

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

Certification Date: 21 Nov 2023 Expiration Date: 21 Nov 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 N	lumber	Call Sign	Service	
KIRBY 27314	ļ		1262683				Tank B	Sarge
	-						· canni D	g**
Hailing Port			Hull Material	н	orsepower	Propulsion		
HOUMA, LA			Steel		•	•		
			Sieei					
UNITED STA	MES							
Place Built			Delivery Date	Keel Laid Date	Gross Tons	Net Tons	DWT	Length
ASHLAND C	ITY, TN		22Oct2015	22Sep201	5 R-1619	R-1619	941	R-297.5
UNITED STA	TES		220012010	EEOOPEO !	J-	I-	V7 :	1-0
UNITEDSIA	(IES							
Owner	ID MARINE LP			•	erator rhy Inland Mar	rino I D		
55 WAUGH D					rby Inland Mai 350 MARKET			
HOUSTON, T					HANNELVIEW		\$	
UNITED STA	TES	,		UN	NITED STATE	S		
	nust be manned v eboatmen, 0 Cei						which there	must be
					-			
0 Masters		Licensed M		Engineers		Dilers		
0 Chief Mate		First Class		Assistant Engi				
0 Second Ma		Radio Offic Able Seam		nd Assistant E	•			
0 Third Mate 0 Master Firs		Able Seam Ordinary Se		Assistant Eng				
0 Mate First		Ordinary Se Deckhands		sed Engineers fied Member E				
			 		<u>-</u>	noitibbe ni anos	to crew and	I no Others. Total
Persons allow		ary v Fas	oongala, U Ollik	6190119 11		iono in addition	to orew, allu	i no Outers. I Utal
Route Perm	nitted And Condi	tions Of	Operation:		<u> </u>			
* .	Bays, and So		=	l Coastwi	ise			
=unos,	_u, o, and o	-41143	with milling	· JUGGETT				5.4.1
	r weather only					from shore be	etween St. 1	Marks and
•	Florida. (does	· .				***	. *	
								CFR Table 31.10
								onth period, the as soon as this
	atus occurs.							_
This tank ba	urge is partici	pating i	n the Eighth a	nd Ninth Co	oast Guard D	istrict's Tan	k Barge Str	eamlined
SEE NE	KT PAGE FOR	ADDITIO	NAL CERTIFIC	ATE INFO	RMATION			
							the Officer in	n Charge, Marine
Inspection, Se		alveston o	certified the ves	sel, in all res		onformity with the	he applicable	vessel inspection
iano ana me	Annual/Perio				This Amenda	ed certificate is		
Date	Zone	A/P/R	Signatu	ire		h W. Morgans	1 1400 (4 4 4). / 4	evered a
	20110	1, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	Oignate		Officer in Charge, M			, o , o , o , o , o , o , o , o , o , o
					autor in Audiala!		ston-Galves	ton
					Inspection Zone	-92011100		



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

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Vessel Name: KIRBY 27314

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

---Hull Exams---

 Exam Type
 Next Exam
 Last Exam
 Prior Exam

 DryDock
 30Nov2033
 07Nov2023
 22Oct2015

 Internal Structure
 31Oct2028
 11Oct2023
 22Oct2015

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

Authorization: FLAMMABLE/COMBUSTIBLE LIQUIDS IN 46 CFR TABLE 30.25-1 AND SPECIFIED HAZARDOUS

CARGOES

Total Capacity Units Highest Grade Type Part151 Regulated Part153 Regulated Part154 Regulated

28577 Barrels A 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	871	13.65
2 P/S	827	13.65
3 P/S	745	13.65
SLOP		

Loading Constraints - Stability

Hull Type	Maximum Load (short tons)	Maximum Draft (ft/in)	Max Density (lbs/gal)	Route Description
II	3782	10ft 0in	13.65	R, LBS, LC 0-12 (no loadline)
III	4654	11ft 9in	13.65	R, LBS, LC 0-12 (no loadline)

Conditions Of Carriage

Only those cargoes named in the vessel's Cargo Authority Attachment, Serial No. C1-1503760, dated 26 Aug 2015, 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 the figures, tables, and appendices of 46 CFR 150 in conjunction with the reactive group numbers from the "Compat Group No" column listed in the vessel's Cargo Authority Attachment.

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 letter Serial No. C1-1503760, dated 26 Aug 2015, and has been found acceptable for the collection of bulk liquid cargo vapors annotated with "Yes" in the vessel's Cargo Authority Attachment's (CAA's) VCS column

In accordance with 46 CFR Part 39.1017 and 39.5000(e) this vessel's VCS has been approved for multi-breasted tandem loading with other vessels specifically approved to tandem load with this vessel.

