

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

Certification Date: 01 Mar 2023 Expiration Date: 01 Mar 2028

Certificate of Inspection

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

Vessel Name		Official Number		IMO Number	Call Sign	Service	
KIRBY 29050		1243626				Tank Ba	rge
KIKB 1 29050		1243020					
Hailing Port		Hull Ma	atorial	Horsepower	Propulsion		
WILMINGTON	N, DE			, ioisopous			
		Stee	1				
UNITED STA	TES						
Place Built		Delivery D	ate Keel Lai	d Date Gross Tons	Net Tons	DWT	Length
Galveston, TX	(27Dec	2012 10Se	p2012 R-1619	R-1619		R-297.5
LINUTED STATE	TEC	27000	2012 1000	P2012 +	F .		1-0
UNITED STA	IES						
Owner				Operator	DAMADINELD	48	
	D MARINE LP	000		18350 Market	D MARINE LP Street		
HOUSTON, T	RIVE, SUITE 1 X 77007	000		Channelview,			
UNITED STA				UNITED STAT			
This vessel m	ust be manned veboatmen, 0 Ce	with the following lice	ensed and ur HSC Type	nlicensed Personr Rating, and 0 GM	nel. Included in wind IDSS Operators.	hich there mu	st be
0 Masters	0	Licensed Mates	0 Chief Engine	ers C) Oilers		
0 Chief Mates	, 0	First Class Pilots	0 First Assistan	t Engineers			
0 Second Ma	tes 0		0 Second Assis				
0 Third Mates	. 0		0 Third Assista				
0 Master Firs			0 Licensed Eng				
0 Mate First (0 Qualified Mer		in addition to	a arous and no	Others Total
In addition, the Persons allow		arry 0 Passengers, 0	Other Perso	ons in crew, 0 Per	sons in addition to	o crew, and no	Others, rotal
Route Perm	nitted And Cond	litions Of Operatio	n:				
lakes	Bays, and S	ounds plus Li	nited Coa	astwise			
					D LESS THAN TWEN	NTY (20) KNO	TS AND CLEAR
LIMITED COAS	TWISE SERVICE	IN SEAS OF LESS TWELVE (12) MILES	FROM SHORE	E BETWEEN ST. MA	ARKS AND CARRABI	ELLE, FLORIDA	Α.
VISIBILITY							
				anne durb bid	MDTOM'S MANY DAI	DCE STREAMIT	NED INSPECTION
THIS TANK BA		TENT THO THE THE	311111 11211211	COMO I GOING DIO	TRICT'S TANK BAI	ORDANCE WITH	ITS TANK BARGE
PROGRAM (TBS	(TAP). INSPECT	ION MOTE TELEBO	ERNING THIS	BARGE SHOULD B	E DIRECTED TO T	HE OCMI HOUS	TON-GALVESTON.
***SEE NE	XT PAGE FOR	ADDITIONAL CE	RTIFICATE	INFORMATION	***	Chin	
		U- basing boom	completed a	HOLIMA LA III	NITED STATES	the Officer in	Charge, Marine
Inspection He	ouma Louisiana	certified the vessel	, in all respec	cts, is in conformit	ty with the applica	ible vessel ins	pection laws and
the rules and	Annual/Perio	cribed thereunder. odic/Re-Inspection		This certifi	cate sued by	David !	111
			ignature	THE RESIDENCE OF THE PARTY OF T	LO BACON CE	R USCG, By	Direction
Date	Zone	A/P/R S	LaCost		e, Marine Inspection	(P. C.	
1/2/24	BTR,LA	17 Justan	p4 50 51	Simos in Citals		a Louisiana	
				Inspection Zone		15/15	
					"College"	litter.	



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

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Certificate of Inspection

Vessel Name: KIRBY 29050

THIS VESSEL HAS BEEN GRANTED A FRESH WATER SERVICE EXAMINATION INTERVAL IN ACCORDANCE WITH 46 CFR TABLE 31.10-21(b); 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 SALTWATER INTERVALS PER 46 CFR TABLE 31.10-21(a) AND THE COGNIZANT OCMI NOTIFIED IN WRITING AS SOON AS THIS CHANGE IN STATUS OCCURS.

