

Certification Date: 01 Nov 2019
Expiration Date: 01 Nov 2024

Certificate of Inspection

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

Vessel Name

Official Number

IMO Number

Call Sign

Service

**KIRBY 27733** 

1245356

Tank Barge

Hailing Port

Hull Material

Horsepower

Propulsion

HOUMA, LA

Ston

Steel

**UNITED STATES** 

Place Built

Delivery Date

Keel Laid Date

Gross Tons

Net Tons

DWT

Length

MADISONVILLE, LA

15Jul2014

04Jun2014

R-1619

R-1619

R-297.5

10

UNITED STATES

Owner

KIRBY INLAND MARINE LP 55 WAUGH DR STE 1000 HOUSTON, TX 77007 UNITED STATES Operator

KIRBY INLAND MARINE LP 18350 Market Street Channelview, TX 77530 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

0 Licensed Mates

0 Chief Engineers

0 Oilers

0 Chief Mates

0 First Class Pilots

**O First Assistant Engineers** 

0 Second Mates

**0 Radio Officers** 

0 Second Assistant Engineers

0 Third Mates

0 Able Seamen

0 Ordinary Seamen

0 Third Assistant Engineers

0 Master First Class Pilot 0 Mate First Class Pilots

0 Deckhands

Undersed Engineers
 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---

THIS TANK BARGE IS PARTICIPATING IN THE EIGHTH-NINTH COAST GUARD DISTRICT'S TANK BARGE STREAMLINED INSPECTION PROGRAM (TESIP). INSPECTION ACTIVITIES ABOARD THIS BARGE SHALL BE CONDUCTED IN ACCORDANCE WITH ITS TANK BARGE ACTION PLAN (TAP). INSPECTION ISSUES CONCERNING THIS BARGE SHOULD BE DIRECTED TO OCMI HOUSTON-GALVESTON.

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 SALT WATER INTERVALS PER 46 CFR TABLE 31.10-21(a) AND THE COGNIZANT OCMI NOTIFIED IN WRITING AS SOON AS THIS CHANGE IN STATUS OCCURS.

### \*\*\*SEE NEXT PAGE FOR ADDITIONAL CERTIFICATE INFORMATION\*\*\*

With this Inspection for Certification having been completed at Houma, LA, UNITED STATES, the Officer in Charge, Marine Inspection, Houma, Louisiana 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

Date Zone A/P/R Signature/

2-14-2020 78-CAP-NOLA A BAD HAM

2-19-2021 New ordeans A Scott-Farman

2-09-22 MOU P RUBEN MONTES

2129123 BTR. CA A Daylen Lacoste

This Amended certificate issued by:

M. M. SHOKARICH, LCDR USCG, By Direction

Officer in Charge, Marine Inspection

Houma, Louisiana

Inspection Zone



Certification Date: 01 Nov 2019 **Expiration Date:** 01 Nov 2024

### Certificate of Inspection

Vessel Name: KIRBY 27733

---Hull Exams---

Exam Type

Next Exam

Last Exam

Prior Exam

DryDock

31Jul2024

17Jul2014

Internal Structure

31Jul2024

17Jul2019

17Jul2014

### --- 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

28575

Barrels

Α

Yes

No

No

### \*Hazardous Bulk Solids Authority\*

### \*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

Maximum Draft

Max Density

**Route Description** 

(short tons) 3751

(ft/in)

(lbs/gal)

11 Ш 4623 10ft 0in 11ft 9in 13.66 13.66

### \*Conditions Of Carriage\*

THERMAL FLUID HEATER MAY ONLY BE OPERATED WHEN CARRYING GRADE "E" CARGOES.

ONLY THOSE CARGOES NAMED IN THE VESSEL'S CARGO AUTHORITY ATTACHMENT, SERIAL #C1-1400007 DATED 10 JAN 2014, MAY BE CARRIED AND THEN ONLY IN THE TANKS INDICATED.

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 COMPATABILITY GROUP NUMBERS FROM THE "COMPAT GRP" COLUMN LISTED ABOVE IN THE "SPECIFIED HAZARDOUS CARGO AUTHORITY" SECTION.

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.

#### \*VAPOR CONTROL AUTHORIZATION\*

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 #C1-1400007 DATED 10 JAN 2014, 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 1.5 PSIG P/V VALVE.