--- Inspection Status ---



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

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Certificate of Inspection

Vessel Name: KIRBY 27314

Fuel Tanks						
	Internal Exam	ninations				
Tank ID	Previous	Last	Next			
machinery deck	-	22Oct2015	-			
Cargo Tanks						
	Internal Exam	1		External Exar	n	
Tank Id	Previous	Last	Next	Previous	Last	Next
1 P/S	22Oct2015	11Oct2023	31Oct2033	-	~	-
2 P/S	22Oct2015	11Oct2023	31Oct2033	-	-	-
3 P/S	15Oct2015	11Oct2023	31Oct2033	-	-	••
SLOP	15Oct2015	11Oct2023	31Oct2033	-	•	-
			Hydro Test			
Tank ld	Safety Valves	\$	Previous	Last	Next	
1 P/S	•		-	22Oct2015	***	
2 P/S	-		-	22Oct2015	-	
3 P/S	-		-	22Oct2015	-	
	-		-		-	

--- 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

SLOP

Class Type

B-II

---Certificate Amendments---

Amending Unit

Amendment Date

Amendment Remark

Sector Houston/Galveston

15Apr2024

Amended Owner Address and Operator Name & Address.

22Oct2015

END





Dated:

Serial #: C1-1503760 26-Aug-15

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CTCO 343 Official #: 1262683

.50-70(a), .50-70(b), .50-73, .50-81(a), .50-81(b),

Shipyard: TRINITY MARINE. ASHLAND CITY, TN

Hull#:

46 CFR 151 Tank Group Chara

Tank Group Information	Cargo	dentificat	ion		Cargo	0	Tanks		Transfer		Environmental Control		Fire	Special Require		T	
Grp Tanks in Group	Density	Press.	Temp.	Hull S	Seg Tank	Туре	Vent	Gauga	Pipe Class Cont	Tanks	Handling Space	Protection Provided	General	Materials of Construction		Temp	
A #1P/S, #2P/S, #3P/S	13.7	Almos,	Elev	B	1ii 2ii	Inlegral Gravity	PV	Closed	ß	G-1	NR	NA	Portable	40-1(f)(1), 50-60, .50-70(a), .50- 70(b), 50-73, .50-	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 sultable only for those cargoes which require no environmental control in the cargo tanks.

Connected and Connected and

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 lank group is suitable only for those cargoes which have no electrical hazard class requirement. NR means that the vessel has no electrical

List of Authorized Cargoes

Cargo identification	on					Conditions of Carriage							
	Chem	C	0.4				Vapor R						
Name	Code	Group No	Sub Chapter	Grade	Hull Type	Tank Group	(Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Matts of	Insp. Period			
Authorized Subchapter O Cargoes													
Acetonitrile	ATN	37	0	С	LIJ.	A	Yes	3	No	G			
Acrylonitrile	ACN	15 ²	0	С	II.	A	Yes	4	.50-70(a), .55-1(e)	G			
Adiponitrile	ADN	37	0	E	II.	A	Yes	1	No				
Alkyl(C7-C9) nitrates	AKN	34 2	0	NA	111	A	No	N/A	.50-81, .50-86	G			
Aminoethylethanolamine	AEE	8	0	E	101	A	Yes		.55-1(b)	G			
Ammonium bisulfite solution (70% or less)	ABX	43 2	0	NA.	10	A	No	1	50-73, 58-1(a), (b), (c)	G			
Ammonium hydroxide (28% or less NH3)	AMH	6	0	NA	10	A		N/A		G			
Anthracene oil (Coal tar fraction)	AHO	33	0	NA			No	N/A	_56-1(a), (b), (c), (f), (g)	G			
Benzene	BNZ	32	0	C		Α	No	N/A	No	G			
Benzene or hydrocarbon mixtures (having 10% Benzene or more)	ВНВ	32 2	0	C		A	Yes	1	.50-60	G			
Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)	BHA	32 2	0	С	1) I	A	Yes	1	.50-60, 56-1(b), (d), (f), (g)	G			
Benzene, Toluene, Xylene mixtures (10% Benzene or more)	втх	32	0	B/C	JII	A	Yes		50-60				
Butyl acrylate (all isomers)	BAR	14	0	D	- //i	A		1		G			
Butyl methacrylate	BMH	14	0	D	101		Yes	2	.50-70(a), .50-81(a), (b)	G			
Butyraldehyde (all isomers)	BAE	19	0	C	m	A	Yes	2	50-70(a), 50-81(a), (b)	G			
Camphor oil (light)	CPO	18	0	D	II.	A	Yes	1	.55-1(h)	G			
Carbon telrachloride	CBT	36	0	NA		A	No	N/A	No	G			
Caustic potash solution	CPS	5 2	0	NA	#11	_ A	No	N/A	No	G			
Caustic soda solution	CSS	5 2	0		_ 1/1	A	No	N/A	,50-73, ,55-1(j)	G			
Chemical Oil (refined, containing phenolics)	COD	21	0	NA	111	Α	No	N/A	.50-73, .55-1(J)	G			
Chlorobenzene	CRB	36		E	II	A	No	N/A	.50-73	G			
Chloroform	CRF	36	0	D		Α	Yes	1	No	G			
Coal tar naphtha solvent	NCT		0	NA	AL	Α	Yes	3	No	G			
Coal tar pitch (moiten)	CTP	33	0	D	101	Α	Yes	1	50-73	G			
Creosote		33	0	E	101	A	No	N/A	-50-73	G			
Cresols (all isomers)	CCW	21 2	0	E	111	Α	Yes	1	No	G			
Cresylate spent caustic	CRS	21	0	E	Itl	Α	Yes	1	No	G			
Cresylic acid tar	CSC	5	0	NA	111	Α	No	N/A	.50-73, .55-1(b)	G			
Crotonaldehyde	CRX	21	0	E	111	A	Yes	. 1	.55-1(f)	G			
Crude hydrocarbon feedstock (containing Bulyraldehydes and	CTA	19 ²	0	С	H.	A	Yes	4	,55-1(h)	G			
Ethylpropyl acrolein)	CHG		0	С	III	Α	Yes	1	No	G			
Cyclohexanone	CCH	18	0	D	III	A	Yes	1	56-1(a), (b)	G			
							100		(47) (M)	u			

