

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

Certification Date: 08 Aug 2024 Expiration Date: 08 Aug 2029

## 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		Off	Icial Number	MO Numi	ner	Call Sign	Service		
KIRBY 2917	1	12	251933				Tank I	Barge	
Halling Port			Hull Material	Hone	2000	0			
GIBSON, LA			Steel	noise	power	Propulsion			
UNITED STA	ATES		Steel						
Pisce Built			Delivery Date	Keel Laid Date	Gross Tons	Nel Tons	DWT	Length	
ASHLAND C	CITY, TN		28840/2014	04Mar2014	R-1619	R-1619	0111	R-297.5	
			201VIay2014	041012112014	ŀ	l.		10	
Owner	·	<del> </del>		Operato					
	ND MARINE L	••		KIRE	Y INLAND	MARINE LP			
HOUSTON,	DR STE 1000				0 Market S				
UNITED STA					nelview, T) ED STATE	-			
0.111.25 011				ONII	EDSIAIE	:5			
This vessel n 0 Certified Li	nust be manne feboatmen, 0	d with the follo Certified Tanke	wing licensed ermen, 0 HSC	and unlicense Type Rating,	d Personne and 0 GMD	I. Included in w SS Operators.	hich there n	nust be	
0 Masters		0 Licensed Mate		Engineers		Dilers		· · · · · · · · · · · · · · · · · · ·	
0 Chief Mate	98	0 First Class Pilo	xts 0 First /	Assistant Enginee	rs				
0 Second Ma	ates	0 Radio Officers	0 Secon	nd Assistant Engli	neers				
0 Third Mate	38	0 Able Seamen	0 Third	Assistant Engine	9f8				
	st Class Pilot	0 Ordinary Seam		sed Engineers				1000	
0 Mate First		0 Deckhands		led Member Engi					
Persons allo	his vessel may wed: 0	carry 0 Passei	ngers, 0 Othe	r Persons in cr	ew, 0 Perso	ons in addition to	o crew, and	no Others. To	tal
Route Pern	nitted And Co	onditions Of O	peration:	<u> </u>			···		
Lakes,	Bays, and	Sounds pl	us Limited	l Coastwis	<b>8</b>	0.5			
LIMITED COA	STWISE SERVI	CE: IN SEAS OF AN TWELVE (12)	F LESS THAN '	THREE (03) FE SHORE BETWEE	ET, WIND I	ESS THAN TWEN	TTY (20) KN	OTS AND CLEAR	P
THIS TANK B	ARGE 15 PART	ICIPATING IN '	THE EIGHTH-N ES ABOARD TH	INTH COAST GU	JARD DISTRI	CT S TANK BAR	GE STREAML	INED INSPECT	D.O.D.
THIS VESSEL	HAS BEEN GR	ANTED A FRESH	WATER SERVI	CE EXAMINATIO	N INTERVAL	RECTED TO THE	E WITH AC	ACD MIDIC 31	
21 (D) ; IE I	HIS VESSEL I	S OPERATED IN	SALT WATER	MORE THAN SI	( (6) MOHTI	AS IN ANY TWEE	VE (12) MC	NTH PERIOD,	į.
		R ADDITION							
mapochon, m	ivviilia, Luulaja	tification naving na certified the rescribed there:	vessal in all l	eted at HOUM, respects, is in	A, LA, UNIT conformity \	ED STATES, I	he Officer in ble vessel in	n Charge, Mari spection laws	ne and
		riodic/Re-Inspe		1 7	his contificat	te issued by:	1/1-11		
Date	Zone	A/P/R	Signatu				NOW	2 2	
		127.77	- Januara		Car in Charge, M	WHALEN, LC	UK USCG,	By Direction	
•					m Unarge, M		Louisiana		_
				Ins	pection Zone	поила	Louisiana	2	
Demonstra	USCG, CG-841 (Rev							ST.	
Public of Home Sec.	VaCU, CG-841 (Rev	4-2000n(v2)					4 7 A	CIC	



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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.

