NCB

SAFER, SMARTER SUPPLY CHAINS

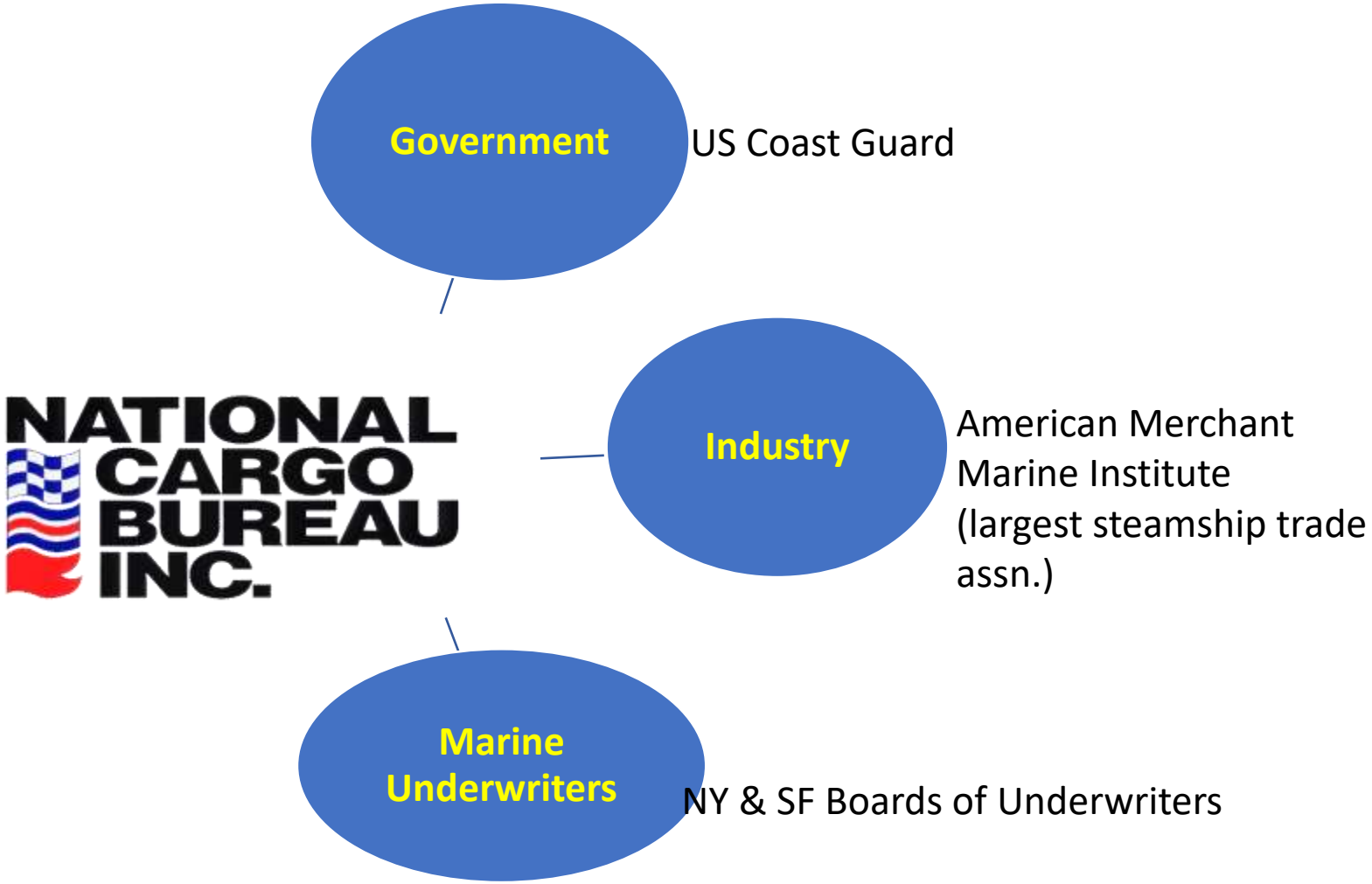
Columbia River Basin Leadership Training Program (COBALT) 2026

