

# Casualty Lessons Learned Two Case Studies



# **Case Study One : Hazmat Incident Ports America Outer Harbor Terminal**

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- The Event: February 27<sup>th</sup>, 2014 M/V Victoria Bridge**  
**While discharging Forty foot containers below deck the crane operator locked onto two twin twenty containers thinking it was one Forty foot Container. Locked in only the four outside corners of the 20s.**

**Upon reaching the Top of the cell guides the two Twin Twenty Containers broke free of the cargo spreader – falling back into the cargo hold.**

**One twenty foot container weighting 18 tons was a Class 8 Hazmat Container with 64 plastic drums of Potassium Hydroxide Solution- UN 1814**

# **Hazmat Incident**

## **Ports America Outer Harbor Terminal**

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- **The After Action:**

**Crane operator stated she thought she was lifting a 40' import rather than the twin 20's therefore she had the bridle in the 40' position. She believed it was a crane malfunction that allowed her to get a locking light and pickup twin 20's while in the 40' position. She states the previous containers she discharged at that Bay were 40's and that she was not informed the containers on this hoist were twin 20's.**

**Crane Walking Boss stated he did not know how the containers fell from the crane.**

**The Crane Walking Boss states he instructed the Crane operator to discharge all 40' containers first and then discharge the 20' pairs. Management did not get any further comments from the Crane Boss because he stated he wished not to speak further and left the terminal.**

**RSA was conducted both crane driver & walking boss.**





Oakland Fire Dept. on crane spreader going into the hatch for an Assessment which they passed off to the NRC team



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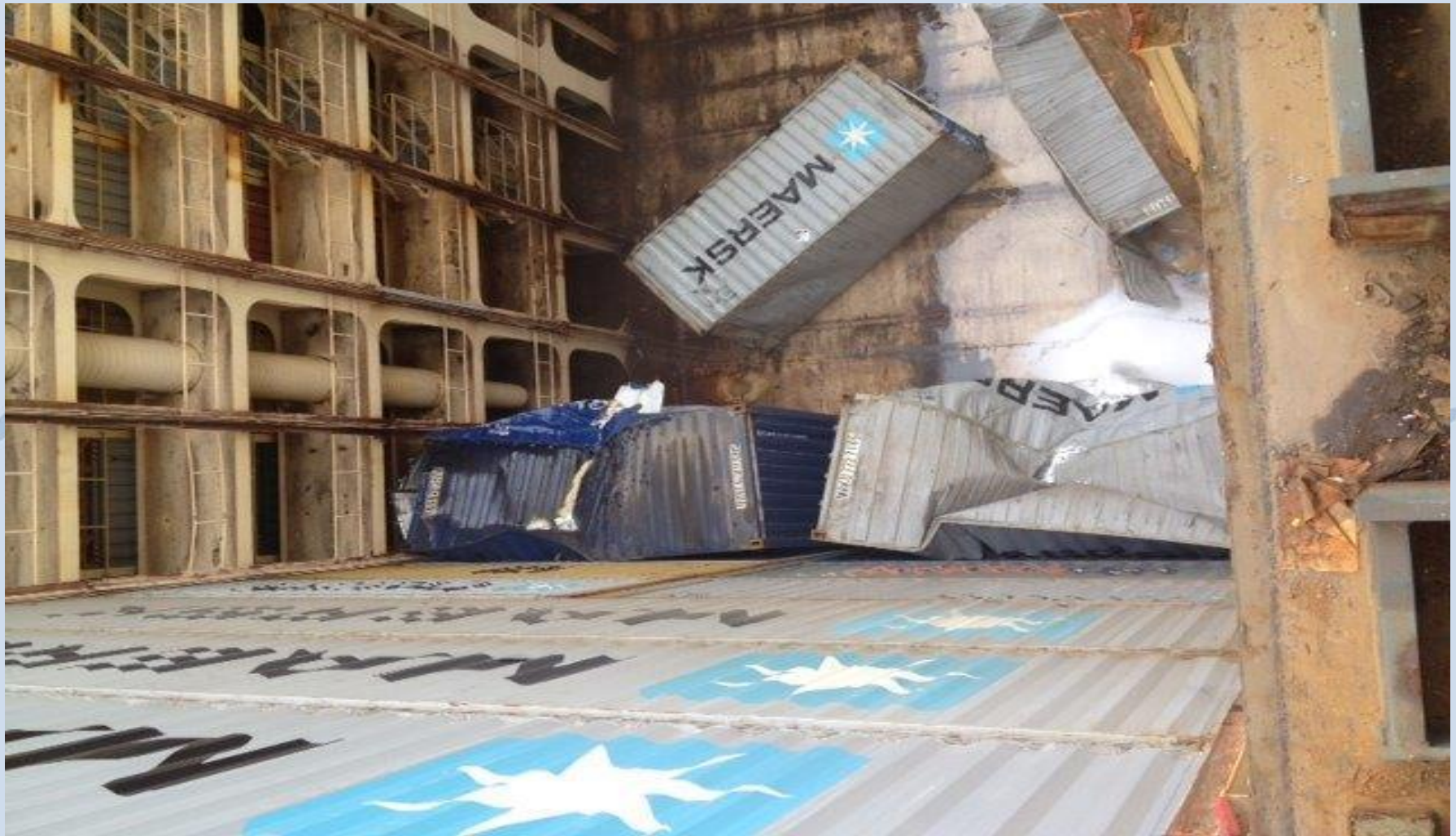