### ---Hull Exams---

Exam Type

Next Exam

Last Exam

Prior Exam

DryDock

31Jul2034

30Jul2024

28May2014

Internal Structure

31Jul2029

Α

30Jul2024

11Jul2019

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

Authorization:

Flammable/Combustible Liquids and Specified Hazardous Cargoes

**Total Capacity** 

Units

Highest Grade Type

Part151 Regulated Part153 Regulated Part154 Regulated

29192

Barrels

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	848	13.6
2 P/S	860	13.6
3 P/S	751	13.6

### \*Loading Constraints - Stability\*

Hull Type	Maximum Load (short tons)	Maximum Draft (ft/in)	Max Density (lbs/gal)	Route Description
11	3814	10ft Oin	13.6	R, LBS
an .	4684	11ft 9in	13.6	R, LBS

#### \*Conditions Of Carriage\*

ONLY THOSE HAZARDOUS CARGOES NAMED IN THE VESSEL'S CARGO AUTHORITY ATTACHMENT, SERIAL NO. C1-1400860 DATED 14 MAR 2014, MAY BE CARRIED AND THEN ONLY IN THE TANKS INDICATED, SUBJECT TO THE LOADING CONSTRAINTS OF THIS DOCUMENT.

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 REGULATIONS PART 197, SUBPART C ARE APPLIED.

THE MAXIMUM DESIGN DENSITY OF CARGO WHICH MAY BE FILLED TO THE TANK TOP IS 8.74 LBS/GAL. CARGOES WITH HIGHER DENSITIES, UP TO 13.58 LBS/GAL, MAY BE CARRIED AS SLACK LOADS, BUT SHALL NOT EXCEED THE TANK WEIGHT LIMITS AS LISTED ABOVE.

IN ACCORDANCE WITH 46 CFR PART 39, EXCLUDING PART 39,4000, THIS VESSEL'S VAPOR CONTROL SYSTEM



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

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### Certificate of Inspection

Vessel Name, KIRRY 29171

HAS BEEN INSPECTED TO THE PLANS APPROVED BY MARINE SAFETY CENTER LETTERS SERIAL NO. C1-1400860 DATED 14 MAR 2014, AND FOUND ACCEPTABLE FOR COLLECTION OF BULK LIQUID CARGO VAPORS ANNOTATED WITH "YES" IN THE CAA'S VCS COLUMN.

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 Exar	n	
Tank Id	Previous	Last	Next	Previous	Last	Next
1 P/S	28May2014	30Jul2024	31Jul2034	-		-
2 P/S	28May2014	30Jul2024	31Jul2034	•	•	
3 P/S	28May2014	30Jul2024	31Jul2034	•	-	-
			Hydro Test			
Tank Id	Safety Valve	s	Previous	Last	Next	
1 P/S	•		-	28May2014	-	
2 P/S	-		-	28May2014	-	
3 P/S	-		-	28May2014	•	

### --- 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\*\*\*



Datert:

C1-1400860

ed: 14-Mar-14

## Certificate of Inspection

Cargo Authority Attachment

Vessel Name: **SMI 30062** Official #: 1251933 Shipyard: Trinity Ashland City

Hull #: 5045

81(b),

46 CFR 151 Tank Group Characteristics

Tank Group Information	Cargo I	dentificati	on		Cargo	I .	Tanks		Carg Trans		Environ Control		Fire	Special Require	nents	T	
Trik Grp Tanks in Group	Density	Press.	Temp.	Hull Typ		_	Vent	Gauge	Pipe Class	Cont	Tanks	Handling Space	Protection Provided	General	Materials of Construction	Elec Haz	Temp Cont
A #1P/S, #2P/S, #3P/S	13.6	Atmos.	Amb.	H	11i 2ii	integral Gravity	₽V	Closed	Iŧ	G-1	NR	NA	Portable	.50-60, .50-70(a), .50-70(b), .50-73, .50-81(a), .50-	55-1(b), (c), (e), (f), (j), 56-1(a), (b), (c), (d), (e), (f), (g),	NR	No

