



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

Certification Date: 06 Feb 2024
Expiration Date: 06 Feb 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	Official Number	IMO Number	Call Sign	Service		
CCL 402	1219910			Tank Barge		
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
HOUSTON, TX	11Aug2009	18Mar2009	R-1754	R-1754		R-297.5
UNITED STATES			I-	I-		I-0
Owner	Operator					
CHEM CARRIERS LLC 1237 HIGHWAY 75 SUNSHINE, LA 70780 UNITED STATES	CHEM CARRIERS LLC 1237 HIGHWAY 75 SUNSHINE, LA 70780 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---						
Also, in fair weather only, not more than twelve (12) miles from shore between St. Marks and Carrabelle, Florida.						
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 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 Baton Rouge, LA, UNITED STATES, the Officer in Charge, Marine Inspection, New Orleans, LA 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: <i>M. J. Novak</i>		
Date	Zone	A/P/R	Signature	M. J. NOVAK CDR, USCG, by direction		
23 APR 25	BATU	A	<i>M. J. Novak</i>	Officer in Charge, Marine Inspection		
				New Orleans, LA		
				Inspection Zone		



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Date	Zone	A/P/R	Signature	



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Certificate of Inspection

Vessel Name: CCL 402

---Hull Exams---

Exam Type	Next Exam	Last Exam	Prior Exam
DryDock	30Apr2029	17Apr2019	11Aug2009
Internal Structure	28Feb2029	06Feb2024	17Apr2019

--- 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
32654	Barrels	A	Yes	No	No

Hazardous Bulk Solids Authority

Not Authorized

Loading Constraints - Structural

Tank Number	Max Cargo Weight per Tank (short tons)	Maximum Density (lbs/gal)
1	865	8.74
2	874	8.74
3	811	8.74

Loading Constraints - Stability

Hull Type	Maximum Load (short tons)	Maximum Draft (ft/in)	Max Density (lbs/gal)	Route Description
II	4441	11ft 2in	15.00	L,B,S
III	4858	12ft 0in	15.00	L,B,S

Conditions Of Carriage

Only those cargoes named in the vessel's Cargo Authority Attachment (CAA), serial #C1-0901093 dated 07Apr09, may be carried and then only in the tanks indicated.

Per 46 CFR 150.130, the Person in Charge of the barge (vessel) 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 numbers from the "Compat Group No" column listed in the vessel's CAA.

When the vessel is carrying cargoes containing greater than 0.5% benzene, the Person In Charge is responsible for ensuring the provisions of 46 CFR 197, Subpart C are applied.

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 tank cargo weight by at most 5 percent.

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 15 lbs/gal may be carried as slack loads, but shall not exceed the tank weight limits as listed above.

Vapor Control Authorization

Per 46 CFR 39, excluding part 39.40, this vessel's vapor control system has been inspected to the plans approved by Marine Safety Center letters Serial #C1-0801310 dated 29Apr08 and Serial #C1-0803448 dated 21Nov08, and found acceptable for collection of bulk liquid cargo vapors annotated with "Yes" in the CAA's VCS column.



Certificate of Inspection

Vessel Name: CCL 402

In accordance with 46 CFR Part 39.1017 and 39.5001(e) 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

Tank Id	Internal Exam			External Exam		
	Previous	Last	Next	Previous	Last	Next
1	11Aug2009	21May2019	31May2029	-	-	-
2	11Aug2009	21May2019	31May2029	-	-	-
3	11Aug2009	21May2019	31May2029	-	-	-

Hydro Test

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

---Conditional Portable Fire Extinguisher Requirements---

Required Only During Transfer of Cargo or Operation of Barge Machinery

--- Fire Fighting Equipment ---

Number of Fireman Outfits - 0

Fire Extinguishers - Hand portable and semi-portable

Quantity	Class Type
2	40-B

END



Department of Homeland Security
United States Coast Guard

Serial #: C1-0901093

Dated: 07-Apr-09

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CCL 402

Official #: 1219910

Shipyard: SOUTHWEST
SHIPYARD

Hull #: 9573

46 CFR 151 Tank Group Characteristics

Tank Group Information		Cargo Identification			Hull Type	Cargo Seg Tank	Tanks			Cargo Transfer		Environmental Control		Fire Protection Provided	Special Requirements		Elec Haz	Temp Cont
Tnk Grp	Tanks in Group	Density	Press.	Temp.			Type	Vent	Gauge	Pipe Class	Cont	Tanks	Handling Space		General	Materials of Construction		
A	#1P/S, #2P/S, #3P/S	15	Atmos.	Amb.	II	1ii 2ii	Integral Gravity	PV	Closed	II	G-1	NR	NA	Portable	.50-60, .50-70(a), .50-70(b), .50-73, .50-81(b),	55-1(b), (c), (e), (f), (j), 56-1(a), (b), (c), (d), (e), (f), (a),	NR	No

Notes: 1. Under Environmental Control, Tanks, NR means that the tank group is suitable only for those cargoes which require no environmental control in the cargo tanks.
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 Identification							Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period	
							App'd (Y or N)	VCS Category			
Authorized Subchapter O Cargoes											
Acetonitrile	ATN	37	O	C	III	A	Yes	3	No	G	
Acrylonitrile	ACN	15 ²	O	C	II	A	Yes	4	.50-70(a), .55-1(e)	G	
Adiponitrile	ADN	37	O	E	II	A	Yes	1	No	G	
Alkyl(C7-C9) nitrates	AKN	34 ²	O	NA	III	A	No	N/A	.50-81, .50-86	G	
Aminoethylethanolamine	AEE	8	O	E	III	A	Yes	1	.55-1(b)	G	
Ammonium bisulfite solution (70% or less)	ABX	43 ²	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b), (c)	G	
Ammonium hydroxide (28% or less NH3)	AMH	6	O	NA	III	A	No	N/A	.56-1(a), (b), (c), (f), (g)	G	
Anthracene oil (Coal tar fraction)	AHO	33	O	NA	II	A	No	N/A	No	G	
Benzene	BNZ	32	O	C	III	A	Yes	1	.50-60	G	
Benzene or hydrocarbon mixtures (having 10% Benzene or more)	BHB	32 ²	O	C	III	A	Yes	1	.50-60	G	
Benzene or hydrocarbon mixtures (containing Acetylene and 10% Benzene or more)	BHA	32 ²	O	C	III	A	Yes	1	.50-60, .56-1(b), (d), (f), (g)	G	
Benzene, Toluene, Xylene mixtures (10% Benzene or more)	BTX	32	O	B/C	III	A	Yes	1	.50-60	G	
Butyl acrylate (all isomers)	BAR	14	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Butyl methacrylate	BMH	14	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Butyraldehyde (all isomers)	BAE	19	O	C	III	A	Yes	1	.55-1(h)	G	
Camphor oil (light)	CPO	18	O	D	II	A	No	N/A	No	G	
Carbon tetrachloride	CBT	36	O	NA	III	A	No	N/A	No	G	
Caustic potash solution	CPS	5 ²	O	NA	III	A	No	N/A	.50-73, .55-1(j)	G	
Caustic soda solution	CSS	5 ²	O	NA	III	A	No	N/A	.50-73, .55-1(j)	G	
Chemical Oil (refined, containing phenolics)	COD	21	O	E	II	A	No	N/A	.50-73	G	
Chlorobenzene	CRB	36	O	D	III	A	Yes	1	No	G	
Chloroform	CRF	36	O	NA	III	A	Yes	3	No	G	
Coal tar naphtha solvent	NCT	33	O	D	III	A	Yes	1	.50-73	G	
Creosote	CCW	21 ²	O	E	III	A	Yes	1	No	G	
Cresols (all isomers)	CRS	21	O	E	III	A	Yes	1	No	G	
Cresylate spent caustic	CSC	5	O	NA	III	A	No	N/A	.50-73, .55-1(b)	G	
Cresylic acid tar	CRX		O	E	III	A	Yes	1	.55-1(f)	G	
Crotonaldehyde	CTA	19 ²	O	C	II	A	Yes	4	.55-1(h)	G	
Crude hydrocarbon feedstock (containing Butyraldehydes and Ethylpropyl acrolein)	CHG		O	C	III	A	No	N/A	No	G	
Cyclohexanone	CCH	18	O	D	III	A	Yes	1	.56-1(a), (b)	G	
Cyclohexanone, Cyclohexanol mixture	CYX	18 ²	O	E	III	A	Yes	1	.56-1(b)	G	
Cyclohexylamine	CHA	7	O	D	III	A	Yes	1	.56-1(a), (b), (c), (g)	G	
Cyclopentadiene, Styrene, Benzene mixture	CSB	30	O	D	III	A	Yes	1	.50-60, .56-1(b)	G	
iso-Decyl acrylate	IAI	14	O	E	III	A	Yes	2	.50-70(a), .50-81(a), (b), .55-1(c)	G	

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Shipyard: SOUTHWEST
SHIPYARD

Official #: 1219910

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Hull #: 9573

Cargo Identification							Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'l's of .56-1(a), (b)	Insp. Period	
							App'd (Y or N)	VCS Category			
Dichlorobenzene (all isomers)	DBX	36	O	E	III	A	Yes	3	No	G	
1,1-Dichloroethane	DCH	36	O	C	III	A	Yes	1	No	G	
2,2'-Dichloroethyl ether	DEE	41	O	D	II	A	Yes	1	.55-1(f)	G	
Dichloromethane	DCM	36	O	NA	III	A	Yes	5	No	G	
2,4-Dichlorophenoxyacetic acid, diethanolamine salt solution	DDE	43	O	E	III	A	No	N/A	.56-1(a), (b), (c), (g)	G	
2,4-Dichlorophenoxyacetic acid, dimethylamine salt solution	DAD	0 1,2	O	A	III	A	No	N/A	.56-1(a), (b), (c), (g)	G	
2,4-Dichlorophenoxyacetic acid, triisopropanolamine salt solution	DTI	43 2	O	E	III	A	No	N/A	.56-1(a), (b), (c), (g)	G	
1,1-Dichloropropane	DPB	36	O	C	III	A	Yes	3	No	G	
1,2-Dichloropropane	DPP	36	O	C	III	A	Yes	3	No	G	
1,3-Dichloropropane	DPC	36	O	C	III	A	Yes	3	No	G	
1,3-Dichloropropene	DPU	15	O	D	II	A	Yes	4	No	G	
Dichloropropene, Dichloropropane mixtures	DMX	15	O	C	II	A	Yes	1	No	G	
Diethanolamine	DEA	8	O	E	III	A	Yes	1	.55-1(c)	G	
Diethylamine	DEN	7	O	C	III	A	Yes	3	.55-1(c)	G	
Diethylenetriamine	DET	7 2	O	E	III	A	Yes	1	.55-1(c)	G	
Diisobutylamine	DBU	7	O	D	III	A	Yes	3	.55-1(c)	G	
Diisopropanolamine	DIP	8	O	E	III	A	Yes	1	.55-1(c)	G	
Diisopropylamine	DIA	7	O	C	II	A	Yes	3	.55-1(c)	G	
N,N-Dimethylacetamide	DAC	10	O	E	III	A	Yes	3	.56-1(b)	G	
Dimethylethanolamine	DMB	8	O	D	III	A	Yes	1	.56-1(b), (c)	G	
Dimethylformamide	DMF	10	O	D	III	A	Yes	1	.55-1(e)	G	
Di-n-propylamine	DNA	7	O	C	II	A	Yes	3	.55-1(c)	G	
Dodecylmethylamine, Tetradecyldimethylamine mixture	DOT	7	O	E	III	A	No	N/A	.56-1(b)	G	
Dodecyl diphenyl ether disulfonate solution	DOS	43	O	#	II	A	No	N/A	No	G	
EE Glycol Ether Mixture	EEG	40	O	D	III	A	No	N/A	No	G	
Ethanolamine	MEA	8	O	E	III	A	Yes	1	.55-1(c)	G	
Ethyl acrylate	EAC	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Ethylamine solution (72% or less)	EAN	7	O	A	II	A	No	N/A	.55-1(b)	G	
N-Ethylbutylamine	EBA	7	O	D	III	A	Yes	3	.55-1(b)	G	
N-Ethylcyclohexylamine	ECC	7	O	D	III	A	Yes	1	.55-1(b)	G	
Ethylene cyanohydrin	ETC	20	O	E	III	A	Yes	1	No	G	
Ethylenediamine	EDA	7 2	O	D	III	A	Yes	1	.55-1(c)	G	
Ethylene dichloride	EDC	36 2	O	C	III	A	Yes	1	No	G	
Ethylene glycol hexyl ether	EGH	40	O	E	III	A	No	N/A	No	G	
Ethylene glycol monoalkyl ethers	EGC	40	O	D/E	III	A	Yes	1	No	G	
Ethylene glycol propyl ether	EGP	40	O	E	III	A	Yes	1	No	G	
2-Ethylhexyl acrylate	EAI	14	O	E	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Ethyl methacrylate	ETM	14	O	D/E	III	A	Yes	2	.50-70(a)	G	
2-Ethyl-3-propylacrolein	EPA	19 2	O	E	III	A	Yes	1	No	G	
Formaldehyde solution (37% to 50%)	FMS	19 2	O	D/E	III	A	Yes	1	.55-1(h)	G	
Furfural	FFA	19	O	D	III	A	Yes	1	.55-1(h)	G	
Glutaraldehyde solution (50% or less)	GTA	19	O	NA	III	A	No	N/A	No	G	
Hexamethylenediamine solution	HMC	7	O	E	III	A	Yes	1	.55-1(c)	G	
Hexamethyleneimine	HMI	7	O	C	II	A	Yes	1	.56-1(b), (c)	G	
Hydrocarbon 5-9	HFN		O	C	III	A	Yes	1	.50-70(a), .50-81(a), (b)	G	
Isoprene	IPR	30	O	A	III	A	No	N/A	.50-70(a), .50-81(a), (b)	G	
Isoprene, Pentadiene mixture	IPN		O	B	III	A	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	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c), (g)	G	
Mesityl oxide	MSO	18 2	O	D	III	A	Yes	1	No	G	
Methyl acrylate	MAM	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	

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							App'd (Y or N)	VCS Category			
Methylcyclopentadiene dimer	MCK	30	O	C	III	A	Yes	1	.56-1(b), (c)	G	
Methyl diethanolamine	MDE	8	O	E	III	A	Yes	1	.55-1(e)	G	
2-Methyl-5-ethylpyridine	MEP	9	O	E	III	A	Yes	1	.55-1(e)	G	
Methyl methacrylate	MMM	14	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
2-Methylpyridine	MPR	9	O	D	III	A	Yes	3	.55-1(c)	G	
alpha-Methylstyrene	MSR	30	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Morpholine	MPL	7 2	O	D	III	A	Yes	1	.55-1(c)	G	
1- or 2-Nitropropane	NPM	42	O	D	III	A	Yes	1	.50-81	G	
Pentachloroethane	PCE	36	O	NA	III	A	No	N/A	No	G	
1,3-Pentadiene	PDE	30	O	A	III	A	No	N/A	.50-70(a), .50-81	G	
Perchloroethylene	PER	36	O	NA	III	A	No	N/A	No	G	
Polyethylene polyamines	PEB	7 2	O	E	III	A	Yes	1	.55-1(e)	G	
iso-Propanolamine	MPA	8	O	E	III	A	Yes	1	.55-1(c)	G	
Propanolamine (iso-, n-)	PAX	8	O	E	III	A	Yes	1	.56-1(b), (c)	G	
iso-Propylamine	IPP	7	O	A	II	A	Yes	5	.55-1(c)	G	
Pyridine	PRD	9	O	C	III	A	Yes	1	.55-1(e)	G	
Sodium acetate, Glycol, Water mixture (3% or more Sodium Hydroxide)	SAP		O		III	A	No	N/A	.50-73, .55-1(j)	G	
Sodium aluminate solution (45% or less)	SAU	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b), (c)	G	
Sodium chlorate solution (50% or less)	SDD	0 1,2	O	NA	III	A	No	N/A	.50-73	G	
Sodium hypochlorite solution (20% or less)	SHQ	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (b)	G	
Sodium sulfide, hydrosulfide solution (H2S 15 ppm or less)	SSH	0 1,2	O	NA	III	A	Yes	1	.50-73, .55-1(b)	G	
Sodium sulfide, hydrosulfide solution (H2S greater than 15 ppm but less than 200 ppm)	SSI	0 1,2	O	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	O	NA	II	A	No	N/A	.50-73, .55-1(b)	G	
Styrene (crude)	STX		O	D	III	A	Yes	2	No	G	
Styrene monomer	STY	30	O	D	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
1,1,2,2-Tetrachloroethane	TEC	36	O	NA	III	A	No	N/A	No	G	
Tetraethylenepentamine	TTP	7	O	E	III	A	Yes	1	.55-1(c)	G	
Tetrahydrofuran	THF	41	O	C	III	A	Yes	1	.50-70(b)	G	
Toluediamine	TDA	9	O	E	II	A	No	N/A	.50-73, .56-1(a), (b), (c), (g)	G	
1,2,4-Trichlorobenzene	TCB	36	O	E	III	A	Yes	1	No	G	
1,1,2-Trichloroethane	TCM	36	O	NA	III	A	Yes	1	.50-73, .56-1(a)	G	
Trichloroethylene	TCL	36 2	O	NA	III	A	Yes	1	No	G	
1,2,3-Trichloropropane	TCN	36	O	E	II	A	Yes	3	.50-73, .56-1(a)	G	
Triethanolamine	TEA	8 2	O	E	III	A	Yes	1	.55-1(b)	G	
Triethylamine	TEN	7	O	C	II	A	Yes	3	.55-1(e)	G	
Triethylenetetramine	TET	7 2	O	E	III	A	Yes	1	.55-1(b)	G	
Triphenylborane (10% or less), caustic soda solution	TPB	5	O	NA	III	A	No	N/A	.56-1(a), (b), (c)	G	
Trisodium phosphate solution	TSP	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c)	G	
Urea, Ammonium nitrate solution (containing more than 2% NH3)	UAS	6	O	NA	III	A	No	N/A	.56-1(b)	G	
Vanillin black liquor (free alkali content, 3% or more).	VBL	5	O	NA	III	A	No	N/A	.50-73, .56-1(a), (c), (g)	G	
Vinyl acetate	VAM	13	O	C	III	A	Yes	2	.50-70(a), .50-81(a), (b)	G	
Vinyl neodecanate	VND	13	O	E	III	A	No	N/A	.50-70(a), .50-81(a), (b)	G	
Vinyltoluene	VNT	13	O	D	III	A	Yes	2	.50-70(a), .50-81, .56-1(a), (b), (c), (f)	G	

Subchapter D Cargoes Authorized for Vapor Control

Acetone	ACT	18 ²	D	C	A	Yes	1
Acetophenone	ACP	18	D	E	A	Yes	1
Alcohol(C12-C16) poly(1-6)ethoxylates	APU	20	D	E	A	Yes	1
Alcohol(C6-C17)(secondary) poly(7-12)ethoxylates	AEB	20	D	E	A	Yes	1

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Department of Homeland Security
United States Coast Guard

Serial #: C1-0901093

Dated: 07-Apr-09

Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CCL 402

Shipyard: SOUTHWEST
SHIPYARD

Official #: 1219910

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Hull #: 9573

Cargo Identification							Conditions of Carriage			
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'l's of	Insp. Period
							App'd (Y or N)	VCS Category		
Amyl acetate (all isomers)	AEC	34	D	D		A	Yes	1		
Amyl alcohol (iso-, n-, sec-, primary)	AAI	20	D	D		A	Yes	1		
Benzyl alcohol	BAL	21	D	E		A	Yes	1		
Brake fluid base mixtures (containing Poly(2-8)alkylene(C2-C3) glycols, Polyalkylene(C2-C10) glycol monoalkyl(C1-C4) ethers, and their borate esters)	BFX	20	D	E		A	Yes	1		
Butyl acetate (all isomers)	BAX	34	D	D		A	Yes	1		
Butyl alcohol (iso-)	IAL	20 ²	D	D		A	Yes	1		
Butyl alcohol (n-)	BAN	20 ²	D	D		A	Yes	1		
Butyl alcohol (sec-)	BAS	20 ²	D	C		A	Yes	1		
Butyl alcohol (tert-)	BAT		D	C		A	Yes	1		
Butyl benzyl phthalate	BPH	34	D	E		A	Yes	1		
Butyl toluene	BUE	32	D	D		A	Yes	1		
Caprolactam solutions	CLS	22	D	E		A	Yes	1		
Cyclohexane	CHX	31	D	C		A	Yes	1		
Cyclohexanol	CHN	20	D	E		A	Yes	1		
1,3-Cyclopentadiene dimer (molten)	CPD	30	D	D/E		A	Yes	2		
p-Cymene	CMP	32	D	D		A	Yes	1		
iso-Decaldehyde	IDA	19	D	E		A	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 ²	D	E		A	Yes	1		
n-Decylbenzene, see Alkyl(C9+)benzenes	DBZ	32	D	E		A	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 ²	D	E		A	Yes	1		
Diisobutylene	DBL	30	D	C		A	Yes	1		
Diisobutyl ketone	DIK	18	D	D		A	Yes	1		
Diisopropylbenzene (all isomers)	DIX	32	D	E		A	Yes	1		
Dimethyl phthalate	DTL	34	D	E		A	Yes	1		
Dioctyl phthalate	DOP	34	D	E		A	Yes	1		
Dipentene	DPN	30	D	D		A	Yes	1		
Diphenyl	DIL	32	D	D/E		A	Yes	1		
Diphenyl, Diphenyl ether mixtures	DDO	33	D	E		A	Yes	1		
Diphenyl ether	DPE	41	D	(E)		A	Yes	1		
Dipropylene glycol	DPG	40	D	E		A	Yes	1		
Distillates: Flashed feed stocks	DFF	33	D	E		A	Yes	1		
Distillates: Straight run	DSR	33	D	E		A	Yes	1		
Dodecene (all isomers)	DOZ	30	D	D		A	Yes	1		
Dodecylbenzene, see Alkyl(C9+)benzenes	DDB	32	D	E		A	Yes	1		
2-Ethoxyethyl acetate	EEA	34	D	D		A	Yes	1		
Ethoxy triglycol (crude)	ETG	40	D	E		A	Yes	1		
Ethyl acetate	ETA	34	D	C		A	Yes	1		
Ethyl acetoacetate	EAA	34	D	E		A	Yes	1		
Ethyl alcohol	EAL	20 ²	D	C		A	Yes	1		
Ethylbenzene	ETB	32	D	C		A	Yes	1		
Ethyl butanol	EBT	20	D	D		A	Yes	1		
Ethyl tert-butyl ether	EBE	41	D	C		A	Yes	1		
Ethyl butyrate	EBR	34	D	D		A	Yes	1		
Ethyl cyclohexane	ECY	31	D	D		A	Yes	1		

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Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CCL 402

Shipyard: SOUTHWEST
SHIPYARD

Official #: 1219910

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Hull #: 9573

Cargo Identification							Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'l's of	Insp. Period	
							App'd (Y or N)	VCS Category			
Ethylene glycol	EGL	20 ²	D	E		A	Yes	1			
Ethylene glycol butyl ether acetate	EMA	34	D	E		A	Yes	1			
Ethylene glycol diacetate	EGY	34	D	E		A	Yes	1			
Ethylene glycol phenyl ether	EPE	40	D	E		A	Yes	1			
Ethyl-3-ethoxypropionate	EEP	34	D	D		A	Yes	1			
2-Ethylhexanol	EHX	20	D	E		A	Yes	1			
Ethyl propionate	EPR	34	D	C		A	Yes	1			
Ethyl toluene	ETE	32	D	D		A	Yes	1			
Formamide	FAM	10	D	E		A	Yes	1			
Furfuryl alcohol	FAL	20 ²	D	E		A	Yes	1			
Gasoline blending stocks: Alkylates	GAK	33	D	A/C		A	Yes	1			
Gasoline blending stocks: Reformates	GRF	33	D	A/C		A	Yes	1			
Gasolines: Automotive (containing not over 4.23 grams lead per gallon)	GAT	33	D	C		A	Yes	1			
Gasolines: Aviation (containing not over 4.86 grams of lead per gallon)	GAV	33	D	C		A	Yes	1			
Gasolines: Casinghead (natural)	GCS	33	D	A/C		A	Yes	1			
Gasolines: Polymer	GPL	33	D	A/C		A	Yes	1			
Gasolines: Straight run	GSR	33	D	A/C		A	Yes	1			
Glycerine	GCR	20 ²	D	E		A	Yes	1			
Heptane (all isomers), see Alkanes (C6-C9) (all isomers)	HMX	31	D	C		A	Yes	1			
Heptanoic acid	HEP	4	D	E		A	Yes	1			
Heptanol (all isomers)	HTX	20	D	D/E		A	Yes	1			
Heptene (all isomers)	HPX	30	D	C		A	Yes	2			
Heptyl acetate	HPE	34	D	E		A	Yes	1			
Hexane (all isomers), see Alkanes (C6-C9)	HXS	31 ²	D	B/C		A	Yes	1			
Hexanoic acid	HXO	4	D	E		A	Yes	1			
Hexanol	HXN	20	D	D		A	Yes	1			
Hexene (all isomers)	HEX	30	D	C		A	Yes	2			
Hexylene glycol	HXG	20	D	E		A	Yes	1			
Isophorone	IPH	18 ²	D	E		A	Yes	1			
Jet fuel: JP-4	JPF	33	D	E		A	Yes	1			
Jet fuel: JP-5 (kerosene, heavy)	JPV	33	D	D		A	Yes	1			
Kerosene	KRS	33	D	D		A	Yes	1			
Methyl acetate	MTT	34	D	D		A	Yes	1			
Methyl alcohol	MAL	20 ²	D	C		A	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		A	Yes	1			
Methyl tert-butyl ether	MBE	41 ²	D	C		A	Yes	1			
Methyl butyl ketone	MBK	18	D	C		A	Yes	1			
Methyl butyrate	MBU	34	D	C		A	Yes	1			
Methyl ethyl ketone	MEK	18 ²	D	C		A	Yes	1			
Methyl heptyl ketone	MHK	18	D	D		A	Yes	1			
Methyl isobutyl ketone	MIK	18 ²	D	C		A	Yes	1			
Methyl naphthalene (molten)	MNA	32	D	E		A	Yes	1			
Mineral spirits	MNS	33	D	D		A	Yes	1			
Myrcene	MRE	30	D	D		A	Yes	1			
Naphtha: Heavy	NAG	33	D	#		A	Yes	1			
Naphtha: Petroleum	PTN	33	D	#		A	Yes	1			
Naphtha: Solvent	NSV	33	D	D		A	Yes	1			

