



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

Certification Date: 24 Feb 2023
Expiration Date: 24 Feb 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

CBC 20

Official Number

1057377

IMO Number

Call Sign

Service

Tank Barge

Hailing Port

NEW ORLEANS, LA

Hull Material

Steel

Horsepower

Propulsion

UNITED STATES

Place Built

JEFFERSONVILLE, IN

Delivery Date

19Mar1998

Keel Laid Date

07Dec1997

Gross Tons

R-716

Net Tons

R-716

DWT

Length

R-195.0

UNITED STATES

Owner

CANAL BARGE COMPANY INC
1801 ENGINEERS RD
BELLE CHASSE, LA 70037
UNITED STATES

Operator

CANAL BARGE COMPANY INC
1801 ENGINEERS ROAD
BELLE CHASSE, LA 70037
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	0 First Assistant Engineers	
0 Second Mates	0 Radio Officers	0 Second Assistant Engineers	
0 Third Mates	0 Able Seamen	0 Third Assistant Engineers	
0 Master First Class Pilot	0 Ordinary Seamen	0 Licensed Engineers	
0 Mate First Class Pilots	0 Deckhands	0 Qualified Member Engineer	

In addition, this vessel may carry 0 Passengers, 0 Other Persons in crew, 0 Persons in addition to crew, and no Others. Total Persons allowed: 0

Route Permitted And Conditions Of Operation:

---Lakes, Bays, and Sounds---

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 and the cognizant OCMI must be notified in writing as soon as this change in status occurs.

This tank barge is participating in the Eighth-Ninth Coast Guard District's Tank Barge Streamlined 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 Sector New Orleans OCMI.

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

With this Inspection for Certification having been completed at Houston, TX, UNITED STATES, the Officer in Charge, Marine Inspection, Sector Houston-Galveston certified the vessel, in all respects, is in conformity with the applicable vessel inspection laws and the rules and regulations prescribed thereunder.

Annual/Periodic/Re-Inspection

This certificate issued by:

Joseph W. Morgans CDR, USCG, By Direction

Officer in Charge, Marine Inspection

Sector Houston-Galveston

Inspection Zone

Date	Zone	A/P/R	Signature
2024 ED 13 Feb 24	Canal Barge	A	[Signature]
9 Jan 24	Canal Barge	P	[Signature]

OMB No. 2115-0517



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Hailing Port	Hull Material	Horsepower	Propulsion
NEW ORLEANS, LA	Steel		
UNITED STATES			

Place Built	Delivery Date	Keel Laid Date	Gross Tons	Net Tons	DWT	Length
JEFFERSONVILLE, IN	19Mar1998	07Dec1997	R-716	R-716		R-195.0
UNITED STATES			-	-		-0

Owner	Operator
CANAL BARGE COMPANY INC 1801 ENGINEERS RD BELLE CHASSE, LA 70037 UNITED STATES	CANAL BARGE COMPANY INC 1801 ENGINEERS ROAD BELLE CHASSE, LA 70037 UNITED STATES

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Annual/Periodic/Re-Inspection				This Amended certificate issued by: D. VELEZ COMMANDER , By direction Officer in Charge, Marine Inspection Sector New Orleans Inspection Zone
Date	Zone	A/P/R	Signature	
13-Feb-24	Canal Barge	A	Alfonso A. Bruckman	



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Department of Homeland Security
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Annual/Periodic/Re-Inspection				This certificate issued by: <i>J.W. Morgans</i> Joseph W. Morgans CDR, USCG, By Direction Officer in Charge, Marine Inspection Sector Houston-Galveston Inspection Zone
Date	Zone	A/P/R	Signature	



Certificate of Inspection

Vessel Name: CBC 20

---Hull Exams---

Exam Type	Next Exam	Last Exam	Prior Exam
DryDock	28Feb2033	13Feb2023	25Apr2013
Internal Structure	31Jan2028	31Jan2023	25Apr2018

--- 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
10667	Barrels	A	Yes	No	No

Hazardous Bulk Solids Authority

Loading Constraints - Structural

Tank Location Description	Max Cargo Weight per Tank (short tons)	Maximum Density (lbs/gal)
2	607	13.6
1	595	13.6
3	607	13.6

Loading Constraints - Stability

Hull Type	Maximum Load (short tons)	Maximum Draft (ft/in)	Max Density (lbs/gal)	Route Description
III	1723	10ft 4in	13.60	RIVERS; LAKES, BAYS AND SOUNDS
II	1495	9ft 3in	13.60	RIVERS; LAKES, BAYS AND SOUNDS

Conditions Of Carriage

Only those cargoes named in the vessel's Cargo Authority Attachment (CAA), serial #VN97010376, dated 07 Mar 2000, and Grade "A" and lower cargoes may be carried.

As per 46 CFR 150.130, the Person In Charge of the vessel is responsible for ensuring that the compatibility requirements of 46 CFR, Part150, are met. Cargoes must be checked for compatibility using the figures, tables, and appendices of 46 CFR, Part 150, in conjunction with the reactive group numbers from the "Compat Group No" column listed in the vessel's Cargo Authority.

When the vessel is carrying cargoes containing greater than 0.5% benzene by volume, the person in charge is responsible for ensuring the provisions of 46 CFR Part 197, Subpart C are applicable.

This vessel's vapor control system has been inspected to the plans approved by the Marine Safety Center letters serial #C2-9703100 dated 23 Sep 1997 and serial #C2-0100997 dated 28 Mar 2001, and found acceptable for the collection of cargo vapors from those specific subchapter "D" cargoes contained in those letters, and those specified hazardous cargoes annotated with either "V" or "T" in the CAA.

The letter "V" in the note column of the CAA signifies approval for vapor control without any additional requirements.

The letter "T" in the note column of the CAA signifies that the cargo is highly toxic and that spill valves or rupture disks are not authorized as the primary means of overfill protection required by 46 CFR 39.2009. A high level and overfill alarm is required by 46 CFR 39.2007.