Presenter: Joel Atillo – NCB Senior Staff Surveyor
Port of Portland

1947 Texas City Disaster

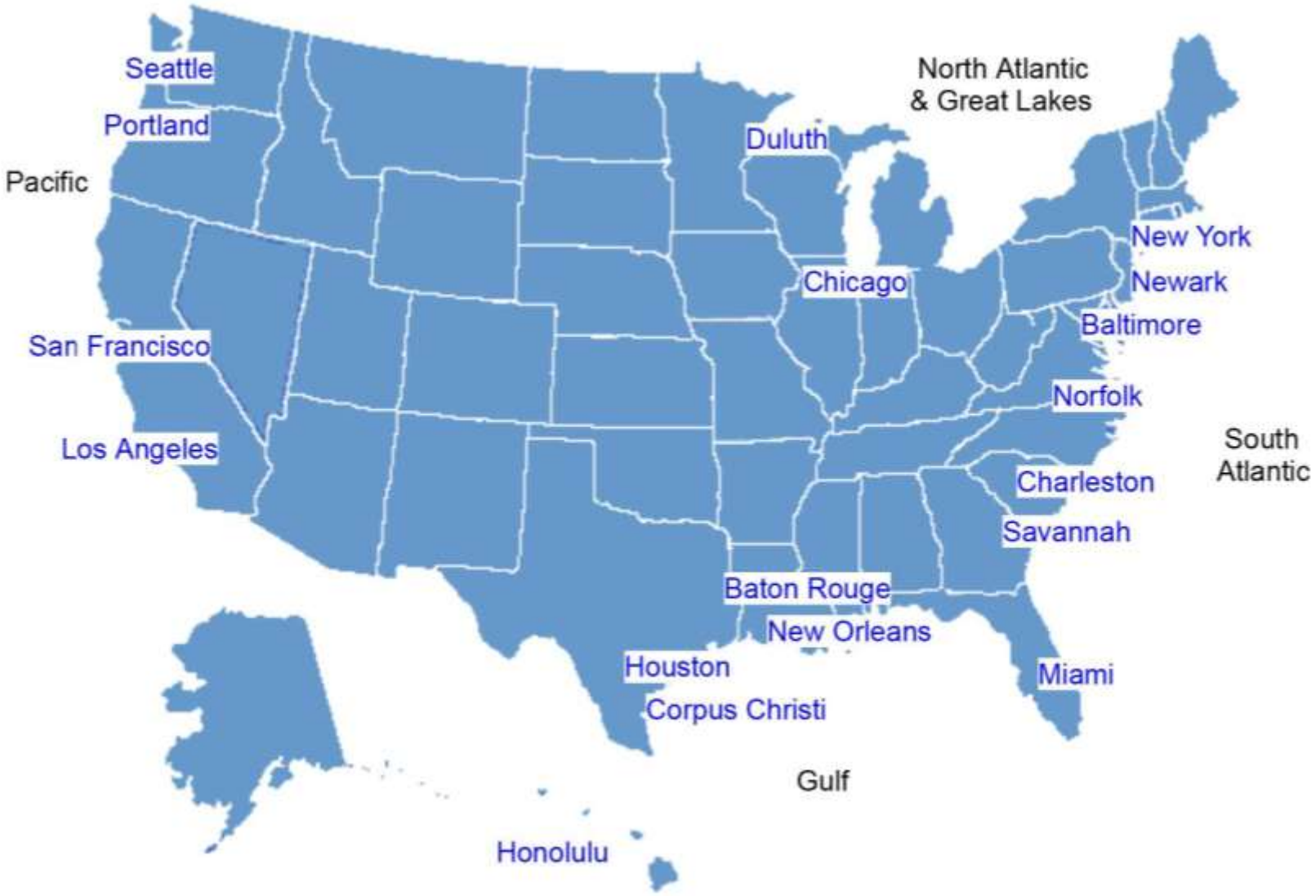
Ammonium Nitrate reaches explosive threshold onboard SS Grandcamp. Massive Explosion destroys vessel and port

1952 PARTNERSHIP PLAN



National Cargo Bureau Created

- NCB was incorporated as a not for profit membership organization on May 6, 1952
- The surveying staff of the Board of Underwriters of New York and the Board of Marine Underwriters of San Francisco became the first surveying staff of National Cargo Bureau
- NCB started operations on November 19, 1952, the same day the 1948 SOLAS Convention went into effect



Currently a staff of 80 Surveyors throughout 18 port offices.

National Cargo Bureau Activities that Support US Coast Guard

- Hazmat Container Inspections - over 20,000 containers in 2024
- Hazmat Training and Onboard Seminars
- DCM and Stow Plan Review - 49CFR/IMDG compliance onboard vessels
- US Delegation to IMO
- US representation on international correspondence and working groups
- Hazmat Policies (e.g. Terminal Operations)
- Flat Rack Inspections – over 11,000 in 2024
- Grain Loading Inspections –over 2400 in 2024

Pro Bono Activities

- Container Inspection Safety Initiative:
  - 500 containers were inspected free of charge for participating lines (CINS members)
  - Containers inspected included DG and non-DG as well as Export and Import
  - Objective was to reveal the danger that exists on every voyage through detection of non-compliant cargoes
- Published White Papers:
  - Holistic Approach to enhance safety and address the carriage of undeclared, misdeclared and other non-compliant dangerous goods
  - Warehousing – Storage and Handling of Dangerous Goods
- Attend and participate as Subject Matter Experts as part of the U. S. Delegation at IMO meetings, including CCC and E&T regarding updates to IMDG and IMSBC Codes.

Hazcheck VALIDATE

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- ✓ **Realtime compliance and validation** tool for managing the transportation of dangerous goods.
- ✓ Software as a Service with easy connectivity via **API and EDI** (IFTDGN and IFTMBF)
- ✓ Designed for **carriers, shippers, freight forwarders, port operators**, and anyone transporting dangerous goods at sea.
- ✓ Supports **Multi Regulatory and Validation** (IMDG, 49CFR)
- ✓ Customizable Rules - **Restrictions, prohibitions,** and **carrier exclusions**
- ✓ Produces **Dangerous Goods Declarations (DGD)** and manifest documentation

80% Global DG TEU

Maritime market share, based on estimated cargo volume (TEU) in 2025

1.6m Validations Weekly

Average DG Validations per week in 2024

15k Users Per Day

Trusted by 15k DG Professionals Daily

44k+ Daily Rules Processed

Customized rules processed per day

<80ms To validate cargo

Average Cargo Validation Time in milliseconds

Hazcheck Detect

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- ✓ An API based, **Cargo Screening** tool for identifying **misdeclared, undeclared cargo such as Dangerous Goods, IWT, military, contraband.**
- ✓ **Undeclared** – identifies cargo not declared as DG; but should be declared. **Misdeclared** – identifies cargo which is declared; but not correctly declared.
- ✓ **Highly customizable rules** for customer specific search.
- ✓ Use **Artificial Intelligence** and **Machine Learning** to improve detection
- ✓ **AI** features **Automatic Dangerous Goods Detection**, and **Unusual Behaviors** to identify anomalies e.g. shipping patterns, commodity itineraries.