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



26-Aug-15

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CTCO 343 Official #: 1262683

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Shipyard: TRINITY MARINE, ASHLAND CITY, TN

Hull #: 5173

			1	1	11				
Chem	Compat	Sub		111		Vapor R			
				Hull Type	Tank Group	j	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of 56-1 (b)	Insp Perio
CHA	7			-					G
CSB	30	_							G
	F 000 F								G
									G
									G
			_	-					G
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									G
				-					G
									G
				_					G
	and the second							F2	G
					Α	Yes		.55-1(c)	G
					Α	Yes	3	55-1(c)	G
		_	_	111	Α	Yes	1	.55-1(c)	G
11.00				III	Α	Yes	3	.55-1(c)	G
				H	Α	Yes	1	.55-1(c)	G
		0		_ II	A	Yes	3	.55-1(c)	G
	10	0	E	W	Α	Yes	3	.56-1(b)	G
	8	0	D	III	Α	Yes	1	.56-1(b), (c)	G
		0	D	111	Α	Yes	1	.55-1(e)	G
		0	¢	II	Α	Yes	3	.55-1(c)	G
- F	7	0	E	101	Α	No	N/A	.56-1(b)	G
DOS	43	0	#	11	Α	No	N/A	No	G
EEG	40	0	D	!!!	Α	No	N/A	No	G
MEA	8	0	E	111	Α	Yes	1	.55-1(c)	G
EAC	14	0	С	111	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
EAN	7	0	Α	II	Α	Yes	6	.55-1(b)	G
EBA	7	0	D	IN	Α	Yes	3	.55-1(b)	G
ECC	7	0	D	111	Α	Yes	1	.55-1(b)	G
ETC	20	0	E	111	Α	Yes	1	No	G
EDA	7 2	0	D	III	Α	Yes	1	.55-1(c)	G
EDC	36 ²	0	С	III	Α	Yes	1	No	G
EGH	40	0	E	III	Α	No	N/A	No	G
EGC	40	0	D/E	III	Α	Yes	1	No	G
EGP	40	0	E	III	Α	Yes	1	No	G
EAI	14	0	E	H	Α	Yes	2	50-70(a), .50-81(a), (b)	G
ETM	14	0	D/E	JH_	Α	Yes	2	50-70(a)	G
EPA	19 ²	0	E	101	A			No	G
FMS	19 ²	0	D/E	III					G
FFA	19	0	D	BI	Α		1	.55-1(h)	G
GTA	19	0	NA	H	-			No	G
HMC	7		E	III	A	Yes	1	.55-1(c)	G
	CYX CHA CSB IAI DBX DCH DEE DCM DDE DAD DTI DPB DPP DPC DPU DMX DEA DET DBU DIP DIA DAC DMB DMF DNA DOS EEG MEA EAC EAN EBA ECC ETC EDA EDC EGH EGC EGP EAI ETM EPA FMS FFA GTA	CYX 18 2 CHA 7 CSB 30 IAI 14 DBX 36 DCH 36 DEE 41 DCM 36 DDE 43 DAD 0 1.2 DTI 43 2 DPB 36 DPC 36 DPC 36 DPU 15 DMX 15 DEA 8 DEN 7 DET 7 2 DBU 7 DIP 8 DIA 7 DAC 10 DMB 8 DMA 7 DAC 10 DMB 8 DMA 7 DOT 7 DOS 43 EEG 40 MEA 8 EAC 14 EAN 7 EEA 7 ECC 7 ETC 20 EDA 7 2 EDC 36 2 EGH 40 EGC 40 EGP 40 EAI 14 ETM 14 EPA 19 2 FMS 19 2 FFA 19 GTA 19	CYX 18 2 0 CHA 7 0 CSB 30 0 IAI 14 0 DBX 36 0 DCH 36 0 DEE 41 0 DCM 36 0 DDE 43 0 DPB 36 0 DPP 36 0 DPP 36 0 DPC 36 0 DPU 15 0 DMX 15 0 DEA 8 0 DEN 7 0 DET 7 2 0 DBU 7 0 DIP 8 0 DIA 7 0 DIP 8 0 DIA 7 0 DAC 10 0 DMS 8 0 DMF 10 0 DMS 43 0 EGG 40 0 EAN 7 0 ECC 7 0 ETC 20 0 EDA 7 0 EGC 40 0 EGP 40 0 EGTA 19 0 FFA 19 0 GTA 19 0 GTA 19 0 GTA 19 0 GTA 19 0	CYX 18 2 O E CHA 7 O D CSB 30 O D IAI 14 O E DBX 36 O E DCH 36 O C DEE 41 O D DCM 36 O NA DDE 43 O E DAD 0 1.2 O A DTI 43 2 O E DPB 36 O C DPP 36 O C DPP 36 O C DPC 36 O C DPU 15 O D DMX 15 O C DEA 8 O E DEN 7 O C DET 7 O C DET 7 O C DBT 7 O C DBT 7 O C DBT 7 O C DAC 10 O E DMB 8 O D DMF 10 O D DMA 7 O C DOT 7 O C EAN 7 O A EBA 7 O D ECC 7 O D ETC 20 O E EDA 7 2 O D ETC 20 O E EDA 7 2 O D EDC 36 2 O C EGH 40 O E EGC 40 O D//E EGP 40 O E EAI 14 O E ETM 19 O D GTA 19 O NA	CYX 18 2 O E III CHA 7 O D III CSB 30 O D III IAI 14 O