--- Inspection Status ---



Certificate of Inspection

Vessel Name: CBC 20

Cargo Tanks

Tank Id	Internal Exam			External Exam		
	Previous	Last	Next	Previous	Last	Next
2	25Apr2013	31Jan2023	31Jan2033	-	-	-
1	25Apr2013	31Jan2023	31Jan2033	-	-	-
3	25Apr2013	31Jan2023	31Jan2033	-	-	-

Hydro Test

Tank Id	Safety Valves	Previous	Last	Next
2	-	-	-	-
1	-	-	-	-
3	-	-	-	-

---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



Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CBC 20
Official #: D1057377

Page 1 of 3

Shipyard: JEFFBOAT
Hull #: 97-2104

List of Authorized Cargoes

Cargo Identification						Conditions of Carriage	
Name	Chem Code	Compat		Grade	Hull Type	Note	Special Requirements in 46 CFR 151 General and Mat'ls of Construction
		Group No	Exc				
Ammonium bisulfite solution (70% or less)	ABX	43	Y		III		50-73, 56-1(a), (b), (c)
Acrylonitrile	ACN	15	Y	C	II	T	50-70(a), 55-1(a)
Adiponitrile	ADN	37	N	E	II	V	No
Aminoethylethanolamine	AEE	8	N	E	III	V	55-1(b)
Alkyl(C7-C9) nitrates	AKN	34	Y		III		50-81, 50-86
Ammonium hydroxide (28% or less NH3)	AMH	6	N		III		56-1(a), (b), (c), (f), (g)
Acetonitrile	ATN	37	N	C	III	T	No
Butyraldehyde (all isomers)	BAE	19	N	C	III	V	55-1(h)
Butyl acrylate (all isomers)	BAR	14	N	D	III	V	50-70(a), 50-81(a), (b)
Benzene hydrocarbon mixtures (containing Acetylenes)(having 10% Benzene or more)	BHA	32	Y		III	V	50-60, 56-1(b), (d), (f), (g)
Benzene hydrocarbon mixtures (having 10% Benzene or more)	BHB	32	N		III	V	50-60
Butyl methacrylate	BMH	14	N	D	III	V	50-70(a), 50-81(a), (b)
Benzene	BNZ	32	N	C	III	V	50-60
Benzene, Toluene, Xylene mixtures (having 10% Benzene or more)	BTX	32	N	B/C	III	V	50-60
Carbon tetrachloride	CBT	36	N		III		No
Cyclohexanone	CCH	18	N	D	III	V	56-1(a), (b)
Creosote (all isomers)	CCW	21	Y	E	III	V	No
Cyclohexylamine	CHA	7	N	D	III	V	56-1(a), (b), (c), (g)
Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein)	CHG	0	N	C	III	V	No
Camphor oil (light)	CPO	18	N	D	II		No
Chlorobenzene	CRB	36	N	D	III	V	No
Chloroform	CRF	36	N	E	III		No
Cresols (all isomers)	CRS	21	N	E	III	V	No
Cresylic acid tar	CRX	21	N		III	V	55-1(f)
Cyclopentadiene, Styrene, Benzene mixture	CSB	30	N	D	III	V	50-60, 56-1(b)
Cresylate spent caustic	CSC	5	N		III		50-73, 55-1(b)
Crotonaldehyde	CTA	19	Y	C	II	T	55-1(h)
N,N-Dimethylacetamide	DAC	10	N	E	III	T	56-1(b)
Diisobutylamine	DBU	7	N	D	III	T	55-1(c)
Dichlorobenzenes (all isomers)	DBX	36	N	E	III	T	56-1(a), (b)
1,1-Dichloroethane	DCH	36	N	C	III	V	No
Dichloromethane	DCM	36	N	NF	III		No
2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution	DDE	43	N		III		56-1(a), (b), (c), (g)
Diethanolamine	DEA	8	N	E	III	V	55-1(c)
2,2'-Dichloroethyl ether	DEE	41	N	D	II	V	55-1(f)
Diethylamine	DEN	7	N	C	III	T	55-1(c)
Diethylenetriamine	DET	7	Y	E	III	V	55-1(c)
Diisopropylamine	DIA	7	N	C	II	T	55-1(c)
Diisopropanolamine	DIP	8	N	E	III	V	55-1(c)
Dimethylethanolamine	DMB	8	N	D	III	V	56-1(b), (c)
Dimethylformamide	DMF	10	N	D	III	V	55-1(a)
Dichloropropene, Dichloropropane mixtures	DMX	15	N		II	V	No
Di-n-propylamine	DNA	7	N	C	II	T	55-1(c)
Dodecyl dimethylamine, Tetradecyl dimethylamine mixture	DOT	7	N	E	III		56-1(b)
1,1-Dichloropropane	DPB	36	N	C	III	T	No
1,3-Dichloropropane	DPC	36	N	C	III	T	No
1,2-Dichloropropane	DPP	36	N	C	III	T	No
1,3-Dichloropropene	DPU	15	N	D	II	T	No
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution	DTI	43	Y		III		56-1(a), (b), (c), (g)