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Cargo Authority Attachment

Vessel Name: CCL 402

Shipyard: SOUTHWEST
SHIPYARD

Official #: 1219910

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Hull #: 9573

Cargo Identification							Conditions of Carriage				
Name	Chem Code NSS	Compat Group No 33	Sub Chapter D	Grade D	Hull Type	Tank Group A	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period	
							App'd (Y or N) Yes	VCS Category 1			
Naphtha: Stoddard solvent											
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	D	D/E		A	Yes	1			
Oil, fuel: No. 5	OFV	33	D	D/E		A	Yes	1			
Oil, fuel: No. 6	OSX	33	D	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: Lubricating	OLB	33	D	E		A	Yes	1			
Oil, misc: Residual	ORL	33	D	E		A	Yes	1			
Oil, misc: Turbine	OTB	33	D	E		A	Yes	1			
Pentane (all isomers)	PTY	31	D	A		A	Yes	5			
Pentene (all isomers)	PTX	30	D	A		A	Yes	5			
alpha-Pinene	PIO	30	D	D		A	Yes	1			
beta-Pinene	PIP	30	D	D		A	Yes	1			
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether	PAG	40	D	E		A	Yes	1			
Poly(2-8)alkylene glycol monoalkyl(C1-C6) ether acetate	PAF	34	D	E		A	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	C		A	Yes	1			
n-Propyl acetate	PAT	34	D	C		A	Yes	1			
iso-Propyl alcohol	IPA	20 ²	D	C		A	Yes	1			
n-Propyl alcohol	PAL	20 ²	D	C		A	Yes	1			
Propylbenzene (all isomers)	PBY	32	D	D		A	Yes	1			
iso-Propylcyclohexane	IPX	31	D	D		A	Yes	1			
Propylene glycol	PPG	20 ²	D	E		A	Yes	1			
Propylene glycol methyl ether acetate	PGN	34	D	D		A	Yes	1			
Propylene tetramer	PTT	30	D	D		A	Yes	1			
Sulfolane	SFL	39	D	E		A	Yes	1			
Tetraethylene glycol	TTG	40	D	E		A	Yes	1			
Tetrahydronaphthalene	THN	32	D	E		A	Yes	1			
Toluene	TOL	32	D	C		A	Yes	1			
Tricresyl phosphate (less than 1% of the ortho isomer)	TCP	34	D	E		A	Yes	1			
Triethylbenzene	TEB	32	D	E		A	Yes	1			
Triethylene glycol	TEG	40	D	E		A	Yes	1			
Triethyl phosphate	TPS	34	D	E		A	Yes	1			
Trimethylbenzene (all isomers)	TRE	32	D	{D}		A	Yes	1			
Trixylenyl phosphate	TRP	34	D	E		A	Yes	1			
Undecene	UDC	30	D	D/E		A	Yes	1			
1-Undecyl alcohol	UND	20	D	E		A	Yes	1			

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Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CCL 402

Shipyard: SOUTHWEST
SHIPYARD

Official #: 1219910

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Hull #: 9573

Cargo Identification						Conditions of Carriage				
Name	Chem Code	Compat Group No	Sub Chapter	Grade	Hull Type	Tank Group	Vapor Recovery		Special Requirements in 46 CFR 151 General and Mat'ls of	Insp. Period
							App'd (Y or N)	VCS Category		
Xylenes (ortho-, meta-, para-)	XLX	32	D	D		A	Yes	1		



Certificate of Inspection

Cargo Authority Attachment

Vessel Name: CCL 402

Official #: 1219910

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Shipyard: SOUTHWEST

Hull #: 9573

Explanation of terms & symbols used in the Table:

Cargo Identification

Name	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 none	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.
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.
Note 1	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.
Note 2	See Appendix I to 46 CFR Part 150 - exceptions to the compatibility chart.
Subchapter Subchapter D Subchapter O Note 3	The subchapter in Title 46 Code of Federal Regulations under which the cargo has been classified. Those flammable and combustible liquids listed in 46 CFR Table 30.25-1. Those hazardous cargoes listed in 46 CFR 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 D, E Note 4	Flammable liquid cargoes, as defined in 46 CFR 30-10.22. Combustible liquid cargoes, as defined in 46 CFR 30-10.15.
NA #	The flammability/combustibility grade of these cargoes may vary depending upon the flashpoint and Reid vapor pressure. The Person-in-Charge shall verify the cargo grade based on Manufacturers data and ensure that the barge is authorized for carriage of that grade of cargo. Those subchapter O cargoes which are not classified as a flammable or combustible liquid. No flammability/combustibility grade has been assigned yet, as the necessary flash point/vapor pressure data for such assignments are presently not available.
Hull Type I II III NA	The required barge hull classification for carriage of the specified Subchapter O hazardous material cargo, see 46 CFR 151.10-1. Designed to carry products which require the maximum preventive measures to preclude the uncontrolled release of the cargo. See 46 CFR 151.10-1(b)(1). Designed to carry products which require significant preventive measures to preclude the uncontrolled release of 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	The vessel's tank group (as defined in Section 4) which is authorized for carriage of the named cargo.
Vapor Recovery Approved (Y or N)	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	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.
Vapor Recovery Approved (Y or N)	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	(High vapor pressure and highly toxic) Must comply with requirements of Categories 1, 3 and 5.
Category 7	(High vapor pressure and polymerizes) Must comply with requirements of Categories 1, 2 and 5.
none	The cargo has not been evaluated/classified for use in vapor control systems.

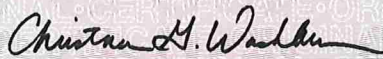


UNITED STATES OF AMERICA

DEPARTMENT OF HOMELAND SECURITY
UNITED STATES COAST GUARD

NATIONAL VESSEL DOCUMENTATION CENTER

CERTIFICATE OF DOCUMENTATION


VESSEL NAME CCL 402		OFFICIAL NUMBER 1219910	IMO OR OTHER NUMBER 9573	YEAR COMPLETED 2009	
HAILING PORT NEW ORLEANS LA		HULL MATERIAL STEEL		MECHANICAL PROPULSION NO	
GROSS TONNAGE 1754 GRT	NET TONNAGE 1754 NRT	LENGTH 297.5	BREADTH 54.0	DEPTH 13.0	
PLACE BUILT HOUSTON TX					
OWNERS CHEM CARRIERS LLC COMPRISED OF ONE MEMBER		OPERATIONAL ENDORSEMENTS COASTWISE			
MANAGING OWNER CHEM CARRIERS LLC 1237 HIGHWAY 75 SUNSHINE LA 70780					
RESTRICTIONS NONE					
ENTITLEMENTS NONE					
REMARKS NONE					
ISSUE DATE NOVEMBER 18, 2025		 DIRECTOR, NATIONAL VESSEL DOCUMENTATION CENTER			
THIS CERTIFICATE EXPIRES DECEMBER 31, 2026					





National Pollution Funds Center

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VESSEL NAME	VESSEL TYPE	HULL TYPE	GROSS TONNAGE	COFR NUMBER	EFFECTIVE DATE	EXPIRATION DATE	COFR APPLICANT	VIN	INSURANCE CANCEL FLAG
 CCL 402	TANKBARGE D		1754	841310 - 21	4/29/2024	4/29/2027	CHEM CARRIERS, L.L.C	D1219910	

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Cargo Piping Test Letter

Note: Test results are valid for (1) year from date of test!

Date:	<u>2/5/2025</u>	M.A.W.P.	<u>125 psi</u>
Vessel:	<u>CCL-402</u>	Method of Test:	<u>AIR</u>
Owner:	<u>Chem Carriers, LLC</u>	Testing Location:	<u>VLS Marine Services Plaquemine</u>
Address:	<u>1237 HWY 75</u>	Physical Address:	<u>1070 River Rd</u>
	<u>Sunshine, LA 70708</u>		<u>Sunshine, LA 70780</u>

TRANSFER SYSTEM TESTING DATA


**** Fill out completely. Write N/A on any non-applicable line. ****

Date:	Barge Piping:	Results	Note:
<u>2/5/2025</u>	<u>Cargo piping & valves</u>	<u>188</u> p.s.i	
<u>2/5/2025</u>	<u>Cargo pressure gauges</u>	<u>98</u> % accurate	
<u>n/a</u>	<u>Steam piping & valves</u>	<u>n/a</u> p.s.i	

Note: Test each pressure gauges annually, accurate within 10 percent. Test each remote controlled operating or indicating equipment such as remotely operated valve, tank alarm, or emergency shutdown device. 33 CFR 156.170(c)(2) & 46 CFR 35.35-70(b)

SIGNATURES

I credit that the tests contained herein were conducted in compliance with 33 CFR 156.170, 46 CFR 35.35-70.

Tester name:	<u>NICHOLAS JULIEN</u>
Tester signature:	

VLS Recovery Services

Committed to providing the most reliable, efficient, and cost-effective recovery services for waste management, railcar cleaning, marine cleaning, marine repairs & industrial cleaning



Vapor Tightness Test

Note: Test results are valid for (1) year from date of test!

Date: <u>2/5/2025</u>	Official Number: <u>1219910</u>
Vessel: <u>CCL-402</u>	Pressure Indicator: <u>AIR</u>
Owner: <u>Chem Carriers, LLC</u>	Testing Location: <u>VLS Marine Services Plaquemine</u>
Address: <u>1237 HWY 75</u>	Physical Address: <u>1070 River Rd</u>
<u>Sunshine, LA 70708</u>	<u>Sunshine, LA 70780</u>

TEST RESULTS


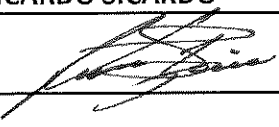
**** Barge is vapor tight if "Total Pressure Loss" is LESS than "Allowable Pressure Loss" ****

Test cargo tanks and related vapor system to <u>1 lb.</u>	
Beginning pressure: <u>28</u> inches H2O	Time started: <u>0800 am</u>
Ending pressure: <u>27.6</u> inches H2O	Time completed: <u>0900 am</u>
Total pressure loss: <u>0.04</u> inches H2O	Allowable pressure loss: _____

The following barge was tested in accordance with the national emission standard for benzene emissions from benzene transfer operations, section 40 CFR 61.304 (f) and section 40 CFR 63.565 (c)

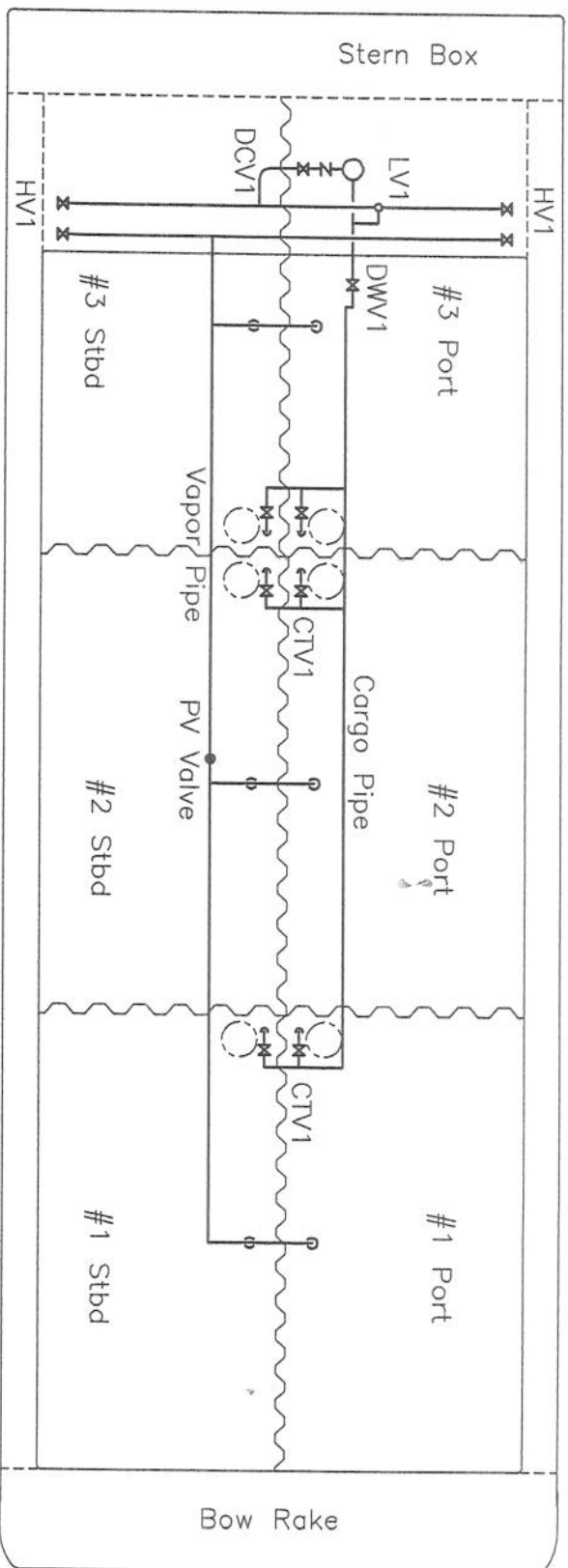
SIGNATURES

I credit that the tests contained herein were conducted in compliance with 46 CFR 35.35-70

Tester name:	<u>NICHOLAS JULIEN</u>
Tester signature:	
Witnessing inspector name:	<u>RICARDO SICARDO</u>
Witnessing inspector signature:	
Witnessing inspector affiliation:	<u>VLS Marine - Plaquemine Point</u>

VLS Recovery Services

Committed to providing the most reliable, efficient, and cost-effective recovery services for waste management, railcar cleaning, marine cleaning, marine repairs & industrial cleaning



CARGO AND VAPOR PIPING

LOAD BARGE

Open HV1, LV1, CTV1

Close DWV1, DCV1

HV1 – Cargo Header Valve
 LV1 – Cargo Load Valve
 CTV1 – Cargo Tank Load/Discharge Valve
 DWV1 – Deepwell Block Valve
 DCV1 – Cargo Pump Discharge Valve

DISCHARGE BARGE

Open DWV1, DCV1, HV1, CTV1

Close LV1

CHEM CARRIERS, LLC – CCL 402



Marine Safety Center Vapor Control System (VCS) Plan Review Information Sheet (PRIS)



Vessel Name	CCL 401 and CCL 402	Shipyard	SOUTHWEST SHIPYARD, LP
Official Number	CG943740 and CG943742	Hull Number	9572 and 9573

1. This sheet consolidates critical VCS parameters for MSC Staff Engineers and CG Field Inspectors dealing with Vapor Control Systems. CG Inspectors should verify the vessel's VCS design is consistent with the information listed in boxes 2, 6, 7 & 8 prior to updating the vapor control endorsement on the vessel's Certificate of Inspection. For cases where the information in the VCS PRIS does not reflect the vessel's design the CG Inspector should contact the Marine Safety Center.

2. Tank Maximum Design Working Pressure	6.00	psig
3. Authorized Maximum Cargo Transfer Rate(s)	4000	bbl/hr loading
	4000	bbl/hr discharging
4. Authorized Maximum Cargo Density	0.432	lbm/ft ³
5. Authorized VCS Categories	1 through 5	

6. Cargoes with the highest vapor density and/or pressure drop:

a. Cargo Name PENTANE

b. Cargo Name PENTANE

7. Pressure Vacuum Valve:

Manufacturer	ERL SUPERAC
Size	MOD II
CG Approval	162.017/167/3

Settings in psig:

Pressure-side	5.5
Vacuum-side	3

8. VCS Pipe Sizes:

Approx. Inside Diameter

Longitudinal Header (inches)	8
Transverse Header (Inches)	8

Required Venting Capacity of Pressure-Side of P/V valve 10542 bbl/hr (air)

Required Venting Capacity of Vacuum-Side of P/V valve 4000 bbl/hr (air)

9. Tank Overfill Protection System (check appropriate box or boxes)

a. High Level/Tank Overfill Alarm



Type ERL

b. Overfill Control Shutdown



Type ERL

c. Spill Valve



Type N/A

d. Rupture Disk



Type N/A

Setting in psig N/A

10. Closed Gauging Verify the vessel has closed gauging that satisfies 46 CFR 39.20-3 and 151.15-10(c).

11. Instructions/Guidelines for the OCMI:

11a. The following is the Marine Safety Center's recommended COI endorsement

Only those hazardous cargoes named in the vessel's Cargo Authority Attachment, Serial # C1-0801310 dated Apr-29-2008, may be carried and then only in the tanks indicated.

When the vessel is carrying cargoes containing greater than 0.5% benzene, the person in charge is responsible for ensuring the provisions of 46 US Code of Federal Regulations Part 197, Subpart C are applied.

In accordance with 46 CFR Part 39, excluding part 39.40, this vessel's vapor control system has been inspected to the plans approved by Marine Safety Center letter Serial # C1-0801310 dated Apr-29-2008, and found acceptable for collection of bulk liquid cargo vapors annotated with "Yes" in the CAA's VCS column.

11b. The MSC approval letter/s must be available at the OCMI's request.

11c. Verify isolation valve at the vapor connection flange is manually operable and designed in a way it is "clearly" open or closed.

11d. Previous applicable approval letters:

None	
------	--

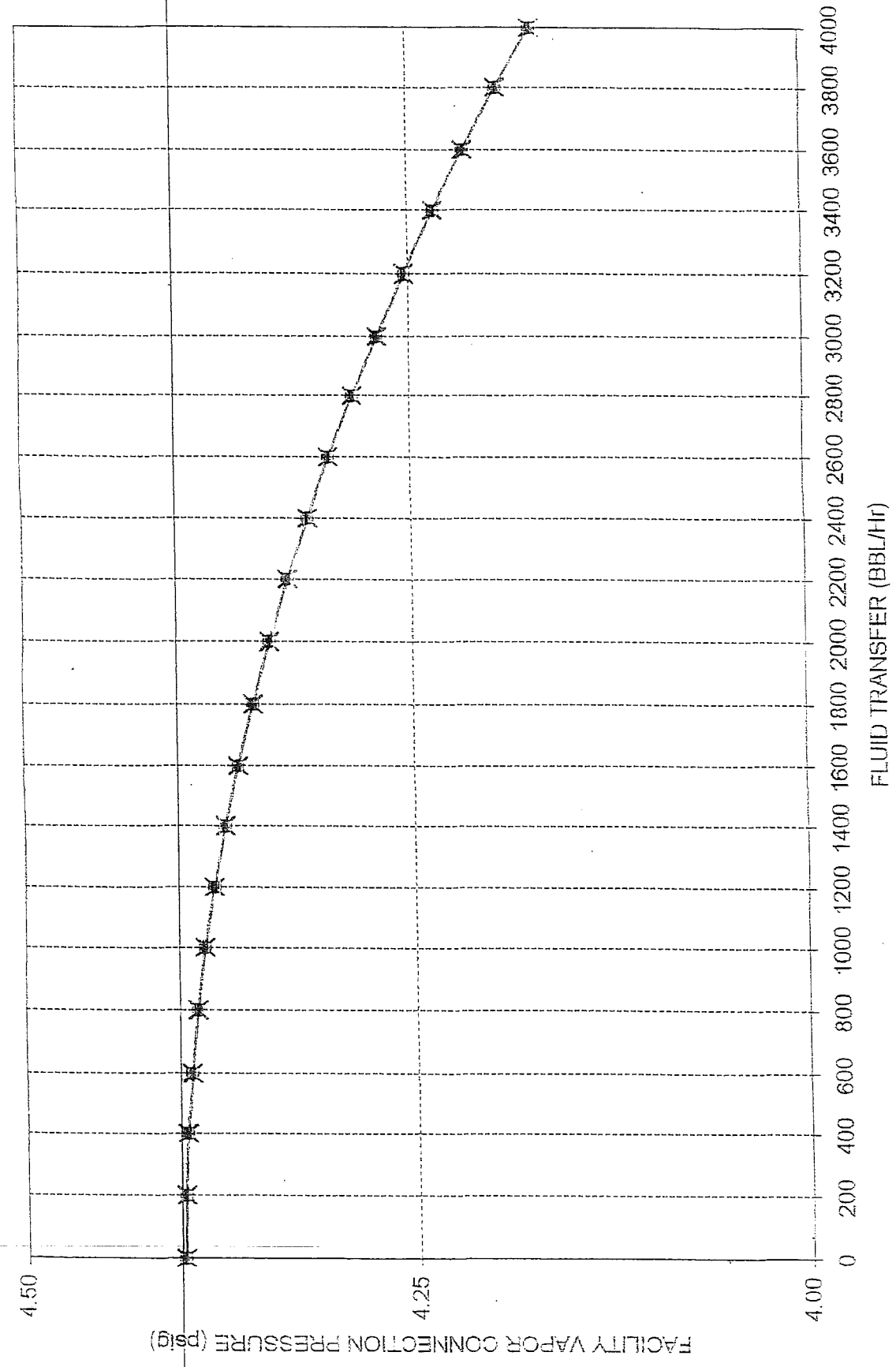
VCS Approval Letter C1-0801310 dated Apr-29-2008

MSC Plan Reviewer: Marcus Ewardo

Vapor Control System (VCS) Calculations

FIG. 2 - Facility Vapor Connection Pressure vs. Maximum Allowable Flowrate based on not Exceeding 80% of the Allowable P/V Valve Setting

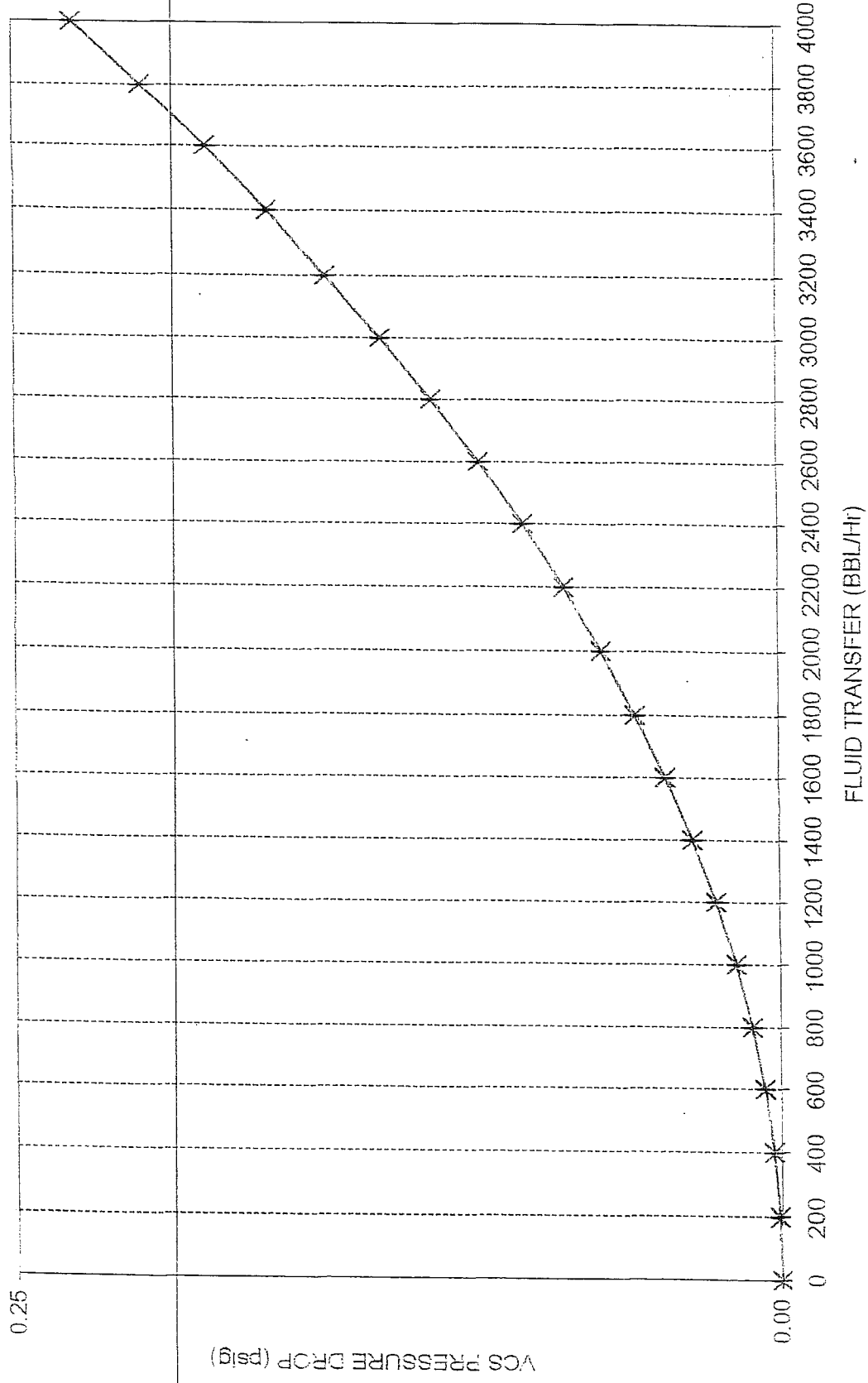
--- Greatest Vapor Air-Wt Density = 0.432 *--- Vapor Air-Wt Density @ Greatest Pressure Drop = 0.432



Vapor Control System (VCS) Calculations

FIG. 1 - Pressure Drop vs. Flowrate from Farthest Tank to Facility Vapor Collection for Cargo with Maximum Pressure Drop

--- Vapor Air-Wt Density @ Greatest Pressure Drop = 0.432 Greatest Vapor Air-Wt Density = 0.432



CARGO TRANSFER PROCEDURES

CHEM CARRIERS L.L.C.