E III DBX 36 O E III DCH 36 O C III DEE 41 O D II DDE 43 O E III DDE 43 O E III DDD 56 O C III DDD 67 O C III DPD 68 O C III DPD 68 O C III DPD 70 O C III DEA 8 O E III DBN 7 O C III DBU 7 O D III DBU 7 O D III DBU 7 O D III DBU 7 O C III DBU 7 O C III DBA 7 O C III DDA 10 O E III DDA 10 O D III ECC 7 O D III ECC 9 O E III ECC 11 O DIE III ECC 11 O DI	CYX 18 2 O E III A CHA 7 O D III A CSB 30 O D III A IAI 14 O E III A DBX 36 O E III A DCH 36 O C III A DDE 41 O D II A DDE 43 O E III A DDD 56 O C III A DPD 36 O C III A DPD 36 O C III A DPD 36 O C III A DPU 15 O D II A DDY 15 O D II A DDY 15 O D II A DEA 8 O E III A DEA 8 O E III A DDD 7 O C III A DDD 7 O D III A DDD 7 O D III A DDD 8 O E III A DDD 9 O D III A DDD 10 O E III A DDD 10 O D III A DDD 11 O D D III A DD 11 O D D	CYX 18 2 O E III A Yes CHA 7 O D III A Yes CSB 30 O D III A Yes IAI 14 O E III A Yes DBX 36 O E III A Yes DCH 36 O C III A Yes DCH 36 O C III A Yes DCH 36 O NA III A Yes DDE 41 O D II A Yes DDE 43 O E III A NO DAD 0 1.2 O A III A NO DDB 36 O C III A Yes DPP 36 O C III A Yes DPP 36 O C III A Yes DPP 36 O C III A Yes DPU 15 O D II A Yes DDA 8 O E III A Yes DDA 15 O C III A Yes DDA 9 O C III A Yes DDA 15 O D II A Yes DDA 16 O C III A Yes DDA 17 O C III A Yes DDA 18 O E III A Yes DDA 19 O C III A Yes DDA 19 O C III A Yes DDA 10 O C III A Yes DDA 11 A Yes DDA 12 O D III A Yes DDA 12 O D III A Yes DDA 13 O C III A Yes DDA 14 O C III A Yes DDA 15 O D III A Yes DDA 16 O C III A Yes DDA 17 O D III A Yes DDA 10 O D III A Yes DDA 10 O D III A Yes DDA 11 A Yes DDA 10 O D III A Yes	CYX 18 2	CYX 18 2 O E III A Yes 1 55-1(a), (b), (c), (a) CHA 7 O D III A Yes 1 55-1(a), (b), (c), (a) CSB 30 O D III A Yes 1 55-1(a), (b), (c), (a) IAI 14 O E III A Yes 2 50-70(a), 50-81(b), (b), 55-1(c) DBX 36 O E III A Yes 1 No DCH 36 O C III A Yes 1 No DCH 36 O NA III A Yes 5 No DDCM 36 O NA III A Yes 5 No DDCM 36 O NA III A Yes 5 No DDCM 36 O NA III A Yes 5 No DDCM 36 O NA III A Yes 5 No DDCM 36 O NA III A NO N/A 55-1(a), (b), (c), (a) DDD 43 O 1-2 O A III A NO N/A 55-1(a), (b), (c), (a) DDD 36 O C III A Yes 3 No DPP 36 O C III A Yes 3 No DPP 36 O C III A Yes 3 No DPP 36 O C III A Yes 1 No DPD 15 O D II A Yes 1 No DMX 15 O C II A Yes 1 No DEA 8 O E III A Yes 1 No DEA 8 O E III A Yes 1 No DEA 8 O E III A Yes 1 No DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 1 No DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O D III A Yes 1 S5-1(a) DED 7 O D III A Yes 1 S5-1(a) DED 7 O D III A Yes 3 S5-1(a) DED 7 O D III A Yes 1 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 3 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DED 7 O C III A Yes 1 S5-1(a) DET 8 O C III A Yes 1 S5-1(a) DET 9 O D III A Yes 1 S5-1(a) DET 9 O D III A Yes 1 S5-1(a) DET 9 O D III A Yes 1 S5-1(a) DET 9 O D III A Yes 1 S5-1(a) EEG 40 O D III A Yes 1 S5-1(a) EEG 40 O D III A Yes 1 S5-1(a) EEG 40 O D III A Yes 1 S5-1(a) EEG 40 O D III A Yes 1 S5-1(a) EEG 40 O D III A Yes 1 S5-1(a) EEG 40 O D III A Yes 1 S5-1(a) EEG