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



Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CBC 20
Official #: D1057377

Page 2 of 3

Shipyard: JEFFBOAT
Hull #: 97-2104

Cargo Identification						Conditions of Carriage	
Name	Chem Code	Compat		Grade	Hull Type	Note	Special Requirements in 48 CFR 151 General and Mat's of Construction
		Group No	Exc				
Ethyl acrylate	EAC	14	N	C	III	V	.50-70(a), .50-81(a), (b)
2-Ethylhexyl acrylate	EAI	14	N	E	III	V	.50-70(a), .50-81(a), (b)
Ethylamine solution (72% or less)	EAN	7	N	A	II	T	.55-1(b)
N-Ethylbutylamine	EBA	7	N	C	III	T	.55-1(b)
N-Ethylcyclohexylamine	ECC	7	N	D	III	V	.55-1(b)
Ethylenediamine	EDA	7	Y	D	III	V	.55-1(c)
Ethylene dichloride	EDC	36	Y	C	III	V	No
Ethylene glycol monoalkyl ethers	EGC	40	N	D/E	III	V	No
Ethylene glycol hexyl ether	EGH	40	N	E	III		No
Ethylene glycol propyl ether	EGP	40	N	E	III		No
2-Ethyl-3-propylacrolein	EPA	19	Y	E	III	V	No
Ethylene cyanohydrin	ETC	20	N	E	III	V	No
Ethyl methacrylate	ETM	14	N	C	III	V	.50-70(a)
Furfural	FFA	19	N	E	III	V	.55-1(h)
Formaldehyde solution (37% to 50%)	FMS	19	Y	D/E	III	V	.55-1(h)
Glutaraldehyde solution (50% or less)	GTA	19	N	NF	III		No
Hydrocarbon 5-9	HFN	30	N	A	III	V	.50-70(a), .50-81(a), (b)
Hexamethylenediamine solution	HMC	7	N	E	III	V	.55-1(c)
Hexamethyleneimine	HMI	7	N	C	II	V	.56-1(b), (c)
Isodecyl acrylate	IAI	14	N	E	III		.50-70(a), .50-81(a), (b), .55-1(c)
Isoprene, Pentadiene mixture	IPN	30	N	A	III		.50-70(a), .55-1(c)
iso-Propylamine	IPP	7	N	A	II		.55-1(c)
Isoprene	IPR	30	N	A	III		.50-70(a), .50-81(a), (b)
Kraft pulping liquors (free alkali content 3% or more)	KPL	5	N		III		.50-73, .56-1(a), (c), (g)
Methyl acrylate	MAM	14	N	C	III	V	.50-70(a), .50-81(a), (b)
Methylcyclopentadiene dimer	MCK	30	N	C	III	V	No
Methyl diethanolamine	MDE	8	N	E	III	V	.56-1(b), (c)
Ethanolamine	MEA	8	N	E	III	V	.55-1(c)
2-Methyl-5-ethylpyridine	MEP	9	N	E	III	V	.55-1(e)
Methyl methacrylate	MMM	14	N	C	III	V	.50-70(a), .50-81(a), (b)
iso-Propanolamine	MPA	8	N	E	III	V	.55-1(c)
Morpholine	MPL	7	Y	D	III	V	.55-1(c)
2-Methylpyridine	MPR	9	N	D	III	T	.55-1(c)
Mesityl oxide	MSO	18	Y	D	III	V	No
alpha-Methylstyrene	MSR	30	N	D	III	V	.50-70(a), .50-81(a), (b)
Coal tar naphtha solvent	NCT	33	N	D	III	V	.50-73
1- or 2-Nitropropane	NPM	42	N	D	III	V	.50-81
Propanolamine (iso-, n-)	PAX	8	N	E	III	V	.56-1(b), (c)
1,3-Pentadiene	PDE	30	N	A	III	V	.50-70(a), .50-81
Polyethylene polyamines	PEB	7	Y	E	III	V	.55-1(e)
Perchloroethylene	PER	36	N	NF	III		No
Pyridine	PRD	9	N	C	III	V	.55-1(e)
Sodium chlorate solution (50% or less)	SDD	0	Y	NF	III		.50-73
Sodium hypochlorite solution (20% or less)	SHQ	5	N	NF	III		.50-73, .56-1(a), (b)
Sodium sulfide, hydrosulfide solution (H2S 15 ppm or less)	SSH	0	Y		III		.50-73, .55-1(b)
Sodium sulfide, hydrosulfide solution (H2S greater than 15 ppm but less than 200 ppm)	SSI	0	Y		III		.50-73, .55-1(b)
Sodium sulfide, hydrosulfide solution (H2S greater than 200 ppm)	SSJ	0	Y		II		.50-73, .55-1(b)
Styrene (crude)	STX	30	N	C	III	V	No
Styrene monomer	STY	30	N	D	III	V	.50-70(a), .50-81(a), (b)
1,2,4-Trichlorobenzene	TCB	36	N	E	III	V	No
Trichloroethylene	TCL	36	Y		III	V	No



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Name	Chem Code	Compat		Grade	Hull Type	Note	Special Requirements in 46 CFR 151 General and Mat's of Construction
		Group No	Exc				
1,1,2-Trichloroethane	TCM	36	N		III	V	50-73, 56-1(a)
1,2,3-Trichloropropane	TCN	36	N	E	II	T	50-73, 56-1(a)
Triethanolamine	TEA	8	Y	E	III	V	55-1(b)
1,1,2,2-Tetrachloroethane	TEC	36	N	NF	III		No
Triethylamine	TEN	7	N	C	II	T	55-1(a)
Triethylenetetramine	TET	7	Y	E	III	V	55-1(b)
Tetrahydrofuran	THF	41	N	C	III	V	50-70(b)
Triphenylborane (10% or less), caustic soda solution	TPB	5	N		III		56-1(a), (b), (c)
Tetraethylenepentamine	TTP	7	N	E	III	V	55-1(c)
Urea, Ammonium nitrate solution (containing more than 2% Ammonia)	UAS	6	N		III		56-1(b)
Vinyl acetate	VAM	13	N	C	III	V	50-70(a), 50-81(a), (b)
Vanillin black liquor (free alkali content 3% or more)	VBL	5	N		III		50-73, 56-1(a), (c), (g)
Vinyltoluene	VNT	13	N	D	III	V	50-70(a), 50-81, 56-1(a), (b), (c), (g)

Explanation of terms & symbols used in the Table:

Cargo Identification

Name	The proper shipping name as listed in 46 CFR Table 151.05
Chem Code	The three letter designation assigned to the cargo in the Chemical Hazards Response Information System (CHRIS) Manual.
Compatibility 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, and appendices of 46 CFR 150 in conjunction with the assigned reactive group number.
Exceptions (Exc)	Indication of whether or not there are exceptions to the compatibility chart for the given cargo. See Appendix I to 46 CFR Part 150.
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. Flammable liquid cargoes, as defined in 46 CFR 30-10.22. Combustible liquid cargoes, as defined in 46 CFR 30-10.15. 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.
A, B, C D, E NA, NF #	
Hull Type	The required barge hull classification for carriage of the specified Subchapter O hazardous material cargo, see 46 CFR 151.10-1. I 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). II Designed to carry products which require significant preventive measures to preclude the uncontrolled release of cargo. See 46 CFR 151.10-1(b)(3). III Designed to carry products of sufficient hazard to require a moderate degree of control. See 46 CFR 151.10-1(b)(4).

Conditions of Carriage

Note See Certificate of Inspection for explanation of symbols used in this column.

Melanie Townsend

From: Orr, Luke Edward LT USCG MSC (USA) <Luke.E.Orr@uscg.mil>
Sent: Thursday, June 29, 2023 12:45 PM
To: Rachel Denley
Cc: Melanie Townsend; Nicole Kent; Jeff Brockman
Subject: RE: 2314305--URL Verdict NeutralNon-DoD Source CBC 20 and CBC 22 through CBC 25 - add Subchapter D cargo to Cargo Authority Attachment

Good Afternoon,

Subchapter D cargoes do not need to be listed on a CAA. The only restrictions to their carriage are the maximum flammability grade, cargo density, and vapor control authorized for the vessels. The grade and density are listed on the PRIS and copied to the COI, and the VCS cargo list identifies the products that require vapor control which the onboard system may be used for. Based on the VCS approval C2-9703100 and C2-0100997, the subject vessel can carry the Subchapter D cargo Naptha: Petroleum.

