	•		C	111	A	Yes	1	.50-70(a), .50-81(a), (b)	G



Serial #: C1-1400007 Dated:

10-Jan-14

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: Kirby 27736 Official #: 1245359

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Shipyard: Trinity Madisonville

Cargo Identification	1				10 100			Condi	tions of Carriage	
							Vapor F	Recovery		
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	(Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period
Isoprene	IPR	30	0	Α	111	Α	Yes	7	.50-70(a), .50-81(a), (b)	G
Isoprene, Pentadiene mixture	IPN		0	В	Ш	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	Ш	Α	No	N/A	.50-73, .56-1(a), (c), (g)	G
Mesityl oxide	MSO	18 ²	0	D	Ш	Α	Yes	1	No	G
Methyl acrylate	MAM	14	0	С	Ш	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
Methylcyclopentadiene dimer	MCK	30	0	С	Ш	Α	Yes	1	No	G
Methyl diethanolamine	MDE	8	0	Е	Ш	Α	Yes	1	.56-1(b), (c)	G
2-Methyl-5-ethylpyridine	MEP	9	0	E	III	Α	Yes	1	.55-1(e)	G
Methyl methacrylate	MMM	14	0	С	111	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
2-Methylpyridine	MPR	9	0	D	III	Α	Yes	3	.55-1(c)	G
alpha-Methylstyrene	MSR	30	0	D	III	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
Morpholine	MPL	7 ²	0	D	Ш	Α	Yes	1	.55-1(c)	G
Naphthalene (molten)	NTM	32	0	С	III	A	Yes	1	No	G
Nitroethane	NTE	42	0	D	П	Α	No	N/A	.50-81, .56-1(b)	G
1- or 2-Nitropropane	NPM	42	0	D	III	Α	Yes	1	.50-81	G
1,3-Pentadiene	PDE	30	0	Α	111	Α	Yes	7	.50-70(a), .50-81	G
Perchloroethylene	PER	36	0	NA	111	Α	No	N/A	No	G
Phthalic anhydride (molten)	PAN	11	0	E	111	Α	Yes	1	No	G
Polyethylene polyamines	PEB	7 2	0	E	III	A	Yes	1	.55-1(e)	G
iso-Propanolamine	MPA	8	0	E	III	Α	Yes	1	.55-1(c)	G
Propanolamine (iso-, n-)	PAX	8	0	 E	III	Α	Yes	1	.56-1(b), (c)	G
iso-Propylamine	IPP	7	0	Α	11	A	Yes	5	.55-1(c)	G
Pyridine	PRD	9	0	C	111	A	Yes	1	.55-1(e)	G
Sodium acetate, Glycol, Water mixture (3% or more Sodium Hydroxide)	SAP		0		III	Α	No	N/A	.50-73, .55-1(j)	G
Sodium aluminate solution (45% or less)	SAU	5	0	NA	III	Α	No	N/A	.50-73, .56-1(a), (b), (c)	G
Sodium chlorate solution (50% or less)	SDD	0 1,2		NA	III	Α	No	N/A	.50-73	G
Sodium hypochlorite solution (20% or less)	SHQ	5	0	NA	III	Α	No	N/A	.50-73, .56-1(a), (b)	G
Sodium sulfide, hydrosulfide solution (H2S 15 ppm or less)	SSH	0 1,2	0	NA	III	A	Yes	1	.50-73, .55-1(b)	G
Sodium sulfide, hydrosulfide solution (H2S greater than 15 ppm but less than 200 ppm)	SSI	0 1,2		NA	111	Α	No	N/A	.50-73, .55-1(b)	G
Sodium sulfide, hydrosulfide solution (H2S greater than 200 ppm)	SSJ	0 1,2	0	NA	II	Α	No	N/A	.50-73, .55-1(b)	G
Styrene (crude)	STX		0	D	111	Α	Yes	2	No	G
Styrene monomer	STY	30	0	D	III	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
1,1,2,2-Tetrachloroethane	TEC	36	0	NA	III	Α	No	N/A	No	G
Tetraethylenepentamine	TTP	7	0	E	III	Α	Yes	1	.55-1(c)	G
Tetrahydrofuran	THF	41	0	С	III	Α	Yes	1	.50-70(b)	G
Toluenediamine	TDA	9	0	Е	II	Α	No	N/A	.50-73, .56-1(a), (b), (c), (g)	G
1,2,4-Trichlorobenzene	TCB	36	0	E	III	Α	Yes	1	No	G
1,1,2-Trichloroethane	ТСМ	36	0	NA	Ш	Α	Yes	1	.50-73, .56-1(a)	G
Trichloroethylene	TCL	36 ²	0	NA	III	Α	Yes	1	No	G
1,2,3-Trichloropropane	TCN	36	0	E		A	Yes	3	.50-73, .56-1(a)	G
Triethanolamine	TEA	8 2	0		III	A	Yes	1	.55-1(b)	G
Triethylamine	TEN	7	0		11	Α	Yes	3	.55-1(e)	G
Triethylenetetramine	TET	7 2	0	 E	III	A	Yes	1	.55-1(b)	G
Triphenylborane (10% or less), caustic soda solution	TPB	5	0	NA	 	Α	No	N/A	.56-1(a), (b), (c)	G
Trisodium phosphate solution	TSP	5	0	NA	 III	A	No	N/A	.50-73, .56-1(a), (c).	G
Urea, Ammonium nitrate solution (containing more than 2% NH3)	UAS	6	0	NA	III	A	No	N/A	.56-1(b)	
orea, Animonium mirate solution (containing more than 2% NH3)	UAS	0		INA	ш	Α	INO	IN/A	· /(w/	