---Hull Exams---

Exam Type

Next Exam

Last Exam

Prior Exam

DryDock

31Jan2033

02Feb2023

27Dec2012

Internal Structure

31Jan2028

02Feb2023

04Jan2018

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

Authorization:

Grade A and lower and specified hazardous cargoes.

Total Capacity

Units

Highest Grade Type Part151 Regulated Part153 Regulated Part154 Regulated

28717

Barrels

Yes

No

Hazardous Bulk Solids Authority

Loading Constraints - Structural

Tank Location Description	Max Cargo Weight per Tank (short tons)	Maximum Density (lbs/gal)
1 P/S	679	13.60
2 P/S	819	13.60
3 P/S	718	13.60

Loading Constraints - Stability

Hull Type	Maximum Load (short tons)	Maximum Draft (ft/in)	Max Density (lbs/gal)	Route Description
II	3849	10ft 3in	13.60	LBS
łl .	3849	10ft 3in	13.60	R
III	4420	11ft 0in	13.60	LBS
UI	4420	11ft 0in	13.60	R

^{*}Conditions Of Carriage*

ONLY THOSE HAZARDOUS CARGOES NAMED IN THE VESSEL'S CARGO AUTHORITY ATTACHMENT, SERIAL NO. C1-1203242 DATED 16 JUL 2012, MAY BE CARRIED AND THEN ONLY IN THE TANKS INDICATED, SUBJECT TO THE LOADING CONSTRAINTS OF THE VESSEL'S CURRENT STABILITY LETTER.

PER 46 CFR 150.130, THE PERSON IN CHARGE OF THE BARGE 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 REACTIVE GROUP NUMBER FROM THE "COMPATIBILITY GROUP NO." COLUMN LISTED IN THE VESSEL'S CAA.

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

WHEN THE VESSEL IS CARRYING CARGOES CONTAINING GREATER THAN 0.5% BENZENE, THE PERSON IN CHARGE IS RESPONSIBLE FOR ENSURING THE PROVISIONS OF 46 U.S. CODE OF FEDERAL REGUALTIONS PART 197, SUBPART C ARE APPLIED.



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THE MAXIMUM DESIGN DENSITY OF CARGO WHICH MAY BE FILLED TO THE TANK TOP IS 8.7 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 BELOW.

TANK MAXIMUM DESIGN WORKING PRESSURE IS 6.29 PSIG.

VAPOR COLLECTION SYSTEM

IN ACCORDANCE WITH 46 CFR PART 39, EXCLUDING PART 39.4000, THIS VESSEL'S VAPOR CONTROL SYSTEM HAS BEEN INSPECTED TO THE PLANS APPROVED BY MARINE SAFETY CENTER LETTERS SERIAL NO. C1-1203242 DATED 16 JUL 2012, AND FOUND ACCEPTABLE FOR 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 6 PSIG P/V VALVE WITH COAST GUARD APPROVAL 162.017/0000167/3. THE CARGO TANK TOP IS SUITABLE FOR A MAXIMUM ALLOWABLE WORKING PRESSURE (MAWP) OF 6.29 PSIG.

IN ACCORDANCE WITH 46 CFR PART 39.1017 AND 39.5000 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.

--- Inspection Status ---

Cargo Tanks

	Internal Exam	1		External Exam	n	
Tank Id	Previous	Last	Next	Previous	Last	Next
1 P/S	27Dec2012	02Feb2023	31Jan2033	•	-	-
2 P/S	27Dec2012	02Feb2023	31Jan2033	-	•	-
3 P/S	27Dec2012	02Feb2023	31Jan2033	-	•	-
			Hydro Test			
Tank Id	Safety Valves	;	Previous	Last	Next	
1 P/S	-		-	-	_	
2 P/S	•		-	•	•	
3 P/S	-		_	_		

--- Conditional Portable Fire Extinguisher Requirements---

Required Only During Transfer of Cargo or Operation of Barge Machinery

--- Fire Fighting Equipment ---

Fire Extinguishers - Hand portable and semi-portable

Quantity

Class Type

2

40-B

END



Dated:

Serial #: C1-1203242

16-Jul-12



Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 29050 Official #: 1243626

Shipyard: West Gulf Marine

Hull #: 222

ank Group Information Cargo Identification		ion		Cargo	Tanks			Cargo Transfer		Environmental Control		Fire	Special Requirements				
Trik Grp Tanks in Group	Density	Press.	Temp.	Hull Typ	Seg Tank		Vent	Gauge	Pipe Class	Cont	Tanks	Handling Space	Protection Provided	General	Materials of Construction	Elec Haz	Temp
A #1P/S, #2P/S, #3P/S	13.6	Atmos.	Amb.	14	1ii 2ii	Integral Gravity	PV	Closed	ţį	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), (j), 56-1(a), (b), (c), (d), (e), (f), (g),	NA	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

List of Authorized Cargoes

Cargo Identification	n						(Condi	tions of Carriage	
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	App'd (Y or N)	vcs	Special Requirements in 46 CFR 151 General and Mat'ts of	Insp. Period
authorized Subchapter O Cargoes					Ĺ					
Acetonitrile	ATN	37	0	С	111	Α	Yes	3 _	No	G
Acrylonitrile	ACN	15 ²	0	С		Α	Yes	4	.50-70(a), .55-1 (e)	G
Adiponitrile	ADN	37	0	E	11	Α	Yes	1	No	G
AlkyI(C7-C9) nitrates	AKN	34 2	0	NA	111	Α	No	N/A	.50-81, .50-88	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	111	Α	No	N/A	.50-73, .56-1(a), (b), (c)	G
Ammonium hydroxlde (28% or less NH3)	AMH	6	0	NA	111	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	.50-80	G
Benzene or hydrocarbon mixtures (having 10% Benzene or more)	внв	32 2	0	С	111	Α	Yes	1	.50-60	G
Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)	ВНА	32 2	0	С	111	Α	Yes	1	.50-80, .56-1(b), (d), (f), (g)	G
Benzene, Toluene, Xylene mixtures (10% Benzene or more)	BTX	32	0	B/C	III	Α	Yes	1	.50-60	G
Butyl acrylate (all isomers)	BAR	14	0	D	111	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
Butyl methacrylate	ВМН	14	0	D	111	A	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	III	Α	No	N/A	No	G
Caustic potash solution	CPS	5 ²	0	NA	111	Α	No	N/A	.50-73, .55-1()	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	CRE	36	0	D	111	A	Yes	1	No	G
Chloroform	CRF	36	0	NA	III	A	Yes	3	No	G
Coal tar naphtha solvent	NCT	33	0	D	111	Α	Yes	1	.50-73	G
Creosote	CCV	V 21 2	0	E	111	Α	Yes	1	No	G
Cresols (all isomers)	CRS	3 21	0	E	111	Α	Yes	1	No	G
Cresylate spent caustic	CSC	5	0	NA	111	Α	No	N/A	Δ .50-73, .55-1 (b)	G
Cresylic acid tar	CRX	<	0	E	111	Α	Yes	5 1	.55-1(f)	G
Crotonaldehyde	CTA	19 4	2 0	С	11	Α	Yes	s 4	.55-1(n)	G
Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein)	CHO	3	0	С	111	Α	No	N/	A No	G
Cyclohexanone	CCI	H 1B	0	D	111	Α	Ye	s 1	.56-1(a), (b)	G
Cyclohexanone, Cyclohexanol mixture	CY	K 18	2 0	Е	111	Α	Ye	s 1	.56-1 (b)	G
Cyclohexylamine	CH	A 7	0	D	III	Α	Ye	s 1	.56-1(a), (b), (c), (g)	G

^{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.