TRANSFER FROM BARGE TO DOCK

PARTS

1. PRODUCTS TRANSFERRED
2. DESCRIPTION OF SYSTEM
3. PERSONS ON DUTY
4. PERSONS IN CHARGE
5. EMERGENCY SHUTDOWN
6. TOPPING OFF PROCEDURE
7. COMPLETION OF TRANSFER
8. REPORTING CARGO SPILLS
9. VESSEL CLOSURES
10. PRODUCT DATA
11. Vapor Control Procedures
12. Inert system

Barge CCL 402

PARTS 1.

PRODUCTS TRANSFERRED

33 CFR 155.750 (a) (1) (i)

This vessel is certificated for the carriage of grades "A" and lower Sub-Chapter (D) and (O) Products. It has also been certified to carry vapor products. Reference Certificate of Inspection.

PARTS 2. DESCRIPTION OF CARGO TRANSFER SYSTEM

33 CFR 155.750 (a) (2) (i) (ii)

The cargo transfer procedures apply to all Chem Carrier L.L.C. owned or leased tank barges. In most cases other than series built barges, the cargo piping arrangement is usually slightly different on every barge, and for this reason, the piping diagram must be studied before loading or discharging a barge. The basic concept for loading and discharging is fairly standard depending on the location of the pump.

A. (Reference the piping diagram for transfer system arrangement.)

B. PROCEDURES FOR THE CONTAINMENT SYSTEM

33 CFR 155.310 (a) (1) (iv)

33 CFR 155.750 (a) (2) (iii)

- 1). The containment pans are equipped with a drain for the removal of slops to shore facilities:

NEVER DRAIN THE CONTAINMENT TANKS ONTO THE DECK.

- 2). CCL 402 is equipped with a separate containment area for

the cargo trunk top and the aft deck area. Each containment area is equipped with drains and scupper plugs. Plugs should be installed prior to cargo transfer and removed after the cargo transfer is complete. PIC should notify Chem Carriers when containment areas need cleaning or if scupper plugs need replacing. **Never Drain Product captured in containment area overboard.**

PARTS 3. PERSONS ON DUTY DURING TRANSFER

33 CFR 155.750 (a) (3)

Number of persons required on duty during transfer operations:

- A. At no time during the transfer operation will be less than one responsible person on duty. The certified tankerman assigned shall be in charge and responsible for the safe transfer of cargo.

PARTS 4. PERSONS IN CHARGE

The tankerman (person in charge) is responsible for transferring cargo and carrying out related operations on board in an efficient, safe, and pollution free manner. The tankerman whether employed by the towboat, owner, operator, a shore tankerman service, or Chem Carriers L.L.C., shall comply with all Coast Guard, State and local regulations. Tankerman's responsibility shall include but not be limited to the following:

- A. To have on his/her person a valid merchant marine document endorsed as tankerman, certified to handle the grade of cargo to be transferred.
- B. Make a thorough inspection of the barge prior to the start of transfer operation.
- C. To have proper connection of the grounding cable.
- D. The vessel's moorings are adequate to hold during all expected conditions of surge, current, wind, tide, ect., and lines are long enough to allow for surge, tide, wind, changes in draft ect.
- E. Proper hose sizes, lengths, support, and connections.
- F. The condition of fire extinguishers and required number.
- G. The person in charge of transfer operations on the transferring vessel or facility and the person in charge of transferring operations on the receiving vessel or facility agree to begin the transfer operations.
- H. The transfer operation between tank barges and dock facilities should be lighted between sunset and sunrise to comply with the U. S. Coast Guard regulation pertaining to the displaying of lights on barges as required by Title 33.
- I. The PIC (PERSON IN CHARGE) will be responsible for the DOI (declaration of inspection) and DOS (declaration of security).
- J. Always maintain communications with dock or shore personnel with an agreed upon approved system.

PARTS 5: EMERGENCY SHUTDOWN

33 CFR 155.750 (a) (6)

THE EMERGENCY SHUTDOWN IS LOCATED NEAR THE CENTER OF THE BARGE.

- A. In the event of an emergency, transfer operations can be stopped by pulling the remote shutdown cable.
- B. Familiarize yourself with its location and operation prior to transfer.

PARTS 6; TOPPING OFF PROCEDURES

33 CFR 155.750 (a) (7)

In the process of topping off, tanks should be loaded at different levels to top off one at a time. Extra care should be taken to avoid over pressuring the connections, and hoses by closing valves against the receiving line. Since barges and facilities vary in their systems, no standard for topping off exist, but the following should be considered:

- A. The closing of one tank increases the rate of flow to other tanks on the same line.
- B. Always consider temperature and cargo in accordance with the amount of expansion that should be allowed.
- C. Always maintain communications with dock or shore personnel.
- D. A set of dipstick overfill devices have been installed on the CCL 402. Dipsticks can be made operational by releasing the covers or caps. Dipsticks should be used as a visual aid for overfill protection.

PARTS 7: COMPLETION OF TRANSFER

33 CFR 155.750 (a) (8)

Upon the completion of the transfer all pipelines should be drained into cargo tanks. The header valve used during the operation should then be closed, sealed off with a blind flange and shore personnel should seal lines and hatches on vessel.

PARTS 8: REPORTING CARGO SPILLS

33 CFR 155.750 (a) (9)

Should an accidental discharge of product occur, you should consider the following:

- A. Locate the source of the spill and try to stop it, if possible, and safe to do so.

- B. Make an attempt to contain the product if possible.
- C. Notify the Coast Guard. The national Response Center at 1-800-424-9300.
- E. Notify Chem Carriers L.L.C. at (225) 642-0060
- F. If loading, transfer the cargo from the leaking tank to an adjacent tank or back to the dock if safe to do so.
- G. If discharging, pump the product from the leaking tank as quickly as possible if safe to do so.

***When reporting a spill, the tankerman should provide the following information:**

- A. Name (his or her)
- B. Name of Company: (employed by; (contracted by;
- C. Name of Barge.
- D. Spill Location
- E. Specify Product.
- F. Estimate Quantity of Spill
- G. Weather, Tide, Sea and Current Conditions.
- H. Cause of Spill.
- I. Action Being Taken to Contain and Stop Spill

PART 9

CLOSURES ON VESSELS

Upon completion of cargo transfer operations, all tank hatch covers, ullage covers, and gauging device covers shall be dogged down and secured. In addition, the vent drain valves, if installed, should be secured and left in the proper position. All drain valves should be closed, and drip pan covers, if installed, should be made up tight. Covers for void spaces, bow and stern compartments shall be secured at all times and checked for tightness. Closing devices on clean-out hatches and clean-out opening should be checked, especially when the barge is loaded.

PART 10

PRODUCT DATA

See specific MSDS sheets provided with these procedures.

In case of any other emergency, immediately shut down and notify the transferring facility, and Chem Carriers L.L.C. (225) 642-0060 24 Hour Line.

PART 11

VAPOR CONTROL PROCEDURES

This is a guide only and is not intended to replace experience, sound judgment, and a proper assessment of the task at hand.

The tankerman on duty is the acting Designated Person In Charge (PIC) and is responsible for cargo transfer operations and carrying out related operations on barges.

1. Vapor Recovery Transfer Maximum Rate is 4000 BBLS/HR for

subchapter "D" Cargoes and 4000 BBLS/Hr for subchapter "O" Cargoes.

- 1.1 Transfer rates, which exceed these maximums, must be approved by Chem Carriers.
- 1.2 Transfer rates for each cargo tank should not exceed the maximum transfer rate.

2. Pre-transfer Inspection For Vapor Recovery Operations

2.1 Follow the procedures outlined below in addition to the procedures utilized during normal transfers:

- 2.1.1 Wear personal protective equipment (PPE) as needed for the cargo in the barge when testing P/V and, hooking up hoses, or draining low points.
- 2.1.2 Ensure that a Certificate of Vapor Tightness is onboard and valid.
- 2.1.3 Close the low point drain on the port/starboard vapor header, if applicable.
- 2.1.4 Close the low point drain near the vent stack, if applicable.
- 2.1.5 Close valve to the vent riser if applicable.
- 2.1.7 Blinds used for the vapor control manifold should have a hole to accommodate the 1/2" stud located in the vapor header.
- 2.1.8 Each cargo tank is fitted with a liquid level gauge stick. Remove the cap, raise the stick, This stick can be monitored visually to avoid overfilling.
- 2.1.9 Ensure that the last one meter (3.3 feet) of vapor piping before the vapor connection is painted red/yellow/red.
- 2.1.10 The cross-header should be stenciled with the word "VAPOR" in black letters at least 2" high.
- 2.1.11 The vapor connection flange should be fixed with a 1" long by 1/2" diameter stud projecting outward from the face of the flange, midway between bolt holes.
- 2.1.12 The high level alarms/shutdowns are installed near the center of each cargo tank. Dock alarm/shutdown should be connected prior to loading, and plugs located near the forward end of the barge Port and Starboard should be labeled "ALARM/SHUTDOWN SENSOR." High level alarms are set to alarm at 90% of the cargo tanks capacity and Shut downs are set to shut transfer down at 95% of each tanks capacity.
- 2.1.13 Ensure that the P/V relief valve flame screen, if required, is in place and in good condition prior to testing.
- 2.1.14 Ensure that the facility has a Letter of Adequacy endorsed as meeting the requirements of 33 CFR Subpart E.

3. Vapor Piping

3.1 The PIC checks the vapor piping diagram.

3.2 Characteristics of a vapor header:

3.2.1 The vapor collection piping system on tank barges is permanently installed and located as close as practical to the loading manifold. The piping system is electrically bonded to the hull and electrically continuous.

3.2.2 The last one meter (3.3 feet) of vapor piping prior to the valve before the vapor connection is painted red/yellow/red. The red bands are 4" wide and the yellow band is 32" wide.

3.2.3 The vapor header is stenciled with the word "VAPOR" in black letters at least 2" high.

3.2.4 The vapor connection flange is to be fixed with a 1" by 1/2" diameter stud projecting outward from the face of the flange. This stud is located at the top of the flange, midway between bolt holes.

3.2.5 When not in use, blank off the vapor headers using a blind flange with a bolt in every hole. Each blind flange used on the vapor piping has a hole drilled to accommodate the pin.

4. Inspection And Verification Of Vent Lines

4.1 The Person in Charge performs the following steps:

4.1.1 Checks the Certificate of Inspection on board the barge;

4.1.2 Locates polymerizing or inhibited cargoes in the section of the COI marked *Specific Hazardous Cargo Authority*;

4.1.3 Refers to the MSDS or Chemical Data Guide on board the vessel to determine what cargoes are subject to polymerization, or what cargoes are inhibited;

4.1.4 Locates the MSDS for the cargo and determines its toxicity and whether or not it is a polymerizing or inhibited cargo; and,

4.1.5 Notifies the Dispatcher and Field Supervisor when polymerization is suspected.

5. Any problems with the Vapor Control system must be reported immediately to the person in charge and Chem Carriers.

U.S. Department of
Homeland Security

United States
Coast Guard



Commandant
United States Coast Guard

2703 Martin Luther King Jr. Ave SE
Stop 7516
Washington, DC 20593-7516
Staff Symbol: CG-MER-4 (VRP)
Phone: (202) 372-1005
Fax: (202) 372-8376
Email: vrp@uscg.mil

16460
March 12, 2025

Chem Carriers, L.L.C.
C/O: FOREFRONT EMERGENCY MANAGEMENT, LP
ATTN: ALLIE MARTIN
1730 COTEAU ROAD
HOUMA, LA 70364

Dear Sir or Madam:

Your Vessel Response Plan (Control Number 56041), submitted to meet the requirements of Title 33, Code of Federal Regulations (CFR), Part 155, Subparts D and I, is **approved**. Approval will remain valid until **March 21, 2030**.

The CCL 402 (1219910) is authorized to operate only in the ports or geographic areas indicated in the Captain of the Port zones listed below. If carrying oil as cargo, the vessel is prohibited from handling, storing, transporting, transferring, or lightering oil unless it is operating in full compliance with this plan. Compliance includes ensuring that required resources have been identified and planned for or are in place and available through contract or other approved means. If applicable to your routes, this includes the dispersant and aerial observation requirements of 33 CFR 155.1050.

You are reminded that your chosen salvage and marine firefighting resource provider may have submitted waivers from meeting one or more of the specified response times in accordance with 33 CFR 155.4055. If so, this may be rescinded by the U.S. Coast Guard if the appropriate response resources are not available when the approved waiver expires. You shall continue to assess the adequacy of your chosen salvors and firefighters as required by 33 CFR 155.4050.

The vessel must keep a copy of this approval letter onboard in addition to the minimum sections of the plan as required by 33 CFR 155.1030. In accordance with 33 CFR 155.1070, you are required to review your plan annually and submit plan amendments for approval. As per 33 CFR 155.1070(b), the entire plan must be resubmitted for a comprehensive review and approval six (6) months prior to the expiration date.

APPROVED CAPTAIN OF THE PORT ZONES

CORPUS CHRISTI
HOUMA
HOUSTON-GALVESTON

LOWER MISSISSIPPI RIVER OHIO VALLEY
(MEMPHIS)
MOBILE
NEW ORLEANS

UPPER MISSISSIPPI RIVER
(ST. LOUIS)
PORT ARTHUR AND LAKE
CHARLES

Sincerely,



CHARRON MCCOMBS

Lieutenant Commander

Acting Chief, Domestic Preparedness & Planning Division

U.S. Coast Guard

By direction

U.S. Department of
Homeland Security

United States
Coast Guard



Commanding Officer
United States Coast Guard
Marine Safety Center

US Coast Guard Stop 7430
2703 Martin Luther King Jr. Ave. SE
Washington, DC 20593-7430
Staff Symbol: MSC-5
Phone: (202) 795-6729
Email: securityplaninfo@uscg.mil

16710
VS-326893
December 3, 2024

Chem Carriers, LLC
Attn: Robert Banta
1237 Hwy 75
Sunshine, LA 70780
robert@chemcarriers.com

Subj: CHEM CARRIERS, LLC VESSELS
VESSEL SECURITY PLAN APPROVAL WITH AMENDMENTS

Ref: (a) Your correspondence dated November 6, 2024
(b) Title 33 Code of Federal Regulations (CFR) Part 104
(c) MSC Vessel Security Plan Approval letter dated October 16, 2024

Dear Mr. Banta:

We have conducted a review of the Vessel Security Plan (VSP) submitted with reference (a) in accordance with reference (b) and it is **"Approved."**

Your vessel must operate in compliance with this approved VSP and the requirements contained in reference (b). You are reminded to immediately report any deviation from this approved plan to the local Captain of the Port (COTP)/Officer in Charge, Marine Inspection (OCMI).

This approval will remain valid until five years from the date of reference (c) unless rescinded in writing by the local COTP/OCMI. You must review your plan annually and submit any amendments to this office for approval. Please ensure that a copy of the VSP is maintained on board the vessel if manned, or, if unmanned, at a suitable secure location so that it is readily available during an emergency or security incident. You shall make available to the Coast Guard, upon request, this letter, the VSP and any information related to the implementation of the VSP. Our Case Number for this plan is 326893. Please ensure that all future correspondence includes this Case Number.

Sincerely,

K. C. WILLIAMS
Lieutenant Commander, U.S. Coast Guard
Chief, Vessel Security Division
By direction

Enclosures: (1) List of Vessel Security Plan Amendments
(2) List of Vessels Covered

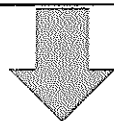
List of Vessels Covered

<u>Vessel Name</u>	<u>Official Number (O.N.)</u>
CCL-1	518612
CCL 2	510107
CCL-3	296363
CCL 4	512519
CCL-5	512520
CCL-6	530996
CCL7	551980
CCL 8	551982
CCL 9	551983
CCL 10	551979
CCL 11	551976
CCL 14	1164451
CCL 15	1164452
CCL 16	1164666
CCL 17	1166179
CCL 18	1168981
CCL 19	1168980
CCL 20	1191598
CCL 21	1191599
CCL 22	1191600
CCL 23	1191601
CCL 24	1196547
CCL 25	1196548
CCL 26	1203816
CCL 27	1203817
CCL 28	1212828
CCL 29	1212829
CCL 30	1305871
CCL 31	1305870
CCL 32	1305869
CCL 33	1305868
CCL 401	1216671
CCL 402	1219910
CCL 403	1231311
CCL 404	1231312
CCL 405	1236867
CCL 406	1236866
CCL 407	1246320
CCL 408	1246097
CCL 409	1246098
CCL 410	1255906
CCL 411	1255907
CCL 414-L	1262941
CCL 415-T	1262942

<u>Vessel Name</u>	<u>Official Number (O.N.)</u>
CCL 416-T	1264691
CCL 417 T	1298307
CCL 418-L	1306896
CCL 419-L	1306897
CCL 420-T	1348560
CCL 421-T	CG1843359
CCL 3202	1089031
HFL 413	1237482
HFL 415	1237483
HFL 435	1236563
HFL 605	1237484

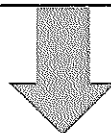
VESSEL INCIDENT / ACCIDENT NOTIFICATION CHART

Incidents that involve injury or illness, spill / pollution or a probable discharge, significant equipment failure, property damage, cargo related issues, service delays or any accident involving a Chem Carriers Towing, LLC vessel or crewmember shall be immediately called into the Chem Carriers Towing, LLC 24-hour Emergency Hotline at **225-642-0060**



Master Standing the Watch

Once the situation has been stabilized and all safety issues have been addressed, immediately contact the Chem Carriers Towing, LLC Emergency Hotline (225-642-0060)
Any serious marine incident, or any incident that has the potential to become a serious marine incident, alcohol testing shall be conducted on all involved crewmembers within 2 hours, whether onboard the vessel or at a testing facility.



NATIONAL Response Center

1-800-424-8802

or

1-202-267-2675

MADANTORY for all pollution incidents on CCT equipment

Chem Carriers Towing, LLC Emergency Hotline



Qualified Individual (QI)

225-642-0060

State Notifications

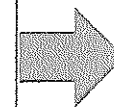
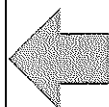
Louisiana 225-925-6595
Mississippi 601-987-1212
Texas 409-924-5400

Oil Spill Removal Organization Customer Internal

Reference Emergency Response Guidelines for
a Complete List of Required Notifications

USCG COTP ZONES

Baton Rouge 225-298-5400
New Orleans 504-365-2200
Morgan City 985-380-5320
Lake Charles 337-721-5741



U.S. Department of
Homeland Security

United States
Coast Guard



Commanding Officer
United States Coast Guard
Marine Safety Center

2100 2nd Street, S.W.
Washington, DC 20593-0001
Staff Symbol: MSC-3
Phone: (202) 475-3403
Fax: (202) 475-3920
Email: msc@uscg.mil

16710/P014066
Serial: C1-0901093
April 7, 2009

M. Dan Jones & Associates
Attn: Mr. Dan Jones
7519 Old Bridge Court
Sugar Land, TX 77479

Subj: CCL 401, CG943740, Southwest Shipyard, LP Hull No. 9572
CCL 402, CG943742, Southwest Shipyard, LP Hull No. 9573
297.5' x 54' x 13' Double Skin Unmanned Hull Type II/III Tank Barges (O/D)
Grade A (max. 25 psia Reid) and Lower Flammable or Combustible Liquids Identified in
Either 46 CFR Table 30.25-1 or 46 CFR Part 153 Table 2 and Specified Hazardous
Cargoes
Design Density 8.7 lbs/gal; Max Density (slack load) 15 lbs/gal
Rivers; Lakes, Bays, and Sounds; and Limited Coastwise on unmanned fair weather
voyages only, not more than 12 miles offshore between St. Marks and Carrabelle, FL.
Lightship Characteristics, Stability, Longitudinal Strength, PRIS and Cargo Authority

Ref: (a) MDJ&A Job No. 07-15(L), "Lightship Calculations for CCL 401", dated 3/28/2009
(b) MDJ&A Job No. 07-15, "Intact Stability Calculations for Southwest Shipyard Hulls 9572
and 9573", Rev. 1, dated 3/28/2009
(c) MDJ&A Job No. 07-15, "Longitudinal Strength Calculations for Southwest Shipyard Hulls
9572 and 9573", Rev. 1, dated 3/28/2009

Dear Mr. Jones:

We have reviewed references (a) through (c), which were submitted with your email dated March 28, 2009. References (a) through (c) are "Examined." Calculations such as these are not normally approved, but are reviewed to ensure the compliances with applicable standards. The following comments apply:

1. In general, we have not duplicated your calculations. As with all calculations, the responsibility for their accuracy rests with the submitter.
2. The approved lightship characteristics used in the stability calculations were determined by a deadweight survey conducted on CCL 401 at Southwest Shipyard Brady Island Facility located in Houston, TX on March 27, 2009 and are as follows:

Displacement	806.03	Long Tons
VCG	9.00	Ft Above the Baseline
LCG	155.71	Ft Aft of the Headlog

3. Based on this data and the stability calculations provided, these barges meet the stability standards in 46 CFR 172 Subpart E for the carriage of cargoes of 46 CFR Subchapter O to maximum drafts of 11'-2" for hull type II and 12'-0" for hull type III on the routes indicated in the subject block above. The maximum cargo specific gravity authorized is 1.8 (15 lbs/gal).

16710/P014066
Serial: C1-0901093
April 7, 2009

Subj: CCL 401, CG943740, Southwest Shipyard, LP Hull No. 9572
CCL 402, CG943742, Southwest Shipyard, LP Hull No. 9573
Lightship Characteristics, Stability, Longitudinal Strength, PRIS and Cargo Authority

4. The longitudinal strength calculations submitted with reference (c) demonstrated the hull girder section modulus to be sufficient for the minimum required still water bending moment.

5. The updated Plan Review Information Sheet (PRIS), enclosure (1), gives the OCMI our recommendations for endorsements on the barges' Certificate of Inspection (COI).

6. The Cargo Authority Attachment (CAA) for CCL 401 is now available in the Coast Guard's Marine Information for Safety and Law Enforcement (MISLE). The CAA for CCL 402 will be made available once the subject vessel is assigned an Official Number. Please note that only the local OCMI can issue a vessel's CAA, which is a part of the Certificate of Inspection (COI).

As a condition of your participation in the MSC's Electronic Commerce Program, you must print a paper copy of any drawings and calculations that have been "Examined" and mail them to the appropriate OCMI, along with a copy of the corresponding MSC approval letter.

The project number for these barges is P014066. Please refer to this project number and the above Coast Guard Numbers or Official Numbers when available, in future correspondence with our office.

If you have any questions concerning our review, please contact Mr. Marcus Ewardo at the number listed above.

Sincerely,



S. L. JOHNSON
Lieutenant Commander, U. S. Coast Guard
Assistant Chief, Tank Vessel and Offshore Division
By direction

Encl: (1) Plan Review Information Sheet (PRIS) for Southwest Shipyard, LP Hulls 9572 and 9573, dated April 7, 2009

Copy: Commander, Coast Guard Sector Houston-Galveston (spi) w/out enclosure (1)

Plan Review Information Sheet (PRIS) for Unmanned Tank Barge

1.	Builder and Hull No.(s)	Hull Type	Service	ABS classified?
	Southwest Shipyard, LP Hulls 9572 and 9573	II/III	O/D	No

2. Route Permitted - Routes and Conditions

R Rivers
 LBS Lakes, Bays, and Sounds (LBS)
 LC 0-12 Limited Coastwise (0-12 miles offshore b/t St. Marks, FL and Carrabelle, FL)

3. Cargo Authority - "Authorization" Tab in "Cargo" WindowAuthorization:

46 CFR Sub. D Authority:	Highest Grade	A	Capacity (bbls)	32,654		
46 CFR Sub. O Authority:	Part 151	Yes	Part 153	No	Part 154	No
33 CFR Sub. O Authority:	Part 151.47	No	Part 151.49a	No	Part 151.49b	No

4. "Conditions of Carriage" Tab in "Cargo" Window

a. The following statement should appear at the beginning of the COI's "Conditions of Carriage" section:

Only those cargoes named in the vessel's Cargo Authority Attachment, serial # C1-0901093, dated April 7, 2009, may be carried, and then only in the tanks indicated.

"Per 46 CFR 150.130, the Person In Charge of the barge (vessel) 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 numbers from the "REACT GRP" column listed in the vessel's Cargo Authority Attachment."

b. 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 15 lbs/gal, may be carried as slack loads, but shall not exceed the tank weight limits as listed below.

Note: 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 SubCh. O cargoes at shallower drafts, the barge(s) should always be loaded uniformly.