# View of the Starboard side Stow of 20' Foot Containers





# Top view from the Starboard land side



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# A View of the Bay 28 looking Forward



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# Stow plan marking the off the 20 foot Containers

MAE/OAK MSKU 6267767 42G0 F 14.6 28-10-16 (1)	MAE/OAK PUNU 1920159 42G0 F 14.5 28-08-16 (5)							MAE/OAK SEAN 8587557 45G0 F 17.8 28-05-16 (51)	MAE/OAK MRKU 0761852 42G0 F 16.1 28-07-16 (59)	MAE/OAK MRKU 1098071 42G0 F 16.3 28-09-16 (63)
MAE/OAK MRKU 0939327 42G0 F 16.1 28-10-14 (2)	MAE/OAK MRKU 0859330 42G0 F 15.3 28-08-14 (6)	MAE/OAK MIEU 2012004 45G0 F 21.5 28-04-14 (9)	MAE/OAK MRKU 4063654 45G0 F 20.8 28-04-14 (16)	MAE/OAK TGHU 7757518 45G0 F 19.2 28-04-14 (23)	MAE/OAK MEDU 8673799 45G0 F 19.2 28-04-14 (30)	MAE/OAK MSCU 9692647 45G0 F 19.2 28-04-14 (37)	MAE/OAK MRKU 2209708 45G0 F 19.2 28-04-14 (44)	MAE/OAK MRKU 0868096 42G0 F 16.1 28-05-14 (52)	MAE/OAK MRKU 6883295 42G0 F 16.8 28-07-14 (60)	MAE/OAK MRKU 0177284 42G0 F 17.0 28-09-14 (64)
MAE/OAK TGHU 7918438 45G0 F 22.2 28-04-14 (3)	MAE/OAK PUNU 8015240 45G0 F 21.5 28-04-14 (7)	MAE/OAK MIEU 2011570 45G0 F 21.5 28-04-14 (10)	MAE/OAK MRKU 3805743 45G0 F 21.5 28-04-14 (17)	MAE/OAK INKU 6525805 45G0 F 19.2 28-04-14 (24)	MAE/OAK MSCU 9844673 45G0 F 19.2 28-04-14 (31)	MAE/OAK INKU 6529035 45G0 F 19.2 28-04-14 (38)	MAE/OAK MRKU 2838491 45G0 F 19.2 28-04-14 (45)	MAE/OAK MRKU 0229475 42G0 F 16.1 28-05-12 (53)	MAE/OAK MRKU 0855566 42G0 F 16.1 28-07-12 (61)	MAE/OAK MRKU 0363315 45G0 F 21.5 28-09-12 (65)
MAE/OAK CLHU 4275570 42G0 F 27.8 28-10-10 (4)	MAE/OAK TRLU 2652907 42G0 F 27.8 28-08-10 (8)	MAE/OAK MRKU 2833139 45G0 F 21.5 28-04-14 (11)	MAE/OAK MSKU 1467470 45G0 F 21.5 28-04-14 (18)	MAE/OAK MEDU 8135197 45G0 F 19.2 28-04-14 (25)	MAE/OAK TCKU 9286832 45G0 F 19.2 28-04-14 (32)	MAE/OAK MSKU 6947553 42G0 F 05.8 28-01-10 (39)	MAE/OAK DAYU 6105692 45G0 F 21.5 28-04-14 (46)	MAE/OAK PUNU 1574903 42G0 F 27.8 28-05-10 (54)	MAE/OAK MRKU 3100990 45G0 F 21.5 28-04-14 (62)	MAE/OAK MSKU 3062146 22G0 F 18.4 28-09-10 (69)