70%+ Global TEU

Maritime market share, based on estimated cargo volume (TEU) in 2025

255m Screenings

Projected screenings in 2025

2.1m identified risks

Individual risks identified in a booking in 2024

270+ Weekly risks prevented

Average containers with risk, prevented per week in 2024

54k+ Keywords

16k Active rules with 54k+ keywords

NCB Container Inspections

- Up to 32,000 inspections conducted in any given year
- Processes mapped out for distinct types of inspections including “tailgate”, “vanning”, and non-DG vs DG cargo
- Inspections are carried out:
  - Physically, in US and other locations, by qualified, trained NCB surveyors
  - Remotely, on a global basis where a physical inspection may not be possible or practical.
- NCB Container Inspections also meet the WSC criteria required for “industry best practice standard”

Examples of insufficiently secured cargo

Examples of insufficiently secured cargo

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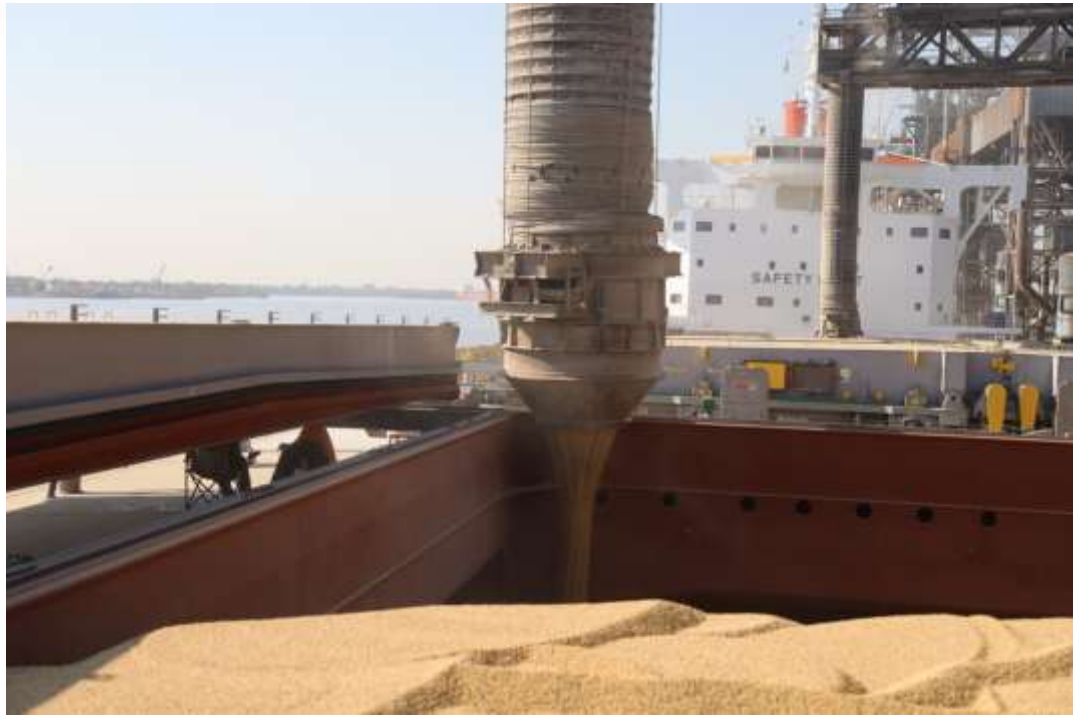
BULK GRAIN

Transverse Shift of Grain and the Need for Regulation

- Grain cargoes are liable to shift during ocean transport when transported in bulk due to their non-cohesive nature
- A grain shift can cause a severe list and loss of residual stability eventually resulting in capsize or foundering of the vessel, particularly in heavy weather

46CFR 172.040 Grain Certificate of Loading



§ 172.040 Certificate of loading.

(a) Before it sails, each vessel that loads grain in bulk, except vessels engaged solely on voyages on the Great Lakes, rivers, or lakes, bays, and sounds, must have a certificate of loading issued by an organization recognized by the Commandant for that purpose. The certificate of loading may be accepted as prima facie evidence of compliance with the regulations in this subpart.

(b) The Commandant recognizes the National Cargo Bureau, Inc., 180 Maiden Lane, Suite 903, New York, NY 10038, for the purpose of issuing certificates of loading.

Bulk Grain Loading Oversight (NCB)

Initial Inspections:

- Review of relevant Documentation
- Hold inspection for suitability to load Grain
- Review of NCB ***Grain Stability Calculation Form***

Upon a successful initial inspection, NCB will issue a National Cargo Bureau ***Certificate of Readiness***

Hold inspection for suitability to load Grain

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Hold Cleanliness

Free of previous cargo residues and other contaminants, free of odor, and free of excessive loose rust and paint scale

Levels of cleanliness: hospital, grain, normal, shovel, load-on-top

Structural integrity, weather-tightness

Holds must be structurally sound. Weather deck hatch covers should be inspected for weather-tightness and, if necessary, hose tested.

Ultrasonic testing a viable alternative. In many cases better than hose test. NCB conducts both hose test and ultrasonic tests.

Review of NCB Grain Stability Calculation Form Page 1

NATIONAL CARGO BUREAU, INC.
GRAIN STABILITY CALCULATION FORM

* (Required for vessels loading bulk grain in the United States of America)

M.V.		YEAR BUILT	
Liberty Eagle		2003	
COUNTRY OF REGISTRY	NET TONNAGE	IMO NO.	AT CITY / IN COUNTRY
United States	17820	9278753	Oshima / Japan
AGENT	T. Parker Host		

GRAIN LOADING BOOKLET APPROVED BY: National Cargo Bureau, Inc.
ON BEHALF OF (FLAG STATE): United States
DRAWING NO.: 20041000 DATE OF APPROVAL: 22 December 2003
APPLICABLE REGULATIONS: International Grain Code
ADDENDUM FOR UNTRIMMED ENDS APPROVED BY: Included in booklet
DRAWING NO.: DATE OF APPROVAL:
LOADING PORT(S): Norfolk, USA
BUNKERING PORT(S): Balboa, Panama
DISCHARGE PORT(S): Dahlian, China
STEAMING DISTANCE: 10388 MILES MILES PER DAY: 324 TIME: 32.1 days
DAILY CONSUMPTION: FUEL: 28.5 mt DIESEL: 2.0 mt WATER: NIL

	DISPLACEMENT	DEADWEIGHT	DRAFT	FREEBOARD
**WINTER	59484.0 mt	50418.0 mt	12.021 m	4.676 m
SUMMER	60878.0 mt	51812.0 mt	12.277 m	4.420 m
**TROPICAL	62770.0 mt	53211.0 mt	12.533 m	4.164 m

FRESH WATER ALLOWANCE: 0.279 m TPC/TPI (AT SUMMER DRAFT): 54.56 mt

* EXCEPT FOR EXEMPTED VOYAGES
** IF APPLICABLE

THIS IS TO CERTIFY THAT:

1. THIS CALCULATION IS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE VESSEL'S GRAIN LOADING BOOKLET AND THE APPLICABLE GRAIN REGULATIONS.
2. THE STABILITY OF THE VESSEL WILL BE MAINTAINED THROUGHOUT THE VOYAGE IN ACCORDANCE WITH THIS CALCULATION.