5. Loading ConstraintsLoading Constraints - Structural

Tank	Max Cargo Wgt/Each Tank (ST)	Max Density (lbs/gal)
1P/S	827	8.74
2P/S	833	8.74
3P/S	738	8.74

Loading Constraints - Stability

Hull Type	Route	Max. Load (ST)	Max Draft (ft, in)	Density (lbs/gal)
II	R, LBS	4378	11' 2"	15.0
III	R, LBS	4796	12' 0"	15.0



16710/P014066/jls
Serial: E1-0803655
December 31, 2008

M. Dan Jones & Associates
Attn: Mr. M. Dan Jones
7519 Old Bridge Court
Sugar Land, TX 77479

Subj: CCL 402, CG943742
Southwest Shipyard LP Hull No. 9573
297'-6" x 54' x 13' Unmanned Hull Type II/III Tank Barge (O/D)
Miscellaneous Piping Systems

Ref: (a) MDJ&A Dwg. 07-15-L CCL 9573 P-01-01, Alt. 0, Cargo Piping, 2 Sheets
(b) MDJ&A Dwg. 07-15-L CCL 9573 P-05-01, Alt. 0, Emergency Shutdown, 1 sheet
(c) MDJ&A Dwg. 07-15-L CCL 9573 P-04-01, Alt. 1, Fuel Oil Piping, 1 Sheet
(d) MDJ&A Dwg. 07-15-L CCL 9573 P-03-01, Alt. 0, Stripping & Handwheels, 1 Sheet
(e) MDJ&A Dwg. 07-15-L CCL 9573 P-07-01, Alt. 1, Steam System, 2 sheets
(f) MDJ&A Dwg. 07-15-L CCL 9573 P-06-01, Alt. 0, Drip Pans, 1 sheet
(g) Our letter Serial No. E1-0801342 dated April 30, 2008

Dear Mr. Jones,

References (a) through (f), submitted electronically by your letter dated October 28, 2008, have been reviewed to the requirements of 46 CFR Subchapters D and O. Additional comments and revisions to references (c) and (e) were provided in your emails of November 25 and December 4, 2008. References (a) through (e) are marked **"Approved"**. The installation, workmanship, and testing shall be completed to the satisfaction of the Officer in Charge, Marine Inspection (OCMI) Houston-Galveston. Reference (f) is marked **"Examined"**. Supporting data such as this are not normally marked approved; however, the information presented is used during the review of other plans. The following comments apply:

Cargo Piping

1. Your email of December 4, 2008 provided manufacturer's data on the flanged 'Visi-flo' sight flow indicator in the 1" burp line to describe BoM item #42 in lieu of the plate mounted ERL model shown. Reference (a) should be revised accordingly to support inspection. Compliance with 46 CFR 39.20-3(a) will be to the satisfaction of the OCMI.

Emergency Pump Shutdown

2. The safe and reliable operation of the emergency pump engine shutdown mechanism, depicted in reference (b), will be demonstrated to the satisfaction of the OCMI.

Subj: CCL 402, Southwest Shipyard LP Hull 9573, CG943742
Miscellaneous Piping Systems

Fuel Oil Piping

3. Comments (1) and (2) of reference (g) remain applicable.
4. The non-metallic flexible hose connecting the pump engine fuel lines (reference (c) BOM item #17) is subject to future purchase and not described. You must present data to the satisfaction of the OCMI that shows the installed hose conforms to the adopted standard SAE J-1942 as indicated.
5. Details of the 500 gallon fuel tank indicated in reference (c) and associated fittings are not within the scope of this plan review and may be subject to OCMI verification of applicable approval records or fabrication details. Independent fuel tanks must be fabricated in accordance with 46 CFR 58.50; openings in diesel tank bottom, sides and ends are restricted as stated in 46 CFR 58.50-10(a)(4).

Steam Piping

6. You have confirmed the steam piping maximum allowable working temperature (MAWT) as 150° F; the maximum allowable working pressure (MAWP) as 125 psi. Steam service at MAWT lower than steam saturation temperature at atmosphere will occur as condensate and not steam under pressure. You must provide documentation to the satisfaction of the OCMI that piping operating up to the specified steam system MAWP and MAWT are compatible with steam supply parameters of terminal service facilities in the planned operating area.
7. Above deck piping with operating temperature exceeding 150° F must be insulated in accordance with 46 CFR 56.50-1(k).

As an agreed upon condition for participating in our Electronic Commerce Program, you must provide a copy of references (a) through (f) to the OCMI in whose zone the work is to be accomplished.

Our Project Number for this vessel is P014066. Please ensure that future correspondence includes the Project Number and either the Coast Guard (CG) number that appears in the subject line or the Official Number, if assigned. If you have any questions concerning our review, please contact Mr. John Saunders at (202) 475-3414.

Sincerely,



T. L. GILES
Lieutenant Commander, U. S. Coast Guard
Chief, Machinery Branch
By Direction

Copy: Commander, Coast Guard Sector Houston-Galveston, Prevention Department



16710/P014938
Serial: C1-1301613
June 5, 2013

M. Dan Jones & Associates
Attn: Mr. M. Dan Jones
7519 Old Bridge Court
Sugar Land, TX 77479
Email: MATDJONES@AOL.COM

Subj: CBR 2014, O.N. 1237668, Conrad Shipyard Hull No. C-976
297'-6" x 54' x 12' Double Skin Unmanned Hull Type II/III Tank Barges (D/O)
CCL 402, O.N. 1219910, Southwest Shipyard Hull No. 9573
CCL 407, O.N. 1246320, Three Rivers Boat & Barge Hull No. 121512
297'-6" x 54' x 13' Double Skin Unmanned Hull Type II/III Tank Barges (D/O)
Grade A (max. 25 psia Reid) and Lower Flammable or Combustible Liquids Identified in
46 CFR Table 30.25-1 or 46 CFR 153 Table 2 and Specified Hazardous Cargoes
Design Density 8.7 lbs/gal
Rivers; Lakes, Bays, and Sounds; Limited Coastwise on unmanned fair weather voyages
only, not more than 12 miles offshore between St. Marks and Carrabelle, Florida
Multi-Breasted Tandem Loading Request

Ref: (a) M. Dan Jones & Associates, "Vapor Collection Calculations on the Dual Loading of
Conrad Industries, Inc. Hull C976," dated May 9, 2013
(b) MSC Letter, Serial No. C1-0801310, dated April 29, 2008
(c) MSC Letter, Serial No. C1-1200006, dated January 23, 2012
(d) MSC Letter, Serial No. C1-1203487, dated July 30, 2012

Dear Mr. Jones:

In response to your electronic submission dated May 8, 2013 (MSC Document No. 1313182) and your email dated May 9, 2013, we have reviewed the pressure drop calculations for multi-breasted tandem loading. Reference (a) is "**Examined.**" Calculations such as these are not normally marked approved, but are used to verify that the system meets the applicable regulations. The following comments apply:

1. These barges have vapor control systems previously approved by references (b) through (d), and are acceptable for tandem loading operations. Based on the calculations in reference (a), tandem loading is limited to simultaneous collection of those cargoes listed in each vessel's Cargo Authority Attachment at a maximum vapor-air mixture density of **0.350 lbm/ft³** and at a maximum **combined** load rate of **4,000 bbl/hr.**

2. CCL 402 and CCL 407 have been approved for maximum vapor-air mixture densities exceeding 0.350 lbm/ft³. In order to assure that vessels do not exceed the maximum allowable

16710/P014938
Serial: C1-1301613
June 5, 2013

Subj: CBR 2014, CCL 402, and CCL 407
Multi-Breasted Tandem Loading

design pressure, no vessel listed in the subject of this letter shall collect the vapors of any cargo with a vapor pressure densities exceeding 0.350 lbm/ft³ when conducting tandem loading operations.

3. Please note that this letter does not constitute final approval for dual loading as the Marine Safety Center only reviews technical calculations for such operations. For final approval you must submit your request to Commandant (CG-ENG-5) with the name of the facility where the vessels will be conducting dual loading operations. For more information, please email the Coast Guard Hazardous Materials Standards division at HazmatStandards@uscg.mil.

Our Project Number for these vessels is **P014938**. Please ensure that future correspondence includes the Project Number and the each vessel's Official Number.

If you have any questions concerning our review, please contact Lieutenant Tony Cao at the number listed above.

Sincerely,

M. J. SEXTON
Lieutenant, U. S. Coast Guard
Assistant Chief, Tank Vessel and Offshore Division
By direction

Copy: Commandant, U.S. Coast Guard (CG-ENG-5), via email

Security Plan Information Sheet (Barge Copy)

A copy of this page to be placed on the barge with the vessel's documents:

This vessel is covered by a Security Plan. The plan is maintained by the vessel's owner, CHEM CARRIERS, LLC in their Sunshine Louisiana Office.

The current custodian of the vessel, (towboat/fleet/dock), has access to the plan or a copy.

In the event of a TSI (Transportation Security Incident): Contact the following by the most secure means available:

Landline	Preferred
Cell Phone	If no land line readily available
VHF Radio	Emergency (non secure mode)

Dept. of Homeland Security:	USCG Response Center:	800-424-8802
Vessel Owner:	Chem Carriers, LLC.	225-642-0060
Local Authorities:	If not known, give vessel location to vessel owner.	
Capt. of the Port.	Nearest COTP (USCG)	

In the event the (TSI) involves a spill or threat of a spill, refer to the OPA-90 Plan maintained on board the vessel for additional information and contact numbers.

In the event of a (TSI) the safety of personnel is most important. Activities and actions should not endanger the crew or dock personnel.

A copy of this page to be placed on the barge with the vessel's documents

The information contained in this plan is considered Sensitive Security Information. The distribution of this plan is limited to custodians of the vessel and it must be kept in a secure location. This plan must not be placed on an unmanned barge.

Chem Carriers, LLC
Date: 10/1/07

Vessels Security Plan
MISLE # 1976434

Page 2

Contact Information:

Company Security Officer: (CSO)

Mr. Frank Banta is a designated the CSO for this plan.

Mr. Robert Banta, Jr. is a designated CSO for this plan

Mr. John D. LeBlanc is a designated CSO for this plan

Mr. Chase LaPlace is a designated VSO for this plan.

Contact Information:	24 Hr. Phone	225-642-0060	24/7
	Pager: Duty CSO	800-213-4791	24/7
	Fax:	225-642-9454	24/7

Email: frank@chemcarriers.com or robert@chemcarriers.com

Company Address:

Name	Chem Carriers, LLC
Address	1247 Hwy 75, Brookewood
City/ST/Zip	Sunshine, LA 70780

WARNING!!

This document contains Sensitive Security Information that is controlled by 49 CFR 1520. No part of this document may be disclosed without a "Need to Know" as defined in Part 1520 except with written permission of the administrator of the TSA or Secretary of Transportation. Unauthorized release may result in civil penalty or other action. For US Government Agencies public disclosure is governed by 5 USC 552 and 49 CFR 1520

Plan prepared by M. J. Schiefel & Associates, Inc.
Last revision date: 10/1/07



BARGE "CCL 402"

INNAGE TRIM TABLE

	1 FT.		2 FT.		3 FT.		4 FT.		5 FT.		6 FT.	
	BOW	STERN	BOW	STERN	BOW	STERN	BOW	STERN	BOW	STERN	BOW	STERN
1 PORT	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/4	- 00-1/4	00-1/4	- 00-1/4	00-3/8	- 00-3/8	00-3/8	- 00-3/8
1 STBD	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/4	- 00-1/4	00-1/4	- 00-1/4	00-3/8	- 00-3/8	00-3/8	- 00-3/8
2 PORT	00-0/8	- 00-0/8	00-0/8	- 00-0/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8
2 STBD	00-0/8	- 00-0/8	00-0/8	- 00-0/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8
3 PORT	00-0/8	- 00-0/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/4	- 00-1/4	00-1/4	- 00-1/4	00-3/8	- 00-3/8
3 STBD	00-0/8	- 00-0/8	00-1/8	- 00-1/8	00-1/8	- 00-1/8	00-1/4	- 00-1/4	00-1/4	- 00-1/4	00-3/8	- 00-3/8

(ALL MEASUREMENTS ABOVE ARE IN INCHES)

EXAMPLE FOR ABOVE TRIM CORRECTIONS:

FWD. DRAFT	=	2'-00"
AFT DRAFT	=	4'-00"
DIFF.	=	2'-00" (DOWN BY STERN)

THE CORRECTION FOR 2'-00" TRIM DOWN BY STERN FOR 1 PORT IS - 00-1/8"
FOR A MEASURED INNAGE GAUGE OF 4'-00" ON 1 PORT, THE TRIM CORRECTED INNAGE IS 3'-11 7/8"

LENGTH BETWEEN DRAFT MARKS: 239'-09"

July 21, 2009

PRECISION MEASUREMENT
& ANALYSIS, INC.
P.O. Box 2092
Pearland, Texas 77588

<http://www.pmacorp.net>



BARGE 'CCL 402"

1 P C T
INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-05 1/4"

IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	9.87	0	296.08	0	638.57	0	1,000.16	0	1,362.01	0	1,723.86	0	2,085.71	0	2,447.56	0	2,809.40	0	3,171.25
1/4	13.44	1/4	302.82	1/4	646.08	1/4	1,007.70	1/4	1,369.55	1/4	1,731.40	1/4	2,093.25	1/4	2,455.09	1/4	2,816.94	1/4	3,178.79
1/2	17.00	1/2	309.56	1/2	653.60	1/2	1,015.24	1/2	1,377.09	1/2	1,738.94	1/2	2,100.78	1/2	2,462.63	1/2	2,824.48	1/2	3,186.33
3/4	20.56	3/4	316.31	3/4	661.11	3/4	1,022.78	3/4	1,384.63	3/4	1,746.48	3/4	2,108.32	3/4	2,470.17	3/4	2,832.02	3/4	3,193.87
1	24.13	1	323.05	1	668.63	1	1,030.32	1	1,392.17	1	1,754.01	1	2,115.86	1	2,477.71	1	2,839.56	1	3,201.41
1/4	29.19	1/4	329.86	1/4	676.14	1/4	1,037.86	1/4	1,399.70	1/4	1,761.55	1/4	2,123.40	1/4	2,485.25	1/4	2,847.10	1/4	3,208.94
1/2	34.26	1/2	336.68	1/2	683.66	1/2	1,045.39	1/2	1,407.24	1/2	1,769.09	1/2	2,130.94	1/2	2,492.79	1/2	2,854.63	1/2	3,216.48
3/4	39.33	3/4	343.50	3/4	691.17	3/4	1,052.93	3/4	1,414.78	3/4	1,776.63	3/4	2,138.48	3/4	2,500.33	3/4	2,862.17	3/4	3,224.02
2	44.40	2	350.32	2	698.68	2	1,060.47	2	1,422.32	2	1,784.17	2	2,146.02	2	2,507.86	2	2,869.71	2	3,231.56
1/4	50.25	1/4	357.21	1/4	706.21	1/4	1,068.01	1/4	1,429.86	1/4	1,791.71	1/4	2,153.55	1/4	2,515.40	1/4	2,877.25	1/4	3,239.10
1/2	56.11	1/2	364.10	1/2	713.73	1/2	1,075.55	1/2	1,437.40	1/2	1,799.24	1/2	2,161.09	1/2	2,522.94	1/2	2,884.79	1/2	3,246.64
3/4	61.96	3/4	370.99	3/4	721.25	3/4	1,083.09	3/4	1,444.94	3/4	1,806.78	3/4	2,168.63	3/4	2,530.48	3/4	2,892.33	3/4	3,254.18
3	67.82	3	377.88	3	728.78	3	1,090.63	3	1,452.47	3	1,814.32	3	2,176.17	3	2,538.02	3	2,899.87	3	3,261.71
1/4	73.80	1/4	384.85	1/4	736.32	1/4	1,098.16	1/4	1,460.01	1/4	1,821.86	1/4	2,183.71	1/4	2,545.56	1/4	2,907.40	1/4	3,269.25
1/2	79.77	1/2	391.82	1/2	743.85	1/2	1,105.70	1/2	1,467.55	1/2	1,829.40	1/2	2,191.25	1/2	2,553.09	1/2	2,914.94	1/2	3,276.79
3/4	85.75	3/4	398.78	3/4	751.39	3/4	1,113.24	3/4	1,475.09	3/4	1,836.94	3/4	2,198.79	3/4	2,560.63	3/4	2,922.48	3/4	3,284.33
4	91.72	4	405.75	4	758.93	4	1,120.78	4	1,482.63	4	1,844.48	4	2,206.32	4	2,568.17	4	2,930.02	4	3,291.87
1/4	97.80	1/4	412.78	1/4	766.47	1/4	1,128.32	1/4	1,490.17	1/4	1,852.01	1/4	2,213.86	1/4	2,575.71	1/4	2,937.56	1/4	3,299.41
1/2	103.88	1/2	419.82	1/2	774.01	1/2	1,135.86	1/2	1,497.70	1/2	1,859.55	1/2	2,221.40	1/2	2,583.25	1/2	2,945.10	1/2	3,306.94
3/4	109.96	3/4	426.85	3/4	781.55	3/4	1,143.40	3/4	1,505.24	3/4	1,867.09	3/4	2,228.94	3/4	2,590.79	3/4	2,952.64	3/4	3,314.48
5	116.04	5	433.88	5	789.09	5	1,150.93	5	1,512.78	5	1,874.63	5	2,236.48	5	2,598.33	5	2,960.17	5	3,322.02
1/4	122.22	1/4	440.97	1/4	796.62	1/4	1,158.47	1/4	1,520.32	1/4	1,882.17	1/4	2,244.02	1/4	2,605.86	1/4	2,967.71	1/4	3,329.56
1/2	128.40	1/2	448.07	1/2	804.16	1/2	1,166.01	1/2	1,527.86	1/2	1,889.71	1/2	2,251.55	1/2	2,613.40	1/2	2,975.25	1/2	3,337.10
3/4	134.57	3/4	455.16	3/4	811.70	3/4	1,173.55	3/4	1,535.40	3/4	1,897.25	3/4	2,259.09	3/4	2,620.94	3/4	2,982.79	3/4	3,344.64
6	140.75	6	462.25	6	819.24	6	1,181.09	6	1,542.94	6	1,904.78	6	2,266.63	6	2,628.48	6	2,990.33	6	3,352.18
1/4	147.02	1/4	469.42	1/4	826.78	1/4	1,188.63	1/4	1,550.47	1/4	1,912.32	1/4	2,274.17	1/4	2,636.02	1/4	2,997.87	1/4	3,359.71
1/2	153.28	1/2	476.58	1/2	834.32	1/2	1,196.16	1/2	1,558.01	1/2	1,919.86	1/2	2,281.71	1/2	2,643.56	1/2	3,005.40	1/2	3,367.25
3/4	159.55	3/4	483.75	3/4	841.86	3/4	1,203.70	3/4	1,565.55	3/4	1,927.40	3/4	2,289.25	3/4	2,651.10	3/4	3,012.94	3/4	3,374.79
7	165.82	7	490.92	7	849.39	7	1,211.24	7	1,573.09	7	1,934.94	7	2,296.79	7	2,658.63	7	3,020.48	7	3,382.33
1/4	172.17	1/4	498.16	1/4	856.93	1/4	1,218.78	1/4	1,580.63	1/4	1,942.48	1/4	2,304.32	1/4	2,666.17	1/4	3,028.02	1/4	3,389.87
1/2	178.52	1/2	505.40	1/2	864.47	1/2	1,226.32	1/2	1,588.17	1/2	1,950.01	1/2	2,311.86	1/2	2,673.71	1/2	3,035.56	1/2	3,397.41
3/4	184.88	3/4	512.64	3/4	872.01	3/4	1,233.86	3/4	1,595.71	3/4	1,957.55	3/4	2,319.40	3/4	2,681.25	3/4	3,043.10	3/4	3,404.95
8	191.23	8	519.89	8	879.55	8	1,241.40	8	1,603.24	8	1,965.09	8	2,326.94	8	2,688.79	8	3,050.64	8	3,412.48
1/4	197.67	1/4	527.20	1/4	887.09	1/4	1,248.93	1/4	1,610.78	1/4	1,972.63	1/4	2,334.48	1/4	2,696.33	1/4	3,058.17	1/4	3,420.02
1/2	204.10	1/2	534.52	1/2	894.62	1/2	1,256.47	1/2	1,618.32	1/2	1,980.17	1/2	2,342.02	1/2	2,703.86	1/2	3,065.71	1/2	3,427.56
3/4	210.54	3/4	541.84	3/4	902.16	3/4	1,264.01	3/4	1,625.86	3/4	1,987.71	3/4	2,349.56	3/4	2,711.40	3/4	3,073.25	3/4	3,435.10
9	216.98	9	549.15	9	909.70	9	1,271.55	9	1,633.40	9	1,995.25	9	2,357.09	9	2,718.94	9	3,080.79	9	3,442.64
1/4	223.49	1/4	556.55	1/4	917.24	1/4	1,279.09	1/4	1,640.94	1/4	2,002.78	1/4	2,364.63	1/4	2,726.48	1/4	3,088.33	1/4	3,450.18
1/2	230.01	1/2	563.94	1/2	924.78	1/2	1,286.63	1/2	1,648.47	1/2	2,010.32	1/2	2,372.17	1/2	2,734.02	1/2	3,095.87	1/2	3,457.71
3/4	236.53	3/4	571.33	3/4	932.32	3/4	1,294.17	3/4	1,656.01	3/4	2,017.86	3/4	2,379.71	3/4	2,741.56	3/4	3,103.41	3/4	3,465.25
10	243.04	10	578.72	10	939.86	10	1,301.70	10	1,663.55	10	2,025.40	10	2,387.25	10	2,749.10	10	3,110.94	10	3,472.79
1/4	249.63	1/4	586.18	1/4	947.39	1/4	1,309.24	1/4	1,671.09	1/4	2,032.94	1/4	2,394.79	1/4	2,756.63	1/4	3,118.48	1/4	3,480.33
1/2	256.23	1/2	593.64	1/2	954.93	1/2	1,316.78	1/2	1,678.63	1/2	2,040.48	1/2	2,402.32	1/2	2,764.17	1/2	3,126.02	1/2	3,487.87
3/4	262.82	3/4	601.10	3/4	962.47	3/4	1,324.32	3/4	1,686.17	3/4	2,048.02	3/4	2,409.86	3/4	2,771.71	3/4	3,133.56	3/4	3,495.41
11	269.41	11	608.56	11	970.01	11	1,331.86	11	1,693.71	11	2,055.55	11	2,417.40	11	2,779.25	11	3,141.10	11	3,502.95
1/4	276.08	1/4	616.06	1/4	977.55	1/4	1,339.40	1/4	1,701.24	1/4	2,063.09	1/4	2,424.94	1/4	2,786.79	1/4	3,148.64	1/4	3,510.48
1/2	282.75	1/2	623.57	1/2	985.09	1/2	1,346.93	1/2	1,708.78	1/2	2,070.63	1/2	2,432.48	1/2	2,794.33	1/2	3,156.17	1/2	3,518.02
3/4	289.41	3/4	631.07	3/4	992.63	3/4	1,354.47	3/4	1,716.32	3/4	2,078.17	3/4	2,440.02	3/4	2,801.87	3/4	3,163.71	3/4	3,525.56

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.
CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.
CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.
CAPACITY TABLE ONLY APPLIES TO INNAGE GAUGES TAKEN TO TOP OF THREADS ON "MMC" VALVE.
GAUGE POINT: (MMC) LOCATED 10'-09" OFF CENTERLINE AND 42'-00" FORWARD OF AFT BULKHEAD.

PRECISION MEASUREMENT
& ANALYSIS, INC.
P.O. Box 2092
Pearland, Texas 77588
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Precision Measurement & Analysis, Inc.