Cargo Authority Attachment

Vessel Name: CTCO 343
Official #: 1262683

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Shipyard: TRINITY MARINE, ASHLAND CITY, TN

Serial #: C1-1503760

26-Aug-15

Hull #: 5173

Cargo Identification	1						(Condi	tions of Carriage	
							Vapor R			_
Name Hydrocarbon 5-9		Compat Group No			Hull Type	Tank Group	•		Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Perlo
	HFN		0	С	III	Α	Yes	1	.50-70(a), .50 81(a), (b)	G
Isoprene	IPR	30	0	Α	III	Α	Yes	7	50-70(a), .50-81(a), (b)	6
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	III	Α	No	N/A	.50-73, .56-1(a), (c), (g)	G
Mesityl oxide	MSO	18 ²	0	D	141	Α	Yes	1	No	G
Methyl acrylate	MAM	14	0	С	III	Α	Yes	2	.50-70(a), .50-81(a), (b)	G
Methylcyclopentadiene dimer	MCK	30	0	С	III	Α	Yes	1	No	G
Methyl diethanolamine	MDE	8	0	E	105	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	III	Α	Yes	2	50-70(a), 50-81(a), (b)	G
2-Methylpyridine	MPR	9	0	D	JII	A	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	- III				.55-1(c)	
Naphthalene (molten)	NTM	32	0	C		Α	Yes	1	No No	G
Nitroethane					- 10	Α .	Yes	1		G
1- or 2-Nitropropane	NTE	42	0	D	11	A	No	N/A	.50-81, .56-1(b)	G
F 19	NPM	42	0	D	111	Α	Yes	1	50-81	G
1,3-Pentadiene	PDE	30	0	A	ш	Α	Yes	7	.50-70(a), .50-81	G
Perchloroethylene	PER	36	0	NA	III	Α	No	N/A	Na	G
Phthalic anhydride (molten)	PAN	11	0	E	111	Α	Yes	1	No	G
Polyethylene polyamines	PEB	7 2	0	E	10	Α	Yes	1	,55-1(e)	G
so-Propanolamine	MPA	8	0	Е	101	Α	Yes	1	.55-1(c)	G
Propanolamine (iso-, n-)	PAX	8	0	Е	111	Α	Yes	1	56-1(b), (c)	G
so-Propylamine	IPP	7	0	Α	11	Α	Yes	5	,55-1(c)	G
Pyridine	PRD	9	0	С	111	Α	Yes	1	.55-1(e)	G
Sodium acetate, Glycol, Water mixture (3% or more Sodium Hydroxide)	SAP	5	0		101	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	0	NA	111	A	No	N/A	50-73	G
Sodlum hypochlorite solution (20% or less)	SHQ	5	0	NA	10	A	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	111				50-73, 55-1(b)	
Sodium sulfide, hydrosulfide solution (H2S greater than 15 ppm but	SSI	0 1,2	0			A	Yes	1		G
ess than 200 ppm)				NA	107	A	No	N/A	.50-73, :55-1(b)	G
Sodium sulfide, hydrosulfide solution (H2S greater than 200 ppm)	SSJ	0 1,2	0	NA	11	Α	No	N/A	50-73, 55-1(b)	G
Styrene (crude)	STX	30	0	D	Ж	Α	Yes	2	No	G
Styrene monomer	STY	30	0	D	Ш	Α	Yes	2	50-70(a), 50-81(a), (b)	G
,1,2,2-Tetrachloroethane	TEC	36	0	NA	10	Α	No	N/A	No	G
etraethylenepentamine	TTP	7	0	E	III	Α	Yes	1	.55-1(c)	G
etrahydrofuran	THF	41	0	С	10	Α	Yes	1	.50-70(b)	G
oluenediamine	TDA	9	0	E	II.	Α	No	N/A	50-73, .56-1(a), (b), (c), (g)	G
,2,4-Trichlorobenzene	ТСВ	36	0	E	m	Α	Yes	1	No	G
,1,2-Trichloroethane	тсм	36	0	NA	III	A	Yes	1	50-73, 56-1(a)	G
richloroethylene	TCL	36 ²	0	NA		A	Yes	1	No	G
2,3-Trichloropropane	TCN	36	0	E	П	A	Yes		.50-73, .56-1(a)	
riethanolamine	TEA	8 ²	0	Ε	III			3		G
riethylamine	TEN	7			-	A .	Yes	1	.55-1(b)	G
riethylenetetramine		7 2	0	С	11	A	Yes	3	.55-1(e)	G
riphenylborane (10% or less), caustic soda solution	TET		0	E	10	A	Yes	1	,55-1(b)	G
	TPB	5	0	NA	111	A	No	N/A	.56-1(a), (b), (c)	G
risodium phosphate solution	TSP	5	0	NA	Ш	Α	No	N/A	.50-73, .56-1(a), (c)	G
rea, Ammonium nitrate solution (containing more than 2% NH3)	UAS	6	0	NA	101	Α	No	N/A	.56-1(b)	G