In addition, due to the age of this project, the CAA for these vessels cannot be updated for the vessel's name change. The official numbers and hull numbers listed on the CAA remain valid as unique identifiers for the vessels. If the vessels' design changes, a new CAA will be issued after the necessary plan review is completed.

We shared this message with an inspector at Sector Houston/Galveston earlier this year. Please let us know if you have any additional questions.

Best Regards,
Luke Orr, LT
Staff Engineer
Marine Safety Center
(202) 795-6776

From: Rachel Denley <rdenley@canalbarge.com>
Sent: Friday, June 2, 2023 12:48 PM
To: HQS-SMB-FLDR-MSC-EC <msc@uscg.mil>
Cc: Melanie Townsend <mtownsend@canalbarge.com>; Nicole Kent <nkent@canalbarge.com>; Jeff Brockman <jbrockman@canalbarge.com>
Subject: 2314305--URL Verdict NeutralNon-DoD Source CBC 20 and CBC 22 through CBC 25 - add Subchapter D cargo to Cargo Authority Attachment

Good morning,

We are kindly requesting a review of the enclosed documentation to allow the referenced barges a revised Cargo Authority Attached to add all approved Subchapter D cargoes as per the approved cargoes on the Vapor Control Letter list of cargoes attached.

Attached please find a copy of the COI's and CAA's for 5 barges along with the Vapor Control Letter Serial number C2-9703100 dated September 23, 1997 with the list of approved cargoes including Subchapter D cargoes. Also included is the extension of plan approval letter serial number C1-9800817 dated March 13, 1998.

Referenced barge identification information:

CBC 20 – official number 1057377 hull number 97-2104

CBC 22 – official number 1062524 hull number 97-2146

CBC 23 – official number 1062525 hull number 97-2147

CBC 24 – official number 1057375 hull number 97-2879

CBC 25 – official number 1057376 hull number 97-2880

Please review the attached and advise if there is any further details needed.

Respectfully,

Rachel Denley

Assistant Manager Barge Maintenance – Compliance & Systems
Canal Barge Company, Inc.

E-mail: rdenley@canalbarge.com

Phone: 504.585.4625 | **Mobile:** 504.729.8593

1801 Engineers Rd., Belle Chasse, LA 70037

www.canalbarge.com

Where People Make the Difference!

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United States
Coast Guard



SEARIVER MARITIME INC
United States Coast Guard
Marine Safety Center
www.uscg.mil/hq/msc

713 758 5095 P.02/07
Washington, DC 20590-0001
Staff Symbol: MSC-3
Phone: (202) 366-8441
FAX: (202) 366-3877

SEARIVER MARITIME, INC.		
INLAND FLEET OFFICE		
JJP		
WAG JGE	MAY 29 2001	JJW LDS
OTHER _____		
HANDLE	NOTE	SEE ME FILE

16710/P007208/7210/lde
Folders listed Enclosure (2)
Serial: C2-0100997
March 28, 2001

Mr. Will Boytim
P.O. Box 1512
Houston, TX 77251-1512

PNO77

Subj: SeaRiver Maritime Barges as per Enclosure (1)
Updated Vapor Control Authority

Ref: (a) Your letter dated December 27, 2000
(b) Marine Safety Center letter Serial T2-0003208 dated 9 November 2000

Dear Mr. Boytim:

We have reviewed your request in reference (a) to add the cargo Naphtha: Petroleum, **CHRIS CODE = PTN** to the subject barges' Vapor Control System (VCS) cargo list. All barges have vapor control authority granted as per the letters listed in Enclosure (1).

Reference (b) authorized two American Commercial Barge Line barges to carry the particular cargo Naphtha Petroleum crude, naphtha 540, Exxon USA. Since then, Commandant (G-MSO-3) has granted a general VCS classification for the mixture Naphtha: Petroleum regulated in 46 CFR Table 30.25-1. With consideration to the diverse characteristics of mixtures carried under this cargo name, the Marine Safety Center has determined the worst-case properties of PTN to be: vapor growth rate = 1.25, vapor specific gravity of 3.4, and partial pressure at 115°F to be 12.5 psig. Future requests to add PTN to a barge's Vapor Control List of Cargoes should address the ability of the VCS to capture vapors of a mixture having these characteristics.

We cannot find in our files information on the maximum design working pressure for the cargo tanks of S/R 321 (O.N. D573492), S/R 322 (O.N. D573493), S/R 323 (O.N. D573494), and S/R 324 (O.N. D573495). Because of this, we were unable to verify that the VCSs of these barges are adequately designed to capture PTN vapors safely. Further information on the design of the cargo tanks will be necessary to give these barges vapor control authority for PTN.

Review of the VCSs of S/R 351 (O.N. D644981), S/R 354 (O.N. D649808), S/R 361 (O.N. D651024), and S/R 364 (O.N. D651992) has shown these barges are capable of capturing vapors of cargoes with a maximum density of 0.217 lbs/ft³ at a maximum loading rate of 5.000 bbl/hr. This is an increase from 0.155 lbs/ft³ previously approved for these barges.

All barges listed in enclosure (1), with the exception of S/R 321 (O.N. D573492), S/R 322 (O.N. D573493), S/R 323 (O.N. D573494), and S/R 324 (O.N. D573495), have been approved to capture a maximum vapor mixture density greater than or equal to that of PTN. With this letter, we approve Naphtha: Petroleum (PTN) for use with the remaining barges' VCS.

Subj: SeaRiver Maritime Barges as per Enclosure (1)
Updated Vapor Control Authority

A copy of this letter should be attached to the Certificate of Inspection (COI) to ensure it is available to Coast Guard inspectors and facility personnel. A vessel's owner is responsible for requesting that the Officer in Charge, Marine Inspection (OCMI) also endorse the COI to indicate those vapors with which the vapor control system may be used

If you have any questions concerning our review, please contact LT Laura Collins, at the number listed above.