BARG 'CCL 402"

1 P T
INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-05 1/4"

IN	10 FT.	IN	11 FT.	IN	12 FT.	IN	13 FT.	IN	14 FT.	IN	15 FT.	IN	16 FT.	IN	17 FT.	IN	18 FT.	IN	19 FT.
0	3,533.10	0	3,894.95	0	4,256.25	0	4,616.27	0	4,976.12	0	5,334.00	0		0		0		0	
1/4	3,540.64	1/4	3,902.49	1/4	4,263.74	1/4	4,623.77	1/4	4,983.63	1/4	5,340.97	1/4		1/4		1/4		1/4	
1/2	3,548.18	1/2	3,910.02	1/2	4,271.23	1/2	4,631.27	1/2	4,991.13	1/2	5,347.94	1/2		1/2		1/2		1/2	
3/4	3,555.72	3/4	3,917.56	3/4	4,278.72	3/4	4,638.78	3/4	4,998.63	3/4	5,354.90	3/4		3/4		3/4		3/4	
1	3,563.25	1	3,925.10	1	4,286.21	1	4,646.28	1	5,006.14	1	5,361.87	1		1		1		1	
1/4	3,570.79	1/4	3,932.64	1/4	4,293.70	1/4	4,653.79	1/4	5,013.64	1/4	5,367.58	1/4		1/4		1/4		1/4	
1/2	3,578.33	1/2	3,940.18	1/2	4,301.20	1/2	4,661.29	1/2	5,021.15	1/2	5,373.30	1/2		1/2		1/2		1/2	
3/4	3,585.87	3/4	3,947.72	3/4	4,308.69	3/4	4,668.79	3/4	5,028.65	3/4	5,379.01	3/4		3/4		3/4		3/4	
2	3,593.41	2	3,955.26	2	4,316.18	2	4,676.30	2	5,036.15	2	5,384.72	2		2		2		2	
1/4	3,600.95	1/4	3,962.79	1/4	4,323.67	1/4	4,683.79	1/4	5,043.64	1/4	5,389.18	1/4		1/4		1/4		1/4	
1/2	3,608.48	1/2	3,970.33	1/2	4,331.16	1/2	4,691.29	1/2	5,051.14	1/2	5,393.63	1/2		1/2		1/2		1/2	
3/4	3,616.02	3/4	3,977.87	3/4	4,338.65	3/4	4,698.79	3/4	5,058.63	3/4	5,398.09	3/4		3/4		3/4		3/4	
3	3,623.56	3	3,985.41	3	4,346.15	3	4,706.29	3	5,066.12	3	5,402.54	3		3		3		3	
1/4	3,631.10	1/4	3,992.95	1/4	4,353.65	1/4	4,713.78	1/4	5,073.58	1/4		1/4		1/4		1/4		1/4	
1/2	3,638.64	1/2	4,000.49	1/2	4,361.15	1/2	4,721.27	1/2	5,081.04	1/2		1/2		1/2		1/2		1/2	
3/4	3,646.18	3/4	4,008.03	3/4	4,368.65	3/4	4,728.76	3/4	5,088.50	3/4		3/4		3/4		3/4		3/4	
4	3,653.72	4	4,015.56	4	4,376.14	4	4,736.25	4	5,095.96	4		4		4		4		4	
1/4	3,661.25	1/4	4,023.10	1/4	4,383.65	1/4	4,743.74	1/4	5,103.39	1/4		1/4		1/4		1/4		1/4	
1/2	3,668.79	1/2	4,030.64	1/2	4,391.15	1/2	4,751.23	1/2	5,110.83	1/2		1/2		1/2		1/2		1/2	
3/4	3,676.33	3/4	4,038.18	3/4	4,398.66	3/4	4,758.72	3/4	5,118.27	3/4		3/4		3/4		3/4		3/4	
5	3,683.87	5	4,045.72	5	4,406.16	5	4,766.21	5	5,125.71	5		5		5		5		5	
1/4	3,691.41	1/4	4,053.26	1/4	4,413.66	1/4	4,773.70	1/4	5,133.15	1/4		1/4		1/4		1/4		1/4	
1/2	3,698.95	1/2	4,060.79	1/2	4,421.17	1/2	4,781.19	1/2	5,140.59	1/2		1/2		1/2		1/2		1/2	
3/4	3,706.49	3/4	4,068.33	3/4	4,428.67	3/4	4,788.68	3/4	5,148.03	3/4		3/4		3/4		3/4		3/4	
6	3,714.02	6	4,075.87	6	4,436.18	6	4,796.17	6	5,155.47	6		6		6		6		6	
1/4	3,721.56	1/4	4,083.41	1/4	4,443.68	1/4	4,803.66	1/4	5,162.91	1/4		1/4		1/4		1/4		1/4	
1/2	3,729.10	1/2	4,090.95	1/2	4,451.18	1/2	4,811.15	1/2	5,170.34	1/2		1/2		1/2		1/2		1/2	
3/4	3,736.64	3/4	4,098.49	3/4	4,458.69	3/4	4,818.64	3/4	5,177.78	3/4		3/4		3/4		3/4		3/4	
7	3,744.18	7	4,106.03	7	4,466.19	7	4,826.13	7	5,185.22	7		7		7		7		7	
1/4	3,751.72	1/4	4,113.56	1/4	4,473.69	1/4	4,833.62	1/4	5,192.66	1/4		1/4		1/4		1/4		1/4	
1/2	3,759.25	1/2	4,121.10	1/2	4,481.20	1/2	4,841.12	1/2	5,200.10	1/2		1/2		1/2		1/2		1/2	
3/4	3,766.79	3/4	4,128.64	3/4	4,488.70	3/4	4,848.61	3/4	5,207.54	3/4		3/4		3/4		3/4		3/4	
8	3,774.33	8	4,136.18	8	4,496.21	8	4,856.10	8	5,214.98	8		8		8		8		8	
1/4	3,781.87	1/4	4,143.71	1/4	4,503.71	1/4	4,863.59	1/4	5,222.42	1/4		1/4		1/4		1/4		1/4	
1/2	3,789.41	1/2	4,151.24	1/2	4,511.21	1/2	4,871.09	1/2	5,229.86	1/2		1/2		1/2		1/2		1/2	
3/4	3,796.95	3/4	4,158.78	3/4	4,518.72	3/4	4,878.58	3/4	5,237.29	3/4		3/4		3/4		3/4		3/4	
9	3,804.49	9	4,166.31	9	4,526.22	9	4,886.08	9	5,244.73	9		9		9		9		9	
1/4	3,812.02	1/4	4,173.81	1/4	4,533.72	1/4	4,893.58	1/4	5,252.17	1/4		1/4		1/4		1/4		1/4	
1/2	3,819.56	1/2	4,181.32	1/2	4,541.23	1/2	4,901.08	1/2	5,259.61	1/2		1/2		1/2		1/2		1/2	
3/4	3,827.10	3/4	4,188.83	3/4	4,548.73	3/4	4,908.59	3/4	5,267.05	3/4		3/4		3/4		3/4		3/4	
10	3,834.64	10	4,196.33	10	4,556.24	10	4,916.09	10	5,274.49	10		10		10		10		10	
1/4	3,842.18	1/4	4,203.82	1/4	4,563.74	1/4	4,923.60	1/4	5,281.93	1/4		1/4		1/4		1/4		1/4	
1/2	3,849.72	1/2	4,211.31	1/2	4,571.24	1/2	4,931.10	1/2	5,289.37	1/2		1/2		1/2		1/2		1/2	
3/4	3,857.26	3/4	4,218.80	3/4	4,578.75	3/4	4,938.60	3/4	5,296.81	3/4		3/4		3/4		3/4		3/4	
11	3,864.79	11	4,226.29	11	4,586.25	11	4,946.11	11	5,304.24	11		11		11		11		11	
1/4	3,872.33	1/4	4,233.78	1/4	4,593.75	1/4	4,953.61	1/4	5,311.68	1/4		1/4		1/4		1/4		1/4	
1/2	3,879.87	1/2	4,241.27	1/2	4,601.26	1/2	4,961.11	1/2	5,319.12	1/2		1/2		1/2		1/2		1/2	
3/4	3,887.41	3/4	4,248.76	3/4	4,608.76	3/4	4,968.62	3/4	5,326.56	3/4		3/4		3/4		3/4		3/4	

STRAPPED: 07/21/2009 CL - SW
 CALCULATED: 07/21/2009 CL
 PRINTED: 07/21/2009 SW

CANCELS AND SUPERCEDES
 ALL PRIOR TO 07/2009

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
 & ANALYSIS, INC.
 P.O. Box 2092
 Pearland, Texas 77588
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BARGE 'CCL 402"

1 ST)
INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-05"

IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	9.88	0	296.12	0	639.07	0	1,000.94	0	1,362.83	0	1,724.72	0	2,086.61	0	2,448.50	0	2,810.39	0	3,172.28
1/4	13.44	1/4	302.86	1/4	646.60	1/4	1,008.48	1/4	1,370.37	1/4	1,732.26	1/4	2,094.15	1/4	2,456.04	1/4	2,817.93	1/4	3,179.82
1/2	17.00	1/2	309.60	1/2	654.14	1/2	1,016.02	1/2	1,377.91	1/2	1,739.80	1/2	2,101.69	1/2	2,463.58	1/2	2,825.47	1/2	3,187.36
3/4	20.57	3/4	316.34	3/4	661.67	3/4	1,023.56	3/4	1,385.45	3/4	1,747.34	3/4	2,109.23	3/4	2,471.12	3/4	2,833.01	3/4	3,194.90
1	24.13	1	323.09	1	669.20	1	1,031.09	1	1,392.99	1	1,754.88	1	2,116.77	1	2,478.66	1	2,840.55	1	3,202.44
1/4	29.20	1/4	329.90	1/4	676.74	1/4	1,038.63	1/4	1,400.53	1/4	1,762.42	1/4	2,124.31	1/4	2,486.20	1/4	2,848.09	1/4	3,209.98
1/2	34.27	1/2	336.72	1/2	684.28	1/2	1,046.17	1/2	1,408.06	1/2	1,769.96	1/2	2,131.85	1/2	2,493.74	1/2	2,855.63	1/2	3,217.52
3/4	39.34	3/4	343.54	3/4	691.82	3/4	1,053.71	3/4	1,415.60	3/4	1,777.50	3/4	2,139.39	3/4	2,501.28	3/4	2,863.17	3/4	3,225.06
2	44.40	2	350.36	2	699.36	2	1,061.25	2	1,423.14	2	1,785.03	2	2,146.93	2	2,508.82	2	2,870.71	2	3,232.60
1/4	50.26	1/4	357.25	1/4	706.90	1/4	1,068.79	1/4	1,430.68	1/4	1,792.57	1/4	2,154.47	1/4	2,516.36	1/4	2,878.25	1/4	3,240.14
1/2	56.12	1/2	364.14	1/2	714.44	1/2	1,076.33	1/2	1,438.22	1/2	1,800.11	1/2	2,162.00	1/2	2,523.90	1/2	2,885.79	1/2	3,247.68
3/4	61.97	3/4	371.04	3/4	721.98	3/4	1,083.87	3/4	1,445.76	3/4	1,807.65	3/4	2,169.54	3/4	2,531.44	3/4	2,893.33	3/4	3,255.22
3	67.83	3	377.93	3	729.52	3	1,091.41	3	1,453.30	3	1,815.19	3	2,177.08	3	2,538.97	3	2,900.87	3	3,262.76
1/4	73.80	1/4	384.90	1/4	737.06	1/4	1,098.95	1/4	1,460.84	1/4	1,822.73	1/4	2,184.62	1/4	2,546.51	1/4	2,908.41	1/4	3,270.30
1/2	79.78	1/2	391.86	1/2	744.60	1/2	1,106.49	1/2	1,468.38	1/2	1,830.27	1/2	2,192.16	1/2	2,554.05	1/2	2,915.94	1/2	3,277.84
3/4	85.76	3/4	398.83	3/4	752.14	3/4	1,114.03	3/4	1,475.92	3/4	1,837.81	3/4	2,199.70	3/4	2,561.59	3/4	2,923.48	3/4	3,285.38
4	91.73	4	405.80	4	759.68	4	1,121.57	4	1,483.46	4	1,845.35	4	2,207.24	4	2,569.13	4	2,931.02	4	3,292.91
1/4	97.82	1/4	412.84	1/4	767.22	1/4	1,129.11	1/4	1,491.00	1/4	1,852.89	1/4	2,214.78	1/4	2,576.67	1/4	2,938.56	1/4	3,300.45
1/2	103.90	1/2	419.88	1/2	774.76	1/2	1,136.65	1/2	1,498.54	1/2	1,860.43	1/2	2,222.32	1/2	2,584.21	1/2	2,946.10	1/2	3,307.99
3/4	109.98	3/4	426.92	3/4	782.29	3/4	1,144.19	3/4	1,506.08	3/4	1,867.97	3/4	2,229.86	3/4	2,591.75	3/4	2,953.64	3/4	3,315.53
5	116.06	5	433.96	5	789.83	5	1,151.73	5	1,513.62	5	1,875.51	5	2,237.40	5	2,599.29	5	2,961.18	5	3,323.07
1/4	122.23	1/4	441.06	1/4	797.37	1/4	1,159.26	1/4	1,521.16	1/4	1,883.05	1/4	2,244.94	1/4	2,606.83	1/4	2,968.72	1/4	3,330.61
1/2	128.41	1/2	448.17	1/2	804.91	1/2	1,166.80	1/2	1,528.69	1/2	1,890.59	1/2	2,252.48	1/2	2,614.37	1/2	2,976.26	1/2	3,338.15
3/4	134.59	3/4	455.28	3/4	812.45	3/4	1,174.34	3/4	1,536.23	3/4	1,898.13	3/4	2,260.02	3/4	2,621.91	3/4	2,983.80	3/4	3,345.69
6	140.77	6	462.39	6	819.99	6	1,181.88	6	1,543.77	6	1,905.66	6	2,267.56	6	2,629.45	6	2,991.34	6	3,353.23
1/4	147.03	1/4	469.57	1/4	827.53	1/4	1,189.42	1/4	1,551.31	1/4	1,913.20	1/4	2,275.10	1/4	2,636.99	1/4	2,998.88	1/4	3,360.77
1/2	153.30	1/2	476.75	1/2	835.07	1/2	1,196.96	1/2	1,558.85	1/2	1,920.74	1/2	2,282.63	1/2	2,644.53	1/2	3,006.42	1/2	3,368.31
3/4	159.57	3/4	483.93	3/4	842.61	3/4	1,204.50	3/4	1,566.39	3/4	1,928.28	3/4	2,290.17	3/4	2,652.07	3/4	3,013.96	3/4	3,375.85
7	165.84	7	491.11	7	850.15	7	1,212.04	7	1,573.93	7	1,935.82	7	2,297.71	7	2,659.60	7	3,021.50	7	3,383.39
1/4	172.19	1/4	498.37	1/4	857.69	1/4	1,219.58	1/4	1,581.47	1/4	1,943.36	1/4	2,305.25	1/4	2,667.14	1/4	3,029.04	1/4	3,390.93
1/2	178.55	1/2	505.63	1/2	865.23	1/2	1,227.12	1/2	1,589.01	1/2	1,950.90	1/2	2,312.79	1/2	2,674.68	1/2	3,036.58	1/2	3,398.47
3/4	184.90	3/4	512.89	3/4	872.77	3/4	1,234.66	3/4	1,596.55	3/4	1,958.44	3/4	2,320.33	3/4	2,682.22	3/4	3,044.11	3/4	3,406.01
8	191.25	8	520.14	8	880.31	8	1,242.20	8	1,604.09	8	1,965.98	8	2,327.87	8	2,689.76	8	3,051.65	8	3,413.55
1/4	197.69	1/4	527.48	1/4	887.85	1/4	1,249.74	1/4	1,611.63	1/4	1,973.52	1/4	2,335.41	1/4	2,697.30	1/4	3,059.19	1/4	3,421.08
1/2	204.13	1/2	534.81	1/2	895.39	1/2	1,257.28	1/2	1,619.17	1/2	1,981.06	1/2	2,342.95	1/2	2,704.84	1/2	3,066.73	1/2	3,428.62
3/4	210.57	3/4	542.14	3/4	902.92	3/4	1,264.82	3/4	1,626.71	3/4	1,988.60	3/4	2,350.49	3/4	2,712.38	3/4	3,074.27	3/4	3,436.16
9	217.00	9	549.47	9	910.46	9	1,272.36	9	1,634.25	9	1,996.14	9	2,358.03	9	2,719.92	9	3,081.81	9	3,443.70
1/4	223.52	1/4	556.88	1/4	918.00	1/4	1,279.89	1/4	1,641.79	1/4	2,003.68	1/4	2,365.57	1/4	2,727.46	1/4	3,089.35	1/4	3,451.24
1/2	230.04	1/2	564.29	1/2	925.54	1/2	1,287.43	1/2	1,649.33	1/2	2,011.22	1/2	2,373.11	1/2	2,735.00	1/2	3,096.89	1/2	3,458.78
3/4	236.55	3/4	571.69	3/4	933.08	3/4	1,294.97	3/4	1,656.86	3/4	2,018.76	3/4	2,380.65	3/4	2,742.54	3/4	3,104.43	3/4	3,466.32
10	243.07	10	579.10	10	940.62	10	1,302.51	10	1,664.40	10	2,026.30	10	2,388.19	10	2,750.08	10	3,111.97	10	3,473.86
1/4	249.66	1/4	586.58	1/4	948.16	1/4	1,310.05	1/4	1,671.94	1/4	2,033.83	1/4	2,395.73	1/4	2,757.62	1/4	3,119.51	1/4	3,481.40
1/2	256.26	1/2	594.05	1/2	955.70	1/2	1,317.59	1/2	1,679.48	1/2	2,041.37	1/2	2,403.27	1/2	2,765.16	1/2	3,127.05	1/2	3,488.94
3/4	262.85	3/4	601.53	3/4	963.24	3/4	1,325.13	3/4	1,687.02	3/4	2,048.91	3/4	2,410.80	3/4	2,772.70	3/4	3,134.59	3/4	3,496.48
11	269.44	11	609.00	11	970.78	11	1,332.67	11	1,694.56	11	2,056.45	11	2,418.34	11	2,780.24	11	3,142.13	11	3,504.02
1/4	276.11	1/4	616.52	1/4	978.32	1/4	1,340.21	1/4	1,702.10	1/4	2,063.99	1/4	2,425.88	1/4	2,787.77	1/4	3,149.67	1/4	3,511.56
1/2	282.78	1/2	624.04	1/2	985.86	1/2	1,347.75	1/2	1,709.64	1/2	2,071.53	1/2	2,433.42	1/2	2,795.31	1/2	3,157.21	1/2	3,519.10
3/4	289.45	3/4	631.55	3/4	993.40	3/4	1,355.29	3/4	1,717.18	3/4	2,079.07	3/4	2,440.96	3/4	2,802.85	3/4	3,164.74	3/4	3,526.64

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.

CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.

CAPACITY TABLE ONLY APPLIES TO INNAGE GAUGES TAKEN TO TOP OF THREADS ON "MMC" VALVE.

GAUGE POINT: (MMC) LOCATED 10'-09" OFF CENTERLINE AND 42'-00" FORWARD OF AFT BULKHEAD.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588

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BARGO 'CCL 402"

1 ST
INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-05"

IN	10 FT.	IN	11 FT.	IN	12 FT.	IN	13 FT.	IN	14 FT.	IN	15 FT.	IN	16 FT.	IN	17 FT.	IN	18 FT.	IN	19 FT.
0	3,534.18	0	3,896.07	0	4,257.43	0	4,617.48	0	4,977.38	0	5,335.31	0		0		0		0	
1/4	3,541.71	1/4	3,903.61	1/4	4,264.92	1/4	4,624.99	1/4	4,984.89	1/4	5,342.27	1/4		1/4		1/4		1/4	
1/2	3,549.25	1/2	3,911.15	1/2	4,272.41	1/2	4,632.49	1/2	4,992.39	1/2	5,349.24	1/2		1/2		1/2		1/2	
3/4	3,556.79	3/4	3,918.68	3/4	4,279.90	3/4	4,640.00	3/4	4,999.90	3/4	5,356.21	3/4		3/4		3/4		3/4	
1	3,564.33	1	3,926.22	1	4,287.39	1	4,647.50	1	5,007.40	1	5,363.18	1		1		1		1	
1/4	3,571.87	1/4	3,933.76	1/4	4,294.88	1/4	4,655.01	1/4	5,014.91	1/4	5,368.89	1/4		1/4		1/4		1/4	
1/2	3,579.41	1/2	3,941.30	1/2	4,302.37	1/2	4,662.51	1/2	5,022.41	1/2	5,374.61	1/2		1/2		1/2		1/2	
3/4	3,586.95	3/4	3,948.84	3/4	4,309.86	3/4	4,670.02	3/4	5,029.92	3/4	5,380.32	3/4		3/4		3/4		3/4	
2	3,594.49	2	3,956.38	2	4,317.36	2	4,677.52	2	5,037.42	2	5,386.03	2		2		2		2	
1/4	3,602.03	1/4	3,963.92	1/4	4,324.85	1/4	4,685.02	1/4	5,044.91	1/4	5,390.49	1/4		1/4		1/4		1/4	
1/2	3,609.57	1/2	3,971.46	1/2	4,332.34	1/2	4,692.52	1/2	5,052.41	1/2	5,394.94	1/2		1/2		1/2		1/2	
3/4	3,617.11	3/4	3,979.00	3/4	4,339.84	3/4	4,700.02	3/4	5,059.90	3/4	5,399.40	3/4		3/4		3/4		3/4	
3	3,624.65	3	3,986.54	3	4,347.33	3	4,707.52	3	5,067.39	3	5,403.86	3		3		3		3	
1/4	3,632.19	1/4	3,994.08	1/4	4,354.83	1/4	4,715.01	1/4	5,074.85	1/4		1/4		1/4		1/4		1/4	
1/2	3,639.73	1/2	4,001.62	1/2	4,362.33	1/2	4,722.50	1/2	5,082.31	1/2		1/2		1/2		1/2		1/2	
3/4	3,647.27	3/4	4,009.16	3/4	4,369.83	3/4	4,729.99	3/4	5,089.77	3/4		3/4		3/4		3/4		3/4	
4	3,654.81	4	4,016.70	4	4,377.33	4	4,737.48	4	5,097.23	4		4		4		4		4	
1/4	3,662.35	1/4	4,024.24	1/4	4,384.84	1/4	4,744.97	1/4	5,104.67	1/4		1/4		1/4		1/4		1/4	
1/2	3,669.88	1/2	4,031.78	1/2	4,392.34	1/2	4,752.47	1/2	5,112.11	1/2		1/2		1/2		1/2		1/2	
3/4	3,677.42	3/4	4,039.32	3/4	4,399.85	3/4	4,759.96	3/4	5,119.55	3/4		3/4		3/4		3/4		3/4	
5	3,684.96	5	4,046.85	5	4,407.35	5	4,767.45	5	5,126.99	5		5		5		5		5	
1/4	3,692.50	1/4	4,054.39	1/4	4,414.86	1/4	4,774.94	1/4	5,134.43	1/4		1/4		1/4		1/4		1/4	
1/2	3,700.04	1/2	4,061.93	1/2	4,422.36	1/2	4,782.43	1/2	5,141.87	1/2		1/2		1/2		1/2		1/2	
3/4	3,707.58	3/4	4,069.47	3/4	4,429.87	3/4	4,789.92	3/4	5,149.31	3/4		3/4		3/4		3/4		3/4	
6	3,715.12	6	4,077.01	6	4,437.37	6	4,797.41	6	5,156.75	6		6		6		6		6	
1/4	3,722.66	1/4	4,084.55	1/4	4,444.87	1/4	4,804.90	1/4	5,164.19	1/4		1/4		1/4		1/4		1/4	
1/2	3,730.20	1/2	4,092.09	1/2	4,452.38	1/2	4,812.40	1/2	5,171.63	1/2		1/2		1/2		1/2		1/2	
3/4	3,737.74	3/4	4,099.63	3/4	4,459.88	3/4	4,819.89	3/4	5,179.07	3/4		3/4		3/4		3/4		3/4	
7	3,745.28	7	4,107.17	7	4,467.39	7	4,827.38	7	5,186.51	7		7		7		7		7	
1/4	3,752.82	1/4	4,114.71	1/4	4,474.89	1/4	4,834.87	1/4	5,193.95	1/4		1/4		1/4		1/4		1/4	
1/2	3,760.36	1/2	4,122.25	1/2	4,482.40	1/2	4,842.36	1/2	5,201.39	1/2		1/2		1/2		1/2		1/2	
3/4	3,767.90	3/4	4,129.79	3/4	4,489.90	3/4	4,849.85	3/4	5,208.83	3/4		3/4		3/4		3/4		3/4	
8	3,775.44	8	4,137.33	8	4,497.41	8	4,857.34	8	5,216.27	8		8		8		8		8	
1/4	3,782.98	1/4	4,144.86	1/4	4,504.91	1/4	4,864.84	1/4	5,223.71	1/4		1/4		1/4		1/4		1/4	
1/2	3,790.52	1/2	4,152.40	1/2	4,512.42	1/2	4,872.33	1/2	5,231.15	1/2		1/2		1/2		1/2		1/2	
3/4	3,798.05	3/4	4,159.94	3/4	4,519.92	3/4	4,879.83	3/4	5,238.59	3/4		3/4		3/4		3/4		3/4	
9	3,805.59	9	4,167.47	9	4,527.43	9	4,887.33	9	5,246.03	9		9		9		9		9	
1/4	3,813.13	1/4	4,174.98	1/4	4,534.93	1/4	4,894.83	1/4	5,253.47	1/4		1/4		1/4		1/4		1/4	
1/2	3,820.67	1/2	4,182.48	1/2	4,542.44	1/2	4,902.34	1/2	5,260.91	1/2		1/2		1/2		1/2		1/2	
3/4	3,828.21	3/4	4,189.99	3/4	4,549.94	3/4	4,909.84	3/4	5,268.35	3/4		3/4		3/4		3/4		3/4	
10	3,835.75	10	4,197.50	10	4,557.45	10	4,917.35	10	5,275.79	10		10		10		10		10	
1/4	3,843.29	1/4	4,204.99	1/4	4,564.95	1/4	4,924.85	1/4	5,283.23	1/4		1/4		1/4		1/4		1/4	
1/2	3,850.83	1/2	4,212.48	1/2	4,572.45	1/2	4,932.35	1/2	5,290.67	1/2		1/2		1/2		1/2		1/2	
3/4	3,858.37	3/4	4,219.97	3/4	4,579.96	3/4	4,939.86	3/4	5,298.11	3/4		3/4		3/4		3/4		3/4	
11	3,865.91	11	4,227.46	11	4,587.46	11	4,947.36	11	5,305.55	11		11		11		11		11	
1/4	3,873.45	1/4	4,234.95	1/4	4,594.97	1/4	4,954.87	1/4	5,312.99	1/4		1/4		1/4		1/4		1/4	
1/2	3,880.99	1/2	4,242.44	1/2	4,602.47	1/2	4,962.37	1/2	5,320.43	1/2		1/2		1/2		1/2		1/2	
3/4	3,888.53	3/4	4,249.94	3/4	4,609.98	3/4	4,969.88	3/4	5,327.87	3/4		3/4		3/4		3/4		3/4	

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

STRAPPED: 07/21/2009 CL - SW
 CALCULATED: 07/21/2009 CL
 PRINTED: 07/21/2009 SW

CANCELS AND SUPERCEDES
 ALL PRIOR TO 07/2009

PRECISION MEASUREMENT
 & ANALYSIS, INC.
 P.O. Box 2092
 Pearland, Texas 77588
<http://www.pmacorp.net>



BARG 'CCL 402"