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

List of Authorized Cargoes

Cargo Identification	n					Conditions of Carriage						
	1						Vapor Re			$\top$		
Name	Chem	Compat Group No	Sub Chapter	Grade	Huil Type	Tank Group	App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period		
Authorized Subchapter O Cargoes												
Acetonitrile	ATN	37	0	С	HI	Α	Yes	3	No	G		
Acrylonitrile	ACN	15 <sup>2</sup>	0	С	II	Α	Yes	4	.50-70(a), .55-1(e)	G		
Adiponitrite	ADN	37	0	Е	ll	Α	Yes	1	No	G		
Alkyl(C7-C9) nitrates	AKN	34 <sup>2</sup>	0	NA	<b>III</b>	Α	No	N/A	.50-81, .50-86	G		
Aminoethylethanolamine	AEE	8	0	Е	III	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	III	Α	No	N/A	.56-1(a), (b), (c), (f), (g)	G		
Anthracene oil (Coal tar fraction)	AHO	33	0	NA	II	Α	No	N/A	No	G		
Benzene	BNZ	32	0	С	III	Α	Yes	1	.50-60	G		
Benzene or hydrocarbon mixtures (having 10% Benzene or more)	внв	32 <sup>2</sup>	0	С	Ш	Α	Yes	1	.50-60	G		
Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)	вна	32 ²	0	С	111	Α	Yes	1	.50-60, .56-1(b), (d), (f), (g)	G		
Benzene, Toluene, Xylene mixtures (10% Benzene or more)	BTX	32	0	B/C	111	Α	Yes	1	.50-60	G		
Butyl acrylate (all isomers)	BAR	14	0	D	III	Α	Yes	2	.50-70(a), .50-81(a), (b)	G		
Butyl methacrylate	вмн	14	0	D	III	Α	Yes	2	.50-70(a), .50-81(a), (b)	G		
Butyraldehyde (all isomers)	BAE	19	0	С	111	Α	Yes	1	.55-1(h)	G		
Camphor oil (light)	CPO	18	0	D	11	Α	No	N/A	No	G		
Carbon tetrachloride	CBT	36	0	NA	ili	Α	No	N/A	No	G		
Caustic potash solution	CPS	5 <sup>2</sup>	0	NΑ	111	Α	No	N/A	.50-73, .55-1(j)	G		
Caustic soda solution	CSS	5 <sup>2</sup>	0	NA	111	Α	No	N/A	.50-73, .65-1(j)	G		
Chemical Oil (refined, containing phenolics)	COD	21	0	Е	11	Α	No	N/A	.50-73	G		
Chlorobenzene	CRB	36	0	D	III	Α	Yes	1	No	G		
Chloroform	CRF	36	0	NA	H	Α	Yes	3	No	G		
Coal tar naphtha solvent	NCT	33	0	D	III	Α	Yes	1	.50-73	G		
Creosote	CCW	21 <sup>2</sup>	0	E	111	Α	Yes	1	No	G		
Cresols (all isomers)	CRS	21	0	Е	III	Α	Yes	1	No	G		
Cresylate spent caustic	CSC	5	0	NA	111	Α	No	N/A	.50-73, .55-1(b)	G		
Cresylic acid tar	CRX		0	E	III	Α	Yes	1	.55-t(f)	G		
Crotonaldehyde	CTA	19 <sup>2</sup>	0	С	11	A	Yes	4	.55-1(h)	в		
Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein)	CHG		0	С	Ш	Α	No	N/A	No	G		
Cyclohexanone	CCH	18	0	D	111	Α	Yes	1	.56-1(a), (b)	G		
Cyclohexanone, Cyclohexanol mixture	CYX	18 <sup>2</sup>	0	Е	111	Α	Yes	1	.56-1 (b)	G		
Cyclohexylamine	CHA	7	0	D	111	Α	Yes	1	.58-1(a), (b), (c), (g)	G		

<sup>2.</sup> 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.

<sup>3.</sup> 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 vesset has no electrical equipment located in a hazardous location.



Serial #: C1-1400860 Dated: 14-Mar-14

## Certificate of Inspection

### Cargo Authority Attachment

Vessel Name: SMI 30062 Official #: 1251933

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Shipyard: Trinity Ashland City