Certification Date: 01 Nov 2019 Expiration Date: 01 Nov 2024

### Certificate of Inspection

Vessel Name: KIRBY 27733

IN ACCORDANCE WITH 46 CFR PART 39.1017 AND 39.5000(e) THIS VESSEL'S VCS HAS BEEN EVALUATED AND APPROVED FOR MULTI-BREASTED TANDEM LOADING WITH OTHER VESSELS SPECIFICALLY APPROVED TO TANDEM LOAD WITH VESSEL.

THE CARGO TANK TOP IS SUITABLE FOR A MAXIMUM ALLOWABLE WORKING PRESSURE (MAWP) OF 3.0 PSI.

#### \*STABILITY AND TRIM\*

CARGO TANKS MUST BE LOADED UNIFORMLY WHENEVER A 46 CFR SUBCHAPTER "O" CARGO IS CARRIED; FOR TRIM PURPOSES, THE WEIGHT OF CARGO IN EACH TANK MAY EXCEED THE UNIFORMLY LOADED CARGO WEIGHT BY AT MOST 5 PERCENT.

THE MAXIMUM DENISTY OF CARGO WHICH MAY BE FILLED TO THE TANK TOP IS 8.74LBS/GAL. CARGOES WITH HIGHER DENSITIES UP TO 13.6 LBS/GAL, MAY BE CARRIED AS SLACK LOADS; BUT SHALL NOT EXCEED THE TANK WEIGHT LIMITES AS LISTED ABOVE.

### --- Inspection Status ---

\*Fuel Tanks\*

Intornal	Examinations
IIII CIII CII	E Xallillanous

Tank ID	Previous	Last	Next
AFT	₩:	17Jul2014	-

#### \*Cargo Tanks\*

	Internal Exam	!		External Exar	n	
Tank Id	Previous	Last	Next	Previous	Last	Next
1 P/S	=2	17Jul2014	17Jul2024		-	-
2 P/S		17Jul2014	17Jul2024	-	•	-
3 P/S		17Jul2014	17Jul2024		,-,	:=
Slop C	<u> </u>	17Jul2014	17Jul2024	-	-	-
			Hydro Test			
Tank ld	Safety Valves	3	Previous	Last	Next	
1 P/S	-		-	~	-	
2 P/S	-			-	-	
3 P/S	= 2		<b>=</b> 1		-	
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 40-B



Certification Date: 01 Nov 2019 Expiration Date: 01 Nov 2024

### Certificate of Inspection

Vessel Name: KIRBY 27733

### ---Certificate Amendments---

**Unit Amending** 

Amendment Date

**Amendment Remark** 

Marine Safety Unit Houma

21Jan2020

Requested to change Owner & Operator Name and Address.

\*\*\*END\*\*\*



Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CTCO 330

Shipyard: Trinity Madisonville

Serial #:

C1-1400007

10-Jan-14

Hull #: 2215-7

Official #: 1245356

46 CFR 151 Tank (	Group (	Chara	cterisi	tics													
Tank Group Information	Cargo Identification				Caro	Tanks			Cargo Transfer		Environmental Control		Fire	Special Requirements			
Trill Grp Tanks in Group	Density	Press.	Temp.	Hull Typ	Seg	Туре	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	If	1ii 2ii	Integral Gravity	PV	Closed	11	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), 58-1(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						
	2,0,						Vapor Re						
Name	Code	Compat Group No	Sub Chapter	Grade	Huli Type	Tank Group	(Y or N)	VC\$ Category	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period			
Authorized Subchapter O Cargoes													
Acetonitrile	ATN	37	0	С	10	Α	Yes	3	No	G			
Acrylonitrile	ACN	15 <sup>2</sup>	0	С	П	Α	Yes	4	50-70(a), 55-1(e)	G			
Adlponitrile	ADN	37	0	E	II	Α	Yes	1	No	G			
Alkyl(C7-C9) nitrates	AKN	34 2	0	NA	III	Α	No	N/A	.50-81, .50-86	G			
Aminoethylethanolamine	AEE	8	0	E	- 111	Α	Yes	1	.55-1(b)	G			
Ammonium bisulfite solution (70% or less)	ABX	43 <sup>2</sup>	0	NA	III	Α	No	N/A	.50-73, .56-1(a), (b), (c)	G			
Ammonium hydroxide (28% or less NH3)	AMH	6	0	NA	IH	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	ļII.	Α	Yes	1	.50-80	G			
Benzene or hydrocarbon mixtures (having 10% Benzene or more)	внв	32 2	0	C	Ш	Α	Yes	1	.50-80	G			
Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)	вна	32 ²	0	С	III	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	.50-80	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	ļū	Α	Yes	2	.50-70(e), .50-81(e), (b)	G			
Butyraldehyde (all isomers)	BAE	19	0	С	III	Α	Yes	1	.55-1(h)	G			
Camphor oil (light)	СРО	18	0	D	11	Α	No	N/A	No	G			
Carbon tetrachloride	CBT	36	0	NA	-111	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	101	Α	No	N/A	.50-73, .55-1(j)	G			
Chemical Oil (refined, containing phenolics)	COD	21	0	E	!!	Α	No	N/A	.50-73	G			
Chlorobenzene	CRB	36	0	D	111	Α	Yes	1	No	G			
Chloroform	CRF	36	0	NA	itt	Α	Yes	3	No	G			
Coal tar naphtha solvent	NCT	33	0	D	III	Α	Yes	1	.50-73	G			
Coal tar pitch (molten)	CTP	33	0	Ε	Ш	Α	No	N/A	.50-73	G			
Creosote	CCM	/ 21 2	0	Ε	10	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	III	Α	No	N/A	.50-73, .55-1(b)	G			
Cresylic acid tar	CRX		0	E	Ш	A	Yes	1	.55-1(f)	G			
Crotonaldehyde	СТА	19 2	0	С	II	Α	Yes	4	.55-1(h)	G			
Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein)	CHG		0	С	111	Α	No	N/A	No	G			
Cyclohexanone	ССН	18	0	D	. III	Α	Yes	1	.56-1(a), (b)	G			
Cyclohexanone, Cyclohexanol mixture	CYX	18 <sup>2</sup>	0	E	H	Α	Yes	1	.56-1 (b)	G			

<sup>\*\*\*</sup> This document is only valid when attached to, and referenced by a current, valid Certificate of Inspection. \*\*\*