2 P T
INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-05"

IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	11.09	0	355.12	0	707.94	0	1,065.14	0	1,425.34	0	1,785.54	0	2,145.73	0	2,505.93	0	2,866.13	0	3,226.33
1/4	15.78	1/4	362.63	1/4	715.19	1/4	1,072.65	1/4	1,432.85	1/4	1,793.04	1/4	2,153.24	1/4	2,513.44	1/4	2,873.63	1/4	3,233.83
1/2	20.46	1/2	370.13	1/2	722.45	1/2	1,080.15	1/2	1,440.35	1/2	1,800.55	1/2	2,160.74	1/2	2,520.94	1/2	2,881.14	1/2	3,241.33
3/4	25.15	3/4	377.63	3/4	729.70	3/4	1,087.66	3/4	1,447.85	3/4	1,808.05	3/4	2,168.25	3/4	2,528.44	3/4	2,888.64	3/4	3,248.84
1	29.84	1	385.14	1	736.95	1	1,095.16	1	1,455.36	1	1,815.55	1	2,175.75	1	2,535.95	1	2,896.14	1	3,256.34
1/4	36.50	1/4	392.64	1/4	744.21	1/4	1,102.66	1/4	1,462.86	1/4	1,823.06	1/4	2,183.26	1/4	2,543.45	1/4	2,903.65	1/4	3,263.85
1/2	43.15	1/2	400.15	1/2	751.46	1/2	1,110.17	1/2	1,470.37	1/2	1,830.56	1/2	2,190.76	1/2	2,550.96	1/2	2,911.15	1/2	3,271.35
3/4	49.81	3/4	407.65	3/4	758.72	3/4	1,117.67	3/4	1,477.87	3/4	1,838.07	3/4	2,198.26	3/4	2,558.46	3/4	2,918.66	3/4	3,278.85
2	56.47	2	415.15	2	765.97	2	1,125.18	2	1,485.37	2	1,845.57	2	2,205.77	2	2,565.96	2	2,926.16	2	3,286.36
1/4	63.84	1/4	422.66	1/4	773.30	1/4	1,132.68	1/4	1,492.88	1/4	1,853.07	1/4	2,213.27	1/4	2,573.47	1/4	2,933.67	1/4	3,293.86
1/2	71.21	1/2	430.16	1/2	780.63	1/2	1,140.19	1/2	1,500.38	1/2	1,860.58	1/2	2,220.78	1/2	2,580.97	1/2	2,941.17	1/2	3,301.37
3/4	78.57	3/4	437.66	3/4	787.96	3/4	1,147.69	3/4	1,507.89	3/4	1,868.08	3/4	2,228.28	3/4	2,588.48	3/4	2,948.67	3/4	3,308.87
3	85.94	3	445.17	3	795.30	3	1,155.19	3	1,515.39	3	1,875.59	3	2,235.78	3	2,595.98	3	2,956.18	3	3,316.37
1/4	93.35	1/4	452.67	1/4	802.75	1/4	1,162.70	1/4	1,522.89	1/4	1,883.09	1/4	2,243.29	1/4	2,603.48	1/4	2,963.68	1/4	3,323.88
1/2	100.76	1/2	460.18	1/2	810.21	1/2	1,170.20	1/2	1,530.40	1/2	1,890.60	1/2	2,250.79	1/2	2,610.99	1/2	2,971.19	1/2	3,331.38
3/4	108.18	3/4	467.68	3/4	817.67	3/4	1,177.71	3/4	1,537.90	3/4	1,898.10	3/4	2,258.30	3/4	2,618.49	3/4	2,978.69	3/4	3,338.89
4	115.59	4	475.18	4	825.13	4	1,185.21	4	1,545.41	4	1,905.60	4	2,265.80	4	2,626.00	4	2,986.19	4	3,346.39
1/4	123.03	1/4	482.59	1/4	832.60	1/4	1,192.71	1/4	1,552.91	1/4	1,913.11	1/4	2,273.30	1/4	2,633.50	1/4	2,993.70	1/4	3,353.89
1/2	130.47	1/2	490.00	1/2	840.08	1/2	1,200.22	1/2	1,560.42	1/2	1,920.61	1/2	2,280.81	1/2	2,641.01	1/2	3,001.20	1/2	3,361.40
3/4	137.92	3/4	497.41	3/4	847.55	3/4	1,207.72	3/4	1,567.92	3/4	1,928.12	3/4	2,288.31	3/4	2,648.51	3/4	3,008.71	3/4	3,368.90
5	145.36	5	504.83	5	855.03	5	1,215.23	5	1,575.42	5	1,935.62	5	2,295.82	5	2,656.01	5	3,016.21	5	3,376.41
1/4	152.82	1/4	512.08	1/4	862.53	1/4	1,222.73	1/4	1,582.93	1/4	1,943.12	1/4	2,303.32	1/4	2,663.52	1/4	3,023.71	1/4	3,383.91
1/2	160.28	1/2	519.33	1/2	870.04	1/2	1,230.23	1/2	1,590.43	1/2	1,950.63	1/2	2,310.83	1/2	2,671.02	1/2	3,031.22	1/2	3,391.42
3/4	167.75	3/4	526.59	3/4	877.54	3/4	1,237.74	3/4	1,597.94	3/4	1,958.13	3/4	2,318.33	3/4	2,678.53	3/4	3,038.72	3/4	3,398.92
6	175.21	6	533.84	6	885.05	6	1,245.24	6	1,605.44	6	1,965.64	6	2,325.83	6	2,686.03	6	3,046.23	6	3,406.42
1/4	182.69	1/4	541.10	1/4	892.55	1/4	1,252.75	1/4	1,612.94	1/4	1,973.14	1/4	2,333.34	1/4	2,693.53	1/4	3,053.73	1/4	3,413.93
1/2	190.17	1/2	548.35	1/2	900.05	1/2	1,260.25	1/2	1,620.45	1/2	1,980.64	1/2	2,340.84	1/2	2,701.04	1/2	3,061.24	1/2	3,421.43
3/4	197.65	3/4	555.60	3/4	907.56	3/4	1,267.76	3/4	1,627.95	3/4	1,988.15	3/4	2,348.35	3/4	2,708.54	3/4	3,068.74	3/4	3,428.94
7	205.12	7	562.86	7	915.06	7	1,275.26	7	1,635.46	7	1,995.65	7	2,355.85	7	2,716.05	7	3,076.24	7	3,436.44
1/4	212.61	1/4	570.11	1/4	922.57	1/4	1,282.76	1/4	1,642.96	1/4	2,003.16	1/4	2,363.35	1/4	2,723.55	1/4	3,083.75	1/4	3,443.94
1/2	220.10	1/2	577.37	1/2	930.07	1/2	1,290.27	1/2	1,650.46	1/2	2,010.66	1/2	2,370.86	1/2	2,731.05	1/2	3,091.25	1/2	3,451.45
3/4	227.60	3/4	584.62	3/4	937.57	3/4	1,297.77	3/4	1,657.97	3/4	2,018.17	3/4	2,378.36	3/4	2,738.56	3/4	3,098.76	3/4	3,458.95
8	235.09	8	591.87	8	945.08	8	1,305.28	8	1,665.47	8	2,025.67	8	2,385.87	8	2,746.06	8	3,106.26	8	3,466.46
1/4	242.58	1/4	599.13	1/4	952.58	1/4	1,312.78	1/4	1,672.98	1/4	2,033.17	1/4	2,393.37	1/4	2,753.57	1/4	3,113.76	1/4	3,473.96
1/2	250.08	1/2	606.38	1/2	960.09	1/2	1,320.28	1/2	1,680.48	1/2	2,040.68	1/2	2,400.87	1/2	2,761.07	1/2	3,121.27	1/2	3,481.46
3/4	257.58	3/4	613.64	3/4	967.59	3/4	1,327.79	3/4	1,687.98	3/4	2,048.18	3/4	2,408.38	3/4	2,768.58	3/4	3,128.77	3/4	3,488.97
9	265.08	9	620.89	9	975.10	9	1,335.29	9	1,695.49	9	2,055.69	9	2,415.88	9	2,776.08	9	3,136.28	9	3,496.47
1/4	272.58	1/4	628.14	1/4	982.60	1/4	1,342.80	1/4	1,702.99	1/4	2,063.19	1/4	2,423.39	1/4	2,783.58	1/4	3,143.78	1/4	3,503.98
1/2	280.08	1/2	635.40	1/2	990.10	1/2	1,350.30	1/2	1,710.50	1/2	2,070.69	1/2	2,430.89	1/2	2,791.09	1/2	3,151.28	1/2	3,511.48
3/4	287.59	3/4	642.65	3/4	997.61	3/4	1,357.80	3/4	1,718.00	3/4	2,078.20	3/4	2,438.39	3/4	2,798.59	3/4	3,158.79	3/4	3,518.99
10	295.09	10	649.91	10	1,005.11	10	1,365.31	10	1,725.51	10	2,085.70	10	2,445.90	10	2,806.10	10	3,166.29	10	3,526.49
1/4	302.59	1/4	657.16	1/4	1,012.62	1/4	1,372.81	1/4	1,733.01	1/4	2,093.21	1/4	2,453.40	1/4	2,813.60	1/4	3,173.80	1/4	3,533.99
1/2	310.10	1/2	664.41	1/2	1,020.12	1/2	1,380.32	1/2	1,740.51	1/2	2,100.71	1/2	2,460.91	1/2	2,821.10	1/2	3,181.30	1/2	3,541.50
3/4	317.60	3/4	671.67	3/4	1,027.62	3/4	1,387.82	3/4	1,748.02	3/4	2,108.21	3/4	2,468.41	3/4	2,828.61	3/4	3,188.80	3/4	3,549.00
11	325.11	11	678.92	11	1,035.13	11	1,395.32	11	1,755.52	11	2,115.72	11	2,475.92	11	2,836.11	11	3,196.31	11	3,556.51
1/4	332.61	1/4	686.18	1/4	1,042.63	1/4	1,402.83	1/4	1,763.03	1/4	2,123.22	1/4	2,483.42	1/4	2,843.62	1/4	3,203.81	1/4	3,564.01
1/2	340.11	1/2	693.43	1/2	1,050.14	1/2	1,410.33	1/2	1,770.53	1/2	2,130.73	1/2	2,490.92	1/2	2,851.12	1/2	3,211.32	1/2	3,571.51
3/4	347.62	3/4	700.68	3/4	1,057.64	3/4	1,417.84	3/4	1,778.03	3/4	2,138.23	3/4	2,498.43	3/4	2,858.62	3/4	3,218.82	3/4	3,579.02

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.

CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.

CAPACITY TABLE ONLY APPLIES TO INNAGE GAUGES TAKEN TO TOP OF THREADS ON "MMC" VALVE.

GAUGE POINT: (MMC) LOCATED 10'-09" OFF CENTERLINE AND 42'-09" FORWARD OF AFT BULKHEAD.

PRECISION MEASUREMENT
& ANALYSIS, INC.P.O. Box 2092
Pearland, Texas 77588
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BARG 'CCL 402"

2 P T
INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-05"

IN	10 FT.	IN	11 FT.	IN	12 FT.	IN	13 FT.	IN	14 FT.	IN	15 FT.	IN	16 FT.	IN	17 FT.	IN	18 FT.	IN	19 FT.
0	3,586.52	0	3,946.72	0	4,306.38	0	4,664.75	0	5,022.95	0	5,379.18	0		0		0		0	
1/4	3,594.03	1/4	3,954.22	1/4	4,313.84	1/4	4,672.22	1/4	5,030.42	1/4	5,386.12	1/4		1/4		1/4		1/4	
1/2	3,601.53	1/2	3,961.73	1/2	4,321.30	1/2	4,679.68	1/2	5,037.89	1/2	5,393.05	1/2		1/2		1/2		1/2	
3/4	3,609.03	3/4	3,969.23	3/4	4,328.75	3/4	4,687.15	3/4	5,045.36	3/4	5,399.99	3/4		3/4		3/4		3/4	
1	3,616.54	1	3,976.74	1	4,336.21	1	4,694.62	1	5,052.83	1	5,406.93	1		1		1		1	
1/4	3,624.04	1/4	3,984.24	1/4	4,343.66	1/4	4,702.09	1/4	5,060.30	1/4	5,412.61	1/4		1/4		1/4		1/4	
1/2	3,631.55	1/2	3,991.74	1/2	4,351.12	1/2	4,709.56	1/2	5,067.77	1/2	5,418.30	1/2		1/2		1/2		1/2	
3/4	3,639.05	3/4	3,999.25	3/4	4,358.57	3/4	4,717.03	3/4	5,075.24	3/4	5,423.98	3/4		3/4		3/4		3/4	
2	3,646.55	2	4,006.75	2	4,366.03	2	4,724.50	2	5,082.71	2	5,429.66	2		2		2		2	
1/4	3,654.06	1/4	4,014.26	1/4	4,373.49	1/4	4,731.97	1/4	5,090.17	1/4	5,434.10	1/4		1/4		1/4		1/4	
1/2	3,661.56	1/2	4,021.76	1/2	4,380.95	1/2	4,739.43	1/2	5,097.62	1/2	5,438.53	1/2		1/2		1/2		1/2	
3/4	3,669.07	3/4	4,029.26	3/4	4,388.41	3/4	4,746.89	3/4	5,105.08	3/4	5,442.97	3/4		3/4		3/4		3/4	
3	3,676.57	3	4,036.77	3	4,395.86	3	4,754.36	3	5,112.54	3	5,447.40	3		3		3		3	
1/4	3,684.08	1/4	4,044.27	1/4	4,403.33	1/4	4,761.81	1/4	5,119.96	1/4		1/4		1/4		1/4		1/4	
1/2	3,691.58	1/2	4,051.78	1/2	4,410.79	1/2	4,769.27	1/2	5,127.39	1/2		1/2		1/2		1/2		1/2	
3/4	3,699.08	3/4	4,059.28	3/4	4,418.26	3/4	4,776.73	3/4	5,134.81	3/4		3/4		3/4		3/4		3/4	
4	3,706.59	4	4,066.78	4	4,425.73	4	4,784.18	4	5,142.24	4		4		4		4		4	
1/4	3,714.09	1/4	4,074.29	1/4	4,433.19	1/4	4,791.64	1/4	5,149.64	1/4		1/4		1/4		1/4		1/4	
1/2	3,721.60	1/2	4,081.79	1/2	4,440.66	1/2	4,799.09	1/2	5,157.05	1/2		1/2		1/2		1/2		1/2	
3/4	3,729.10	3/4	4,089.30	3/4	4,448.13	3/4	4,806.55	3/4	5,164.45	3/4		3/4		3/4		3/4		3/4	
5	3,736.60	5	4,096.80	5	4,455.60	5	4,814.01	5	5,171.86	5		5		5		5		5	
1/4	3,744.11	1/4	4,104.30	1/4	4,463.07	1/4	4,821.46	1/4	5,179.26	1/4		1/4		1/4		1/4		1/4	
1/2	3,751.61	1/2	4,111.81	1/2	4,470.54	1/2	4,828.92	1/2	5,186.66	1/2		1/2		1/2		1/2		1/2	
3/4	3,759.12	3/4	4,119.31	3/4	4,478.01	3/4	4,836.37	3/4	5,194.07	3/4		3/4		3/4		3/4		3/4	
6	3,766.62	6	4,126.82	6	4,485.48	6	4,843.83	6	5,201.47	6		6		6		6		6	
1/4	3,774.12	1/4	4,134.32	1/4	4,492.95	1/4	4,851.29	1/4	5,208.88	1/4		1/4		1/4		1/4		1/4	
1/2	3,781.63	1/2	4,141.83	1/2	4,500.42	1/2	4,858.74	1/2	5,216.28	1/2		1/2		1/2		1/2		1/2	
3/4	3,789.13	3/4	4,149.33	3/4	4,507.89	3/4	4,866.20	3/4	5,223.69	3/4		3/4		3/4		3/4		3/4	
7	3,796.64	7	4,156.83	7	4,515.36	7	4,873.65	7	5,231.09	7		7		7		7		7	
1/4	3,804.14	1/4	4,164.34	1/4	4,522.83	1/4	4,881.11	1/4	5,238.50	1/4		1/4		1/4		1/4		1/4	
1/2	3,811.65	1/2	4,171.84	1/2	4,530.30	1/2	4,888.57	1/2	5,245.90	1/2		1/2		1/2		1/2		1/2	
3/4	3,819.15	3/4	4,179.35	3/4	4,537.77	3/4	4,896.02	3/4	5,253.31	3/4		3/4		3/4		3/4		3/4	
8	3,826.65	8	4,186.85	8	4,545.24	8	4,903.48	8	5,260.71	8		8		8		8		8	
1/4	3,834.16	1/4	4,194.35	1/4	4,552.71	1/4	4,910.94	1/4	5,268.12	1/4		1/4		1/4		1/4		1/4	
1/2	3,841.66	1/2	4,201.85	1/2	4,560.17	1/2	4,918.40	1/2	5,275.52	1/2		1/2		1/2		1/2		1/2	
3/4	3,849.17	3/4	4,209.35	3/4	4,567.64	3/4	4,925.86	3/4	5,282.92	3/4		3/4		3/4		3/4		3/4	
9	3,856.67	9	4,216.85	9	4,575.11	9	4,933.32	9	5,290.33	9		9		9		9		9	
1/4	3,864.17	1/4	4,224.32	1/4	4,582.58	1/4	4,940.79	1/4	5,297.73	1/4		1/4		1/4		1/4		1/4	
1/2	3,871.68	1/2	4,231.79	1/2	4,590.05	1/2	4,948.26	1/2	5,305.14	1/2		1/2		1/2		1/2		1/2	
3/4	3,879.18	3/4	4,239.27	3/4	4,597.52	3/4	4,955.73	3/4	5,312.54	3/4		3/4		3/4		3/4		3/4	
10	3,886.69	10	4,246.74	10	4,604.99	10	4,963.20	10	5,319.95	10		10		10		10		10	
1/4	3,894.19	1/4	4,254.19	1/4	4,612.46	1/4	4,970.67	1/4	5,327.35	1/4		1/4		1/4		1/4		1/4	
1/2	3,901.69	1/2	4,261.65	1/2	4,619.93	1/2	4,978.14	1/2	5,334.76	1/2		1/2		1/2		1/2		1/2	
3/4	3,909.20	3/4	4,269.10	3/4	4,627.40	3/4	4,985.61	3/4	5,342.16	3/4		3/4		3/4		3/4		3/4	
11	3,916.70	11	4,276.56	11	4,634.87	11	4,993.08	11	5,349.57	11		11		11		11		11	
1/4	3,924.21	1/4	4,284.02	1/4	4,642.34	1/4	5,000.55	1/4	5,356.97	1/4		1/4		1/4		1/4		1/4	
1/2	3,931.71	1/2	4,291.47	1/2	4,649.81	1/2	5,008.01	1/2	5,364.37	1/2		1/2		1/2		1/2		1/2	
3/4	3,939.21	3/4	4,298.93	3/4	4,657.28	3/4	5,015.48	3/4	5,371.78	3/4		3/4		3/4		3/4		3/4	

STRAPPED: 07/21/2009 CL - SW
 CALCULATED: 07/21/2009 CL
 PRINTED: 07/21/2009 SW

CANCELS AND SUPERCEDES
 ALL PRIOR TO 07/2009

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
 & ANALYSIS, INC.
 P.O. Box 2092
 Pearland, Texas 77588
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BARGE 'CCL 402"

2 S

INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-04 3/4"

IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	11.09	0	355.16	0	715.09	0	1,075.31	0	1,435.55	0	1,795.79	0	2,156.03	0	2,516.27	0	2,876.51	0	3,236.75
1/4	15.78	1/4	362.67	1/4	722.59	1/4	1,082.81	1/4	1,443.05	1/4	1,803.29	1/4	2,163.53	1/4	2,523.77	1/4	2,884.01	1/4	3,244.25
1/2	20.47	1/2	370.17	1/2	730.09	1/2	1,090.32	1/2	1,450.56	1/2	1,810.80	1/2	2,171.04	1/2	2,531.28	1/2	2,891.52	1/2	3,251.76
3/4	25.15	3/4	377.68	3/4	737.59	3/4	1,097.82	3/4	1,458.06	3/4	1,818.30	3/4	2,178.54	3/4	2,538.78	3/4	2,899.02	3/4	3,259.26
1	29.84	1	385.18	1	745.09	1	1,105.33	1	1,465.57	1	1,825.81	1	2,186.05	1	2,546.29	1	2,906.53	1	3,266.77
1/4	36.50	1/4	392.69	1/4	752.59	1/4	1,112.83	1/4	1,473.07	1/4	1,833.31	1/4	2,193.55	1/4	2,553.79	1/4	2,914.03	1/4	3,274.27
1/2	43.16	1/2	400.19	1/2	760.10	1/2	1,120.34	1/2	1,480.58	1/2	1,840.82	1/2	2,201.06	1/2	2,561.30	1/2	2,921.54	1/2	3,281.78
3/4	49.82	3/4	407.70	3/4	767.60	3/4	1,127.84	3/4	1,488.08	3/4	1,848.32	3/4	2,208.56	3/4	2,568.80	3/4	2,929.04	3/4	3,289.28
2	56.48	2	415.20	2	775.11	2	1,135.35	2	1,495.59	2	1,855.83	2	2,216.07	2	2,576.31	2	2,936.55	2	3,296.79
1/4	63.85	1/4	422.71	1/4	782.61	1/4	1,142.85	1/4	1,503.09	1/4	1,863.33	1/4	2,223.57	1/4	2,583.81	1/4	2,944.05	1/4	3,304.29
1/2	71.21	1/2	430.21	1/2	790.12	1/2	1,150.36	1/2	1,510.60	1/2	1,870.84	1/2	2,231.08	1/2	2,591.32	1/2	2,951.56	1/2	3,311.80
3/4	78.58	3/4	437.72	3/4	797.62	3/4	1,157.86	3/4	1,518.10	3/4	1,878.34	3/4	2,238.58	3/4	2,598.82	3/4	2,959.06	3/4	3,319.30
3	85.95	3	445.22	3	805.13	3	1,165.37	3	1,525.61	3	1,885.85	3	2,246.09	3	2,606.33	3	2,966.57	3	3,326.81
1/4	93.36	1/4	452.73	1/4	812.63	1/4	1,172.87	1/4	1,533.11	1/4	1,893.35	1/4	2,253.59	1/4	2,613.83	1/4	2,974.07	1/4	3,334.31
1/2	100.78	1/2	460.23	1/2	820.14	1/2	1,180.38	1/2	1,540.62	1/2	1,900.86	1/2	2,261.10	1/2	2,621.34	1/2	2,981.58	1/2	3,341.82
3/4	108.19	3/4	467.74	3/4	827.64	3/4	1,187.88	3/4	1,548.12	3/4	1,908.36	3/4	2,268.60	3/4	2,628.84	3/4	2,989.08	3/4	3,349.32
4	115.60	4	475.24	4	835.15	4	1,195.39	4	1,555.63	4	1,915.87	4	2,276.11	4	2,636.35	4	2,996.59	4	3,356.83
1/4	123.05	1/4	482.74	1/4	842.65	1/4	1,202.89	1/4	1,563.13	1/4	1,923.37	1/4	2,283.61	1/4	2,643.85	1/4	3,004.09	1/4	3,364.33
1/2	130.49	1/2	490.24	1/2	850.16	1/2	1,210.40	1/2	1,570.64	1/2	1,930.88	1/2	2,291.12	1/2	2,651.36	1/2	3,011.60	1/2	3,371.84
3/4	137.93	3/4	497.74	3/4	857.66	3/4	1,217.90	3/4	1,578.14	3/4	1,938.38	3/4	2,298.62	3/4	2,658.86	3/4	3,019.10	3/4	3,379.34
5	145.37	5	505.25	5	865.17	5	1,225.41	5	1,585.65	5	1,945.89	5	2,306.13	5	2,666.37	5	3,026.61	5	3,386.85
1/4	152.84	1/4	512.74	1/4	872.67	1/4	1,232.91	1/4	1,593.15	1/4	1,953.39	1/4	2,313.63	1/4	2,673.87	1/4	3,034.11	1/4	3,394.35
1/2	160.30	1/2	520.24	1/2	880.18	1/2	1,240.42	1/2	1,600.66	1/2	1,960.90	1/2	2,321.14	1/2	2,681.38	1/2	3,041.62	1/2	3,401.86
3/4	167.77	3/4	527.73	3/4	887.68	3/4	1,247.92	3/4	1,608.16	3/4	1,968.40	3/4	2,328.64	3/4	2,688.88	3/4	3,049.12	3/4	3,409.36
6	175.23	6	535.22	6	895.19	6	1,255.43	6	1,615.67	6	1,975.91	6	2,336.15	6	2,696.39	6	3,056.63	6	3,416.87
1/4	182.71	1/4	542.72	1/4	902.69	1/4	1,262.93	1/4	1,623.17	1/4	1,983.41	1/4	2,343.65	1/4	2,703.89	1/4	3,064.13	1/4	3,424.37
1/2	190.19	1/2	550.21	1/2	910.20	1/2	1,270.44	1/2	1,630.68	1/2	1,990.92	1/2	2,351.16	1/2	2,711.40	1/2	3,071.64	1/2	3,431.88
3/4	197.67	3/4	557.71	3/4	917.70	3/4	1,277.94	3/4	1,638.18	3/4	1,998.42	3/4	2,358.66	3/4	2,718.90	3/4	3,079.14	3/4	3,439.38
7	205.15	7	565.20	7	925.21	7	1,285.45	7	1,645.69	7	2,005.93	7	2,366.17	7	2,726.41	7	3,086.65	7	3,446.89
1/4	212.64	1/4	572.70	1/4	932.71	1/4	1,292.95	1/4	1,653.19	1/4	2,013.43	1/4	2,373.67	1/4	2,733.91	1/4	3,094.15	1/4	3,454.39
1/2	220.13	1/2	580.19	1/2	940.22	1/2	1,300.46	1/2	1,660.70	1/2	2,020.94	1/2	2,381.18	1/2	2,741.42	1/2	3,101.66	1/2	3,461.90
3/4	227.62	3/4	587.69	3/4	947.72	3/4	1,307.96	3/4	1,668.20	3/4	2,028.44	3/4	2,388.68	3/4	2,748.92	3/4	3,109.16	3/4	3,469.40
8	235.11	8	595.18	8	955.23	8	1,315.47	8	1,675.71	8	2,035.95	8	2,396.19	8	2,756.43	8	3,116.67	8	3,476.91
1/4	242.61	1/4	602.68	1/4	962.73	1/4	1,322.97	1/4	1,683.21	1/4	2,043.45	1/4	2,403.69	1/4	2,763.93	1/4	3,124.17	1/4	3,484.41
1/2	250.11	1/2	610.17	1/2	970.24	1/2	1,330.48	1/2	1,690.72	1/2	2,050.96	1/2	2,411.20	1/2	2,771.44	1/2	3,131.68	1/2	3,491.92
3/4	257.61	3/4	617.67	3/4	977.74	3/4	1,337.98	3/4	1,698.22	3/4	2,058.46	3/4	2,418.70	3/4	2,778.94	3/4	3,139.18	3/4	3,499.42
9	265.11	9	625.16	9	985.25	9	1,345.49	9	1,705.73	9	2,065.97	9	2,426.21	9	2,786.45	9	3,146.69	9	3,506.93
1/4	272.61	1/4	632.65	1/4	992.75	1/4	1,352.99	1/4	1,713.23	1/4	2,073.47	1/4	2,433.71	1/4	2,793.95	1/4	3,154.19	1/4	3,514.43
1/2	280.12	1/2	640.15	1/2	1,000.26	1/2	1,360.50	1/2	1,720.74	1/2	2,080.98	1/2	2,441.22	1/2	2,801.46	1/2	3,161.70	1/2	3,521.94
3/4	287.62	3/4	647.64	3/4	1,007.76	3/4	1,368.00	3/4	1,728.24	3/4	2,088.48	3/4	2,448.72	3/4	2,808.96	3/4	3,169.20	3/4	3,529.44
10	295.12	10	655.14	10	1,015.27	10	1,375.51	10	1,735.75	10	2,095.99	10	2,456.23	10	2,816.47	10	3,176.71	10	3,536.95
1/4	302.63	1/4	662.63	1/4	1,022.77	1/4	1,383.01	1/4	1,743.25	1/4	2,103.49	1/4	2,463.73	1/4	2,823.97	1/4	3,184.21	1/4	3,544.45
1/2	310.14	1/2	670.13	1/2	1,030.28	1/2	1,390.52	1/2	1,750.76	1/2	2,111.00	1/2	2,471.24	1/2	2,831.48	1/2	3,191.72	1/2	3,551.96
3/4	317.64	3/4	677.62	3/4	1,037.78	3/4	1,398.02	3/4	1,758.26	3/4	2,118.50	3/4	2,478.74	3/4	2,838.98	3/4	3,199.22	3/4	3,559.46
11	325.15	11	685.12	11	1,045.29	11	1,405.53	11	1,765.77	11	2,126.01	11	2,486.25	11	2,846.49	11	3,206.73	11	3,566.97
1/4	332.65	1/4	692.61	1/4	1,052.79	1/4	1,413.03	1/4	1,773.27	1/4	2,133.51	1/4	2,493.75	1/4	2,853.99	1/4	3,214.23	1/4	3,574.47
1/2	340.15	1/2	700.11	1/2	1,060.30	1/2	1,420.54	1/2	1,780.78	1/2	2,141.02	1/2	2,501.26	1/2	2,861.50	1/2	3,221.74	1/2	3,581.98
3/4	347.66	3/4	707.60	3/4	1,067.80	3/4	1,428.04	3/4	1,788.28	3/4	2,148.52	3/4	2,508.76	3/4	2,869.00	3/4	3,229.24	3/4	3,589.48

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.

CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.

CAPACITY TABLE ONLY APPLIES TO INNAGE GAUGES TAKEN TO TOP OF THREADS ON "MMC" VALVE.

GAUGE POINT: (MMC) LOCATED 10'-09" OFF CENTERLINE AND 42'-09" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.

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BARG 'CCL 402"

2 S)
INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-04 3/4"

IN	10 FT.	IN	11 FT.	IN	12 FT.	IN	13 FT.	IN	14 FT.	IN	15 FT.	IN	16 FT.	IN	17 FT.	IN	18 FT.	IN	19 FT.
0	3,596.99	0	3,957.23	0	4,316.94	0	4,675.34	0	5,033.59	0	5,389.86	0		0		0		0	
1/4	3,604.49	1/4	3,964.73	1/4	4,324.39	1/4	4,682.81	1/4	5,041.06	1/4	5,396.80	1/4		1/4		1/4		1/4	
1/2	3,612.00	1/2	3,972.24	1/2	4,331.85	1/2	4,690.28	1/2	5,048.53	1/2	5,403.74	1/2		1/2		1/2		1/2	
3/4	3,619.50	3/4	3,979.74	3/4	4,339.31	3/4	4,697.75	3/4	5,056.00	3/4	5,410.67	3/4		3/4		3/4		3/4	
1	3,627.01	1	3,987.25	1	4,346.77	1	4,705.22	1	5,063.47	1	5,417.61	1		1		1		1	
1/4	3,634.51	1/4	3,994.75	1/4	4,354.22	1/4	4,712.69	1/4	5,070.94	1/4	5,423.29	1/4		1/4		1/4		1/4	
1/2	3,642.02	1/2	4,002.26	1/2	4,361.68	1/2	4,720.17	1/2	5,078.41	1/2	5,428.98	1/2		1/2		1/2		1/2	
3/4	3,649.52	3/4	4,009.76	3/4	4,369.14	3/4	4,727.64	3/4	5,085.88	3/4	5,434.67	3/4		3/4		3/4		3/4	
2	3,657.03	2	4,017.27	2	4,376.59	2	4,735.11	2	5,093.35	2	5,440.35	2		2		2		2	
1/4	3,664.53	1/4	4,024.77	1/4	4,384.05	1/4	4,742.57	1/4	5,100.81	1/4	5,444.79	1/4		1/4		1/4		1/4	
1/2	3,672.04	1/2	4,032.28	1/2	4,391.51	1/2	4,750.04	1/2	5,108.27	1/2	5,449.22	1/2		1/2		1/2		1/2	
3/4	3,679.54	3/4	4,039.78	3/4	4,398.97	3/4	4,757.50	3/4	5,115.73	3/4	5,453.66	3/4		3/4		3/4		3/4	
3	3,687.05	3	4,047.29	3	4,406.43	3	4,764.97	3	5,123.19	3	5,458.09	3		3		3		3	
1/4	3,694.55	1/4	4,054.79	1/4	4,413.90	1/4	4,772.42	1/4	5,130.61	1/4		1/4		1/4		1/4		1/4	
1/2	3,702.06	1/2	4,062.30	1/2	4,421.36	1/2	4,779.88	1/2	5,138.04	1/2		1/2		1/2		1/2		1/2	
3/4	3,709.56	3/4	4,069.80	3/4	4,428.83	3/4	4,787.34	3/4	5,145.46	3/4		3/4		3/4		3/4		3/4	
4	3,717.07	4	4,077.31	4	4,436.29	4	4,794.79	4	5,152.89	4		4		4		4		4	
1/4	3,724.57	1/4	4,084.81	1/4	4,443.76	1/4	4,802.25	1/4	5,160.29	1/4		1/4		1/4		1/4		1/4	
1/2	3,732.08	1/2	4,092.32	1/2	4,451.23	1/2	4,809.71	1/2	5,167.70	1/2		1/2		1/2		1/2		1/2	
3/4	3,739.58	3/4	4,099.82	3/4	4,458.70	3/4	4,817.16	3/4	5,175.11	3/4		3/4		3/4		3/4		3/4	
5	3,747.09	5	4,107.33	5	4,466.17	5	4,824.62	5	5,182.51	5		5		5		5		5	
1/4	3,754.59	1/4	4,114.83	1/4	4,473.65	1/4	4,832.08	1/4	5,189.92	1/4		1/4		1/4		1/4		1/4	
1/2	3,762.10	1/2	4,122.34	1/2	4,481.12	1/2	4,839.53	1/2	5,197.32	1/2		1/2		1/2		1/2		1/2	
3/4	3,769.60	3/4	4,129.84	3/4	4,488.59	3/4	4,846.99	3/4	5,204.73	3/4		3/4		3/4		3/4		3/4	
6	3,777.11	6	4,137.35	6	4,496.06	6	4,854.45	6	5,212.13	6		6		6		6		6	
1/4	3,784.61	1/4	4,144.85	1/4	4,503.53	1/4	4,861.90	1/4	5,219.54	1/4		1/4		1/4		1/4		1/4	
1/2	3,792.12	1/2	4,152.36	1/2	4,511.00	1/2	4,869.36	1/2	5,226.94	1/2		1/2		1/2		1/2		1/2	
3/4	3,799.62	3/4	4,159.86	3/4	4,518.47	3/4	4,876.82	3/4	5,234.35	3/4		3/4		3/4		3/4		3/4	
7	3,807.13	7	4,167.37	7	4,525.94	7	4,884.27	7	5,241.75	7		7		7		7		7	
1/4	3,814.63	1/4	4,174.87	1/4	4,533.41	1/4	4,891.73	1/4	5,249.16	1/4		1/4		1/4		1/4		1/4	
1/2	3,822.14	1/2	4,182.38	1/2	4,540.88	1/2	4,899.19	1/2	5,256.56	1/2		1/2		1/2		1/2		1/2	
3/4	3,829.64	3/4	4,189.88	3/4	4,548.35	3/4	4,906.64	3/4	5,263.97	3/4		3/4		3/4		3/4		3/4	
8	3,837.15	8	4,197.39	8	4,555.82	8	4,914.10	8	5,271.38	8		8		8		8		8	
1/4	3,844.65	1/4	4,204.89	1/4	4,563.29	1/4	4,921.56	1/4	5,278.78	1/4		1/4		1/4		1/4		1/4	
1/2	3,852.16	1/2	4,212.39	1/2	4,570.76	1/2	4,929.02	1/2	5,286.19	1/2		1/2		1/2		1/2		1/2	
3/4	3,859.66	3/4	4,219.89	3/4	4,578.23	3/4	4,936.49	3/4	5,293.59	3/4		3/4		3/4		3/4		3/4	
9	3,867.17	9	4,227.40	9	4,585.70	9	4,943.95	9	5,301.00	9		9		9		9		9	
1/4	3,874.67	1/4	4,234.87	1/4	4,593.17	1/4	4,951.42	1/4	5,308.40	1/4		1/4		1/4		1/4		1/4	
1/2	3,882.18	1/2	4,242.34	1/2	4,600.64	1/2	4,958.89	1/2	5,315.81	1/2		1/2		1/2		1/2		1/2	
3/4	3,889.68	3/4	4,249.81	3/4	4,608.11	3/4	4,966.36	3/4	5,323.21	3/4		3/4		3/4		3/4		3/4	
10	3,897.19	10	4,257.28	10	4,615.58	10	4,973.83	10	5,330.62	10		10		10		10		10	
1/4	3,904.69	1/4	4,264.74	1/4	4,623.05	1/4	4,981.30	1/4	5,338.02	1/4		1/4		1/4		1/4		1/4	
1/2	3,912.20	1/2	4,272.20	1/2	4,630.52	1/2	4,988.77	1/2	5,345.43	1/2		1/2		1/2		1/2		1/2	
3/4	3,919.70	3/4	4,279.65	3/4	4,637.99	3/4	4,996.24	3/4	5,352.84	3/4		3/4		3/4		3/4		3/4	
11	3,927.21	11	4,287.11	11	4,645.46	11	5,003.71	11	5,360.24	11		11		11		11		11	
1/4	3,934.71	1/4	4,294.57	1/4	4,652.93	1/4	5,011.18	1/4	5,367.65	1/4		1/4		1/4		1/4		1/4	
1/2	3,942.22	1/2	4,302.02	1/2	4,660.40	1/2	5,018.65	1/2	5,375.05	1/2		1/2		1/2		1/2		1/2	
3/4	3,949.72	3/4	4,309.48	3/4	4,667.87	3/4	5,026.12	3/4	5,382.46	3/4		3/4		3/4		3/4		3/4	

STRAPPED: 07/21/2009 CL - SW
 CALCULATED: 07/21/2009 CL
 PRINTED: 07/21/2009 SW

CANCELS AND SUPERCEDES
 ALL PRIOR TO 07/2009

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BARG "CCL 402"

3 P T INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS																		GAUGE HEIGHT 16'-04 3/4"	
IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	11.03	0	352.92	0	702.76	0	1,055.61	0	1,412.89	0	1,768.78	0	2,125.57	0	2,482.89	0	2,840.07	0	3,197.18
1/4	15.69	1/4	360.37	1/4	709.95	1/4	1,063.06	1/4	1,420.33	1/4	1,776.18	1/4	2,133.01	1/4	2,490.33	1/4	2,847.51	1/4	3,204.62
1/2	20.35	1/2	367.81	1/2	717.14	1/2	1,070.50	1/2	1,427.77	1/2	1,783.58	1/2	2,140.46	1/2	2,497.78	1/2	2,854.95	1/2	3,212.06
3/4	25.00	3/4	375.26	3/4	724.33	3/4	1,077.94	3/4	1,435.21	3/4	1,790.98	3/4	2,147.90	3/4	2,505.22	3/4	2,862.39	3/4	3,219.50
1	29.66	1	382.71	1	731.53	1	1,085.39	1	1,442.66	1	1,798.39	1	2,155.35	1	2,512.67	1	2,869.83	1	3,226.94
1/4	36.28	1/4	390.16	1/4	738.73	1/4	1,092.83	1/4	1,450.10	1/4	1,805.79	1/4	2,162.80	1/4	2,520.12	1/4	2,877.27	1/4	3,234.38
1/2	42.90	1/2	397.61	1/2	745.94	1/2	1,100.27	1/2	1,457.54	1/2	1,813.19	1/2	2,170.24	1/2	2,527.56	1/2	2,884.71	1/2	3,241.82
3/4	49.52	3/4	405.05	3/4	753.14	3/4	1,107.71	3/4	1,464.99	3/4	1,820.59	3/4	2,177.69	3/4	2,535.01	3/4	2,892.15	3/4	3,249.26
2	56.14	2	412.50	2	760.35	2	1,115.16	2	1,472.43	2	1,827.99	2	2,185.14	2	2,542.45	2	2,899.59	2	3,256.70
1/4	63.46	1/4	419.95	1/4	767.55	1/4	1,122.60	1/4	1,479.87	1/4	1,835.40	1/4	2,192.58	1/4	2,549.90	1/4	2,907.03	1/4	3,264.14
1/2	70.79	1/2	427.40	1/2	774.76	1/2	1,130.04	1/2	1,487.31	1/2	1,842.80	1/2	2,200.03	1/2	2,557.34	1/2	2,914.47	1/2	3,271.58
3/4	78.11	3/4	434.84	3/4	781.97	3/4	1,137.49	3/4	1,494.76	3/4	1,850.20	3/4	2,207.48	3/4	2,564.79	3/4	2,921.91	3/4	3,279.02
3	85.43	3	442.29	3	789.17	3	1,144.93	3	1,502.20	3	1,857.60	3	2,214.92	3	2,572.23	3	2,929.35	3	3,286.46
1/4	92.80	1/4	449.74	1/4	796.38	1/4	1,152.37	1/4	1,509.63	1/4	1,865.02	1/4	2,222.37	1/4	2,579.67	1/4	2,936.79	1/4	3,293.90
1/2	100.17	1/2	457.19	1/2	803.59	1/2	1,159.82	1/2	1,517.05	1/2	1,872.44	1/2	2,229.82	1/2	2,587.11	1/2	2,944.23	1/2	3,301.34
3/4	107.54	3/4	464.64	3/4	810.80	3/4	1,167.26	3/4	1,524.48	3/4	1,879.86	3/4	2,237.26	3/4	2,594.56	3/4	2,951.67	3/4	3,308.78
4	114.91	4	472.08	4	818.01	4	1,174.70	4	1,531.91	4	1,887.28	4	2,244.71	4	2,602.00	4	2,959.11	4	3,316.22
1/4	122.31	1/4	479.44	1/4	825.31	1/4	1,182.15	1/4	1,539.31	1/4	1,894.72	1/4	2,252.15	1/4	2,609.44	1/4	2,966.55	1/4	3,323.66
1/2	129.70	1/2	486.79	1/2	832.61	1/2	1,189.59	1/2	1,546.71	1/2	1,902.17	1/2	2,259.60	1/2	2,616.88	1/2	2,973.99	1/2	3,331.10
3/4	137.10	3/4	494.14	3/4	839.91	3/4	1,197.03	3/4	1,554.12	3/4	1,909.62	3/4	2,267.04	3/4	2,624.32	3/4	2,981.43	3/4	3,338.54
5	144.50	5	501.49	5	847.20	5	1,204.48	5	1,561.52	5	1,917.06	5	2,274.49	5	2,631.76	5	2,988.87	5	3,345.98
1/4	151.92	1/4	508.69	1/4	854.65	1/4	1,211.92	1/4	1,568.92	1/4	1,924.51	1/4	2,281.93	1/4	2,639.20	1/4	2,996.31	1/4	3,353.42
1/2	159.33	1/2	515.88	1/2	862.09	1/2	1,219.36	1/2	1,576.32	1/2	1,931.96	1/2	2,289.37	1/2	2,646.64	1/2	3,003.75	1/2	3,360.86
3/4	166.75	3/4	523.07	3/4	869.53	3/4	1,226.81	3/4	1,583.72	3/4	1,939.40	3/4	2,296.82	3/4	2,654.08	3/4	3,011.19	3/4	3,368.30
6	174.16	6	530.27	6	876.98	6	1,234.25	6	1,591.13	6	1,946.85	6	2,304.26	6	2,661.52	6	3,018.63	6	3,375.74
1/4	181.59	1/4	537.46	1/4	884.42	1/4	1,241.69	1/4	1,598.53	1/4	1,954.30	1/4	2,311.70	1/4	2,668.96	1/4	3,026.07	1/4	3,383.18
1/2	189.02	1/2	544.65	1/2	891.86	1/2	1,249.14	1/2	1,605.93	1/2	1,961.74	1/2	2,319.14	1/2	2,676.40	1/2	3,033.51	1/2	3,390.62
3/4	196.44	3/4	551.84	3/4	899.31	3/4	1,256.58	3/4	1,613.33	3/4	1,969.19	3/4	2,326.58	3/4	2,683.84	3/4	3,040.95	3/4	3,398.06
7	203.87	7	559.03	7	906.75	7	1,264.02	7	1,620.74	7	1,976.64	7	2,334.03	7	2,691.27	7	3,048.39	7	3,405.50
1/4	211.31	1/4	566.22	1/4	914.19	1/4	1,271.47	1/4	1,628.14	1/4	1,984.08	1/4	2,341.47	1/4	2,698.71	1/4	3,055.83	1/4	3,412.94
1/2	218.75	1/2	573.40	1/2	921.63	1/2	1,278.91	1/2	1,635.54	1/2	1,991.53	1/2	2,348.91	1/2	2,706.15	1/2	3,063.26	1/2	3,420.38
3/4	226.19	3/4	580.59	3/4	929.08	3/4	1,286.35	3/4	1,642.94	3/4	1,998.97	3/4	2,356.35	3/4	2,713.59	3/4	3,070.70	3/4	3,427.82
8	233.64	8	587.77	8	936.52	8	1,293.79	8	1,650.34	8	2,006.42	8	2,363.80	8	2,721.03	8	3,078.14	8	3,435.25
1/4	241.09	1/4	594.96	1/4	943.96	1/4	1,301.24	1/4	1,657.75	1/4	2,013.87	1/4	2,371.24	1/4	2,728.47	1/4	3,085.58	1/4	3,442.69
1/2	248.54	1/2	602.15	1/2	951.41	1/2	1,308.68	1/2	1,665.15	1/2	2,021.31	1/2	2,378.68	1/2	2,735.91	1/2	3,093.02	1/2	3,450.13
3/4	256.00	3/4	609.33	3/4	958.85	3/4	1,316.12	3/4	1,672.55	3/4	2,028.76	3/4	2,386.12	3/4	2,743.35	3/4	3,100.46	3/4	3,457.57
9	263.45	9	616.52	9	966.29	9	1,323.57	9	1,679.95	9	2,036.21	9	2,393.56	9	2,750.79	9	3,107.90	9	3,465.01
1/4	270.91	1/4	623.71	1/4	973.74	1/4	1,331.01	1/4	1,687.35	1/4	2,043.65	1/4	2,401.01	1/4	2,758.23	1/4	3,115.34	1/4	3,472.44
1/2	278.37	1/2	630.89	1/2	981.18	1/2	1,338.45	1/2	1,694.76	1/2	2,051.10	1/2	2,408.45	1/2	2,765.67	1/2	3,122.78	1/2	3,479.87
3/4	285.82	3/4	638.08	3/4	988.62	3/4	1,345.90	3/4	1,702.16	3/4	2,058.55	3/4	2,415.89	3/4	2,773.11	3/4	3,130.22	3/4	3,487.30
10	293.28	10	645.26	10	996.07	10	1,353.34	10	1,709.56	10	2,065.99	10	2,423.33	10	2,780.55	10	3,137.66	10	3,494.73
1/4	300.74	1/4	652.45	1/4	1,003.51	1/4	1,360.78	1/4	1,716.96	1/4	2,073.44	1/4	2,430.78	1/4	2,787.99	1/4	3,145.10	1/4	3,502.15
1/2	308.20	1/2	659.64	1/2	1,010.95	1/2	1,368.23	1/2	1,724.36	1/2	2,080.89	1/2	2,438.22	1/2	2,795.43	1/2	3,152.54	1/2	3,509.58
3/4	315.66	3/4	666.82	3/4	1,018.40	3/4	1,375.67	3/4	1,731.77	3/4	2,088.33	3/4	2,445.66	3/4	2,802.87	3/4	3,159.98	3/4	3,517.01
11	323.11	11	674.01	11	1,025.84	11	1,383.11	11	1,739.17	11	2,095.78	11	2,453.10	11	2,810.31	11	3,167.42	11	3,524.43
1/4	330.56	1/4	681.20	1/4	1,033.28	1/4	1,390.56	1/4	1,746.57	1/4	2,103.23	1/4	2,460.55	1/4	2,817.75	1/4	3,174.86	1/4	3,531.86
1/2	338.02	1/2	688.38	1/2	1,040.73	1/2	1,398.00	1/2	1,753.97	1/2	2,110.67	1/2	2,468.00	1/2	2,825.19	1/2	3,182.30	1/2	3,539.28
3/4	345.47	3/4	695.57	3/4	1,048.17	3/4	1,405.44	3/4	1,761.38	3/4	2,118.12	3/4	2,475.44	3/4	2,832.63	3/4	3,189.74	3/4	3,546.71

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.
CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.
CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.
CAPACITY TABLE ONLY APPLIES TO INNAGE GAUGES TAKEN TO TOP OF THREADS ON "MMC" VALVE.
GAUGE POINT: (MMC) LOCATED 10'-09" OFF CENTERLINE AND 41'-09" FORWARD OF AFT BULKHEAD.