Cargo Identificatio	n							Condi	tions of Carriage	
	Chem	Compat	Sub		Hull	T		Recovery		
Name	Code	Group No	Chapter	Grade	Туре	Tank Group	App'd (Y or N)	VCS Category	Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period
Cyclopentadiene, Styrene, Benzene mixture	CSB	30	0	D	111	Α	Yes	1	.50-60, .56-1(b)	G
iso-Decyl acrylate	IAI	14	0	Е	Ш	Α	Yes	2	.50-70(a), .50-81(a), (b), .55-1(c)	G
Dichlorobenzene (all isomers)	DBX	36	0	E	[1]	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	II	Α	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	Ε	111	Α	No	N/A	.56-1(a), (b), (c), (g)	Ġ
2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution	DAD	0 1,2	0	Α	Ш	A	No	N/A	.56-1(a), (b), (c), (g)	G
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution	DTI	43 <sup>2</sup>	0	Е	(1)	Α	No	N/A	.56-1(a), (b), (c), (g)	G
1,1-Dichloropropane	DPB	36	0	C	111	Α	Yes	3	No	G
1,2-Dichloropropane	DPP	36	0	С	III	Α	Yes	3	No	G
1,3-Dichloropropane	DPC	36	0	С	111	Α	Yes	3	No	G
1,3-Dichloroproperie	DPU	15	0	D	11	Α	Yes	4	No	G
Dichloropropene, Dichloropropane mixtures	DMX	15	0	С	-	Α	Yes	1	No	G
Diethanolamine	DEA	8	0	E	Ш	Α	Yes	1	.55-1(c)	Ġ
Diethylamine	DEN	7	0	С	[]]	Α	Yes	3	.55-1(c)	G
Diethylenetriamine	DET	72	0	E	111	Α	Yes	1	.55-1(c)	G
Diisobutylamine	DBU	7	0	D	[[]	A	Yes	3	.55-1(c)	G
Diisopropanolamine	DIP	8	0	E	III	Α	Yes	1	.55-1(c)	G
Diisopropylamine	DIA	7	-	C		Α	Yes	3	.55-1(c)	G
N,N-Dimethylacetamide	DAC	10	0	E		Α	Yes	3	.56-1(b)	G
Dimethylethanolamine	DMB	8	0	D	111	A	Yes	1	.58-1(b), (c)	G
Dimethylformamide	DMF	10	0	D	 	A	Yes	<u>·</u>	.55-t(e)	
Di-n-propylamine	DNA	7	0	c		A	Yes	3	.55-1(c)	6
Dodecyldimethylamine, Tetradecyldimethylamine mixture	DOT	7	0	E	 	A	No	N/A	.56-1(b)	G
Dodecyl diphenyl ether disulfonate solution	DOS	43	0	#	11	Α	No	N/A	No	
EE Glycol Ether Mixture	EEG	40	0		111		No	N/A	No	G
Ethanolamine	MEA	8	0	E	111	Α	Yes	1	.55-1(c)	G
Ethyl acrylate	EAC	14	0	C	111	A	Yes	2	.50-70(a), .50-81(a), (b)	6
Ethylamine solution (72% or less)	EAN	7		Α	 	^	Yes	6	.55-1(b)	G
N-Ethylbutylamine	EBA	7	0	<u> </u>	<u>''</u> 	A	Yes	3	.55-1(b)	- G
N-Ethylcyclohexylamine	ECC	7	- 0	D	111	A			.55-1(b)	G
Ethylene cyanohydrin	ETC	20	0	E			Yes	1	No No	
Ethylenediamine	EDA	7 2	0	 D		Α	Yes	11		G
Ethylene dichloride	EDC	36 <sup>2</sup>	0	C	- 111	A	Yes	1	.55-1(e) No	G
Ethylene glycol hexyl ether	EGH	40	0		- 41	Α	Yes	1		G
Ethylene glycol monoalkyl ethers	EGC	40	0	E	111	A	No	N/A	No No	G
Ethylene glycol propyl ether	EGP		~	D/E		A	Yes	1		G
2-Ethylhexyl acrylate		40	0	E		A	Yes	1	No	G
	EAI	14	0	E	111	A	Yes	2	.50-70(a), .50-81(a), (b)	G
Ethyl methacrylate 2-Ethyl-3-propylacrolein	ETM	14	0	D/E		_ <u>A</u> _	Yes	2	.50-70(a)	G
Formaldehyde solution (37% to 50%)	EPA	19 2	0	E		A	Yes	1	No SECULIA	G
	FMS	19 <sup>2</sup>	0	D/E	1)	A	Yes	1	.55-1(h)	G
Furfural Cluteraldebude calcular (50% calcas)	FFA	19	0	D	- !!!	Α .	Yes	1	.55-1(h)	G
Glutaraldehyde solution (50% or less)	GTA	19	0	NA	181	A	No	N/A	No	G
Hexamethylenediamine solution	HMC	7	0	E	<u> </u>	<u>A</u>	Yes		.55-1(c)	G
Hexamethyleneimine	HMI	7	0	С	<u> </u>	A	Yes	1	.56-1(b), (c)	G
Hydrocarbon 5-9	HFN		0	C	111	A	Yes	1	.50-70(a), .50-81(a), (b)	G
Isoprene	IPR	30	0	Α	111	Α	Yes	7	.50-70(a), .50-81(a), (b)	G



14-Mar-14

## Certificate of Inspection

### Cargo Authority Attachment

Vessel Name: SMI 30062 Official #: 1251933

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Shipyard: Trinity Ashland City