Serial #: C1-1400007 Dated: 10-Jan-14

Certificate of Inspection

### Cargo Authority Attachment

Vessel Name: CTCO 330 Official #: 1245356

Page 2 of 8

Shipyard: Trinity Madisonville

Cargo Identificatio	n					Conditions of Carriage							
			12	1		-	Vapor F	ecovery		1			
Name	Chem	Compat Group No	Sub Chapter	Grade	Hutl Type	Tank Group	App'd (Y or N)	VCS Category	Special Requirements in 48 CFR 151 General and Matts of	insp. Period			
Cyclohexylamine	CHA	7	0	Đ	ЭH	Α	Yes	. 1	.56-1(a), (b), (c), (g)	G			
Cyclopentadiene, Styrene, Benzene mixture	CSB	30	0	D	10	Α	Yes	1	.50-60, .56-1(b)	G			
iso-Decyl acrylate	IAJ	14	0	E	III	Α	Yes	2	.50-70(a), .50-81(a), (b), .55-1(c)	G			
Dichlorobenzene (all isomers)	DBX	36	0	E	183	Α	Yes	3	.56-1(a), (b)	G			
1,1-Dichloroethane	DCH	36	0	С	111	Α	Yes	1	No	G			
2,2'-Dichloroethyl ether	DEE	41	0	D	TI .	A	Yes	- 1	.55-1(f)	G			
Dichloromethane	DCM	36	0	NA	III	Α	Yes	5	No	G			
2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution	DDE	43	0	E	111	Α	No	N/A	.56-1(a), (b), (c), (g)	G			
2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution	DAD	0 1,2	0	Α	10	Α	No	N/A	.56-1(a), (b), (c), (g)	G			
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution	DTI	43 <sup>2</sup>	0	E	30	Α	No	N/A	.56-1(a), (b), (c), (g)	G			
1,1-Dichloropropane	DPB	36	0	С	311	Α	Yes	3	No	G			
1_2-Dichloropropane	DPP	36	0	Ç	111	Α	Yes	3	No	G			
1,3-Dichloropropane	DPC	36	0	С	133	Α	Yes	3	No	G			
1,3-Dichloropropene	DPU	15	0	D	H	Α	Yes	4	No	G			
Dichloropropene, Dichloropropane mixtures	DMX	15	0	С	- 11	Α	Yes	1	No	G			
Diethanolamine	DEA	8	0	Ε	. 111	Α	Yes	-1	.55-1(c)	G			
Diethylamine	DEN	7	0	С	111	Α	Yes	3	.45-1(c)	G			
Diethylenetriamine	DET	7 2	0	Ε	III	A	Yes	1	.55-1(c)	G			
Disobutylamine	DBU	7	0	D	10	Α	Yes	3	55-1(c)	G			
Diisopropanolamine	DIP	8	0	E	101	Α	Yes	1	55-1(c)	G			
Diisopropylamine	DIA	7	0	C	II	A	Yes	3	55-1(c)	G			
N N-Dimethylacetamide	DAC	10	0	E	111	A	Yes	3	56-1(b)	G			
Dimethylethanolamine	DMB	8	0	D	111	A	Yes	1	.56-1(b), (c)	G			
Dimethylformamide	DMF	10	0	D	10	A	Yes	1	.55-1(e)	G			
Di-n-propylamine	DNA	7	0	С	-11	A	Yes	3	55-1(c)	G			
Dodecyldimethylamine, Tetradecyldimethylamine mixture	DOT	7	0	ε	131	A	No	N/A	56-1(b)	G			
Dodecyl diphenyl ether disulfonate solution	DOS	43	0	#	II.	A	No	N/A	No	G			
EE Glycol Ether Mixture	EEG	40	0	D	10	A	No	N/A	No	G			
Ethanolamine	MEA	8	o	E	HI-C	A	Yes	1	.55-1(c)	G			
Ethyl acrylate	EAC	14	0	c	111	A	Yes	2	50-70(a), 50-81(a) (b)	G			
Ethylamine solution (72% or less)	EAN	7	0	Ā	ii.	A	Yes	6	55-1(b)	G			
N-Ethylbutylamine	EBA	7	0	D	101	A	Yes	3	55-1(b)	G			
N-Ethylcyclohexylamine	ECC	7	0	0	181	A	Yes	1	.55-1(b)	G			
Ethylene cyanohydrin	ETC	20	0	Ε	10	A	Yes	1	No	G			
Ethylenediamine	EDA	7 2	0	D	10	A	Yes	1	.55-1(c)	G			
Ethylene dichlonde	EDC	36 <sup>2</sup>	0	С	113	A	Yes	1	No	G			
Ethylene glycol hexyl ether	EGH	40	0	E	10				No	G			
Ethylene glycol monoalkyl ethers	EGÇ	40	0	D/E	111	A	No Yes	N/A	No	G			
Ethylene glycol propyl ether	EGP	40	0	E	III.	A	Yes	1	No	G			
2-Ethylhexyl acrylate	EAI	14	ō	Ē	111	A	Yes	2	.50-70(a), :50-81(a), (b)	G			
Ethyl methacrylate	ETM	14	0	D/E	101		*		50-70(a)	G			
2-Ethyl-3-propylacrolein	EPA	19 2	0	E	181	A	Yes	2	No	G			
Formaldehyde solution (37% to 50%)	FMS	19 2	0	D/E		A	Yes	1	.55-1(h)	G			
Furfural	FFA	19	0		10	A	Yes	1	55-1(h)				
Glutaraldehyde solution (50% or less)	GTA	19	0	D	10	Α	Yes	1 N/A	33-1(n) No	G			
Hexamethylenediamine solution	HMC	7		NA E	102	A	No	N/A		_			
Hexamethyleneimine	HMI	7	0	E	H	A	Yes	1	.55-1(c)	G			
· revenue at logitimito	TIMI			С	11	A	Yes	1	.56-1(b), (c)	G			



C1-1400007

10-Jan-14

# Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CTCO 330 Official #: 1245356