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Cargo Authority Attachment

Vessel Name: Kirby 27736 Official #: 1245359

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Shipyard: Trinity Madisonville

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Cargo Identificatio	n							Condi	tions of Carriage	
	Chem	Compet	Cub					Recovery		
Name	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
Vanillin black liquor (free alkali content, 3% or more).	VBL	5	0	NA	111	Α	No	N/A	.50-73, .56-1(a), (c), (g)	G
Vinyl acetate	VAM	13	0	С	111	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
Vinyl neodecanate	VND	13	0	E	IH	Α	No	N/A	.50-70(a), .50-81(a), (b)	G
Vinyltoluene	VNT	13	0	D	Ш	Α	Yes	2	.50-70(a), .50-81, .56-1(a), (b), (c), (G
Subchapter D Cargoes Authorized for Vapor Contr	ol									
Acetone	ACT	18 ²	D	С		Α	Yes	1		
Acetophenone	ACP	18	D	Е		Α	Yes	1		
Alcohol(C12-C16) poly(1-6)ethoxylates	APU	20	D	Е		Α	Yes	1		
Alcohol(C6-C17)(secondary) poly(7-12)ethoxylates	AEB	20	D	E		Α	Yes	1		
Amyl acetate (all isomers)	AEC	34	D	D		Α	Yes	1		
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	20 ²	D	D		Α	Yes	1		
Butyl alcohol (sec-)	BAS	20 ²	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	Е		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		Α	Yes	1		
n-Decylbenzene, see Alkyl(C9+)benzenes	DBZ	32	D	E		Α	Yes	1		
Diacetone alcohol	DAA	20 ²	D	D		Α	Yes	1		
ortho-Dibutyl phthalate	DPA	34	D	Е		Α	Yes	1		
Diethylbenzene	DEB	32	D	D		Α	Yes	1		
Diethylene glycol	DEG	40 ²	D	E		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		Α	Yes	1		
Dimethyl phthalate	DTL	34	D	E		Α	Yes	1		
Dioctyl phthalate	DOP	34	D	E		Α	Yes	1		
Dipentene	DPN	30	D	D		Α	Yes	1		
Diphenyl	DIL	32	D	D/E		Α	Yes	1		
Diphenyl, Diphenyl ether mixtures	DDO	33	D	E		Α	Yes	1		
Diphenyl ether	DPE	41	D	{E}		Α	Yes	1		
Dipropylene glycol	DPG	40	D	E		Α	Yes	1		
Distillates: Flashed feed stocks	DFF	33	D	E		Α	Yes	1		
Distillates: Straight run	DSR	33	D	E		Α	Yes	1		



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Cargo Authority Attachment

Vessel Name: Kirby 27736 Official #: 1245359

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Shipyard: Trinity Madisonville