Sincerely,



T.E. MEYERS
Lieutenant, U.S. Coast Guard
Chief, Cargo Authority Branch
By direction of the Commanding Officer

Encl: (1) List of Subject Barges and Vapor Control Approval Letters
(2) List of MSC Tank Vessel and Offshore Division Folders

Copy: MSO Houston-Galveston

**List of Subject Barges and Vapor Control Approval Letters,
ENCLOSURE (1) To Marine Safety Center Letter C2-0100997, dated 28 March 2001**

MB 6; O.N. D295642, Jeffboat Hull 1291

195' x 35' x 12.5' Unmanned Type II/III Tank Barge (O/D)
VCS Approval MSC letter Serial C2-09701346 dated 24 April 1997

S/R 5; O.N. D1057375, Jeffboat Hull 96-2879

S/R 6; O.N. D1057376, Jeffboat Hull 96-2880

S/R 7; O.N. D1057377, Jeffboat Hull 97-2104

S/R 8; O.N. D1057378, Jeffboat Hull 97-2105

195' x 35' x 12.5' Unmanned Type II/III Tank Barge (O/D)
VCS Approval MSC letter Serial C2-9703100 dated 23 September 1997

S/R 101; O.N. D1068374, Jeffboat Hull 98-2352

S/R 102; O.N. D1068375, Jeffboat Hull 98-2353

S/R 103; O.N. D1068376, Jeffboat Hull 98-2354

S/R 104; O.N. D1068377, Jeffboat Hull 98-2355

S/R 105; O.N. D1068378, Jeffboat Hull 98-2356

195' x 35' x 12.5' Unmanned Type II/III Tank Barge (O/D)
VCS Approval MSC letter Serial C2-9801873 dated 29 May 1998

S/R 106; O.N. D1074387, Jeffboat Hull 98-2543

195' x 35' x 12.5' Unmanned Type II/III Tank Barge (O/D)
VCS Approval MSC letter Serial C1-9901103 dated 7 April 1999

S/R 107; O.N. D1079981, Jeffboat Hull 99-2789

S/R 108; O.N. D1079982, Jeffboat Hull 99-2790

S/R 109; O.N. D1079983, Jeffboat Hull 99-2791

S/R 110; O.N. D1079984, Jeffboat Hull 99-2792

S/R 111; O.N. D1079985, Jeffboat Hull 99-2793

195' x 35' x 12.5' Unmanned Type II/III Tank Barge (O/D)
VCS Approval MSC letter Serial C1-9901511 dated 10 May 1999

S/R 112; O.N. D1088424, Jeffboat Hull 99-2824

S/R 113; O.N. D1088425, Jeffboat Hull 99-2825

S/R 114; O.N. D1088426, Jeffboat Hull 99-2826

S/R 115; O.N. D1088427, Jeffboat Hull 99-2827

S/R 116; O.N. D1088428, Jeffboat Hull 99-9828

195' x 35' x 12.5' Unmanned Type II/III Tank Barge (O/D)
VCS Approval MSC letter Serial C1-9905158 dated 9 September 1999

S/R 230, O.N. D514604, Ingalls Hull 1668

D/R 239, O.N. D519103, Ingalls Hull 1693

297' x 54' x 12' Unmanned Type II/III Tank Barge (D)
VCS Approval MSC letter Serial C-30346 dated 22 July 1993

ENCLOSURE (1) To Maritime Safety Center Letter C2-0100997, dated 28 March 2001

S/R 250; O.N. D983941, Jeffboat Hull 91-2527
S/R 251; O.N. D983942, Jeffboat Hull 91-2528
S/R 252; O.N. D983943, Jeffboat Hull 91-2529 ← (M402)
S/R 253; O.N. D983944, Jeffboat Hull 91-2530
S/R 254; O.N. D983945, Jeffboat Hull 91-2531
S/R 255; O.N. D983946, Jeffboat Hull 91-2532
S/R 256; O.N. D983947, Jeffboat Hull 91-2533
S/R 257; O.N. D983948, Jeffboat Hull 91-2534
S/R 258; O.N. D983949, Jeffboat Hull 91-2535
S/R 259; O.N. 983950, Jeffboat Hull 91-2536
240' x 54' x 12' Unmanned Type II/III Tank Barge (O/D)
VCS Approval MSC letter C2-9602974 dated 8 November 1996

S/R 311, O.N. D569601, Bludworth Hull 8200
295' x 54' x 10.5' Unmanned Type II/III Tank Barge (D)
VCS Approval MSC letter C2-9703097 dated 23 September 1997

S/R 321, O.N. D573492, Dravo Hull 6974
S/R 322, O.N. D573493, Dravo Hull 6975
S/R 324, O.N. D573495, Dravo Hull 6977
297.5' x 54' x 12' Unmanned Type II/III Tank Barge (D)
S/R 323, O.N. D573494, Dravo Hull 6976
147.5' x 54' x 12' Unmanned Type II/III Tank Barge (D)
VCS Approval MSC letter M-20261 dated 26 March 1992

S/R 333, O.N. D573949, Ingalls Hull 1895
147' x 54' x 12' Unmanned Type II/III Tank Barge (D)
VCS Approval MSC letter MC-10060 dated 11 February 1991

S/R 334, O.N. D628787, Dravo Hull 8059
297.5' x 54' x 13' Unmanned Type II/III Tank Barge (D)
VCS Approval MSC letter C2-9703097 dated 23 September 1997

S/R 343, O.N. D575774, Dravo Hull 6559
147.5' x 53' x 12' Unmanned Type II/III Tank Barge (D)
VCS Approval MSC letter C-30331 dated 16 July 1993

S/R 351, O.N. D644981, Jeffboat Hull 81-2093
S/R 354, O.N. D649808, Jeffboat Hull 81-2096
S/R 361, O.N. D651024, Jeffboat Hull 81-2097
S/R 364, O.N. D651992, Jeffboat Hull 81-2100
297.5' x 54' x 12' Unmanned Type II/III Tank Barge (D)
VCS Approval MSC letter C2-9703095 dated 22 September 1997

S/R 391, O.N. D628786, Dravo Hull 7847
297.5' x 54' x 12' Unmanned Type II/III Tank Barge (D)
VCS Approval MSC letter C2-9703097 dated 23 September 1997

S/R 392, O.N. D557744, Dravo Hull 6374

297.5' x 54' x 12' Unmanned Type II/III Tank Barge (O/D)