Serial #: C1-1203242 Dated: 16-Jul-12



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Cargo Authority Attachment

Vessel Name: KIRBY 29050 Official #: 1243626

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Shipyard: West Gulf Marine

Name clopentadiene, Styrene, Benzene mixture -Decyl acrylate chlorobenzene (all isomers) -Dichloroethane 2'-Dichloroethyl ether chloromethane 4-Dichlorophenoxyacetic acid, diethanolamine salt solution 4-Dichlorophenoxyacetic acid, dimethylamine salt solution 4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1-Dichloropropane 2-Dichloropropane	Chem Code CSB IAI DBX DCH DEE DCM DDE	Compat Group No 30 14 36 36 41 36	0 0 0	Grade D E	Hull Type	Tank Group	Vapor Ri App'd	VCS Category	Special Requirements in 46 CFR 151 General and Mat'is of	Insp. Period
clopentadiene, Styrene, Benzene mixture -Decyl acrylate chlorobenzene (all isomers) -Dichloroethane 2'-Dichloroethyl ether chloromethane -Dichlorophenoxyacetic acid, diethanolamine salt solution 4-Dichlorophenoxyacetic acid, dimethylamine salt solution 4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1-Dichloropropane 2-Dichloropropane	Code CSB IAI DBX DCH DEE DCM DDE	30 14 36 36 41 36	O O O	D E	Type III	Group	(Y or N)	Category		
-Decyl acrylate chlorobenzene (all isomers) I-Dichloroethane 2'-Dichloroethyl ether chloromethane 4-Dichlorophenoxyacetic acid, diethanolamine salt solution 4-Dichlorophenoxyacetic acid, dimethylamine salt solution 4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1-Dichloropropane 2-Dichloropropane	DBX DCH DEE DCM DDE	14 36 36 41 36	0	Ε		Α	Vac			
chlorobenzene (all isomers) 1-Dichloroethane 2'-Dichloroethyl ether chloromethane 4-Dichlorophenoxyacetic acid, diethanolamine salt solution 4-Dichlorophenoxyacetic acid, dimethylamine salt solution 4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1-Dichloropropane 2-Dichloropropane	DBX DCH DEE DCM DDE	36 36 41 36	0		111		Tes	1	.50-80, .56-1 (b)	G
-Dichloroethane 2'-Dichloroethyl ether chloromethane 4-Dichlorophenoxyacetic acid, diethanolamine salt solution 4-Dichlorophenoxyacetic acid, dimethylamine salt solution 4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1-Dichloropropane 2-Dichloropropane	DCH DEE DCM DDE	36 41 36	0	F	111	Α	Yes	2	.50-70(a), .50-81(a), (b), .55-1(c)	G
2'-Dichloroethyl ether chloromethane 4-Dichlorophenoxyacetic acid, diethanolamine salt solution 4-Dichlorophenoxyacetic acid, dimethylamine salt solution 4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1-Dichloropropane 2-Dichloropropane	DEE DCM DDE	41 36		_	111	Α	Yes	3	.56-1(a), (b)	G
chloromethane 1-Dichlorophenoxyacetic acid, diethanolamine salt solution 1-Dichlorophenoxyacetic acid, dimethylamine salt solution 1-Dichlorophenoxyacetic acid, triisopropanolamine salt solution 1-Dichloropropane 2-Dichloropropane	DCM DDE	36	_	С	111	A	Yes	1	No	G