CALCULATION PREPARED BY:
(TO BE COMPLETED IF THE FORM IS PREPARED BY OTHER THAN SHIP'S PERSONNEL)

NAME (PRINT)
COMPANY
SIGNATURE
DATE

MASTER'S SIGNATURE
C. THOMPSON
MASTER'S NAME (PRINTED)

EXAMINED BY:
N.C.B. SURVEYOR'S SIGNATURE
M. BURNS
N.C.B. SURVEYOR'S NAME (PRINTED)

DATE: 1 NOVEMBER 2011

NOTE: ORIGINAL STABILITY CALCULATION AND GRAIN ARRANGEMENT PLAN TO BE SUBMITTED TO THE N.C.B. SURVEYOR. ALL TONNAGES USED IN THIS CALCULATION SHALL BE SHOWN IN THE SAME UNITS AS USED IN THE GRAIN LOADING BOOKLET.

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NCB Grain Stability Calculation Form Page 2

SHIP AND CARGO CALCULATION

PART I

TYPE OF GRAIN: Wheat — STOWAGE FACTOR: 1.198 M³/MT — 43 FT³/LT

COMPT. NO.	CARGO (1)	S.F. (1)	GRAIN CUBICS (2) TOTAL	GRAIN CUBICS (2) USED	WEIGHT (3)	V.C.G.	MOMENT (3)
1	Wheat	1.198	9323	5325	4445	7.00	31115
2	↓	↓	11729		9790	9.59	93886
3			11604		9686	9.60	92986
4			10858		9063	9.56	86642
5			11577		9664	9.61	92871
6			7454	6125	5113	8.60	43972

S.F. M³/MT	S.F. FT³/LT	DEN MT/M³
1.171	42	0.854
1.184	42.5	0.844
1.198	43	0.834
1.212	43.5	0.825
1.226	44	0.816
1.240	44.5	0.806
1.254	45	0.797
1.268	45.5	0.789
1.282	46	0.780
1.296	46.5	0.772
1.310	47	0.763
1.324	47.5	0.755
1.338	48	0.747
1.352	48.5	0.740
1.366	49	0.732
1.380	49.5	0.725
1.393	50	0.718
1.407	50.5	0.711
1.421	51	0.704
1.435	51.5	0.697
1.449	52	0.690
1.477	53	0.677
1.505	54	0.664
1.533	55	0.652
1.561	56	0.641
1.589	57	0.629
1.618	58	0.619
1.644	59	0.608
1.672	60	0.598
1.700	61	0.588
1.728	62	0.579

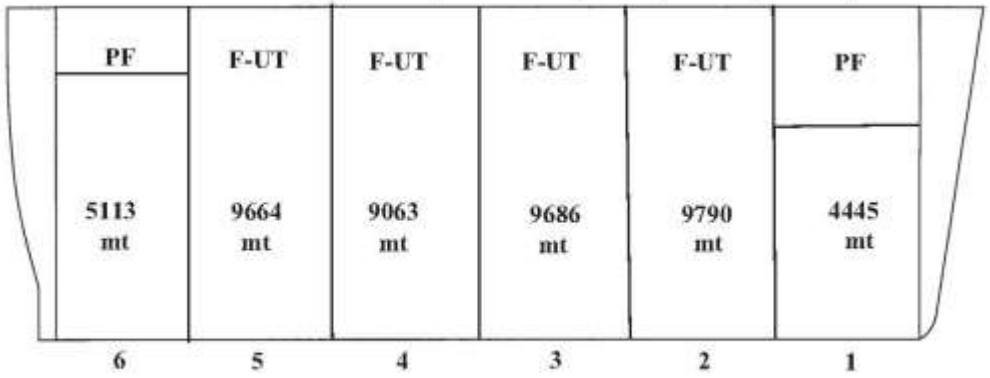
THIS CALCULATION IS PREPARED IN:

- ☒ METRIC UNITS
- ☐ ENGLISH UNITS

CARGO TOTALS	47761		441472
LIGHT SHIP	9066	11.11	100723
CONSTANT	276	13.82	3814
SHIP AND CARGO TOTALS	57103		546009

(1) COMPLETE THESE COLUMNS IF MORE THAN ONE TYPE OF CARGO IS LOADED.
(2) FOR PARTLY FILLED COMPARTMENTS, SHOW THE CUBICS USED IN ADDITION TO THE TOTAL CUBICS.
(3) WEIGHTS AND MOMENTS SHOULD BE SHOWN TO THE NEAREST WHOLE UNIT.

CARGO PLAN: INDICATE HOLDS, TWEEN DECKS, ENGINE SPACES, FITTINGS, STOWAGE, TONNAGES, ETC.



NCB Grain Stability Calculation Form Page 3

FUEL AND WATER CALCULATION

PART II

THE **INTERMEDIATE** SECTION MUST BE COMPLETED IF THE **ARRIVAL** SECTION SHOWS BALLAST THAT IS NOT LISTED IN THE **DEPARTURE** SECTION. THE **INTERMEDIATE** CONDITION IS IMMEDIATELY BEFORE BALLASTING AND MUST INCLUDE THE EFFECT OF FREE SURFACE, BUT **NOT** THE EFFECT OF ADDED WEIGHT. ADDITIONAL FUEL TAKEN AFTER DEPARTURE MUST BE SHOWN IN THE **INTERMEDIATE** SECTION IN THE SAME MANNER AS BALLAST.