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Serial #: C1-1503760 Dated: 26-Aug-15

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CTCO 343

Shipyard: TRINITY MARINE, ASHLAND CITY, TN

Hull #: 5173

Official #: 1262683

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/			Page 4	8 10		_			Hull #: 5173	
Cargo Identificati	on							Condi	tions of Carriage	
Name Vanillin black liquor (free alkali conlent, 3% or more).	Chem Code VBL	Compat Group No 5	Sub Chapter O	Grade NA	Hull Type	Tank Group A	App'd	Recovery VCS Category N/A	Special Requirements in 48 CFR 151 General and Mat'ls of .50-73, .56-1(a), (o), (g)	Insp. Period
Vinyl acetate	VAM	13	0	С	- 10	Α	Yes	2	50-70(a), 50-81(a), (b)	G
Vinyl neodecanate	VND	13	0	ε	101	Α	No	N/A	50-70(a), .50-81(a), (b)	G
Vinyltoluene	VNT	13	0	D	-10	Α	Yes	2	50-70(a), 50-81, 56-1(a), (b), (c), (G
Subchapter D Cargoes Authorized for Vapor Cont	irol		_	_	in the second	-				
Acetone	ACT	18 ²	D	С		Α	Yes	1		-
Acetophenone	ACP	18	D	E		A	Yes	1		
Alcohol(C12-C16) poly(1-6)ethoxylates	APU	20	D	E		A	Yes	1		
Alcohol(C6-C17)(secondary) poly(7-12)ethoxylates	AEB	20	D	E		A	Yes	1		
Amyl acetate (all isomers)	AEC	34	D	D		A	Yes	1		
Amyl alcohol (Iso-, n-, sec-, primary)	AAI	20	D	D		A	Yes	1		
Benzyl alcohol	BAL	21	D	E	-	A	Yes	1		
Brake fluid base mixtures (containing Poly(2-8)alkylene(C2-C3) glycols, Polyalkylene(C2-C10) glycol monoalkyl(C1-C4) ethers, and their borate esters)	BFX	20	D	E		A	Yes	1		
Butyl acetate (all isomers)	BAX	34	D	D		Α	Yes	1		-
Bulyl 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	20 ²	D	С		Α	Yes	1		
Butyl benzyl phthalate	BPH	34	D	E		Α	Yes	1		
Butyl toluene	BUE	32	D	D		A	Yes	1		-
Caprolactam solutions	CLS	22	D	E		Α	Yes	1		
Cyclohexane	CHX	31	D	С		A	Yes	1		
Cyclohexanol	CHN	20	D	E		Α	Yes	1		
1,3-Cyclopentadiene dimer (molten)	CPD	30	D	D/E		A	Yes	2		
p-Cymene	CMP	32		D		A	Yes	1		
iso-Decaldehyde	IDA	19		E		A	Yes	1		
n-Decaldehyde	DAL	19	-	E		A	Yes	1		
Decene	DCE	30		D		A	Yes	<u> </u>		
Decyl alcohol (all isomers)	DAX	20 ²		E		A	Yes	1		
n-Decylbenzene, see Alkyl(C9+)benzenes	DBZ	32		E		A	Yes	1		
Diacetone alcohol	DAA	20 ²		D		A	Yes	-1		
ortho-Dibutyl phthalate	DPA	34		E		A	Yes	1		
Diethylbenzene	DEB	32		D		A	Yes	1		_
Dielhylene glycol	DEG	40 ²				A	Yes	1		-
Diisobulylene	DBL	30				A	Yes			
Diisobutyl ketone	DIK	18)	-	A		1		
Diisopropylbenzene (all isomers)	DIX	32			-	A	Yes	1		
Dimethyl phthalate	DTL	34					Yes	1		
Dioclyl phthalate	DOP	34				A A	Yes	1		
Dipentene	DPN	30)			Yes	1		
Diphenyl	DIL	32) D/E		Α	Yes	1		
Diphenyl, Diphenyl ether mixtures	DDO	33)/C		Α	Yes	1		
Diphenyl ether	DPE					A	Yes	1	E 7%	
ipropylane glycol	DPG		D E	E}		Α	Yes	1		
Distillates: Flashed feed stocks	DFF		D E			A	Yes	1		
Distillates: Straight run	DSR				-	A	Yes	1		
	201	JJ	D E	:		A	Yes	1		



Cargo Authority Attachment

Vessel Name: CTCO 343
Official #: 1262683

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Shipyard: TRINITY MARINE, ASHLAND CITY, TN