S/R 393, O.N. D557745, Dravo Hull 6375

149' x 54' x 12' Unmanned Type II/III Tank Barge (D)

VCS Approval MSC letter C-30296 dated 14 July 1993

S/R 401; O.N. D1036925, Jeffboat Hull 95-2429

S/R 411; O.N. D1036926, Jeffboat Hull 95-2430

297.5' x 54' x 12' Unmanned Type II/III Tank Barge (O/D)

- VCS Approval MSC letter C2-9503007 dated 10 August 1995

List of MSC Tank Vessel and Offshore Division Folders
ENCLOSURE (2) To Marine Safety Center Letter C2-0100997, dated 28 March 2001

Jeff 1291

Jeff 96-2879 & 96-2880

Jeff 97-2104 & 97-2105

Jeff 99-2785 thru 99-2796

Jeff 98-2352 thru 98-2356

Jeff 98-2543

Jeff 99-2824 thru 98-2828

Inga 1668

Inga 1693

Blud 8200, 8300, 8400, 8500

Drav 6974-6977

Inga 1889-1896

Drav 6559

Jeff 81-2093, 2097

Jeff 81-2096, 2100

Blud 8000

Inga 1867

Drav 7847

Jeff 2429, 2430

Jeff 91-2527 thru 91-2536

Drav 6373-6376

Enclosure (2)

U.S. Department
of Transportation

United States
Coast Guard



Commanding Officer
United States Coast Guard
Marine Safety Center

400 7th Street S.W.
Washington, DC 20590-0001
Staff Symbol: MSC-3
Phone: (202) 366-6441
Fax: (202) 366-3877

16710/P003770
16710/JEFF 96-2879 and
96-2880, 97-2104 and
97-2105
Serial: C2-9703100
September 23, 1997

Mr. Eugene R. Seib
Jeffboat
P.O. Box 610
1030 East Market Street
Jeffersonville, IN 47130

Subj: S/R 5, O.N. CG1057375, JEFFBOAT Hull 96-2879
S/R 6, O.N. CG1057376, JEFFBOAT Hull 96-2880
S/R 7, O.N. CG1057377, JEFFBOAT Hull 97-2104
S/R 8, O.N. CG1057378, JEFFBOAT Hull 97-2105
195' x 35' x 12'-6" Unmanned Type II/III Tank Barge (O/D)
Grade A (max. 25 psia Reid) & Lower Grade Flammable &
Combustible Liquids & Specific Hazardous Cargoes
Maximum Cargo Density (slack load) 13.9 lbs/gal
Rivers; Lakes, Bays & Sounds; & Limited Coastwise on
unmanned fairweather voyages only, not more than 12 miles
offshore between St. Marks and Carrabelle, FL
Vapor Control System Modification

Ref: (a) Your letter of August 28, 1997

Dear Mr. Seib:

In response to your request in reference (a) we have reviewed the subject barges' vapor control systems (VCS) for compliance with 46 CFR Part 39, excluding Subpart 39.40. Enclosures (1) and (2) are returned marked "Approved". Installation, workmanship and testing shall be to the satisfaction of the cognizant Officer in Charge, Marine Inspection (OCMI). The following comments apply:

1. Based on your calculations, these VCSs have been designed to recover vapors of the flammable and combustible cargoes listed in enclosure (3) at a maximum vapor-air mixture density of 0.240 lbs/ft³ and a maximum liquid loading rate of 4,285 bbl/hr.
2. The barges' oil transfer procedures must be revised to include a table or graph showing the liquid transfer rate versus the pressure drop as required by 46 CFR 39.10(b)(3). This information must be taken from the calculations and tables approved in enclosure (2).

16710/P003770
16710/JEFF 96-2879 and
96-2880, 97-2104 and
97-2105
Serial: C2-9703100
September 23, 1997

Subj: S/R 5, O.N. CG1057375, JEFFBOAT Hull 96-2879, et al.
Vapor Control System Modification

3. A copy of this letter should be attached to the Certificate of Inspection (COI) to ensure it is available to Coast Guard inspectors and facility personnel. A vessel's owner is responsible for requesting that the OCMI endorse the COI to indicate those vapors with which the vapor control system may be used.

If we can be of further assistance, please contact Lieutenant Pat Keffler at the numbers listed above.

Sincerely,



R. K. HUNT
Lieutenant Commander, U.S. Coast Guard
Chief, Foreign Tank Vessel Branch
By direction of the Commanding Officer

- Encl: (1) Jeffboat Dwg No. B-14399, rev. 2, Vapor Recovery System Rake Double Skin Tank Barge
(2) Vapor Control System Calculations for Barges S/R 5, S/R 6, S/R 7 and S/R 8, revised 8/27/97
(3) VCS List of Cargoes for S/R 5, S/R 6, S/R 7 and S/R 8 revised 9/23/97

Vapor Control System List of Cargoes

 for: S/R 5, S/R 6, S/R 7, S/R 8, O.N. 1057375, 1057376, 1057377, 1057378, JEFFBOAT

Chemical Name	Chem Code	VCS Category	48 CFR Regulation
Acetone	ACT	1	30
Acetophenone	ACP	1	30
Amyl alcohol (iso-, n-, sec-, primary)	AAI	1	30
Aromatic resin feedstock	ARS	1	30
Brake fluid base mixtures (containing Poly(2-8)alkylene(C2-C3) glycols, Polyalkylene(C2-C10) glycol monoalkyl(C1-C3) ethers)	BFX	1	30
Butyl alcohol (iso-)	IAL	1	30
Butyl alcohol (n-)	BAN	1	30
Butyl alcohol (sec-)	BAS	1	30
Butyl alcohol (tert-)	BAT	1	30
Caprolactam solutions	CLS	1	30
Cyclohexanol	CHN	1	30
Decylbenzene (n-)	DBZ	1	30
Diacetone alcohol	DAA	1	30
Diethylene glycol	DEG	1	30
Diisobutyl ketone	DIK	1	30
Diocetyl phthalate	DOP	1	30
Dipropylene glycol	DPG	1	30
Distillates: Flashed feed stocks	DFF	1	30
Distillates: Straight run	DSR	1	30
Dodecylbenzene	DDB	1	30
Ethoxy triglycol (crude)	ETG	1	30
Ethyl acetate	ETA	1	30
Ethyl acetoacetate	EAA	1	30
Ethyl alcohol	EAL	1	30
Ethyl butanol	EBT	1	30
Ethylene glycol	EGL	1	30
Ethylene glycol phenyl ether	EPE	1	30
Ethyl propionate	EPR	1	30
Ethyl tert-butyl ether	EBE	1	30
Formamide	FAM	1	30
Gasoline blending stocks: Alkylates	GAK	1	30
Gasoline blending stocks: Reformates	GRF	1	30
Gasolines: Automotive (containing not over 4.23 grams lead per gallon)	GAT	1	30
Gasolines: Aviation (containing not over 4.86 grams of lead per gallon)	GAV	1	30
Gasolines: Casinghead (natural)	GCS	1	30
Gasolines: Polymer	GPL	1	30
Gasolines: Straight run	GSR	1	30
Glycerine	GCR	1	30
Heptanoic acid	HEP	1	30
Hexanoic acid	HXO	1	30
Hexanol	HXN	1	30
Hexylene glycol	HXG	4	30
Isophorone	IPH	1	30