Cargo Identification						Conditions of Carriage							
							Vapor F	Recovery	· · · · · · · · · · · · · · · · · · ·	$\overline{}$			
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			
Isoprene, Pentadiene mixture	IPN		0	В	Ш	Α	No	N/A	.50-70(a), .55-1(c)	G			
Kraft pulping liquors (free alkali content 3% or more)(including: Black, Green, or White liquor)	KPL	5	0	NA	III	Α	No	N/A	.50-73, .56-1(a), (c), (g)	G			
Mesityl oxide	MSO	18 <sup>2</sup>	0	D	III	Α	Yes	1	No	G			
Methyl acrylate	MAM	14	0	С	[]]	Α	Yes	2	.50-70(a), .50-8t(a), (b)	G			
Methylcyclopentadiene dimer	MCK	30	0	С	Ш	Α	Yes	1	No	G			
Methyl diethanolamine	MDE	8	0	E	Ш	Α	Yes	1	.56-1(b), (c)	G			
2-Methyl-5-ethylpyridine	MEP	9	0	E	H	Α	Yes	1	.55-1(e)	G			
Methyl methacrylate	MMN	l 14	0	С	HI	Α	Yes	2	.50-70(a), .50-81(a), (b)	G			
2-Methylpyridine	MPR	9	0	D	Ħ	Α	Yes	3	.55-1(c)	G			
alpha-Methylstyrene	MSR	30	0	D	Ш	Α	Yes	2	.50-70(a), .50-81(a), (b)	G			
Morpholine	MPL	72	0	D	HI	Α	Yes	1	.55-1(c)	G			
Nitroethane	NTE	42	0	D	ll	Α	No	N/A	.50-81, .56-1(b)	G			
1- or 2-Nitropropane	NPM	42	0	D	III	Α	Yes	1	.50-81	G			
1,3-Pentadiene	PDE	30	0	Α	<b>  </b>	Α	Yes	7	.50-70(a), .50-81	G			
Perchloroethylene	PER	36	0	NA	111	Α	No	N/A	No	G			
Polyethylene polyamines	PEB	7 2	0	Ε	ŧII	Α	Yes	1	.55-1(e)	G			
iso-Propanolamine	MPA	8	0	Ε	Ш	Α	Yes	1	.55-1(c)	G			
Propanolamine (iso-, n-)	PAX	8	0	E	111	Α	Yes	1	.56-1(b), (c)	G			
iso-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		0	***************************************	III	Α	No	N/A	.50-73, .55-1(j)	G			
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	Α	No	N/A	.50-73	G			
Sodium hypochlorite solution (20% or less)	SHQ	5	0	NA	Ш	Α	No	N/A	.50-73, .56-1(a), (b)	G			
Sodium sulfide, hydrosulfide solution (H2S 15 ppm or less)	SSH	0 1,2	0	NA	111	Α	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	.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		0	D	III	Α	Yes	2	No	G			
Styrene monomer	STY	30	0	D	III	Α	Yes	2	.50-70(a), .50-81(a), (b)	G			
1,1,2,2-Tetrachloroethane	TEC	36	0	NA		A	No	N/A	No	G			
Tetraethylenepentamine	TTP	7	0	E .	111	Α	Yes	1	.55-1(c)	G			
Tetrahydrofuran	THF	41	0	С	111	Α	Yes	1	.50-70(ь)	G			
Toluenediamine	TDA	9	0	E	II	A	No	N/A	50-73, .56-1(a), (b), (c), (g)	G			
1,2,4-Trichlorobenzene	TCB	36	0	E	111	Α	Yes		No	G			
1,1,2-Trichloroethane	TCM	36	0	NA	III	Α	Yes		.50-73, .56-1(a)	G			
Trichloroethylene	TCL	36 <sup>2</sup>	0	NA	111	Α	Yes	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	No	G			
1,2,3-Trichloropropane	TCN	36	0	E	II.	Α	Yes		.50-73, .56-1(a)				
Triethanolamine	TEA	8 2	0	Ē	111	A	Yes		.55-1(b)	G			
Triethylamine	TEN	7	0	C	11	Α	Yes		,55-1(e)	G			
Triethylenetetramine	TET	72	0	E	<u>''</u>	^	Yes		.55-1(b)	G			
Triphenylborane (10% or less), caustic soda solution	TPB	5	0	NA		^_	No	' N/A	.56-1(a), (b), (c)	G			
Trisodium phosphate solution	TSP	5	0	NA.	111		No	N/A	.50-73, .56-1(a), (c).	G			
Urea, Ammonium nitrate solution (containing more than 2% NH3)	UAS	6	0	NA	111	A	No	N/A	.58-1(b)				
Vanillin black liquor (free alkali content, 3% or more).	VBL	5	0	NA NA	111	^	No	N/A	.50-73, ,56-1(a), (c), (g)	G			
Vinyl acetate	VAM	13	0	C		^_	Yes		.50-70(a), .50-81(a), (b)				
Vinyl neodecanate	VAIV	13	0	E	188	^_	No	<sup>2</sup>		G			
YRIYI HOOGGAHALE	AIAIN			<u> </u>	111	^	INO	IWA	refers to a cried (e)	·····			