Cargo Identificatio	n							Condi	tions of Carriage	
		T					_	Recovery		T
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
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		Α	Yes	1		
Ethoxy triglycol (crude)	ETG	40	D	E		Α	Yes	1		
Ethyl acetate	ETA	34	D	С		Α	Yes	1		
Ethyl acetoacetate	EAA	34	D	E		Α	Yes	1		
Ethyl alcohol	EAL	20 ²	D	С		Α	Yes	1		
Ethylbenzene	ETB	32	D	С		Α	Yes	1		
Ethyl butanol	EBT	20	D	D		Α	Yes	1		
Ethyl tert-butyl ether	EBE	41	D	С		Α	Yes	1		
Ethyl butyrate	EBR	34	D	D		Α	Yes	1		
Ethyl cyclohexane	ECY	31	D	D		Α	Yes	1		
Ethylene glycol	EGL	20 ²	D	E		Α	Yes	1		
Ethylene glycol butyl ether acetate	EMA	34	D	E		Α	Yes	1		
Ethylene glycol diacetate	EGY	34	D	E		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	E		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	E		Α	Yes	1		
Furfuryl alcohol	FAL	20 2	D	Е		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		
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	E		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	11		
Hexane (all isomers), see Alkanes (C6-C9)	HXS	31 ²	D	B/C		Α	Yes	1		
Hexanoic acid	HXO	4	D	E		Α	Yes	1		
Hexanol	HXN	20	D	D		Α	Yes	11		
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		A	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		A	Yes	1		
Methyl alcohol	MAL	20 ²	D	С		A	Yes	1		
Methylamyl acetate	MAC	34	D	D		Α	Yes	1		



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Shipyard: Trinity Madisonville

Cargo Identificat	ion							Condi	tions of Carriage	
								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
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	E		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		
Naphtha: Stoddard solvent	NSS	33	D	D		Α	Yes	1		-
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	VI	
Nonyl phenol	NNP	21	D	E		Α	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		Α	Yes	1		
Octanoic acid (all isomers)	OAY	4	D	E		Α	Yes	1		
Octanol (all isomers)	OCX	20 ²	D	E		A	Yes	1		
Octene (all isomers)	OTX	30	D	С		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		Α	Yes	1		
Oil, fuel: No. 5	OFV	33	D	D/E		Α	Yes	1		
Oil, fuel: No. 6	OSX	33	D	E		Α	Yes	1		
Oil, misc: Crude	OIL	33	D	C/D		Α	Yes	1		
Oil, misc: Diesel	ODS	33	D	D/E		Α	Yes	1	And the second s	
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		Α	Yes	1		
Oil, misc: Turbine	ОТВ	33	D	E		A	Yes	1		
Pentane (all isomers)	PTY	31	D	Α		A	Yes	5		
Pentene (all isomers)	PTX	30	D	A		A	Yes	5		
n-Pentyl propionate	PPE	34	D	D		Α	Yes	1		
alpha-Pinene	PIO	30	D	D		A	Yes	1		
beta-Pinene	PIP	30		D		A	Yes	1		
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether	PAG	40		E		A	Yes	1		
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate	PAF	34	D	 E		A	Yes	1	WALL AT	
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	С		A	Yes	1		
iso-Propyl alcohol	IPA	20 ²	D	C		Α	Yes	1		
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Shipyard: Trinity Madisonville

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	
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	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		Α	Yes	1			
Tetraethylene glycol	TTG	40	D	Е		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		- 1	
Triethylene glycol	TEG	40	D	E		Α	Yes	1			
Triethyl phosphate	TPS	34	D	E		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	E		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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Shipyard: Trinity Madison

Hull #: 2215-10

Explanation of terms & symbols used in the Table:

Cargo Identification

Compatability Group No

Note 1 Note 2

Note 3

Chem Code

Subchapter

Grade

D. F

Hull Type

NA

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. Certain mixtures of cargoes may not have a CHRIS Code assigned.

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

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

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

Subchapter D Those flammable and combustible liquids listed in 46 CFR Table 30.25-1 Subchapter O

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 that grade of cargo A, B, C

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.

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 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 is significant preventive measures to preclude the uncontrolled release of cargo. See 46 CFR 151.10-1(b)(3). Designed to carry products of sufficient 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 Recover 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 components and restricting vapor flow which could lead to cargo tank overpressurization. The vessel's owner must develop a method of ensuring all VCS safety components are functional and polymer build-up is not causing an unsafe condition due to increased pressure in the vapor control piping and cargo tanks. The method shall be acceptable to the local Officer in Charge, Marine Inspection. This is in addition to the requirements of Category 1. Please note that a material not normally considered a monomer can be a problem in detonation arrester.

Category 3

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