26-Aug-15

Hull #: 5173

Cargo Identificat	ion							Condi	tions of Carriage	
							Vapor	Recovery		_
Name	Chem	Compat Group No	Sub	Grade	Hull Type	Tank Group	(Y or N)	VCS	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp
Dodecene (all isomers)	DOZ	30	D	D	1 2/1-1	Α	Yes	1	101 Canada and Maris Of	Perio
Dodecylbenzene, see Alkyl(C9+)benzenes	DDB	32	D	Е		Α	Yes	1		
2-Ethoxyethyl acetate	EEA	34	D	D		Α	Yes	1		
Ethoxy triglycol (crude)	ETG	40	D	E		Α	Yes	1	55.0	
Ethyl acetate	ETA	34	D	С		Α	Yes	1		
Ethyl aceloacetate	EAA	34	D	E		A	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		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		
Ethylene glycol bulyl 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		A	Yes	1		
Ethyl-3-ethoxypropionate	EEP	34	D	D		Α	Yes	1		
2-Ethylhexanol	EHX	20	D	E		A	Yes	1		
Ethyl propionate	EPR	34	D	С	-	A	Yes	1		
Ethyl toluene	ETE	32	D	D		A	Yes	1		
Formamide	FAM	10	D	E	10,00	Α	Yes	1	15.50	
Furfuryl alcohol	FAL	20 2	D	E		A	Yes	1		_
Gasoline blending stocks: Alkylates	GAK	33	D	A/C		A	Yes	1		
Gasoline blending stocks: Reformates	GRF	33	D	A/C		A	Yes	1		
Gasolines: Automotive (containing not over 4,23 grams lead per gallon)	GAT	33	D	С		A	Yes	1		
Gasolines: Aviation (containing not over 4.86 grams of lead per gallon)	GAV	33	D	С		A	Yes	1		
Gasolines: Casinghead (natural)	GCS	33	D	A/C		Α	Yes	1		
Gasolines: Polymer	GPL	33	D	A/C	×	Ā	Yes	1	- 1 0 101	
Gasolines: Straight run	GSR	33	D	A/C		A	Yes	1		
Glycerine	GCR	20 2	D	E		A	Yes	1		
Heptane (all isomers), see Alkanes (C6-C9) (all isomers)	НМХ	31		c		A	Yes	1	F-0	100
Heptanoic acid	HEP	4		Ĕ		A	Yes	1		
leptanol (all isomers)	HTX	20		D/E		A	Yes			
leptene (all isomers)	HPX	30		C	-	A	Yes	2		
leptyl acetate	HPE	34		E		A	Yes			
lexane (all isomers), see Alkanes (C6-C9)	HXS	31 2		B/C	_	A		1		
lexanoic acid	HXO	4		E		A	Yes	1		
lexanol	HXN	20		D		A	Yes	1	+ -1	5.51
lexene (all isomers)	HEX	30	_	C		A	Hannagara	114-11		
lexylene glycol	HXG			E		A	Yes	2		
ophorone	IPH	18 ²	-	E		A		1		
et fuel: JP-4	JPF						Yes	1		
et fuel: JP-5 (kerosene, heavy)	JPV			= D		A	Yes	1		
erosene	KRS		_)		A	Yes	1		
							Yes	1		
ethyl acetate	MTT	34	1) '							
ethyl acelate ethyl alcohol	MTT		D (A A	Yes	1		



Cargo Authority Attachment

Vessel Name: CTCO 343
Official #: 1262683

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Shipyard: TRINITY MARINE, ASHLAND CITY, TN

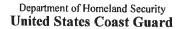
C1-1503760

26-Aug-15

Hull#: 5173

Cargo Identific	cation							Condi	tions of Carriage	
	Chara	0					Vapor	Recovery		
Name	Chem Code	Compat Group No	Sub Chapte	Grade	Hull Type	Tank Group	App'd (Y or N)	VCS Calegory	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period
Methylamyl alcohol	MAA	20	D	D		Α	Yes	1	j i i i i i i i i i i i i i i i i i i i	Period
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		A	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	#		A	Yes	1		
Naphtha: Petroleum	PTN	33	D	#		A	Yes	1		_
Naphtha: Solvent	NSV	33	D	D		A	Yes	1		
Naphtha: Stoddard solvent	NSS	33	D	D		A	Yes	1		
Naphtha: Varnish makers and painters (75%)	NVM	33	D	C		A	Yes	4		
Nonane (all isomers), see Alkanes (C6-C9)	NAX	31	D	D		A	Yes	1		
Nonene (all isomers)	NON	30	D	D		A	Yes	2		
Nonyl alcohol (all isomers)	NNS	20 2	D	E		A	Yes	1		
Nonyl phenol	NNP	21	D	E	_		Yes			
Nonyl phenol poly(4+)ethoxylates	NPE	40	D	Ē	-	A	Yes	1		121 253
Octane (all isomers), see Alkanes (C6-C9)	OAX	31	D	С		A	Yes	1		
Octanoic acid (all isomers)	OAY	4	D	E						
Octanol (all isomers)	OCX	20 2	D	E		A	Yes	1		
Octene (all isomers)	OTX	30	D	C	_	A	Yes	1		
Oil, fuel: No. 2	OTW	33	D	D/E	10		Yes	2	75.5	
Oil, fuel: No. 2-D	OTD	33	D	D		A	Yes	1		
Oll, fuel: No. 4	OFR	33	D	D/E	-	A	Yes	1		
Oil, fuel: No. 5	OFV	33	D			A	Yes	_1		
Oil, fuel: No. 6	OSX	33	D	D/E E		A	Yes	1		
Oil, misc: Crude	OIL	33	D			Α	Yes	1		
Oil, misc: Diesel	ODS			A/D	_	A	Yes	1		
Oil, misc: Gas, high pour	OGP	33	D	D/E		A	Yes	1		
Oil, misc: Lubricating			D	E	_	A	Yes	1		
Dil, misc: Residual	OLB	33	D	E		Α	Yes	11		
Dil, misc: Turbine	ORL	33	D	E _		A	Yes	1		
Pentane (all isomers)	OTB	33		E		Α	Yes	1		
Pentene (all Isomers)	PTY	31		A		Α	Yes	5		
n-Pentyl propionate	PTX	30		A	50.20	Α	Yes	5	HHC 1510	
Ilpha-Pinene	PPE	34		D		Α	Yes	1		
eta-Pinene	PIO	30		D		Α	Yes	1		
oly(2-8)alkylene glycol monoalkyl(C1-C6) ether	PIP	30	_	D		Α	Yes	1		
	PAG	40		E		Α	Yes	1		
oly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate	PAF	34		E		A	Yes	1		
olyptopylana akaal	PLB	30		E		Α	Yes	1		
olypropylene glycol	PGC			E		Α	Yes	1		
o-Propyl acetate	IAC		D	С		Α	Yes	1		
-Propyl acetate	PAT	34	D (С		Α	Yes	1		
so-Propyl alcohol	IPA	20 2	D (С		Α	Yes	1		