14-Mar-14

## Certificate of Inspection

### Cargo Authority Attachment

Vessel Name: SMI 30062 Official #: 1251933

Page 4 of 8

Shipyard: Trinity Ashland City

Cargo Identification	n						(	Condi	tions of Carriage	
	Chem	Сотра	Sub	Condo	Hull	Tank	App'd	ecovery VCS	Special Requirements in 46 CFR	Insp.
Name	Code	Group No	Chapter	Grade	Туре	Group		Category	151 General and Mat'ls of .50-70(a), .50-81, .56-1(a), (b), (c), (	Period
Vinyltoluene	VIVI	13		U	111	Α	Yes	2	.50-70(a), .50-81, .50-1(a), (b), (c), (	
Subchapter D Cargoes Authorized for Vapor Contr										
Acetone	ACT	18 2	D	c		Α .	Yes			
Acetophenone	ACP	18	D	Ε		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	THE TOP WAY	
Amyl acetate (all isomers)	AEC	34	D	D		Α	Yes	1		
Amyl alcohol (iso-, n-, sec-, primary)	AAI	20	D	D	n=1//n=	Α	Yes	1		
Benzyl alcohol	BAL	21	D	E		Α	Yes	1		
Brake fluid base mixtures (containing Poly(2-8)alkylene(C2-C3) glycols, Polyalkylene(C2-C10) glycol monoalkyl(C1-C4) ethers, and their borate esters)	BFX	20	D	E		Α	Yes	1		
Butyl acetate (all isomers)	BAX	34	D	D		Α	Yes	1		
Butyl alcohol (iso-)	IAL	20 <sup>2</sup>	D	D		Α	Yes	1		
Butyl alcohol (n-)	BAN	20 <sup>2</sup>	D	D		Α	Yes	1	, , , , , , , , , , , , , , , , , , ,	
Butyl alcohol (sec-)	BAS	20 <sup>2</sup>	D	С		Α	Yes	1		
Butyl alcohol (tert-)	BAT		D	С		Α	Yes	1		
Butyl benzyl phthalate	8PH	34	D	E		Α	Yes	1		
Butyl toluene	BUE	32	D	D		Α	Yes	1		
Caprolactam solutions	CLS	22	D	E	······································	Α	Yes	1	,/	
Cyclohexane	CHX	31	D	С		Α	Yes	1		
Cyclohexanol	CHN	20	D	E		A	Yes	1		
1,3-Cyclopentadiene dimer (molten)	CPD	30	D	D/E		Α	Yes	2		
p-Cymene	CMP	32	D	D		Α	Yes	1		
iso-Decaldehyde	IDA	19	D	E		Α	Yes	1	7,0	
n-Decaldehyde	DAL	19	D	E		A	Yes	1	1	
Decene	DCE	30		 D		Α	Yes	1		
Decyl alcohol (all isomers)	DAX	20 <sup>2</sup>	D	E		A	Yes	1		
n-Decylbenzene, see Alkyl(C9+)benzenes	DBZ	32	D	E		A	Yes	1		
Diacetone alcohol	DAA	20 <sup>2</sup>		D		A	Yes	1	***************************************	
ortho-Dibutyl phthalate	DPA	34	D	E		A	Yes	1	THE STATE OF THE S	
Diethylbenzene	DEB	32	D	_ D		^\ A	Yes	1		
Diethylene głycol	DEG	40 <sup>2</sup>	D	E		A	Yes	1		
Diisobutylene	DBL	30	D D	C		Α	Yes	<u>'</u>		
Dilsobutyl ketone	DIK	18		D		A	Yes	<u>'</u>		
Diisopropylbenzene (all isomers)	DIX	32		E			Yes	1		
Dimethyl phthalate	DTL.	34		<u> </u>	~~····		Yes			
Dioctyl phthalate	DOP	34	D	E		A	Yes	1	· · · · · · · · · · · · · · · · · · ·	
Dipentene	DPN	30	D	D			Yes	1		
Diphenyl	DIL	32		D/E		A				
	DDO	33	D			A	Yes	1		
Diphenyl, Diphenyl ether mixtures Diphenyl ether	DPE	 41	D D	E {E}		A	Yes	1		
	DPG					Α	Yes			
Distillator: Elaphod food stocks	DFF	40	Đ	E		Α	Yes	1	,	
Distillates: Flashed feed stocks		33	D	E		Α	Yes	1		
Distillates: Straight run	DSR	33	D	E		Α	Yes	1	/d	
Dodecene (all isomers)	DOZ	30	D	D	***************************************	A	Yes	1		
Dodecylbenzene, see Alkyl(C9+)benzenes	DDB	32	D	E		Α .	Yes	1		
2-Ethoxyethyl acetate	EEA	34	D	D		Α	Yes	1		