Dichlorophenoxyacetic acid, diethanolamine salt solution Dichlorophenoxyacetic acid, dimethylamine salt solution Dichlorophenoxyacetic acid, triisopropanolamine salt solution Dichloropropane Dichloropropane	DDE		0	D	II.	Α	Yes	1	.55-1(f)	G
4-Dichlorophenoxyacetic acid, dimethylamine salt solution 4-Dichlorophenoxyacetic acid, trilsopropanolamine salt solution 1-Dichloropropane 2-Dichloropropane			0	NA	111	Α	Yes	5	No	G
4-Dichlorophenoxyacetic acid, trilsopropanolamine salt solution 1-Dichloropropane 2-Dichloropropane	DAD	43	0	Е	III	Α	No	N/A	.56-1(a), (b), (c), (g)	G
1-Dichloropropane 2-Dichloropropane		0 1,	2 0	Α	111	Α	No	N/A	.56-1(a), (b), (c), (g)	G
1-Dichloropropane 2-Dichloropropane	DTI	43 2	0	Е	111	Α	No	N/A	.58-1(a), (b), (c), (g)	G
2-Dichloropropane	DPB	36	0	С	111	Α	Yes	3	No	G
	DPP	36	0	С	111	Α	Yes	3	No	G
3-Dichloropropane	DPC	36	0	С	(11)	Α	Yes	3	No	G
3-Dichloropropene	DPU	15	0	D	11	Α	Yes	4	No	G
chloropropene, Dichloropropane mixtures	DMX	15	0	С	11	Α	Yes	1	No	G
ethanolamine	DEA	8	0	E	111	Α	Yes	1	.55-1(c)	G
ethylamine	DEN	7	0	С	111	Α	Yes	3	.55-1(c)	G
ethylenetriamine	DET	7 2	0	E	111	Α	Yes	1	.55-1(c)	G
isobutylamine	DBU	7	0	D	III	Α	Yes	3	.55-1(c)	G
isopropanolamine	DIP	8	0	E	111	A	Yes	1	.55-1(c)	G
lisopropylamine	DIA	7	0	С	11	A	Yes	3	.55-1(c)	G
N-Dimethylacetamide	DAC	10	0	E	111	A	Yes		.56-1(b)	G
imethylethanolamine	DME		0	D	III	Α	Yes	1	.58-1(b), (c)	G
imethylformamide	DMF		0	D	III	Α	Yes	1	.55-1(e)	G
i-n-propylamine	DNA		0	С	11	A	Yes	3	.55-1(c)	G
odecyldimethylamine, Tetradecyldimethylamine mixture	DOT		0	E	III	A	No	N/A	4 .58-1(b)	G
odecyl diphenyl ether disulfonate solution	DOS	43	0	#	11	A	No	N/A		G
E Glycol Ether Mixture	EEG		0	D	111	A	No	N/A		G
thanolamine	MEA		0	E	111	A	Yes	-	.55-1(c)	G
	EAC		0	C	111	Α	Yes		.50-70(a), .50-81(a), (b)	G
thylamics solution (73% or less)	EAN		0	A	11	A	No	N/A	A .55-1(b)	G
thylamine solution (72% or less)	EBA		0		111	-	Yes	-	.55-1 (b)	G
I-Ethylbutylamine	ECC	-	0	D	111		Yes		,55-1 (b)	G
I-Ethylcyclohexylamine	ETC		0	E	111		Yes		No	G
thylene cyanohydrin	EDA		-	D	111	-	Ye		.55-1(c)	G
thylenediamine	EDO			C	111		Ye	-	No	G
thylene dichloride	EGI		0	E	111		No		Δ No	G
thylene glycol hexyl ether	EG	-	0	D/I					No	G
thylene glycol monoalkyl ethers	EG	-	0	E	111				No	G
Ethylene glycol propyl ether	EAI		0	E	[11				.50-70(a), .50-81(a), (b)	G
2-Ethylhexyl acrylate	ETI		0	D/					.50-70(a)	G
Ethyl methacrylate	EP			E	111				No	G
2-Ethyl-3-propylacrolein	FM								.55-1(h)	G
Formaldehyde solution (37% to 50%)	FF/				111				.55-1(h)	G
Furfural										G
Glutaraldehyde solution (50% or less)	GT				11				,55-1(c)	G
Hexamethylenediamine solution	HM		-						.56-1 (b) , (c)	G
Hexamethyleneimine	HM								.50-70(a), .50-81(a), (b)	G
Hydrocarbon 5-9 Isoprene	HF 1PF		0		11				/A .50-70(a), .50-81(a), (b)	G