Revised: 9/23/97

Coast Guard Marine Safety Center (MSC-3)

Page 1 of 6

ENCLOSURE (3)

Vapor Control System List of Cargoes

 for: S/R 5, S/R 6, S/R 7, S/R 8, O.N. 1057375, 1057376, 1057377, 1057378, JEFFBOAT

Chemical Name	Chem Code	VCS Category	46 CFR Regulation
Jet fuel: JP-4	JPF	1	30
Jet fuel: JP-5 (Kerosene, heavy)	JPV	1	30
Kerosene	KRS	1	30
Methyl acetate	MTT	1	30
Methyl alcohol	MAL	1	30
Methyl butyl ketone	MBK	1	30
Methyl butyrate	MBU	1	30
Methyl ethyl ketone	MEK	1	30
Methyl isobutyl ketone	MIK	1	30
Methyl naphthalene (molten)	MNA	1	30
Methyl tert-butyl ether	MBE	1	30
Mineral spirits	MNS	1	30
Naphtha: Solvent	NSV	1	30
Naphtha: Stoddard solvent	NSS	1	30
Naphtha: Varnish makers and painters (75%)	NVM	1	30
Octanoic acid (all isomers)	OAY	1	30
Oil, fuel: No. 2	OTW	1	30
Oil, fuel: No. 4	OFR	1	30
Oil, fuel: No. 5	OFV	1	30
Oil, fuel: No. 6	OSX	1	30
Oil, misc: Crude	OIL	1	30
Oil, misc: Diesel	ODS	1	30
Oil, misc: Lubricating	OLB	1	30
Oil, misc: Turbine	OTB	1	30
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether	PAG	1	30
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate	PAF	1	30
Polybutene	PLB	1	30
Polypropylene glycol	PGC	1	30
iso-Propyl acetate	IAC	1	30
n-Propyl acetate	PAT	1	30
iso-Propyl alcohol	IPA	1	30
n-Propyl alcohol	PAL	1	30
Propylene glycol	PPG	1	30
Propylene glycol methyl ether acetate	PGN	1	30
Sulfolane	SFL	1	30
Tetradecanol	TTN	1	30
Tetraethylene glycol	TTG	1	30
Tetrahydronaphthalene	THN	1	30
Triethylene glycol	TEG	1	30
Triethyl phosphate	TPS	1	30
Alcohol(C12-C15) poly(1-6)ethoxylates	APU	1	30/153
Alcohol(C6-C17)(secondary) poly(7-12)ethoxylates	AEB	1	30/153
Amyl acetate (all isomers)	AEC	1	30/153
Benzyl alcohol	BAL	1	30/153

Revised: 9/23/97

Coast Guard Marine Safety Center (MSC-3)

Page 2 of 6

Vapor Control System List of Cargoes

 for: S/R 5, S/R 6, S/R 7, S/R 8, O.N. 1057375, 1057376, 1057377, 1057378, JEFFBOAT

Chemical Name	Chem Code	VCS Category	46 CFR Regulation
Butyl acetate (all isomers)	BAX	1	30/153
Butyl benzyl phthalate	BPH	1	30/153
Butyl toluene	BUE	1	30/153
Cyclohexane	CHX	1	30/153
1,3-Cyclopentadiene dimer (molten)	CPD	2	30/153
p-Cymene	CMP	1	30/153
iso-Decaldehyde	IDA	1	30/153
n-Decaldehyde	DAL	1	30/153
Decene	DCE	1	30/153
Decyl alcohol (all isomers)	DAX	1	30/153
ortho-Dibutyl phthalate	DPA	1	30/153
Diethylbenzene	DEB	1	30/153
Diisobutylene	DBL	1	30/153
Diisopropylbenzene (all isomers)	DIX	1	30/153
Dimethyl phthalate	DTL	1	30/153
Dipentene	DPN	1	30/153
Diphenyl	DIL	1	30/153
Diphenyl, Diphenyl ether mixtures	DDO	1	30/153
Diphenyl ether	DPE	1	30/153
Dodecene (all isomers)	DOZ	1	30/153
2-Ethoxyethyl acetate	EEA	1	30/153
Ethylbenzene	ETB	1	30/153
Ethyl butyrate	EBR	1	30/153
Ethylcyclohexane	ECY	1	30/153
Ethylene glycol butyl ether acetate	EMA	1	30/153
Ethylene glycol diacetate	EGY	1	30/153
Ethyl-3-ethoxypropionate	EEP	1	30/153
Ethyl toluene	ETE	1	30/153
Furfuryl alcohol	FAL	1	30/153
Heptane (all isomers)	HMX	1	30/153
Heptanol (all isomers)	HTX	1	30/153
Heptene (all isomers)	HPX	2	30/153
Heptyl acetate	HPE	1	30/153
Hexane (all isomers)	HXS	1	30/153
Hexene (all isomers)	HEX	2	30/153
Methyl amyl acetate	MAC	1	30/153
Methyl amyl alcohol	MAA	1	30/153
Methyl heptyl ketone	MHK	1	30/153
Myrcene	MRE	1	30/153
Nonane (all isomers)	NAX	1	30/153
Nonene (all isomers)	NON	2	30/153
Nonyl alcohol (all isomers)	NNS	1	30/153
Nonyl phenol	NNP	1	30/153
Nonyl phenol poly(4-12)ethoxylates	NPE	1	30/153

Revised: 9/23/97

Coast Guard Marine Safety Center (MSC-3)