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

PRECISION MEASUREMENT
& ANALYSIS, INC.
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BARGO 'CCL 402"

3 P C T
INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-04 3/4"

IN	10 FT.	IN	11 FT.	IN	12 FT.	IN	13 FT.	IN	14 FT.	IN	15 FT.	IN	16 FT.	IN	17 FT.	IN	18 FT.	IN	19 FT.
0	3,554.14	0	3,849.18	0	4,123.38	0	4,396.64	0	4,669.78	0	4,961.55	0		0		0		0	
1/4	3,561.56	1/4	3,854.89	1/4	4,129.06	1/4	4,402.33	1/4	4,675.47	1/4	4,968.47	1/4		1/4		1/4		1/4	
1/2	3,568.99	1/2	3,860.61	1/2	4,134.75	1/2	4,408.03	1/2	4,681.17	1/2	4,975.39	1/2		1/2		1/2		1/2	
3/4	3,576.41	3/4	3,866.32	3/4	4,140.43	3/4	4,413.72	3/4	4,686.87	3/4	4,982.32	3/4		3/4		3/4		3/4	
1	3,583.84	1	3,872.04	1	4,146.12	1	4,419.42	1	4,692.56	1	4,989.24	1		1		1		1	
1/4	3,591.27	1/4	3,877.76	1/4	4,151.80	1/4	4,425.11	1/4	4,698.26	1/4	4,994.92	1/4		1/4		1/4		1/4	
1/2	3,598.69	1/2	3,883.48	1/2	4,157.49	1/2	4,430.81	1/2	4,703.95	1/2	5,000.60	1/2		1/2		1/2		1/2	
3/4	3,606.12	3/4	3,889.20	3/4	4,163.17	3/4	4,436.50	3/4	4,709.65	3/4	5,006.27	3/4		3/4		3/4		3/4	
2	3,613.55	2	3,894.93	2	4,168.86	2	4,442.20	2	4,715.34	2	5,011.95	2		2		2		2	
1/4	3,620.65	1/4	3,900.65	1/4	4,174.55	1/4	4,447.89	1/4	4,721.03	1/4	5,016.39	1/4		1/4		1/4		1/4	
1/2	3,627.75	1/2	3,906.37	1/2	4,180.23	1/2	4,453.58	1/2	4,726.72	1/2	5,020.83	1/2		1/2		1/2		1/2	
3/4	3,634.85	3/4	3,912.09	3/4	4,185.92	3/4	4,459.28	3/4	4,732.41	3/4	5,025.26	3/4		3/4		3/4		3/4	
3	3,641.95	3	3,917.81	3	4,191.61	3	4,464.97	3	4,738.09	3	5,029.70	3		3		3		3	
1/4	3,648.18	1/4	3,923.53	1/4	4,197.30	1/4	4,470.65	1/4	4,743.76	1/4		1/4		1/4		1/4		1/4	
1/2	3,654.41	1/2	3,929.26	1/2	4,202.99	1/2	4,476.34	1/2	4,749.42	1/2		1/2		1/2		1/2		1/2	
3/4	3,660.64	3/4	3,934.98	3/4	4,208.68	3/4	4,482.02	3/4	4,755.09	3/4		3/4		3/4		3/4		3/4	
4	3,666.87	4	3,940.70	4	4,214.38	4	4,487.71	4	4,760.75	4		4		4		4		4	
1/4	3,672.56	1/4	3,946.42	1/4	4,220.07	1/4	4,493.40	1/4	4,766.40	1/4		1/4		1/4		1/4		1/4	
1/2	3,678.25	1/2	3,952.14	1/2	4,225.77	1/2	4,499.08	1/2	4,772.05	1/2		1/2		1/2		1/2		1/2	
3/4	3,683.93	3/4	3,957.86	3/4	4,231.46	3/4	4,504.77	3/4	4,777.70	3/4		3/4		3/4		3/4		3/4	
5	3,689.62	5	3,963.59	5	4,237.16	5	4,510.45	5	4,783.35	5		5		5		5		5	
1/4	3,695.31	1/4	3,969.31	1/4	4,242.85	1/4	4,516.14	1/4	4,789.00	1/4		1/4		1/4		1/4		1/4	
1/2	3,701.00	1/2	3,975.03	1/2	4,248.55	1/2	4,521.82	1/2	4,794.65	1/2		1/2		1/2		1/2		1/2	
3/4	3,706.69	3/4	3,980.75	3/4	4,254.25	3/4	4,527.51	3/4	4,800.30	3/4		3/4		3/4		3/4		3/4	
6	3,712.38	6	3,986.47	6	4,259.94	6	4,533.19	6	4,805.95	6		6		6		6		6	
1/4	3,718.08	1/4	3,992.19	1/4	4,265.64	1/4	4,538.88	1/4	4,811.60	1/4		1/4		1/4		1/4		1/4	
1/2	3,723.78	1/2	3,997.92	1/2	4,271.33	1/2	4,544.56	1/2	4,817.25	1/2		1/2		1/2		1/2		1/2	
3/4	3,729.47	3/4	4,003.64	3/4	4,277.03	3/4	4,550.25	3/4	4,822.90	3/4		3/4		3/4		3/4		3/4	
7	3,735.17	7	4,009.36	7	4,282.72	7	4,555.93	7	4,828.56	7		7		7		7		7	
1/4	3,740.87	1/4	4,015.08	1/4	4,288.42	1/4	4,561.62	1/4	4,834.21	1/4		1/4		1/4		1/4		1/4	
1/2	3,746.57	1/2	4,020.80	1/2	4,294.11	1/2	4,567.31	1/2	4,839.86	1/2		1/2		1/2		1/2		1/2	
3/4	3,752.27	3/4	4,026.52	3/4	4,299.81	3/4	4,572.99	3/4	4,845.51	3/4		3/4		3/4		3/4		3/4	
8	3,757.97	8	4,032.25	8	4,305.51	8	4,578.68	8	4,851.16	8		8		8		8		8	
1/4	3,763.67	1/4	4,037.96	1/4	4,311.20	1/4	4,584.37	1/4	4,857.13	1/4		1/4		1/4		1/4		1/4	
1/2	3,769.37	1/2	4,043.68	1/2	4,316.90	1/2	4,590.05	1/2	4,863.11	1/2		1/2		1/2		1/2		1/2	
3/4	3,775.07	3/4	4,049.39	3/4	4,322.59	3/4	4,595.74	3/4	4,869.09	3/4		3/4		3/4		3/4		3/4	
9	3,780.77	9	4,055.11	9	4,328.29	9	4,601.43	9	4,875.06	9		9		9		9		9	
1/4	3,786.47	1/4	4,060.80	1/4	4,333.98	1/4	4,607.13	1/4	4,881.91	1/4		1/4		1/4		1/4		1/4	
1/2	3,792.17	1/2	4,066.50	1/2	4,339.68	1/2	4,612.82	1/2	4,888.75	1/2		1/2		1/2		1/2		1/2	
3/4	3,797.87	3/4	4,072.20	3/4	4,345.38	3/4	4,618.52	3/4	4,895.60	3/4		3/4		3/4		3/4		3/4	
10	3,803.57	10	4,077.89	10	4,351.07	10	4,624.21	10	4,902.44	10		10		10		10		10	
1/4	3,809.27	1/4	4,083.58	1/4	4,356.77	1/4	4,629.91	1/4	4,909.83	1/4		1/4		1/4		1/4		1/4	
1/2	3,814.97	1/2	4,089.26	1/2	4,362.46	1/2	4,635.61	1/2	4,917.22	1/2		1/2		1/2		1/2		1/2	
3/4	3,820.67	3/4	4,094.95	3/4	4,368.16	3/4	4,641.30	3/4	4,924.61	3/4		3/4		3/4		3/4		3/4	
11	3,826.37	11	4,100.63	11	4,373.85	11	4,647.00	11	4,932.00	11		11		11		11		11	
1/4	3,832.07	1/4	4,106.32	1/4	4,379.55	1/4	4,652.69	1/4	4,939.38	1/4		1/4		1/4		1/4		1/4	
1/2	3,837.77	1/2	4,112.00	1/2	4,385.24	1/2	4,658.39	1/2	4,946.77	1/2		1/2		1/2		1/2		1/2	
3/4	3,843.48	3/4	4,117.69	3/4	4,390.94	3/4	4,664.08	3/4	4,954.16	3/4		3/4		3/4		3/4		3/4	

STRAPPED: 07/21/2009 CL - SW
 CALCULATED: 07/21/2009 CL
 PRINTED: 07/21/2009 SW

CANCELS AND SUPERCEDES
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BARGE 'CCL 402"

3 S

INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-05"

IN	0 FT.	IN	1 FT.	IN	2 FT.	IN	3 FT.	IN	4 FT.	IN	5 FT.	IN	6 FT.	IN	7 FT.	IN	8 FT.	IN	9 FT.
0	11.02	0	352.94	0	710.61	0	1,068.57	0	1,426.55	0	1,784.54	0	2,142.52	0	2,500.51	0	2,858.28	0	3,215.99
1/4	15.68	1/4	360.40	1/4	718.06	1/4	1,076.03	1/4	1,434.01	1/4	1,792.00	1/4	2,149.98	1/4	2,507.96	1/4	2,865.74	1/4	3,223.44
1/2	20.34	1/2	367.86	1/2	725.52	1/2	1,083.49	1/2	1,441.47	1/2	1,799.45	1/2	2,157.44	1/2	2,515.42	1/2	2,873.19	1/2	3,230.89
3/4	25.00	3/4	375.31	3/4	732.97	3/4	1,090.94	3/4	1,448.93	3/4	1,806.91	3/4	2,164.90	3/4	2,522.88	3/4	2,880.64	3/4	3,238.35
1	29.66	1	382.77	1	740.42	1	1,098.40	1	1,456.39	1	1,814.37	1	2,172.35	1	2,530.34	1	2,888.09	1	3,245.80
1/4	36.27	1/4	390.23	1/4	747.88	1/4	1,105.86	1/4	1,463.84	1/4	1,821.83	1/4	2,179.81	1/4	2,537.80	1/4	2,895.55	1/4	3,253.25
1/2	42.89	1/2	397.69	1/2	755.33	1/2	1,113.32	1/2	1,471.30	1/2	1,829.29	1/2	2,187.27	1/2	2,545.25	1/2	2,903.00	1/2	3,260.70
3/4	49.51	3/4	405.14	3/4	762.79	3/4	1,120.78	3/4	1,478.76	3/4	1,836.74	3/4	2,194.73	3/4	2,552.71	3/4	2,910.45	3/4	3,268.16
2	56.13	2	412.60	2	770.25	2	1,128.23	2	1,486.22	2	1,844.20	2	2,202.19	2	2,560.17	2	2,917.90	2	3,275.61
1/4	63.45	1/4	420.06	1/4	777.71	1/4	1,135.69	1/4	1,493.68	1/4	1,851.66	1/4	2,209.64	1/4	2,567.63	1/4	2,925.35	1/4	3,283.06
1/2	70.77	1/2	427.52	1/2	785.17	1/2	1,143.15	1/2	1,501.13	1/2	1,859.12	1/2	2,217.10	1/2	2,575.08	1/2	2,932.81	1/2	3,290.51
3/4	78.09	3/4	434.98	3/4	792.62	3/4	1,150.61	3/4	1,508.59	3/4	1,866.58	3/4	2,224.56	3/4	2,582.54	3/4	2,940.26	3/4	3,297.96
3	85.41	3	442.43	3	800.08	3	1,158.07	3	1,516.05	3	1,874.03	3	2,232.02	3	2,590.00	3	2,947.71	3	3,305.42
1/4	92.78	1/4	449.89	1/4	807.54	1/4	1,165.52	1/4	1,523.51	1/4	1,881.49	1/4	2,239.48	1/4	2,597.45	1/4	2,955.16	1/4	3,312.87
1/2	100.15	1/2	457.35	1/2	815.00	1/2	1,172.98	1/2	1,530.97	1/2	1,888.95	1/2	2,246.93	1/2	2,604.91	1/2	2,962.62	1/2	3,320.32
3/4	107.51	3/4	464.81	3/4	822.46	3/4	1,180.44	3/4	1,538.42	3/4	1,896.41	3/4	2,254.39	3/4	2,612.36	3/4	2,970.07	3/4	3,327.77
4	114.88	4	472.27	4	829.91	4	1,187.90	4	1,545.88	4	1,903.87	4	2,261.85	4	2,619.81	4	2,977.52	4	3,335.23
1/4	122.28	1/4	479.72	1/4	837.37	1/4	1,195.36	1/4	1,553.34	1/4	1,911.32	1/4	2,269.31	1/4	2,627.27	1/4	2,984.97	1/4	3,342.68
1/2	129.67	1/2	487.17	1/2	844.83	1/2	1,202.81	1/2	1,560.80	1/2	1,918.78	1/2	2,276.77	1/2	2,634.72	1/2	2,992.42	1/2	3,350.13
3/4	137.07	3/4	494.63	3/4	852.29	3/4	1,210.27	3/4	1,568.26	3/4	1,926.24	3/4	2,284.22	3/4	2,642.17	3/4	2,999.88	3/4	3,357.58
5	144.47	5	502.08	5	859.75	5	1,217.73	5	1,575.71	5	1,933.70	5	2,291.68	5	2,649.62	5	3,007.33	5	3,365.03
1/4	151.88	1/4	509.53	1/4	867.20	1/4	1,225.19	1/4	1,583.17	1/4	1,941.16	1/4	2,299.14	1/4	2,657.08	1/4	3,014.78	1/4	3,372.49
1/2	159.30	1/2	516.98	1/2	874.66	1/2	1,232.65	1/2	1,590.63	1/2	1,948.61	1/2	2,306.60	1/2	2,664.53	1/2	3,022.23	1/2	3,379.94
3/4	166.72	3/4	524.42	3/4	882.12	3/4	1,240.10	3/4	1,598.09	3/4	1,956.07	3/4	2,314.06	3/4	2,671.98	3/4	3,029.69	3/4	3,387.39
6	174.13	6	531.87	6	889.58	6	1,247.56	6	1,605.55	6	1,963.53	6	2,321.51	6	2,679.43	6	3,037.14	6	3,394.84
1/4	181.57	1/4	539.32	1/4	897.04	1/4	1,255.02	1/4	1,613.00	1/4	1,970.99	1/4	2,328.97	1/4	2,686.88	1/4	3,044.59	1/4	3,402.30
1/2	189.00	1/2	546.77	1/2	904.49	1/2	1,262.48	1/2	1,620.46	1/2	1,978.45	1/2	2,336.43	1/2	2,694.34	1/2	3,052.04	1/2	3,409.75
3/4	196.43	3/4	554.21	3/4	911.95	3/4	1,269.94	3/4	1,627.92	3/4	1,985.90	3/4	2,343.89	3/4	2,701.79	3/4	3,059.49	3/4	3,417.20
7	203.87	7	561.66	7	919.41	7	1,277.39	7	1,635.38	7	1,993.36	7	2,351.35	7	2,709.24	7	3,066.95	7	3,424.65
1/4	211.31	1/4	569.11	1/4	926.87	1/4	1,284.85	1/4	1,642.84	1/4	2,000.82	1/4	2,358.80	1/4	2,716.69	1/4	3,074.40	1/4	3,432.10
1/2	218.75	1/2	576.56	1/2	934.33	1/2	1,292.31	1/2	1,650.29	1/2	2,008.28	1/2	2,366.26	1/2	2,724.15	1/2	3,081.85	1/2	3,439.56
3/4	226.20	3/4	584.00	3/4	941.78	3/4	1,299.77	3/4	1,657.75	3/4	2,015.74	3/4	2,373.72	3/4	2,731.60	3/4	3,089.30	3/4	3,447.01
8	233.64	8	591.45	8	949.24	8	1,307.23	8	1,665.21	8	2,023.19	8	2,381.18	8	2,739.05	8	3,096.76	8	3,454.46
1/4	241.09	1/4	598.90	1/4	956.70	1/4	1,314.68	1/4	1,672.67	1/4	2,030.65	1/4	2,388.64	1/4	2,746.50	1/4	3,104.21	1/4	3,461.91
1/2	248.55	1/2	606.35	1/2	964.16	1/2	1,322.14	1/2	1,680.13	1/2	2,038.11	1/2	2,396.09	1/2	2,753.95	1/2	3,111.66	1/2	3,469.36
3/4	256.00	3/4	613.79	3/4	971.62	3/4	1,329.60	3/4	1,687.58	3/4	2,045.57	3/4	2,403.55	3/4	2,761.41	3/4	3,119.11	3/4	3,476.81
9	263.45	9	621.24	9	979.07	9	1,337.06	9	1,695.04	9	2,053.03	9	2,411.01	9	2,768.86	9	3,126.56	9	3,484.26
1/4	270.91	1/4	628.69	1/4	986.53	1/4	1,344.52	1/4	1,702.50	1/4	2,060.48	1/4	2,418.47	1/4	2,776.31	1/4	3,134.02	1/4	3,491.70
1/2	278.36	1/2	636.14	1/2	993.99	1/2	1,351.97	1/2	1,709.96	1/2	2,067.94	1/2	2,425.93	1/2	2,783.76	1/2	3,141.47	1/2	3,499.15
3/4	285.82	3/4	643.58	3/4	1,001.45	3/4	1,359.43	3/4	1,717.42	3/4	2,075.40	3/4	2,433.38	3/4	2,791.21	3/4	3,148.92	3/4	3,506.59
10	293.28	10	651.03	10	1,008.91	10	1,366.89	10	1,724.87	10	2,082.86	10	2,440.84	10	2,798.67	10	3,156.37	10	3,514.03
1/4	300.73	1/4	658.48	1/4	1,016.36	1/4	1,374.35	1/4	1,732.33	1/4	2,090.32	1/4	2,448.30	1/4	2,806.12	1/4	3,163.82	1/4	3,521.47
1/2	308.19	1/2	665.93	1/2	1,023.82	1/2	1,381.81	1/2	1,739.79	1/2	2,097.77	1/2	2,455.76	1/2	2,813.57	1/2	3,171.28	1/2	3,528.91
3/4	315.65	3/4	673.38	3/4	1,031.28	3/4	1,389.26	3/4	1,747.25	3/4	2,105.23	3/4	2,463.22	3/4	2,821.02	3/4	3,178.73	3/4	3,536.35
11	323.11	11	680.82	11	1,038.74	11	1,396.72	11	1,754.71	11	2,112.69	11	2,470.67	11	2,828.48	11	3,186.18	11	3,543.78
1/4	330.57	1/4	688.27	1/4	1,046.20	1/4	1,404.18	1/4	1,762.16	1/4	2,120.15	1/4	2,478.13	1/4	2,835.93	1/4	3,193.63	1/4	3,551.22
1/2	338.02	1/2	695.72	1/2	1,053.65	1/2	1,411.64	1/2	1,769.62	1/2	2,127.61	1/2	2,485.59	1/2	2,843.38	1/2	3,201.09	1/2	3,558.66
3/4	345.48	3/4	703.17	3/4	1,061.11	3/4	1,419.10	3/4	1,777.08	3/4	2,135.06	3/4	2,493.05	3/4	2,850.83	3/4	3,208.54	3/4	3,566.10

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

BARGE STRAPPED AND COMPUTED IN ACCORDANCE WITH MPMS CHAPTER 2.7.

CAPACITY TABLE ONLY APPLIES WHEN BARGE IS ON EVEN KEEL.

CAPACITY TABLE EXTENDS TO EXTREME HEIGHT OF TANK.

CAPACITY TABLE ONLY APPLIES TO INNAGE GAUGES TAKEN TO TOP OF THREADS ON "MMC" VALVE.

GAUGE POINT: (MMC) LOCATED 10'-09" OFF CENTERLINE AND 41'-09" FORWARD OF AFT BULKHEAD.

PRECISION MEASUREMENT
& ANALYSIS, INC.

P.O. Box 2092

Pearland, Texas 77588

http://www.pmacorp.net



BARGE "CCL 402"

3 ST
INNAGE TABLE

CAPACITIES GIVEN IN BARRELS OF 42 U.S. GALLONS

GAUGE HEIGHT 16'-05"

IN	10 FT.	IN	11 FT.	IN	12 FT.	IN	13 FT.	IN	14 FT.	IN	15 FT.	IN	16 FT.	IN	17 FT.	IN	18 FT.	IN	19 FT.
0	3,573.54	0	3,868.95	0	4,143.12	0	4,416.37	0	4,689.49	0	4,981.23	0		0		0			
1/4	3,580.98	1/4	3,874.66	1/4	4,148.81	1/4	4,422.06	1/4	4,695.19	1/4	4,988.15	1/4		1/4		1/4		1/4	
1/2	3,588.42	1/2	3,880.38	1/2	4,154.49	1/2	4,427.76	1/2	4,700.88	1/2	4,995.07	1/2		1/2		1/2		1/2	
3/4	3,595.85	3/4	3,886.09	3/4	4,160.18	3/4	4,433.45	3/4	4,706.58	3/4	5,001.99	3/4		3/4		3/4		3/4	
1	3,603.29	1	3,891.81	1	4,165.86	1	4,439.15	1	4,712.27	1	5,008.91	1		1		1		1	
1/4	3,610.73	1/4	3,897.53	1/4	4,171.55	1/4	4,444.84	1/4	4,717.97	1/4	5,014.59	1/4		1/4		1/4		1/4	
1/2	3,618.17	1/2	3,903.25	1/2	4,177.23	1/2	4,450.54	1/2	4,723.66	1/2	5,020.26	1/2		1/2		1/2		1/2	
3/4	3,625.61	3/4	3,908.97	3/4	4,182.92	3/4	4,456.23	3/4	4,729.36	3/4	5,025.94	3/4		3/4		3/4		3/4	
2	3,633.05	2	3,914.69	2	4,188.60	2	4,461.93	2	4,735.05	2	5,031.62	2		2		2		2	
1/4	3,640.16	1/4	3,920.41	1/4	4,194.29	1/4	4,467.62	1/4	4,740.74	1/4	5,036.05	1/4		1/4		1/4		1/4	
1/2	3,647.27	1/2	3,926.13	1/2	4,199.98	1/2	4,473.31	1/2	4,746.43	1/2	5,040.49	1/2		1/2		1/2		1/2	
3/4	3,654.38	3/4	3,931.86	3/4	4,205.67	3/4	4,479.00	3/4	4,752.11	3/4	5,044.92	3/4		3/4		3/4		3/4	
3	3,661.50	3	3,937.58	3	4,211.35	3	4,484.69	3	4,757.80	3	5,049.36	3		3		3		3	
1/4	3,667.74	1/4	3,943.30	1/4	4,217.04	1/4	4,490.38	1/4	4,763.46	1/4		1/4		1/4		1/4		1/4	
1/2	3,673.99	1/2	3,949.02	1/2	4,222.74	1/2	4,496.06	1/2	4,769.13	1/2		1/2		1/2		1/2		1/2	
3/4	3,680.23	3/4	3,954.74	3/4	4,228.43	3/4	4,501.75	3/4	4,774.79	3/4		3/4		3/4		3/4		3/4	
4	3,686.48	4	3,960.46	4	4,234.12	4	4,507.43	4	4,780.46	4		4		4		4		4	
1/4	3,692.18	1/4	3,966.18	1/4	4,239.82	1/4	4,513.12	1/4	4,786.11	1/4		1/4		1/4		1/4		1/4	
1/2	3,697.88	1/2	3,971.90	1/2	4,245.51	1/2	4,518.80	1/2	4,791.76	1/2		1/2		1/2		1/2		1/2	
3/4	3,703.58	3/4	3,977.63	3/4	4,251.21	3/4	4,524.49	3/4	4,797.41	3/4		3/4		3/4		3/4		3/4	
5	3,709.28	5	3,983.35	5	4,256.90	5	4,530.17	5	4,803.06	5		5		5		5		5	
1/4	3,714.98	1/4	3,989.07	1/4	4,262.60	1/4	4,535.86	1/4	4,808.71	1/4		1/4		1/4		1/4		1/4	
1/2	3,720.69	1/2	3,994.79	1/2	4,268.29	1/2	4,541.54	1/2	4,814.36	1/2		1/2		1/2		1/2		1/2	
3/4	3,726.39	3/4	4,000.51	3/4	4,273.99	3/4	4,547.23	3/4	4,820.01	3/4		3/4		3/4		3/4		3/4	
6	3,732.09	6	4,006.23	6	4,279.68	6	4,552.91	6	4,825.66	6		6		6		6		6	
1/4	3,737.79	1/4	4,011.95	1/4	4,285.38	1/4	4,558.60	1/4	4,831.31	1/4		1/4		1/4		1/4		1/4	
1/2	3,743.49	1/2	4,017.67	1/2	4,291.07	1/2	4,564.28	1/2	4,836.96	1/2		1/2		1/2		1/2		1/2	
3/4	3,749.19	3/4	4,023.40	3/4	4,296.77	3/4	4,569.97	3/4	4,842.61	3/4		3/4		3/4		3/4		3/4	
7	3,754.90	7	4,029.12	7	4,302.46	7	4,575.65	7	4,848.26	7		7		7		7		7	
1/4	3,760.60	1/4	4,034.84	1/4	4,308.16	1/4	4,581.34	1/4	4,853.91	1/4		1/4		1/4		1/4		1/4	
1/2	3,766.30	1/2	4,040.56	1/2	4,313.85	1/2	4,587.02	1/2	4,859.56	1/2		1/2		1/2		1/2		1/2	
3/4	3,772.00	3/4	4,046.28	3/4	4,319.55	3/4	4,592.71	3/4	4,865.21	3/4		3/4		3/4		3/4		3/4	
8	3,777.70	8	4,052.00	8	4,325.24	8	4,598.39	8	4,870.86	8		8		8		8		8	
1/4	3,783.40	1/4	4,057.72	1/4	4,330.94	1/4	4,604.08	1/4	4,876.83	1/4		1/4		1/4		1/4		1/4	
1/2	3,789.11	1/2	4,063.43	1/2	4,336.63	1/2	4,609.77	1/2	4,882.81	1/2		1/2		1/2		1/2		1/2	
3/4	3,794.81	3/4	4,069.15	3/4	4,342.33	3/4	4,615.46	3/4	4,888.78	3/4		3/4		3/4		3/4		3/4	
9	3,800.51	9	4,074.86	9	4,348.02	9	4,621.15	9	4,894.76	9		9		9		9		9	
1/4	3,806.21	1/4	4,080.56	1/4	4,353.72	1/4	4,626.84	1/4	4,901.60	1/4		1/4		1/4		1/4		1/4	
1/2	3,811.91	1/2	4,086.25	1/2	4,359.41	1/2	4,632.54	1/2	4,908.45	1/2		1/2		1/2		1/2		1/2	
3/4	3,817.61	3/4	4,091.95	3/4	4,365.11	3/4	4,638.23	3/4	4,915.29	3/4		3/4		3/4		3/4		3/4	
10	3,823.32	10	4,097.64	10	4,370.80	10	4,643.93	10	4,922.14	10		10		10		10		10	
1/4	3,829.02	1/4	4,103.33	1/4	4,376.50	1/4	4,649.62	1/4	4,929.52	1/4		1/4		1/4		1/4		1/4	
1/2	3,834.72	1/2	4,109.01	1/2	4,382.20	1/2	4,655.32	1/2	4,936.91	1/2		1/2		1/2		1/2		1/2	
3/4	3,840.42	3/4	4,114.70	3/4	4,387.89	3/4	4,661.01	3/4	4,944.30	3/4		3/4		3/4		3/4		3/4	
11	3,846.12	11	4,120.38	11	4,393.59	11	4,666.71	11	4,951.68	11		11		11		11		11	
1/4	3,851.83	1/4	4,126.07	1/4	4,399.28	1/4	4,672.41	1/4	4,959.07	1/4		1/4		1/4		1/4		1/4	
1/2	3,857.53	1/2	4,131.75	1/2	4,404.98	1/2	4,678.10	1/2	4,966.46	1/2		1/2		1/2		1/2		1/2	
3/4	3,863.24	3/4	4,137.44	3/4	4,410.67	3/4	4,683.80	3/4	4,973.84	3/4		3/4		3/4		3/4		3/4	

STRAPPED: 07/21/2009 CL - SW
 CALCULATED: 07/21/2009 CL
 PRINTED: 07/21/2009 SW

CANCELS AND SUPERCEDES
 ALL PRIOR TO 07/2009

CERTIFIED CHART FOR THE ABOVE NAMED TANK ONLY.

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