Certificate of Inspection

Cargo Authority Attachment

Vessel Name: KIRBY 29050

 Shipyard: West Gulf Marine

Serial #: C1-1203242

16-Jul-12

Dated:

Cargo Identification								Condi	Conditions of Carriage							
							Vapor F	lecovery		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						
soprene, 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	III	Α	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	14	0	С	111	Α	Yes	2	.50-70(a), .50-81(a), (b)	G						
Methylcyclopentadiene dimer	MCK	30	0	С	111	Α	Yes	1	No	G						
Methyl diethanolamine	MDE	8	0	E	111	Α	Yes	1	.56-1 (b), (c)	G						
2-Methyl-5-ethylpyridine	MEP	9	0	E	111	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	111	Α	Yes	3	.55-1 (c)	G						
alpha-Methylstyrene	MSR	30	0	D	111	A	Yes	2	.50-70(a), .50-81(a), (b)	G						
Morpholine	MPL	7 2	0	D	111	Α	Yes	1	.55-1 (c)	G						
Vitroethane	NTE	42	0	D	11	A	No	N/A	.50-81, .56-1(b)	G						
1- or 2-Nitropropane	NPM	42	0	D	111	A	Yes	1	.50-81	G						
1.3-Pentadiene	PDE	30	0	Α	111	Α	No	N/A	.50-70(a), .50-B1	G						
Perchloroethylene	PER	36	0	NA	111	A	No	N/A		G						
Polyethylene polyamines	PEB	72	0	E	III	A	Yes		.55-1 (e)	G						
so-Propanolamine	MPA	8	0	E	111	A	Yes	370	.55-1 (c)	G						
Propanolamine (iso-, n-)	PAX	8	0	E	111	A	Yes		.58-1 (b), (c)	G						
iso-Propylamine	IPP	7	0	A	11	A	Yes	-	.55-1(c)	G						
	PRD	9	0	C	111	A	Yes	-	.55-1(e)	G						
Pyridine	SAP	- 9	0	<u> </u>	111	A	No	N/A		G						
Sodium acetate, Glycol, Water mixture (3% or more Sodium Hydroxide)	SAP		U		111	A	140	IN/F	(
Sodium aluminate solution (45% or less)	SAU	5	0	NA	111	Α	No	N/A	.50-73, .56-1(a), (b), (c)	G						
Sodium chlorate solution (50% or less)	SDD	0 1,	2 0	NA	111	A	No	N/A	.50-73	G						
Sodium hypochlorite solution (20% or less)	SHQ	5	0	NA	111	A	No	N/A		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 0	NA	111	Α	No	N/A	4 .50-73, .55-1(b)	G						
Sodium sulfide, hydrosulfide solution (H2S greater than 200 ppm)	SSJ	0 1.	2 0	NA	l1	A	No	N/A	.50-73, .55-1(b)	G						
Styrene (crude)	STX		0	D	111	Α	Yes	3 2	No	G						
Styrene monomer	STY	30	0	D	111	A	Yes	2	.50-70(a), .50-81(a), (b)	G						
1,1,2,2-Tetrachloroethane	TEC	36	0	NA	III	A	No	N/	A No	G						
Tetraethylenepentamine	TTP	7	0	E	111	A	Yes	-	.55-1(c)	G						
Tetrahydrofuran	THE		0	C	111	A	Yes		,50-70(b)	G						
Toluenediamine	TDA		0	E	II	A	No	N/	Δ .50-73, .55-1(a), (b), (c), (g)	G						
1,2,4-Trichlorobenzene	TCB		0	E	111		Ye		No	G						
1,1,2-Trichloroethane	TCM		0	NA		-	Ye	-	.50-73, .56-1(a)	G						
Trichloroethylene	TCL			NA	-		Ye	-	No	G						
	TCN		0	E	11				.50-73, .58-1(a)	G						
1,2,3-Trichloropropane	TEA			E	111				.55-1(b)	G						
Triethanolamine	TEN		0	C	11	A			.55-1(e)	G						
Triethylamine Triethylamine	TET			E	111				.55-1(b)	G						
Triethylenetetramine	TPE		0	NA NA						G						
Triphenylborane (10% or less), caustic soda solution									··	G						
Trisodium phosphate solution	TSF	0.00	0	NA NA	_				<u> </u>	G						
Urea, Ammonium nitrate solution (containing more than 2% NH3)	UAS		0	NA NA					<u> </u>	G						
Vanillin black liquor (free alkali content, 3% or more).	VBL		0	NA O					.50-70(a), .50-81(a), (b)	<u> </u>						
Vinyl acetate	VAN	M 13	0	С	- 11	I A	Ye	s 2	.50-70(a), .50-81(a), (b)	G						