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Cargo Authority Attachment

Vessel Name: CTCO 343
Official #: 1262683

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Shipyard: TRINITY MARINE, ASHLAND CITY, TN

Serial #: C1-1503760

Dated: 26-Aug-15

Hull#: 5173

Cargo Identific	ation					Conditions of Carriage							
Name	Chem Code PAL	Compat Group No 20 2	Sub Chapter D	Grade C	Hull Type	Tank Group A	Vapor I App'd	Recovery VCS	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period			
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	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		A	Yes	1					
Toluene	TOL	32	D	С		Α	Yes	1					
Tricresyl phosphate (less than 1% of the ortho isomer)	TCP	34	D	E		A	Yes	1					
Triethylbenzene	TEB	32	D	E		Α	Yes	1					
Triethylene glycol	TEG	40	D	E		Α	Yes	1					
Triethyl phosphate	TPS	34	D	Е		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		Α	Yes	1					
1-Undecyl alcohol	UND	20	D	E		A	Yes	1					
Kylenes (ortho-, meta-, para-)	XLX	32	D	D		A	Yes	1		-			



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

Serial #: C1-1503760 Dated: 26-Aug-15

Certificate of Inspection Cargo Authority Attachment

Vessel Name: CTCO 343 Official #: 1262683

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Shipyard: TRINITY MARI

Hull #: 5173

Explanation of terms & symbols used in the Table:

Cargo identification

The proper shipping name as listed in 46 CFR Table 30.25-1, 46 CFR Table 151.05, and 46 CFR Part 153 Table 2.

Chem Code 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, tables, and appendices of 46 CFR 150 in conjunction with the assigned reactive group number.

Because of the very high reactivity or unusual conditions of carriage or potential compatibility problems, this product is not assigned to a specific group in the Compatibility Chart. For additional compatibility information, contact Commandant (CG-3PSO-3), U.S. Coast Guard, 2100 Second Street, SW, Washington, DC 20593-0001. Telephone (202) 372-1425. Compatability Group No.

Note 1

Note 2

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. Those flammable and combustate 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. Subchapter D

Subchapter O Note 3

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 Grade

carriage of that grade of cargo. A, B, C mmable liquid cargoes, as defined in 46 CFR 30-10.22.

Note 4

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/combustbility grade has been assigned yet, as the necessary flash point/vapor pressure data for such assignments are presently not available.

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

Designed to carry products which require the maximum preventive measures to preclude the uncontrolled release of the cargo. See 46 CFR 151.10-1(b)(1).

Designed to carry products which require significant preventive measures to preclude the uncontrolled release of cargo. See 46 CFR 151.10-1(b)(3).

Designed to carry products of 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

Hull Type

NA

Tank Group The vessel's tank group (as defined in Section 4) which is authorized for carriage of the named cargo.

Vapor Recover Approved (Y or N) Yes: The vessel's VCS has been reviewed and approved by the MSC to control vapors of the specified cards

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

Талк Group The vessel's lank group (as defined under the "46 CFR Tank Group Characleristics" listed on page 1) which is authorized for carriage of the named cargo,

Vapor Recover 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. Approved (Y or N)

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 oit) 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 39.30-16)) must use appropriate friction factors, vapor densities and vapor growth rates.

(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 overpressur/zation. The vessel's owner must develop a method of ensuring all VCS safety components are functional and polymer build-up is not causing an unsafe condition due to increased pressure in the vapor control piping and cargo tanks. The method shall be acceptable to the local Officer in Charge, Marine Inspection. This is in addition to the requirements of Category 1. Please note that a material not normally considered a monomer can be a problem in detonation Category 2

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.

Category 4 (Polymerizes and highly toxic) Must comply with requirements of Categories 1, 2 and 3,

(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 5

Category 6 (High vapor pressure and highly toxic) Must comply with requirements of Categories 1, 3 and 5,

Category 7 (High vapor pressure and polymerizes) Must comply with requirements of Categories 1, 2 and 5,

none The cargo has not been evaluated/classified for use in vapor control systems.