Page 3 of 8

Shipyard: Trinity Madisonville

Cargo Identification	1					Conditions of Carriage						
	1	1	1					Recovery	0.00 0.00			
Name	Chem	Compet Group No	Sub Chapter	Grade	Type	Group	(Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period		
Isoprene	IPR	30	0	Α	.10	A	Yes	7 -	.50-70(a), .50-81(a), (b)	G		
Isoprene, Pentadiene mixture	IPN		0	В	10	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 <sup>2</sup>	0	D	111	A	Yes	1	No	G		
Methyl acrylate	MAM	14	0	С	Ш	A	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	BI	Α	Yes	1	56-1(b), (c)	G		
2-Methyl-5-ethylpyridine	MEP	9	0	Ε	RI	Α	Yes	1	.55-1(e)	G		
Methyl methacrylate	ммм	1 14	0	С	10	Α	Yes	2	.50-70(a), .50-81(a), (b)	G		
2-Methylpyridine	MPR	9	0	D	10	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	- 00	Α	Yes	1	.55-1(c)	G		
Naphthalene (molten)	NTM	32	0	С	113	Α	Yes	1	No	G		
Nitroethane	NTE	42	0	D	u	Α	No	N/A	50-81, 56-1(b)	G		
1- or 2-Nitropropane	NPM	42	0	D	IB	Α	Yes	1	.50-81	G		
1,3-Pentadiene	PDE	30	0	A	III	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	Ε	Ш	Α	Yes	1	No	G		
Polyethylene polyamines	PEB	72	0	E	III	Α	Yes	1	55-1(e)	G		
iso-Propanolamine	MPA	8	0	E	111	Α	Yes	1	55-1(a)	G		
Propanolamine (iso-, n-)	PAX	8	0	Е	III	Α	Yes	- 1	.56-1(b), (a)	G		
iso-Propylamine	IPP	7	0	A	- 11	A	Yes	5	.55-1(c)	G		
Pyridine	PRD	9	0	С	III	A	Yes	1	.55-1(e)	g		
Sodium acetate, Glycol, Water mixture (3% or more Sodium Hydroxide)	SAP		0		III	A	No	N/A	50-73, 55-1(j)	G		
Sodium aluminate solution (45% or less)	SAU	5	0	NA	111	A	No	N/A	50-73, 56-1(a), (b), (c)	G		
Sodium chlorate solution (50% or less)	SDD	0 1,2	2 0	NA	111	Α	No	N/A	50-73	G		
Sodium hypochlorite solution (20% or less)	SHQ	5	0	NA	- 111	Α	No	N/A	50-73, 56-1(a), (b)	G		
Sodium sulfide, hydrosulfide solution (H2S 15 ppm or less)	SSH	0 12		NA	DI.	A	Yes	1	.50-73, 55-1(b)	G		
Sodium suffide, hydrosulfide solution (H2S greater than 15 ppm but less than 200 ppm)	SSI	0 1.2	0	NA	III	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		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.	A	Yes	2	50-70(a), 50-81(a) (b)	G		
1,1,2,2-Tetrachloroethane	TEC	36	0	NA	BI	Α	No	N/A	No	G		
Tetraethylenepentamine	TTP	7	0	E	Ш	Α	Yes	1	.55-1(c)	G		
Tetrahydrofuran	THF	41	0	С	101	Α	Yes	1	50-70(b)	G		
Toluenediamine	TDA	9	0	E	H	A	No	N/A	.50-73, .56-1(a), (b), (c), (g)	G		
1,2,4-Trichlorobenzene	TCB	36	ō	ε	(1)	A	Yes	1	No	G		
1,1,2-Trichloroethane	TCM		0	NA	Ш	A	Yes	1	.50-7356-1(a)	G		
Trichloroethylene	TCL	38 <sup>2</sup>	0	NA	101	A	Yes	1	No	G		
1,2,3-Trichloropropane	TCN	36	ō	Ε	11	A	Yes	3	.50-73, 56-1(n)	G		
Triethanolamine	TEA	8 2	0	ε	10	A	Yes	1	.55-1(b)	G		
Triethylamine	TEN	7	0	c	11	A	Yes	3	.55-1(e)	G		
Triethylenetetramine	TET	7 2	0	Ē	101	A	Yes	1	55-1(b)	G		
Triphenylborane (10% or less), caustic soda solution	TPB	5	0	NA.	10	Â	No	N/A	56-1(a), (b), (c)	G		
Trisodium phosphate solution	TSP	5	0	NA NA	113				56-73, 58-1(a), (c).	G		
		6	_			A	No	N/A		G		
Urea, Ammonium nitrate solution (containing more than 2% NH3)	UAS	0	0	NA	- H	Α	No	N/A	.56-1(b)	9		