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Cargo Authority Attachment

Vessel Name: KIRBY 29050 Official #: 1243626

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Shipyard: West Gulf Marine

Cargo Identification									tions of Carriage	
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	App'd	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Perio
/inyttoluene	VNT	13	0.	D	1(1	Α	Yes	2	.50-70(a), .50-81, .58-1(a), (b), (c), (G
ubchapter D Cargoes Authorized for Vapor Contro	ol									
Acetone	ACT	18 ²	D	С		Α	Yes	1		
Acetophenone	ACP	18	D	E		Α	Yes	1		
Alcohol(C12-C16) poly(1-6)ethoxylates	APU	20	D	E		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) plycols, Polyalkylene(C2-C10) glycol monoalkyl(C1-C4) ethers, and heir 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	C		Α	Yes	1		
Butyl benzyl phthalate	BPH	34	D	Е		Α	Yes	1		
Butyl toluene	BUE	32	D	D		Α	Yes	1		
Caprolactam solutions	CLS	22	D	E		Α	Yes	1		ALCOHOL: AND COM-
Cyclohexane	CHX	31	D	С		Α	Yes	1		
Cyclohexanol	CHN	20	D	E		Α	Yes	1	And the state of t	
1,3-Cyclopentadiene dimer (molten)	CPD	30	D	D/E		Α	Yes	2		
p-Cymene	CMP	32	D	D		A	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		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	E		A	Yes	1	A STATE OF THE PARTY OF THE PAR	***************************************
Diethylbenzene	DEB	32	D	D		Α	Yes	1		
Diethylene glycol	DEG		D	E		A	Yes			
Diisobutylene	DBL	30	D	C	-	A	Yes			
Disobutyl ketone	DIK	18		D		A	Yes			
	DIX	32	D	E		Α	Yes			
Diisopropylbenzene (all isomers)	DTL	34	D	E		Α	Yes	-		
Dimethyl phthalate	DOF		D	E		A	Yes			
Dioctyl phthalate	DPN		D	D		A	Yes			
Dipentene	DIL	32	D	D/E		A	Yes			
Diphonyl Diphonyl other mixtures	DDC		D	E		A	Yes			
Diphenyl, Diphenyl ether mixtures	DPE		D	(E)		A	Yes			
	DPC		D	E		A	Yes			
Diphenyl ether		- 40		E		A	Yes			
Dipropylene glycol		33	n							
Dipropylene glycol Distillates: Flashed feed stocks	DFF		D							
Dipropylene glycol Distillates: Flashed feed stocks Distillates: Straight run	DFF	33	D	E		Α	Yes	1		
Dipropylene glycol Distillates: Flashed feed stocks	DFF	33 Z 30						s 1		

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Cargo Authority Attachment

Vessel Name: KIRBY 29050

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Shipyard: West Gulf Marine

Cargo Identificatio	Cargo Identification												
	T	T	Γ			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			
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	C		Α	Yes	1					
Ethyl butanol	EBT	20	D	D		Α	Yes	1					
Ethyl tert-butyl ether	EBE	41	D	С		Α	Yes	11					
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		langua en con			
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	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					
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	GSA	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)	НМХ	31	D	С		Α	Yes	1					
Heptanoic acid	HEP	4	D	E		Α	Yes	1					
Heptanol (all isomers)	нтх	20	D	D/E		Α	Yes	1					
Heptene (all isomers)	HPX	30	D	С		Α	Yes	2					
Heptyl acetate	HPE	34	D	Ε		Α	Yes	1					
Hexane (all isomers), see Alkanes (C6-C9)	HXS	31 2	D	B/C		Α	Yes	1					
Hexanoic acid	HXC) 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	нхо	3 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	МТ	Г 34	D	D	The second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a second section in the second section in the second section is a section in the second section in the section is a section in the section in the section is a section in the section in the section is a section in the section in the section is a section in the section in the section in the section is a section in the section	Α	Yes	3 1					
Methyl alcohol	MAI	L 20 2	D	С		Α	Yes	3 1					
Methylamyl acetate	MA	C 34	D	D		Α	Yes	s 1					
Methylamyl alcohol	MA	A 20	D	D		Α	Ye	s 1					
Methyl amyl ketone	MA	K 18	D	D		Α	Ye	s 1		-			
Methyl tert-butyl ether	MB	E 41 2	D	С		Α	Ye	s 1					
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United States Coast Guard

