U.S. Department of Transportation
United States Coast Guard

Commanding Officer
United States Coast Guard
Marine Safety Center

400 7th Street, S.W.
Washington, DC 20590-0001
Staff Symbol: MSC-1
Phone: (202) 366-6481
FAX: (202) 366-3877

STABILITY LETTER

16710/P007796
Serial: H1-0201933
June 10, 2002

Master, GELBERMAN; CG004177
Dravo Steelship Corp. Hull 91
82.66' x 26' x 10' Army Corps of Engineers Drift Collection Vessel

You are responsible for maintaining this vessel in a satisfactory stability condition at all times.

An inclining experiment, witnessed by the U.S. Coast Guard, was conducted on the GELBERMAN, CG004177, at Port Liberte, New Jersey on October 30, 2001. On the basis of that test, stability calculations have been performed. Results indicate that the stability of the GELBERMAN, as presently outfitted and equipped, is satisfactory for operation on Partially Protected Waters, provided that the following restrictions are observed.

OPERATING RESTRICTIONS

1. ROUTE: Operation on Partially Protected Waters is permitted.

2. TOWING: The vessel is permitted to engage in towing operations.

3. LIFTING: The vessel may engage in lifting operations in accordance with the attached Crane Lifting Capacity Table bearing U.S. Coast Guard Marine Safety Center Approval Stamp dated March 7, 2002. The operator is not to exceed the lifting capacity of the crane.

4. FREEBOARD AND DRAFT: A freeboard of at least 1 foot 6-1/2 inches from the main deck measured at amidships must be maintained. This corresponds to a maximum molded draft of 8 feet 5-1/2 inches. Amidships is located 41 feet 4-1/4 inches aft of the Forward Perpendicular. Trim shall be minimized.

5. DECK CARGO: The vessel is authorized to carry a maximum of 18.67 Long Tons of deck cargo.

6. TANKS: Any cross-connections between port and starboard tank pairs shall be kept closed at all times when underway.

7. WEIGHT CHANGES: This stability letter has been issued based upon the following light ship parameters:

Displacement	172.86	Long Tons
VCG	9.77	Feet Above the Baseline
LCG	41.40	Feet Aft of the Forward Perpendicular

16710/P007796
Serial: H1-0201933
June 10, 2002

Subj: HAYWARD; CG004177; Stability Letter

Any alteration resulting in a change in these parameters will invalidate this stability letter. No fixed ballast or other such weights shall be added, removed, altered and/or relocated without the authorization and supervision of the cognizant OCMI.

8. HULL OPENINGS: Any openings that could allow water to enter into the hull or deckhouse should be kept closed when rough weather or sea conditions exist or are anticipated.

9. BILGES: The vessel's bilges and voids shall be kept pumped to minimum content at all times consistent with pollution prevention requirements.

10. FREEING PORTS: Deck freeing ports shall be maintained operable and completely unobstructed at all times.

11. LIST: You should make every effort to determine the cause of any list of the vessel before taking corrective action.

This stability letter shall be posted under glass or other suitable transparent material in the pilothouse of the vessel so that all pages, including the Crane Lifting Capacity Table are visible. It supersedes any stability information previously issued to the vessel.

A. D. Wiest
A. D. WIEST
Lieutenant Commander, U.S. Coast Guard
By direction of the Commanding Officer

Attachment: Crane Lifting Capacity Table bearing U.S. Coast Guard Marine Safety Center Approval Stamp dated March 7, 2002

D.C.V. GELBERMAN – MAXIMUM LIFTING CAPACITIES

The vessel is assumed to be in protected/partially protected waters when the crane is in operation. The following table lists crane capacities in long tons for each loading condition, operating boom length and angle of the boom off the vessel centerline. The values are based on the lifting capacities specified by the manufacturer. The shaded cells indicate a reduced lifting capacity due to vessel heel angle, as recommended by the manufacturer. The bold values indicate reduced capacity due to vessel righting energy limits. Hook loads at the crane radii listed are the maximum permissible to maintain a minimum of 10 ft-deg of righting energy up to the angle of maximum righting arm.

Load Case	Maximum Lifting Capacity (LT) 44000 3S								
	Boom Length = 13.76 ft			Boom Length = 18.86 ft			Boom Length = 24.11 ft		
	0° off CL	45° off CL	90° off CL	0° off CL	45° off CL	90° off CL	0° off CL	45° off CL	90° off CL
Lightship ballasted	9.84	9.84		7.23	7.23		5.71	5.71	
Lightship w/deck cargo	9.84	**7.51**	**6.01**	7.23	**5.15**	**4.82**	5.71	**5.19**	**4.00**
10% tankage ballasted	9.84	9.84	**9.08**	7.23	7.23		5.71	5.71	
10% tankage w/deck cargo	9.84	**6.26**	**5.00**	7.23	**5.11**	**3.99**	5.71	**4.30**	**3.31**
50% tankage ballasted	9.84	9.84	**8.83**	7.23	7.23	7.08	5.71	5.71	5.71
50% tankage w/deck cargo	9.84	**4.76**	**3.82**	7.23	**3.90**	3.06	5.71	**3.29**	**2.54**
90% tankage ballasted	9.84	9.84	**8.50**	7.23	7.23	**6.83**	5.71	5.71	**5.68**
90% tankage w/deck cargo	9.84	**4.77**	**3.83**	7.23	**3.92**	**3.08**	5.71	**3.32**	**2.57**
100% tankage ballasted	9.84	9.84	**9.10**	7.23	7.23	7.23	5.71	5.71	5.71
100% tankage w/deck cargo	9.84	**4.86**	**3.94**	7.23	**4.02**	**3.17**	5.71	**3.41**	**2.65**