		DEPARTURE: Norfolk				INTERMEDIATE: Balboa				ARRIVAL: Dahlian			
TANK	TYPE LIQUID	WEIGHT	V.C.G.	MOMENT	F.S. MOM.	WEIGHT	V.C.G.	MOMENT	F.S. MOM.	WEIGHT	V.C.G.	MOMENT	F.S. MOM.
FOT 1P	FO	100	11.80	1180	196	100	11.80	1180	196	50	11.80	590	196
FOT 2P	FO	200	9.90	1980	157	106	9.90	1049	157	106	9.90	1049	157
FOT 3P	FO	200	9.91	1982	157	105	9.91	1041	157	107	9.91	1060	157
FOT 4S	FO	100	11.79	1179	196	100	11.79	1179	196	50	11.79	590	196
DOT 1P	DO	25	15.18	380	8	25	15.18	380	8	25	15.18	380	8
DOT 1S	DO	25	15.18	380	8	25	15.18	380	8	25	15.18	380	8
DOT 2S	DO	40	13.74	550	123	27	13.74	371	123	74	13.74	1017	123
FWT P	FW	75	15.36	1152	145	75	15.36	1152	145	75	15.36	1152	145
FWT S	FW	75	15.34	1151	166	75	15.34	1151	166	75	15.34	1151	166
Ballast	BW	100	1.51	151	-	100	1.51	151	-	100	1.51	151	-

Max. VCGs have been used throughout. Actuals would be acceptable

Max. FSMs have been used throughout. Actuals would be acceptable provided maximums used for largest pair of each type of tanks

TOTALS									
LIQUIDS	940	10085	1156	738	8034	1156	687	7520	1156
SHIP AND CARGO	57103	546009		57103	546009		57103	546009	
DISPLACEMENT	58043	556094		57841	554043		57790	553529	

SAILING DRAFT 11.91 AT DENSITY 1.011

DEPARTURE KG	9.58	INTERMEDIATE KG	9.58	ARRIVAL KG	9.58
(1) FREE SURFACE CORR. (+)	0.02	(1) FREE SURFACE CORR. (+)	0.02	(1) FREE SURFACE CORR. (+)	0.02
(2) VERT. S.M. CORR. (+)	-	(2) VERT. S.M. CORR. (+)	-	(2) VERT. S.M. CORR. (+)	-
DEPARTURE KGv	9.60	INTERMEDIATE KGv	9.60	ARRIVAL KGv	9.60
DEPARTURE KM	13.35	INTERMEDIATE KM	13.35	ARRIVAL KM	13.36
DEPARTURE KGv	9.60	INTERMEDIATE KGv	9.60	ARRIVAL KGv	9.60
DEPARTURE GM	3.75	INTERMEDIATE GM	3.75	ARRIVAL GM	3.76
REQUIRED MINIMUM GM	0.30	REQUIRED MINIMUM GM	0.30	REQUIRED MINIMUM GM	0.30

(1) FREE SURFACE CORR. = SUM OF FREE SURFACE MOMENTS / DISPLACEMENT

(2) VERT. S.M. CORR. = SUM OF VERTICAL SHIFTING MOMENTS / DISPLACEMENT

(THIS CORRECTION MUST BE APPLIED TO ALL SHIPS.)

(THIS CORRECTION APPLIES WHEN THE VOLUMETRIC HEELING MOMENT CURVES OR TABLES DO NOT SPECIFICALLY STATE THAT THE CORRECTION FOR THE RISE IN VERTICAL CENTER OF GRAVITY HAS BEEN INCLUDED, AND THE MANUAL PROVIDES VERTICAL SHIFTING MOMENTS.)

NCB Grain Stability Calculation Form Page 4

HEELING MOMENT CALCULATION

PART III

COMPT. NO	STOWAGE (1)	GRAIN ULLAGE OR DEPTH M	VOLUMETRIC HEELING MOMENT M⁴	S.F. OR DENSITY (2)	GRAIN HEELING MOMENT MT–M	VERTICAL SHIFTING MOMENT (IF PROVIDED) SEE NOTE 2 IN PART II M⁴ FT⁴	MT–M / FT–LT
1	PF	8.46	13771	1.198	(12295.2 x 1.12)		
2	F-UT	0	3730				
3	F-UT	0	3880				
4	F-UT	0	3799				
5	F-UT	0	3840				
6	PF	4.15	9598		(8569.9 x 1.12)		
				1.198			
		TOTALS	38618		32235		

(1) UNDER STOWAGE INDICATE "F-T" FOR FILLED COMPARTMENTS TRIMMED, "F-UT" FOR FILLED COMPARTMENTS UNTRIMMED, "PF" FOR PARTLY FILLED COMPARTMENTS, AND "SEC" FOR SECURED OR OVER-STOWED COMPARTMENTS.

(2) THE STOWAGE FACTOR USED IN PART III SHALL NOT EXCEED THE ONE BASED ON THE WEIGHT PER UNIT OF VOLUME (TEST WEIGHT) OF THE GRAIN. IF THE STOWAGE FACTOR IS THE SAME IN ALL COMPARTMENTS, DIVIDE THE TOTAL VOLUMETRIC HEELING MOMENT BY THE STOWAGE FACTOR OR MULTIPLY BY THE DENSITY TO OBTAIN THE GRAIN HEELING MOMENT. IF THE STOWAGE FACTOR VARIES, OBTAIN THE GRAIN HEELING MOMENT FOR EACH COMPARTMENT.