# Certificate of Inspection

### Cargo Authority Attachment

Vessel Name: CTCO 330 Official #: 1245356

Page 4 of 8

Shipyard: Trinity Madisonville

Serial #: C1-1400007

10-Jan-14

Cargo Identification	n						(	Condi	tions of Carriage	
							Vapor F	Recovery		
Name	Chem	Compat Group No	Sub Chepter	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	III	Α	No	N/A	50-73, .56-1(a), (c), (g)	G
Vinyl acetate	VAM	13	0	С	III	Α	Yes	2	.50-70(a), .50-61(a) (b)	G
Vinyl neodecanate	VND	13	0	ξ	111	A	No	N/A	.50-70(a), 50-81(a), (b)	G
Vinyltoluene	VNT	13	0	D	NI.	Α	Yes	2	.50-70(a), 50-81, 58-1(a), (b), (c), (	G
Subshantor D Carross Authorized for Venez Canta	-1									-
Subchapter D Cargoes Authorized for Vapor Contr Acetone		40.3	_	•						
	ACT	18 2	D	C	_	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		Α	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	Ę		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		A	Yes	1		
Butyl acetate (all isomers)	BAX	34	D	D		Α	Yes	1		
Butyl alcohol (iso-)	IAL	20 <sup>2</sup>	D	D		Α	Yes	1		
Butyl alcohol (n-)	BAN	20 2	D	D		Α	Yes	1		
Butyl alcohol (sec-)	BA\$	20 2	D	С		A	Yes	1		
Butyl alcohol (tert-)	BAT		D	С		Α	Yes	1		- 12.7
Butyl benzyl phthalate	8PH	34	D	E		A	Yes	1		
Butyl toluene	BUE	32	D	D		Α	Yes	- 1		
Caprolactam solutions	CLS	22	D	E	-	A	Yes	1		
Cyclohexane	CHX	31	D	С	_	A	Yes	1		
Cyclohexanol	CHN	20	D	E		A	Yes	1		
1 3-Cyclopentadiene dimer (molten)	CPD	30	D	D/E		Α	Yes	2		
p-Cymene	СМР	32	D	D		Α	Yes	1		
iso-Decaldehyde	IDA	19	D	Ε		Α	Yes	1		
n-Decaldehyde	DAL	19	D	E		A	Yes	1		
Decene	DCE	30	D	D		A	Yes	1		
Decyl alcohol (all isomers)	DAX	20 <sup>2</sup>	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		A	Yes	1		
ortho-Dibutyl phthalate	DPA	34	D	E	-	A	Yes	1		
Diethylbenzene	DEB	32	D	D		A	Yes	1		-
Diethylene glycol	DEG	40 <sup>2</sup>	D	E		A	Yes	1		
Diisobutylene	OBL	30	D	c						
Disobutyl ketone	DIK	18	D	D		A	Yes	1		
Diisopropylbenzene (all isomers)	DIX	32	D	E	-	A	Yes			-
Dimethyl phthalate	DTL	34	D	E			1000			
Dioctyl phthalate	DOP	34	D	E		Α	Yes	1		
Dipentene	DPN	30	D	D	-	Α	Yes	1		
Diphenyl	DIL	32	D	D/E		A	Yes	1		
Diphenyl, Diphenyl ether mixtures	DDO		D			Α	Yes	1		
Diphenyl ether	DPE	33		E	_	A	Yes	1		
Dipropylene glycol		41		(E)		A	Yes	1		-
Distillates: Flashed feed stocks	DPG	40	D	E		A	Yes	1		
Cionidides Lagalier Icen 20079	DFF	33	0	E		Α	Yes	1		