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# Certificate of Inspection

### Cargo Authority Attachment

Vessel Name: **SMI 30062** Official #: 1251933

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Shipyard: Trinity Ashland City

Serial #: C1-1400860

14-Mar-14

Cargo Identificatio	n							Condi	tions of Carriage	
								Recovery		$\overline{}$
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
Ethoxy triglycol (crude)	ETG	40	D	Е		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 <sup>2</sup>	D	С		Α	Yes	1		
Ethylbenzene	ETB	32	D	С		Α	Yes	1	***************************************	
Ethyl butanol	EBT	20	D	D		Α	Yes	1		
Ethyl tert-butyl ether	EBE	41	D	С		Α	Yes	1		
Ethyl butyrate	EBR	34	D	D		Α	Yes	1		
Ethyl cyclohexane	ECY	31	D	D		Α	Yes	1		
Ethylene glycol	EGL	20 <sup>2</sup>	D	Е		Α	Yes	1		
Ethylene glycol butyl ether acetate	EMA	34	D	E		Α	Yes	1		
Ethylene glycol diacetate	EGY	34	D	Ε		Α	Yes	1		-
Ethylene glycol phenyl ether	EPE	40	D	Ε		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	WU	Α	Yes	1		
Formamide	FAM	10	D	E		Α	Yes	1		
Furfuryl alcohol	FAL	20 <sup>2</sup>	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 galton)	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	WILLIAM TO THE TENT OF THE TEN	
Glycerine	GCR	20 <sup>2</sup>	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)	HTX	20	D	D/E		Α	Yes	1		
Heptene (all isomers)	HPX	30	D	С		Α	Yes	2		
Heptyl acetate	HPE	34	D	E,		Α	Yes	1		-
Hexane (all isomers), see Alkanes (C6-C9)	HXS	31 2	D	B/C		Α	Yes	1	· · · · · · · · · · · · · · · · · · ·	
Hexanoic acid	НХО	4	D	E		Α	Yes	1		
Hexanol	HXN	20	D	D		Α	Yes	1	***************************************	
Hexene (all isomers)	HEX	30	D	C	r-//	Α	Yes	2		
Hexylene glycol	HXG	20	D	E		Α	Yes	1		
Isophorone	IPH	18 <sup>2</sup>	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		A	Yes	1		
Methyl acetate	MTT	34	D	D		Α	Yes	1		
Methyl alcohol	MAL	20 2	D	С	*****	Α	Yes	1	***************************************	
Methylamyl acetate	MAC	34	D	D		A	Yes	1		
Methylamyl alcohol	MAA	20	D	D		A	Yes	1		
Methyl amyl ketone	MAK	18	D	D		Α	Yes	1	West 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	
Methyl tert-butyl ether	MBE	41 2	D	C		A	Yes	· · · · ·	VAV	
								_ '		



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## Certificate of Inspection

### Cargo Authority Attachment

Vessel Name: SMI 30062 Official #: 1251933

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Shipyard: Trinity Ashland City