A. FOR VESSELS APPROVED UNDER INTERNATIONAL GRAIN CODE, Part A, 7.1
REGULATION 4, CHAPTER VI, SOLAS 1974 or
REGULATION 4, IMCO RESOLUTION A.264(VIII), NEW CHAPTER VI, SOLAS 1960
REGULATION 4, IMCO RESOLUTION A.184 AN EQUIVALENT TO CHAPTER VI, SOLAS 1960

STABILITY SUMMARY

	DEPARTURE	INTERMEDIATE	ARRIVAL
DISPLACEMENT	58043	57841	57790
KG ~~or GM~~	9.60	9.60	9.60
TOTAL GRAIN HEELING MOMENT	32235	32235	32235
MAXIMUM ALLOWABLE HEELING MOMENT	50846	50672	50628
* ANGLE OF HEEL (12° MAX.)			
* RESIDUAL AREA 0.075 METER-RADIANS (14.1 FT° OR 4.3 M°) MINIMUM			
* GM (0.3M OR 1 FT MINIMUM)			

* TO BE COMPLETED IF VESSEL'S GRAIN LOADING BOOKLET DOES NOT INCLUDE A TABLE OF ALLOWABLE HEELING MOMENTS. IN SUCH CASE, STATICAL STABILITY DIAGRAMS DEMONSTRATING THIS INFORMATION SHALL BE ATTACHED HERETO.

B. FOR SPECIALLY SUITABLE SHIPS APPROVED UNDER INTERNATIONAL GRAIN CODE, PART A, 8. 2
SECTION V (B) , PART B, CHAPTER VI, SOLAS 1974
SECTION V (B) , PART B, IMCO RESOLUTION A.264 (VIII), NEW CHAPTER VI, SOLAS 1960
REGULATION 12, CHAPTER VI, SOLAS 1960

$$\text{ANGLE OF HEEL} = \frac{\text{GRAIN HEELING MOMENT x 57.3}}{\text{DISPLACEMENT X GM}}$$

	DEPARTURE	INTERMEDIATE	ARRIVAL
TOTAL GRAIN HEELING MOMENT			
DISPLACEMENT			
GM			
ANGLE OF HEEL (5° MAX.)			

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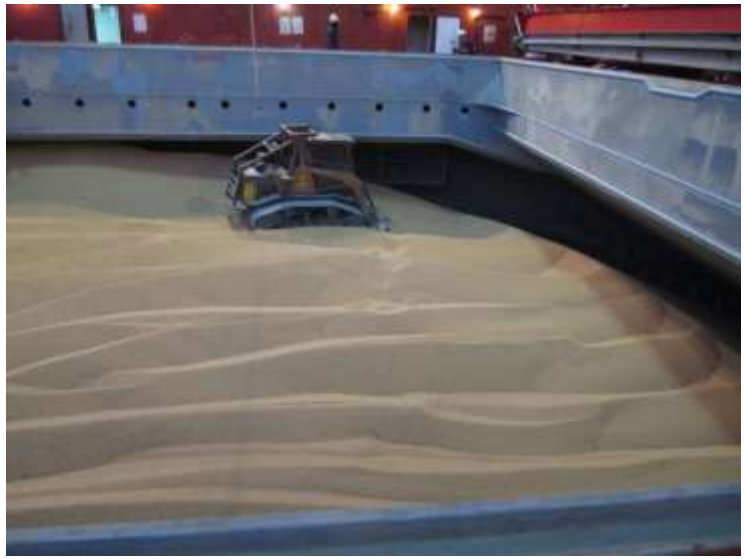
Movable Bulkheads

- Numerous small vessels often use movable bulkheads to create additional stowage spaces and to minimize the number of partially full holds
- Bulkheads should be installed in accordance with written instructions as provided in the ISM Manual
- Spaces between the movable bulkheads and ship structure must be made grain tight
- Failure of movable bulkheads could lead to a serious casualty due to shifting cargo

Bulk Grain Loading Oversight (NCB)

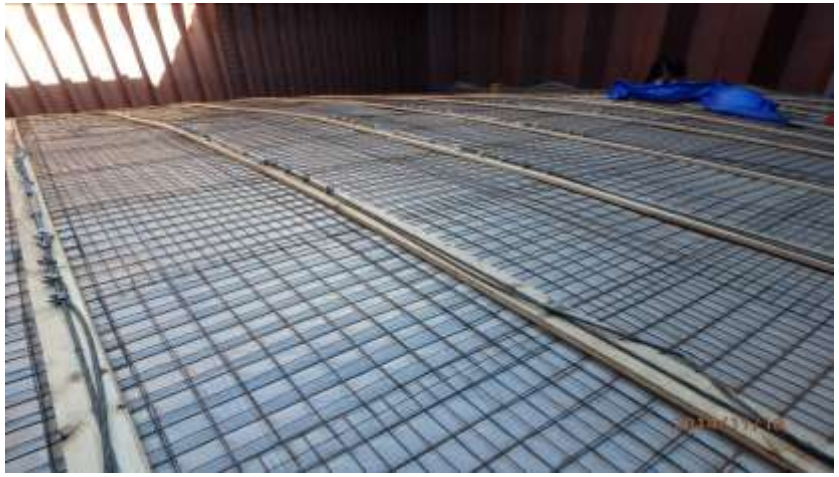
Daily and Final Visits:

- Actual stowage conforms with loading plan
- Full trimmed holds have been trimmed and fully loaded
- Full untrimmed holds have been completely loaded in the way of the Hatch Opening
- Partly filled holds are level
- Securing of grain if required has been accomplished
- Correct Stowage Factor used to determine the Grain Heeling Moment



Stowage of Bulk Grain

Strapping" or Securing with Wire Mesh

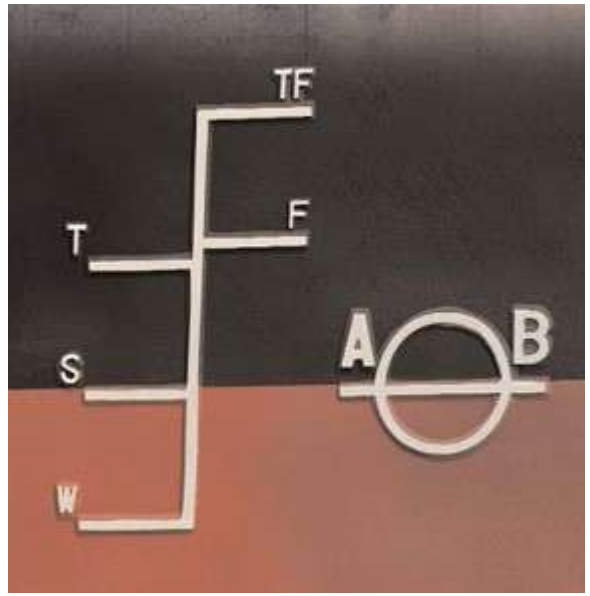


Multi-Purpose Vessels –
Securing with Pontoons

Bulk Grain Loading Oversight (NCB)