Load Case	Maximum Lifting Capacity (LT) 44000 3S								
	Boom Length = 29.36 ft			Boom Length = 35.47 ft			Boom Length = 41.57 ft		
	0° off CL	45° off CL	90° off CL	0° off CL	45° off CL	90° off CL	0° off CL	45° off CL	90° off CL
Lightship ballasted	4.67	4.67		3.84	3.84		2.71	2.71	2.71
Lightship w/deck cargo	4.67	**4.49**	**3.42**	3.84	3.84	**2.92**	2.71	2.71	**2.56**
10% tankage ballasted	4.67	4.67		3.84	3.84		2.71	2.71	2.71
10% tankage w/deck cargo	4.67	**3.72**	**2.83**	3.84	**3.21**	**2.41**	2.71	2.71	**2.11**
50% tankage ballasted	4.67	4.67		3.84	3.84		2.71	2.71	2.71
50% tankage w/deck cargo	4.67	**2.84**	**2.17**	3.84	**2.46**	**1.86**	2.71	**2.17**	**1.62**
90% tankage ballasted	4.67	4.67	4.67	3.84	3.84	3.84	2.71	2.71	2.71
90% tankage w/deck cargo	4.67	**2.87**	**2.19**	3.84	**2.49**	**1.88**	2.71	**2.19**	**1.64**
100% tankage ballasted	4.67	4.67	4.67	3.84	3.84	3.84	2.71	2.71	2.71
100% tankage w/deck cargo	4.67	**2.96**	**2.27**	3.84	**2.56**	[illegible]	2.71	**2.27**	**1.70**

APPROVED
Subject to comments in
Marine Safety Center letter of
MAR - 7 2002
Commanding Officer
USCG Marine Safety Center

D.C.V. GELBERMAN – MAXIMUM LIFTING CAPACITIES

The vessel is assumed to be in protected/partially protected waters when the crane is in operation. The following table lists crane capacities in long tons for each loading condition, operating boom length and angle of the boom off the vessel centerline. The values are based on the lifting capacities specified by the manufacturer. The shaded cells indicate a reduced lifting capacity due to vessel heel angle, as recommended by the manufacturer. The bold values indicate reduced capacity due to vessel righting energy limits. Hook loads at the crane radii listed are the maximum permissible to maintain a minimum of 10 ft-deg of righting energy up to the angle of maximum righting arm.

Load Case	Maximum Lifting Capacity (LT) 44000 3S								
	Boom Length = 13.78 ft			Boom Length = 18.86 ft			Boom Length = 24.11 ft		
	0° off CL	45° off CL	90° off CL	0° off CL	45° off CL	90° off CL	0° off CL	45° off CL	90° off CL
Lightship ballasted	9.84	9.84	9.54	7.23	7.23	7.05	5.71	5.71	5.54
Lightship w/deck cargo	9.84	**7.51**	**6.01**	7.23	**6.15**	**4.82**	5.71	**5.19**	**4.00**
10% tankage ballasted	9.84	9.84	**9.08**	7.23	7.23	7.01	5.71	5.71	5.54
10% tankage w/deck cargo	9.84	**6.26**	**5.00**	7.23	**5.11**	**3.99**	5.71	**4.30**	**3.31**
50% tankage ballasted	9.84	9.84	**8.83**	7.23	7.23	**7.08**	5.71	5.71	5.71
50% tankage w/deck cargo	9.84	**4.76**	**3.82**	7.23	**3.90**	**3.06**	5.71	**3.29**	**2.54**
90% tankage ballasted	9.84	9.84	**8.50**	7.23	7.23	**6.83**	5.71	5.71	**5.68**
90% tankage w/deck cargo	9.84	**4.77**	**3.83**	7.23	**3.92**	**3.08**	5.71	**3.32**	**2.57**
100% tankage ballasted	9.84	9.84	**9.10**	7.23	7.23	7.23	5.71	5.71	5.71
100% tankage w/deck cargo	9.84	**4.88**	**3.94**	7.23	**4.02**	**3.17**	5.71	**3.41**	**2.65**

Load Case	Maximum Lifting Capacity (LT) 44000 3S								
	Boom Length = 29.36 ft			Boom Length = 35.47 ft			Boom Length = 41.57 ft		
	0° off CL	45° off CL	90° off CL	0° off CL	45° off CL	90° off CL	0° off CL	45° off CL	90° off CL
Lightship ballasted	4.67	4.67	4.57	3.84	3.84	3.76	2.71	2.71	2.71
Lightship w/deck cargo	4.67	**4.49**	**3.42**	3.84	3.84	**2.92**	2.71	2.71	**2.56**
10% tankage ballasted	4.67	4.67	4.53	3.84	3.84	3.73	2.71	2.71	2.71
10% tankage w/deck cargo	4.67	**3.72**	**2.83**	3.84	**3.21**	**2.41**	2.71	2.71	**2.11**
50% tankage ballasted	4.67	4.67	4.62	3.84	3.84	3.80	2.71	2.71	2.71
50% tankage w/deck cargo	4.67	**2.84**	**2.17**	3.84	**2.46**	**1.86**	2.71	**2.17**	**1.62**
90% tankage ballasted	4.67	4.67	4.67	3.84	3.84	3.84	2.71	2.71	2.71
90% tankage w/deck cargo	4.67	**2.87**	**2.19**	3.84	**2.49**	**1.88**	2.71	**2.19**	**1.64**
100% tankage ballasted	4.67	4.67	4.67	3.84	3.84	3.84	2.71	2.71	2.71
100% tankage w/deck cargo	4.67	**2.96**	**2.27**	3.84	**2.56**	**1.94**	2.71	**2.27**	**1.70**