Department of Homeland Security

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Cargo Authority Attachment

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Shipyard: West Gulf Marine

Cargo Identificat	tion							Condi	tions of Carriage	
								Recovery		T
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
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		A	Yes	1	- 2	
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	#		A	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		
Nonyl phenol	NNP	21	D	E		A	Yes	1		
Nonyi phenol poly(4+)ethoxylates	NPE	40	D	E		A	Yes	1		
Octane (all isomers), see Alkanes (C6-C9)	OAX	31	D	C		A	Yes	1		
Octanoic acid (all isomers)	OAY	4	D	E		A	Yes	1		
Octanol (all isomers)	OCX	20 2	D	E	-	A	Yes	1		-
Octene (all isomers)	OTX	30	D	C		A	Yes	2		
Oil, fuel: No. 2	OTW		D	D/E		A	Yes	1		
Oll, fuel: No. 2-D	OTD	33	D	D		A	Yes	1		
	OFR	33	D	D/E		A	Yes			
Oil, fuel: No. 4	OFV	33	D	D/E		A	Yes			
Oil, fuel: No. 5	OSX		D	E			Yes			
Oil, fuel: No. 6			D	C/D		A	Yes			
Oil, misc: Crude	OIL	33		D/E						
Oil, misc: Diesel	ODS		<u>D</u>		-	A .	Yes			-
Oil, misc: Gas, high pour	OGP		D	E		A	Yes			
Oil, misc: Lubricating	OLB	33	D	E		A	Yes			
Oil, misc: Residual	ORL	33	D	E		Α	Yes		Commission of the Commission o	
Oil, misc: Turbine	ОТВ		D	E		A	Yes			
Pentane (all isomers)	PTY	31	D	A		A	Yes	-		
Pentene (all isomers)	PTX		D	Α		A	Yes			
n-Pentyl propionate	PPE	34	D	D		Α_	Yes			
alpha-Pinene	PIO	30	D	D		Α	Yes			
beta-Pinene	PIP	30	D	D		Α	Yes			
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether	PAG		D	E		Α	Yes			
Poly(2-B)alkylene glycol monoalkyl(C1-C6) ether acetate	PAF		D	E		Α	Yes			
Polybutene	PLB		D	E		Α	Yes			
Polypropylene glycol	PGC		D	E		Α	Ye			
iso-Propyi acetate	IAC	34	D	С		Α	Ye	s 1		
n-Propyl acetate	PAT	34	D	С		Α.	Ye	s 1		
iso-Propyl alcohol	IPA	20 2	D	С		Α	Ye	s 1		
n-Propyl alcohol	PAL	20 ²	D	С		Α	Ye	s 1		
Propylbenzene (all isomers)	PBY	/ 32	D	D		Α	Ye	s 1		
iso-Propylcyclohexane	IPX	31	D	D		Α	Ye	s 1		
							-			



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Cargo Authority Attachment

Vessel Name: KIRBY 29050

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Shipyard: West Gulf Marine

Cargo Identifica	ation					Conditions of Carriage						
							Vapor F	Recovery		T		
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		
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	E		Α	Yes	1				
Tetrahydronaphthalene	THN	32	D	E		Α	Yes	1				
Toluene	TOL	32	D	С		Α	Yes	1	The second secon			
Tricresyl phosphate (less than 1% of the ortho isomer)	TCP	34	D	E		Α	Yes	1				
Triethylbenzene	TEB	32	D	E		Α	Yes	1				
Triethylene glycol	TEG	40	D	E		Α	Yes	1	and the second s			
Triethyl phosphate	TPS	34	D	E		Α	Yes	1				
Trimethylbenzene (all isomers)	TRE	32	D	{D}		Α	Yes	1				
Trixylenyl phosphate	TRP	34	D	E	-	Α	Yes	1	THE RESERVE TO SERVE THE PARTY OF THE PARTY			
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				



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Vessel Name: KIRRY 20050

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Shipyard: West Gulf Mari

Hull #: 222

Explanation of terms & symbols used in the Table:

Cargo Identification

Chem Code

none

Compatability Group No.

Note 1 Note 2 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 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, table 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 hart. For additional compatibility information, contact Commandant (CG-3PSO-3), U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593-0001. Telephone (202) 372-1425

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

Subchanter Subchapter D Subchapter O Note 3

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 16ble 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 fiammable 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 Flammable liquid cargoes, as defined in 46 CFR 30-10.22.

A, B, C

Combustible liquid cargoes, as defined in 46 CPR 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

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

Category 3

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

(Polymerizes and highly toxic) Must comply with requirements of Categories 1, 2 and 3.

Category 4 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 Category 7 (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.

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