Page 3 of 6

Vapor Control System List of Cargoes

 for: S/R 5, S/R 6, S/R 7, S/R 8, O.N. 1057375, 1057376, 1057377, 1057378, JEFFBOAT

Chemical Name	Chem Code	VCS Category	48 CFR Regulation
Octane (all isomers)	OAX	1	30/153
Octanol (all isomers)	OCX	1	30/153
Octene (all isomers)	OTX	2	30/153
alpha-Pinene	PIO	1	30/153
beta-Pinene	PIP	1	30/153
Propylbenzene (all isomers)	PBY	1	30/153
iso-Propylcyclohexane	IPX	1	30/153
Propylene tetramer	PTT	1	30/153
Toluene	TOL	1	30/153
Tricresyl phosphate (less than 1% of the ortho isomer)	TCP	1	30/153
Triethylbenzene	TEB	1	30/153
Trimethylbenzene (all isomers)	TRE	1	30/153
Trixylenyl phosphate	TRP	1	30/153
1-Undecene	UDC	1	30/153
1-Undecyl alcohol	UND	1	30/153
Xylenes (ortho-, meta-, para-)	XLX	1	30/153
Benzene	BNZ	1	151
Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)	BHA	1	151
Creosote (all isomers)	CCW	1	151
Cresylic acid tar	CRX	1	151
Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein)	CHG	1	151
Cyclopentadiene, Styrene, Benzene mixture	CSB	1	151
Ethylene glycol propyl ether	EGP	1	151
Hydrocarbon 5-9	HFN	1	151
alpha-Methylstyrene	MSR	2	151
Styrene (crude)	STX	2	151
1,2,4-Trichlorobenzene	TCB	1	153
Acetonitrile	ATN	3	151/153
Acrylonitrile	ACN	4	151/153
Adiponitrile	ADN	1	151/153
Aminoethylethanolamine	AEE	1	151/153
Benzene or hydrocarbon mixtures (having 10% Benzene or more)	BHB	1	151/153
Benzene, Toluene, Xylene mixtures (10% Benzene or more)	BTX	1	151/153
Butyl acrylate (all isomers)	BAR	2	151/153
Butyl methacrylate	BMH	2	151/153
Butyraldehyde (all isomers)	BAE	1	151/153
Chlorobenzene	CRB	1	151/153
Coal tar naphtha solvent	NCT	1	151/153
Cresols (all isomers)	CRS	1	151/153
Crotonaldehyde	CTA	4	151/153
Cyclohexanone	CCH	1	151/153
Cyclohexylamine	CHA	1	151/153
Dichlorobenzene (all isomers)	DBX	3	151/153

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Vapor Control System List of Cargoes

 for: S/R 5, S/R 6, S/R 7, S/R 8, O.N. 1057375, 1057376, 1057377, 1057378, JEFFBOAT

Chemical Name	Chem Code	VCS Category	46 CFR Regulation
1,1-Dichloroethane	DCH	1	151/153
2,2-Dichloroethyl ether	DEE	1	151/153
1,1-Dichloropropane	DPB	3	151/153
1,2-Dichloropropane	DPP	3	151/153
1,3-Dichloropropane	DPC	3	151/153
1,3-Dichloropropene	DPU	4	151/153
Dichloropropene, Dichloropropane mixtures	DMX	1	151/153
Diethanolamine	DEA	1	151/153
Diethylamine	DEN	3	151/153
Diethylenetriamine	DET	1	151/153
Diisobutylamine	DBU	3	151/153
Diisopropanolamine	DIP	1	151/153
Diisopropylamine	DIA	3	151/153
N,N-Dimethylacetamide	DAC	3	151/153
Dimethylethanolamine	DMB	1	151/153
Dimethylformamide	DMF	1	151/153
Di-n-propylamine	DNA	3	151/153
Ethanolamine	MEA	1	151/153
Ethyl acrylate	EAC	2	151/153
Ethylamine solution (72% or less)	EAN	6	151/153
N-Ethylbutylamine	EBA	3	151/153
N-Ethylcyclohexylamine	ECC	1	151/153
Ethylene cyanohydrin	ETC	1	151/153
Ethylenediamine	EDA	1	151/153
Ethylene dichloride	EDC	1	151/153
Ethylene dichloride, 1,1,2-Trichloroethane mixture	ETX	1	151/153
Ethylene glycol monoalkyl ethers	EGC	1	151/153
2-Ethylhexyl acrylate	EAI	2	151/153
Ethyl methacrylate	ETM	2	151/153
2-Ethyl-3-propylacrolein	EPA	1	151/153
Formaldehyde solution (37% to 50%)	FMS	1	151/153
Furfural	FFA	1	151/153
Hexamethylenediamine solution	HMC	1	151/153
Hexamethyleneimine	HMI	1	151/153
Mesityl oxide	MSO	1	151/153
Methyl acrylate	MAM	2	151/153
Methylcyclopentadiene dimer	MCK	1	151/153
Methyl diethanolamine	MDE	1	151/153
2-Methyl-5-ethylpyridine	MEP	1	151/153
Methyl methacrylate	MMM	2	151/153
2-Methylpyridine	MPR	3	151/153
Morpholine	MPL	1	151/153
1- or 2-Nitropropane	NPM	1	151/153
1,3-Pentadiene	PDE	7	151/153

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Vapor Control System List of Cargoes

 for: S/R 5, S/R 6, S/R 7, S/R 8, O.N. 1057375, 1057376, 1057377, 1057378, JEFFBOAT

Chemical Name	Chem Code	VCS Category	46 CFR Regulation
Polyethylene polyamines	PEB	1	151/153
iso-Propanolamine	MPA	1	151/153
Propanolamine (iso-, n-)	PAX	1	151/153
Pyridine	PRD	1	151/153
Styrene monomer	STY	2	151/153
Tetraethylenepentamine	TTP	1	151/153
Tetrahydrofuran	THF	1	151/153
1,1,2-Trichloroethane	TCM	1	151/153
Trichloroethylene	TCL	1	151/153
1,2,3-Trichloropropane	TCN	3	151/153
Triethanolamine	TEA	1	151/153
Triethylamine	TEN	3	151/153
Triethylenetetramine	TET	1	151/153
Vinyl acetate	VAM	2	151/153
Vinytoluene	VNT	2	151/153

Vapor Control System Categories

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 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: (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.