MAE/OAK MSKU 7362060 22G0 F 18.2 29-10-08 (67)	MAE/OAK TRLU 3945282 22G0 F 04.3 29-08-08 (73)	MAE/OAK MRKU 2717798 45G0 F 21.5 28-04-14 (12)	MAE/OAK MRKU 4237864 45G0 F 21.5 28-04-14 (19)	MAE/OAK MSCU 9576117 45G0 F 19.2 28-04-14 (26)	MAE/OAK TRLU 7081845 45G0 F 19.2 28-04-14 (33)	MAE/OAK MRKU 0934813 42G0 F 07.0 28-01-08 (40)	MAE/OAK MSKU 1550521 45G0 F 21.5 28-03-08 (47)	MAE/OAK MSCU 5007447 42G0 F 27.8 28-05-08 (55)	MAE/OAK MSKU 7005632 22G0 F 21.0 29-07-08 (61)	MAE/OAK MEDU 1985603 22G0 F 23.8 29-09-08 (61)
MAE/OAK MSKU 3906400 22G0 F 22.7 29-10-06 (69)	MAE/OAK PUNU 0288470 22G0 F 20.8 29-08-06 (75)	MAE/OAK MRKU 2085973 45G0 F 21.5 28-04-14 (13)	MAE/OAK MRKU 3770441 45G0 F 21.5 28-04-14 (20)	MAE/OAK MRKU 3556070 45G0 F 19.2 28-02-06 (27)	MAE/OAK MRKU 4641900 45G0 F 19.2 28-00-06 (34)	MAE/OAK MRKU 0551645 42G0 F 06.8 28-01-06 (41)	MAE/OAK PUNU 8083727 45G0 F 21.5 28-04-06 (48)	MAE/OAK CAXU 4078253 42G0 F 27.8 28-05-06 (56)	MAE/OAK MRKU 8753508 22G0 F 20.8 29-07-06 (63)	MAE/OAK MRKU 7433201 22G0 F 22.7 29-09-06 (63)
MAE/OAK MSKU 5984212 22G0 F 22.6 28-10-04 (71)	MAE/OAK MRKU 8985545 22G0 F 20.8 29-08-04 (77)	MAE/OAK MSKU 8246249 45G0 F 21.5 28-04-14 (14)	MAE/OAK MRKU 3630373 45G0 F 21.5 28-04-14 (21)	MAE/OAK MRKU 0943517 42G0 F 06.7 28-02-04 (28)	MAE/OAK MSKU 0152400 45G0 F 19.2 28-00-04 (35)	MAE/OAK MRKU 0010701 42G0 F 06.8 28-01-04 (42)	MAE/OAK MSKU 9391241 45G0 F 21.5 28-04-04 (49)	MAE/OAK TGHU 4474371 42G0 F 27.8 28-05-04 (57)	MAE/OAK MRKU 7908009 22G0 F 22.3 29-07-04 (65)	MAE/OAK MSKU 3511102 22G0 F 22.2 29-09-04 (65)
	MAE/OAK MEDU 1064682 22G0 F 12.3 28-08-02 (79)	MAE/OAK MSKU 0838679 45G0 F 21.5 28-04-14 (15)	MAE/OAK MSKU 9440109 45G0 F 21.5 28-04-14 (22)	MAE/OAK MEDU 4129318 42G0 F 15.4 28-02-02 (29)	MAE/OAK SCMU 4303691 45G0 F 19.2 28-00-02 (36)	MAE/OAK MRKU 0108175 42G0 F 08.0 28-01-02 (43)	MAE/OAK MSKU 9129524 45G0 F 21.5 28-04-02 (50)	MAE/OAK MEDU 4082870 42G0 F 27.8 28-05-02 (58)	MAE/OAK TGHU 2569225 22G0 F 22.3 29-07-02 (67)	