Cargo Identificat	ion					Conditions of Carriage							
							Vapor i	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'is 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 <sup>2</sup>	D	С		Α	Yes	1					
Methyl heptyl ketone	MHK	18	D	D		Α	Yes	1					
Methyl isobutyl ketone	MIK	18 <sup>2</sup>	D	С		Α	Yes	1	· · · · · · · · · · · · · · · · · · ·				
Methyl naphthalene (molten)	MNA	32	D	E		Α	Yes	1					
Mineral spirits	MNS	33	D	D		Α	Yes	1		/			
Myrcene	MRE	30	D	D		Α	Yes	1					
Naphtha: Heavy	NAG	33	D	#		Α	Yes	1					
Naphtha: Petroleum	PTN	33	D	#		A	Yes	1					
Naphtha: Solvent	NSV	33	D	D		Α	Yes	1		······································			
Naphtha: Stoddard solvent	NSS	33	D	Đ		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		A	Yes	2		~~~~			
Nonyl alcohol (all isomers)	NNS	20 <sup>2</sup>	D	E		A	Yes	1					
Nonyl phenol	NNP	21	D	E		Α	Yes	1	TOTAL CONTRACTOR OF THE PARTY O				
Nonyl phenol poly(4+)ethoxylates	NPE	40	D	E		Α	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 <sup>2</sup>		E		Α.	Yes	<u>.</u>	- TOPANNALL.				
Octene (all isomers)	OTX	30		c		A	Yes	2	710000000				
Oil, fuel: No. 2	OTW	33		D/E		Α	Yes	1					
Oil, fuel: No. 2-D	OTD	33	D	D		Α	Yes	1					
Oil, fuel: No. 4	OFR	33		D/E		Α	Yes	1					
Oil, fuel: No. 5	OFV	33		D/E		Α	Yes	1					
Oil, fuel: No. 6	osx	33		E		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		Α	Yes	<u>'</u>		.,,,,,			
Oil, misc: Lubricating	OLB	33	D	_ <u>_</u>		Α	Yes	<u>'</u>		~~/			
Oll, misc: Residual	ORL.	33	D	E			Yes	1	What I was a second and a second a second and a second an				
Oil, misc: Turbine	OTB	33	D	E		A	Yes	•					
	PTY	31	D					1					
Pentane (all isomers)	PTX	30		Α		Α	Yes	5 5					
Pentene (all isomers)			D D	<u>A</u>		Α	Yes		· · · · · · · · · · · · · · · · · · ·				
n-Pentyl propionate	PPE	34	D	D		A	Yes	1					
alpha-Pinene		30		D		Α	Yes	1					
beta-Pinene	PIP	30	D	D		Α	Yes	1	************				
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether	PAG	40	D	Ε		<u> </u>	Yes	1	AIP/MALL.				
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate	PAF	34	D	E		<u> </u>	Yes	1					
Polybutene	PLB	30	D	E		A	Yes	1					
Polypropylene glycol	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					
iso-Propyl alcohol	IPA	20 <sup>2</sup>	D	С		A	Yes	1					
n-Propyl alcohol	PAL	20 <sup>2</sup>	D	С	***************************************	Α	Yes	1					
Propylbenzene (all isomers)	PBY	32	D	D		Α	Yes	1	www.				
iso-Propylcyclohexane	IPX	31	D	D		Α	Yes	1					



14-Mar-14

# Certificate of Inspection

Cargo Authority Attachment

Vessel Name: SMI 30062 Official #: 1251933

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Shipyard: Trinity Ashland City

Huil #: 5045

Cargo Identific	ation					Conditions of Carriage							
							Vapor F	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			
Propylene glycol	PPG	20 <sup>2</sup>	D	Е		Α	Yes	1		-1			
Propylene glycol methyl ether acetate	PGN	34	D	Đ		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	Ε		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					
Triethylene glycol	TEG	40	D	E		Α	Yes	1					
Triethyl phosphate	TPS	34	D	E		Α	Yes	1					
Trimethylbenzene (all isomers)	TRE	32	D	{D}		Α	Yes	1					
Trixylenyl phosphate	TRP	34	D	Ε		Α	Yes	1					
Undecene	UDC	30	D	D/E		Α	Yes	1					
1-Undecyl alcohol	UND	20	D	Е		Α	Yes	1					
Xylenes (ortho-, meta-, para-)	XLX	32	D	D		Α	Yes	1					



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

Serial #: C1-1400860

14-Mar-14

Dated:

## Certificate of Inspection Cargo Authority Attachment

Vessel Name: SMI 30062 Shipyard: Trinity Ashland

Official #: 1251933 Page 8 of 8 Hull #: 5045

#### 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 tetter designation assigned to the cargo in the Chemical Hazards Response Information System (CHRIS) Manual.

none

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

Compatability Group No.

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

Note 1

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

Note 2

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

Subchapter Subchaoter 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 Table 151,05 and 46 CFR Part 153 Table 2.

Those cargoes listed in 46 CFR Part 153 Table 2 are non-regulated cargoes when carried in bulk on non-oceangoing barges

Grade

The cargo classification assigned to each flammable or combustible liquid. Grades inside of "{ }" indicate a provisional assignment based upon literature sources which were not verified by manufacturers data. The Person-in-Charge shall verify the cargo grade based on Manufacturers data and ensure that the barge is authorized for carriage of that grade of cargo

A, B, C

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

The flammability/combustibility grade of these cargoes may vary depending upon the flashpoint and Reid vapor pressure. The Person-in-Charge shall verify the

Note 4

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

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

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

Approved (Y or N) es: 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 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,

none

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