At the completion of loading:

- Vessel is upright (less than 1° of list)
- Vessel is not excessively down by the head
- Vessel does not exceed seasonal load line adjusted for actual dock water density
- If Final Stowage differed from Pre-stow, then the Stability Calculation should be revised
- If Ballast required, verify onboard or obtain letter from Master stating Ballast to be taken before reaching open waters
- After the successful completion of loading the NCB surveyor will issue a ***Certificate of Loading***

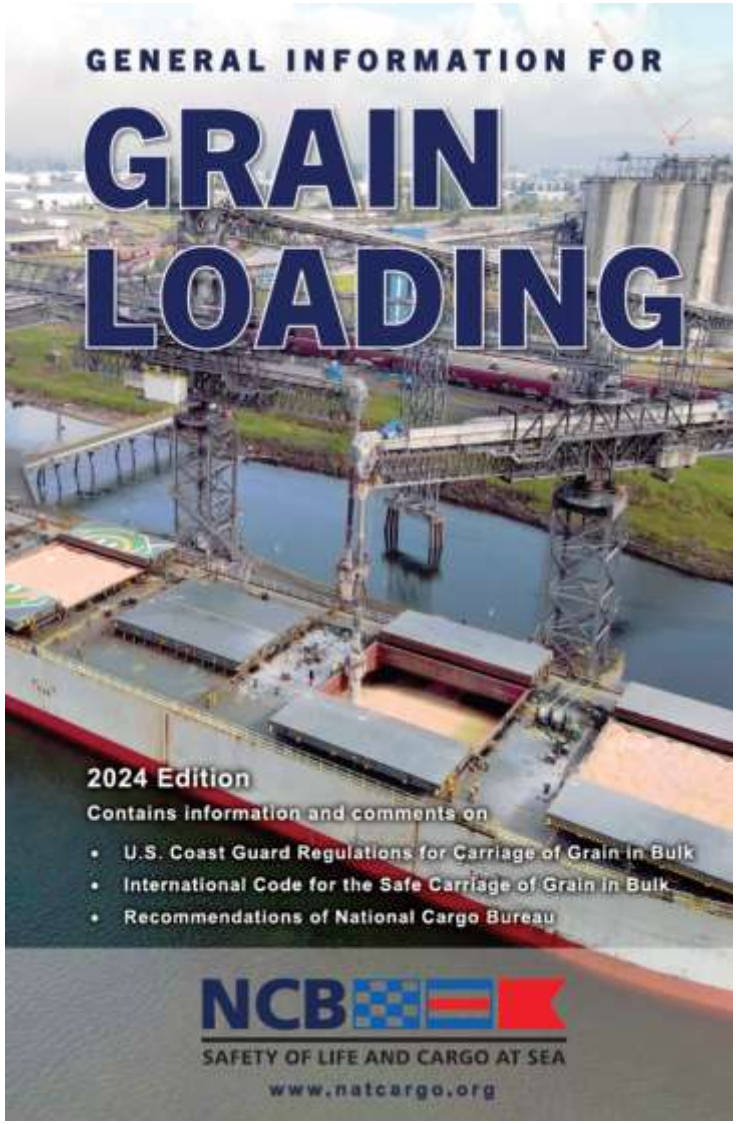


BULK GRAIN

The National Cargo Bureau (NCB) General Information for Grain Loading booklet is a compilation of information on the safe loading and stowage of bulk grain and includes the following:

- Information on the International Grain Code.
- US Coast Guard Regulations concerning the loading of bulk grain in US Ports.
- History of bulk grain loading and development of the regulations.
- Recommendations concerning the loading of bulk grain.
- Vessel Preparation for loading bulk grain
- NCB Grain Stability Calculation Form preparation.
- Various methods to achieve compliance with the grain regulations.
- Necessary precautions to be taken during grain loading
- Grain Stability loading examples.

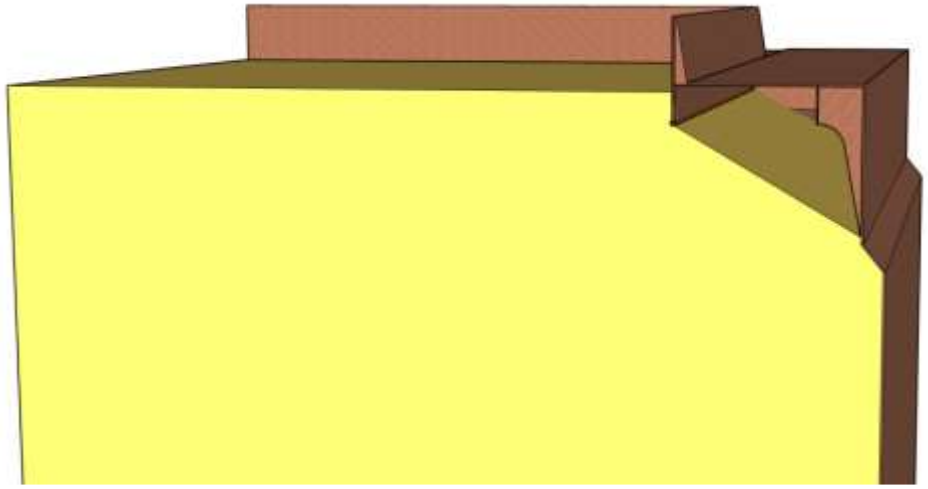
The booklet is intended as a handy reference for Ship's Masters, Deck Officers, Surveyors, and other members of the maritime community involved in the loading of bulk grain