DAY 2/27  
[ X435 ]  
Seq 5

DISCH 28(29) / HOLD  
VICTORIA BRIDGE ( VCTB 0202 )  
Berth: 02 - S  
Voyage: 405A - 409R  
2014/02/27 01:07:26

<REMARK>

## Group Codes

	20'	40'	45'	48'	53'
AX	24				
S2	10				
V	1				
DG 1					

## Total Summary

	20'	40'	45'	48'	53'
Full	14	55			
MT	10				
Reef					
RH					
DG 1					
Tot	15	65			



## Cargo Hold Clear of other containers - Final clean



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Damaged container being placed on a forty foot Flat rack for discharge to the dock stringer.





# Damaged cargo on Flat racks on the dock



# Best Practices / Lessons Learned

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- 1. Ensure a safe evacuation of your labor force.**
- 2. Designate a safe location and do a head count of labor.**
- 3. Coordinate and interface a notification with all involved or could be involved in the Hazmat incident.**
- 4. Provide and have in hand an MSDS information for Fire Department and First Responders.**
- 5. With locate knowledge interact with Fire and Responders.**
- 6. Do an After Incident Analysis for process improvement and training Elements.**
- 7. Inform the USCG and others involved in the response.**



# Case Study Two : Vessel Crane Damage / Near Miss Environmental Fuel Barge Incident



## **Case Study Two : Vessel Crane Damage / Near Miss Environmental Fuel Barge Incident**

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- On July 31<sup>st</sup>. 2009 at 1155 hours a dock side crane while gantrying hit the Vessel's Crane.
- This collision between the Dock side crane and the crane aboard the vessel Polynesia. The ship's crane was under repair at the time of this incident and the collision occurred while gantrying the Dock crane to a new hatch just prior to Lunch.
- As a result the vessel crane's jib mountings were broken on the port side as well as the mounting bolts were broken at the heel block area.



M/V Polynesia with aft # 2 boom low and over the Port side in the proper operational stow.



# Tug and Bunker Barge along the Port side



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Aft ship's crane boomed up over the std'b side



Vision of the dock Crane driver blocked by the leg of Crane 435 as he moved to a new Hatch

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Technical problems were occurring with the ship's crane and a shore repair crew was working on the ship's crane at the time of the Incident.



The Dock crane was in the boomed up position while gantrying aft. Collision sensors on the shore crane are not active in the boomed up position.

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Smaller Vessels when taking Bunkers will cause the work area of the barge to extend in the cargo hatch area.



# **Suggested Best Practices When Bunker Barges Are Fueling Container Vessels**

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- **Bunker barge personnel have experienced objects as lashing bars, cones and recently containers falling onto the barge.**
- **Advance notification should be sent by the carrier representative/agent to the terminal that bunkering is planned for the ship while alongside.**
- **Terminal operators should incorporate the advanced notification information of bunkering into the crane letter of operation.**
- **All parties need to communicate information that would affect the safety of the bunkering operation.**
- **The walking bosses/foremen should include bunkering information into the safety talk to the longshore workforce.**
- **When and where possible, bunker barges should be secured alongside the vessel's accommodation (the house).**



# Summary

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- There were **No** injuries to personnel and **No** environmental impact as a result of this Collision incident.
- The damage event and repair factors did reach close to \$500,000 dollars.

## QUESTIONS