Serial #: C1-1400007 Dated: 10-Jan-14

Certificate of Inspection

### Cargo Authority Attachment

Vessel Name: CTCO 330 Official #: 1245356

Page 5 of 8

Shipyard: Trinity Madisonville

Cargo Identification	n							Condi	tions of Carriage	
	1		- <u>-</u> .		1			Recovery		T
Name	Code	Compat Group No	Sub Chapter	Grade	Hutl Type	Tank Group	App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Matts of	Insp. Period
Dodecene (all isomers)	DOZ	30	D	D		Α	Yes	1	4123	
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	(120)	
Ethyl acetoacetate	EAA	34	D	E		Α	Yes	1		
Ethyl alcohol	EAL	20 ²	D	С		Α	Yes	1		
Ethylbenzene	ETB	32	D	C	31.57	Α	Yes	1	1000 - 100 -	
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 <sup>2</sup>	Đ	ε		Α	Yes	1		
Ethylene glycol butyl ether acetate	EMA	34	Đ	E		Α	Yes	1		
Ethylene glycol diacetate	EGY	34	D	E	200000	Α	Yes	1		
Ethylene glycol phenyl ether	EPE	40	D	ε		Α	Yes	1	128 1 E 18 I V	. 12-1
Ethyl-3-ethoxypropionate	EEP	34	D	D		Α	Yes	1		
2-Ethylhexanol	EHX	20	D	E		Α	Yes	1		25.00.00
Ethyl propionate	EPR	34	D	С		Α	Yes	. 1		
Ethyl toluene	ETE	32	D	D		Α	Yes	1	45755257	
Formamide	FAM	10	D	E		Α	Yes	1		
Furfuryi alcohol	FAL	20 <sup>2</sup>	D	E		Α	Yes	1	- 10.00	
Gasoline blending stocks: Alkylates	GAK	33	D	A/C		Α	Yes	1		
Gasoline blending stocks: Reformates	GRF	33	D	A/C	1997	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 <sup>2</sup>	D	Ε	2.2.0	Α	Yes	1		
Heptane (all isomers), see Alkanes (C6-C9) (all isomers)	HMX	31	D	С		Α	Yes	1		
Heptanoic acid	HEP	4	D	٤		Α	Yes	1		
Heptanol (all isomers)	HTX	20	D	D/E	2002	Α	Yes	1		
Heptene (all isomers)	HPX	30	D	C		Α	Yes	2		100
Heptyl acetate	HPE	34	D	E		Α	Yes	1		
Hexane (all isomers), see Alkanes (C6-C9)	HXS	31 2	D	B/C		Α	Yes	1	2000000	
Hexanoic acid	нхо	4	D	E		Α	Yes	1		
Hexanol	HXN	20	D	D		Α	Yes	1		
Hexene (all isomers)	HEX	30	D	С		Α	Yes	2		
Hexylene glycol	HXG	20	D	Ε		Α	Yes	1		
Isophorone	IPH	18 <sup>2</sup>	D	Ε	4114-150	Α	Yes	1	11.4	
Jet fuel: JP-4	JPF	33	D	Е		Α	Yes	1		
Jet fuel: JP-5 (kerosene, heavy)	JPV	33	D	D		Α	Yes	1		W
Kerosene	KRS	33	D	D		Α	Yes	1	- No. 20 No.	
Methyl acetate	MTT	34	D	D	A10563.030	Α	Yes	1		
Methyl alcohol	MAL	20 <sup>2</sup>	D	Ç		Α	Yes	1		
Methylamyl acetate	MAC	34	D	D		A	Yes	1		