Amendment to the Grain Code

- When a cargo hold is *nearly full* and reaches the level of the hatch coaming, the *Partly Filled* heeling moment values in the Grain Loading Manual assume that trimming has been carried out at the ends of the hold.
- However, there have been instances where, after loading is completed, trimming had not been carried out for the same *Partly Filled* in-coaming level grain load, so untrimmed voids exist at the ends. In such cases, the applicable heeling moment is unclear, as the IGC did not require this specific condition to be addressed.
- To resolve this ambiguity, **MSC.552(108)** introduces an amendment to the Grain Code, effective January 1, 2026. This amendment formally recognizes this intermediate loading condition and requires that the Grain Loading Manual include the corresponding heeling moment values for this scenario.

"Specially suitable compartment, partly filled in way of the hatch opening, with ends untrimmed"



Vessels Loading Bulk Cargo

IMSBC Code compliance, Draft Surveys, Hold Cleanliness inspections, watertightness…

Marine Claims Services

- NCB Damaged Cargo Surveys are conducted on behalf of ship owners, operators, and charterers as well as logistics service providers, cargo insurers or P&I clubs.
- These surveys may be conducted on board the vessel or at shore side locations depending on the nature and circumstances surrounding the incident and disposition of the cargo at time of NCB's appointment.

Marine Claims Services

Key services include:

- **Investigation and Information Gathering**: Identifying affected parties, analyzing contracts, and assessing stowage methods.
- **Documentation Collection**: Gathering bills of lading, manifests, invoices, and inspection reports.
- **Detailed Cargo Inspection**: Assessing the loss and identifying causes.
- **Causality Determination**: Providing expert opinions on the cause of the loss.
- **Preserving Recovery Prospects**: Coordinating joint surveys and documenting evidence.
- **Salvage Process Support**: Assisting in the salvage process.
- **Loss Mitigation and Future Recommendations**: Developing recommendations to prevent future losses.
- **Remote Surveys for Non-Complex Claims**: Using technology for swift assessments.

These surveys help stakeholders minimize losses, manage claims, and implement preventive measures.

Marine Insurance Surveys

- **Global Cargo Risk Management**
  - Global coordination and oversight for multi-national loss prevention programs and "cradle to grave" risk management support for critical or key infrastructure project cargo shipments.
- **Cargo Load and Stow / Discharge**
  - Marine Warranty Surveys – Project Cargo
  - Breakbulk / Flatrack / Mafi / Container
- **Shipping and Handling Consultations**
  - Carried out on high value, heavy, awkward, or other cargo that may be sensitive to mechanical or climatic stresses with the objective to proactively (or reactively) minimize the potential for cargo damage or loss

Marine Insurance Surveys

- **Cargo Security Risk Assessments and Consultations**
  - Carried out on High Value Theft Targeted (HVTT) cargoes.
- **Warehouse Risk Assessments**
  - Assessments for condition of insurance coverage
- **Cargo Suitability Inspections**
  - “Cargo-worthiness” of vessels for high value or project cargo / key item shipments
- **Marine Liability Risk Assessments**
  - Provide an indication of risk and liability exposure

High NATCAT rating due to Earthquake exposure. Facility is only 202 meters from a active fault.

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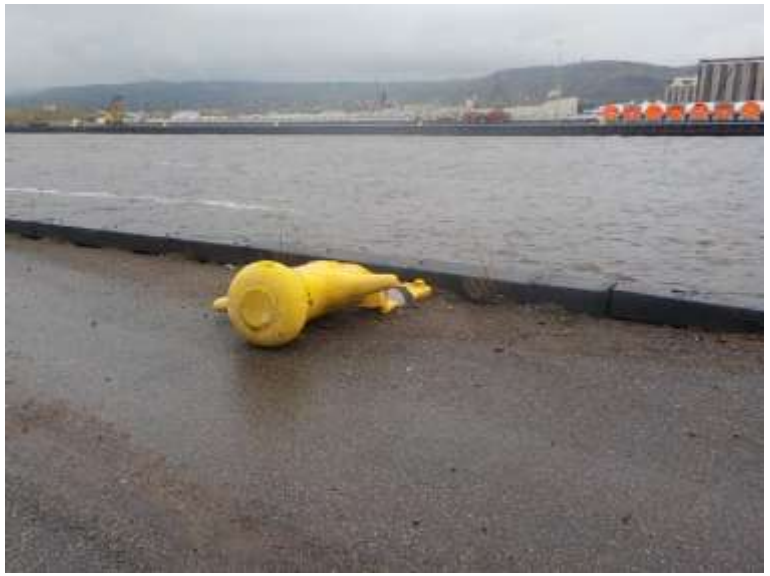
Radioactive Surveys

Damaged vessel and facility Surveys



Loading / Discharging, Securing of Cargo – Break Bulk and Project Cargo

Steel Outturn Surveys

Bulk Cargo Damage Surveys

Bagged Cocoa Beans

Bagged Rice Loading

- Hold inspection – Issuance of Certificate of Readiness
- Inspection of proper stowage and securing of cargo

Flag State Safety Inspections

Vessel Condition & Pre-Purchase Surveys

Section score

Section	Description	Score
1.1	Inspection history	60,0%
1.2	Chief Officer	100,0%
1.3	Chief Engineer	89,1%
2	General items	78,5%
3	Accommodation and bridge	100,0%
4	Hull, deck and holds	60,0%
5	Engine room and steering gear	100,0%
	Total	83,9%

Risk Areas

Cargo Care	92,0%
Cargo Gear	100,0%
Follow-up Actions	60,0%
Housekeeping	88,9%
Maintenance	91,4%
Navigation	100,0%
Pollution Prevention	100,0%
Structural Condition	46,8%
Various	100,0%
Visitor / Stevedore Safety	77,8%

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Thank You!

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