Serial #: C1-1400007

# Certificate of Inspection

### Cargo Authority Attachment

Vessel Name: CTCO 330 Official #: 1245356

Page 6 of 8

Shipyard: Trinity Madisonville

Cargo Identification	on			,		Conditions of Carriage					
	Chem	Compat	Sub		Hult	Tank	Vapor F App'd	Recovery VCS	Consid Bowless - to 1 40 CCC		
Name	Code	Group No		Grade	Туре	Group	(Y or N)	Category	Special Requirements in 46 CFR 151 General and Marts 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		A	Yes	1			
Methyl butyl ketone	MBK	18	D	C		Α	Yes	1			
Methyl butyrate	MBU	34	D	С		Α	Yes	1	-		
Methyl ethyl ketone	MEK	18 <sup>2</sup>	D	С		Α	Yes	1			
Methyl heptyl ketone	MHK	18	D	D		A	Yes	1			
Methyl isobutyl ketone	MIK	18 <sup>2</sup>	D	С	100	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	#		Α	Yes	1			
Naphtha: Solvent	NSV	33	D	D		Α	Yes	1			
Naphtha Stoddard solvent	NSS	33	D	D	-	A	Yes	1		_	
Naphtha. Varnish makers and painters (75%)	NVM	33	D	C		A	Yes	1			
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		A	Yes	_1			
Nonyl phenol poly(4+)ethoxylates	NPE	40	D	E		A	Yes	1			
Octane (all isomers), see Alkanes (C6-C9)	OAX	31	D	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	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	0	D/E	_	A	Yes	+			
Oil, fuel: No. 5	OFV	33	D	D/E		A	Yes	1			
Oil, fuel: No. 6	OSX	33	D	Ε	-	A	Yes	1			
Oil, misc. Crude	OIL	33	D	C/D		A	Yes	1		-	
Oil, misc. Diesel	ODS	33	D	D/E	-	A	Yes	1		-	
Oil, misc. Gas, high pour	OGP	33	D	E		A	Yes			_	
Oil, misc. Lubricating	OLB	33	D	E	_	Ā	Yes	1			
Oil, misc Residual	ORL	33	D	E			Yes	1			
Oil misc Turbine	ОТВ	33	D	E		A		1			
Pentane (all isomers)	PTY	31	D			A	Yes	1			
Pentene (all isomers)	PTX	30	D	A .		A	Yes	5		-	
n-Pentyl propionate		-		Α		A	Yes	5			
alpha-Pinene	PPE	34	0	D		Α	Yes	1,			
beta-Pinene	PIP	30	D	D		Α	Yes	1		-	
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether		-	D	D		A	Yes	1			
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate	PAG	40	D	E		A	Yes	1			
Polybutene	PAF	34	D	E		A	Yes	1			
Polypropylene glycol	PLB	30	<u>D</u>	E .		A	Yes	1			
	PGC	40	D	E		A	Yes	_1		-	
iso-Propyl acetate	IAC	34	D	С		A	Yes	1			
n-Propyl acetate	PAT	34	D	С		Α	Yes	_1			



erial #: C1-1400007 Dated: 10-Jan-14

# Certificate of Inspection

### Cargo Authority Attachment

Vessel Name: CTCO 330 Official #: 1245356

Page 7 of 8

Shipyard: Trinity Madisonville

Cargo Identific	ation				1	Conditions of Carriage						
	i		1	Ι		-	Vapor F	Recovery	4	$\overline{}$		
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		
n-Propyi alcohol	PAL	20 <sup>2</sup>	D	С		Α	Yes	1				
Propylbenzene (all isomers)	PBY	32	D	D		Α	Yes	1				
iso-Propyicyclohexane	IPX	31	D	D		Α	Yes	1				
Propylene glycol	PPG	20 <sup>2</sup>	D	Ε		Α	Yes	1				
Propylene glycol methyl ether acetate	PGN	34	D	D		Α	Yes	1				
Propylene tetramer	PTT	30	D	D	- 1,00	A	Yes	1				
Sulfolane	SFL	39	D	Ε		A	Yes	1				
Tetraethylene glycol	TTG	40	D	Ε		Α	Yes	1_	ETELESIA TO THE TOTAL THE TOTAL TO THE TOTAL TOTAL TO THE			
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	E		Α	Yes	1				
Tnethylene giycol	TEG	40	D	Ε		Α	Yes	1				
Triethyl phosphate	TPS	34	D	Ε		Α	Yes	1				
Trimethylbenzene (all isomers)	TRE	32	D	{D}		Α	Yes	1				
Trixylenyl phosphate	TRP	34	D	E		Α	Yes	1	U			
Undecene	UDC	30	D	0/E	2014 (	Α	Yes	1				
1-Undecyl alcohol	UND	20	D	Ε		Α	Yes	1				
Xylenes (ortho-, meta-, para-)	XLX	32	D	D		Α	Yes	1				



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

Serial #: C1-1400007

Dated:

10-Jan-14

# Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CTCO 330 Official #: 1245356

Page 8 of 8

Shipyard: Trinity Madison

Hull #: 2215-7

#### Explanation of terms & symbols used in the Table:

Cargo Identification

Chem Code

Compatability Group No.

Note 2

Subchapter Subchapter D Subchapter O

A, B, C 0 F

NA

Hull Type

Grade

The proper shipping name as listed in 48 CFR Table 30.25-1, 48 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 | 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. Cargoas 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.

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 combustible liquids listed in 46 CFR Table 30.25-1

Those hazardous cargoes listed in 46 CFR 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 ventied 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

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

Designed to carry products of sufficeint hazard to require a moderate degree of control. See 46 CFR 151.10-1(b)(4). Not applicable to barges certificated under Subchapter D.

### Conditions of Carriage

Tank Group Vapor Recoven 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 Category 1

The specified cargo's provisional classification for vapor control systems.

(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. 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.

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.