# Lock 20 Crane Incident and Recovery

February 2012

US Army Corps of Engineers
BUILDING STRONG®

# Lock and Dam 20

- Rock Island District
- Upper Mississippi River
- Canton, Missouri
- Typically 3,500 commercial lockages / year
- Typically 25 to 30 million annual tonnage
- Single Lock chamber: 110’ wide x 600 ‘ long
- Dam has 40 tainter gates and 3 roller gates

# 27 June 2011 Storm Info

- At approximately 0130, L/D20 was hit by a severe storm with sustained winds in excess of 70 mph.
- The winds pushed the bridge crane the length of the dam (2,300 LF) to the Illinois side.
- The winds propelled the crane off the end of the dam where it came to rest partially in the concrete storage yard and partially on top of the dam

# 27 June 2011 Storm Info

- There was damage to dam hatch covers, handrails, lighting fixtures, dam concrete, the crane and locomotive bulkhead lifter.
- Lock operators noticed the crane was missing shortly after 0300 (visibility was minimal due to the storm and darkness).
- Lockmaster was notified at approximately 0400 and the incident was reported up the chain shortly thereafter.

# 27 June 2011 Storm Info

- The District Commander ordered an AR 15-6 Investigation on 18 July 2011.
- Personnel from the Mississippi River Project were on site the morning of the incident.
- District Crane Safety Officer was on site the day of the incident.
- The 15-6 Investigation was completed on 17 Aug 2011.

06/27/2011 10:29

06/27/2011 10:32

06/27/2011 10:32

06/27/2011 10:32

06/27/2011 10:33

06/27/2011 10:33

27
120 VOLTS
26
06/27/2011 10:37

06/27/2011 10:38

06/27/2011 10:38

06/27/2011 10:38

06/27/2011 10:38

06/27/2011 10:43

06/27/2011 10:44

06/27/2011 10:45

06/27/2011 10:45

06/27/2011 10:46

06/27/2011 10:49

06/27/2011 10:53

06/27/2011 10:55

06/27/2011 10:56

No Trespassing
U.S. Government Property
06/27/2011 10:56

06/27/2011 10:56

06/27/2011 10:57

06/27/2011 10:58

06/27/2011 11:00

06/27/2011 11:00

06/27/2011 11:01

06/27/2011 11:02

06/27/2011 11:06

06/27/2011 11:06

06/27/2011 11:08

06/27/2011 11:22

06/27/2011 13:49

06/27/2011 13:50

06/27/2011 13:50

06/27/2011 13:52

06/27/2011 13:53

06/27/2011 13:53

Danger
No Smoking
Matches or
Open Flame
06/27/2011 13:53

06/27/2011 13:56

# 15-6 Finding and Recommendations

- MVR to develop SOP for the storing of its locomotive cranes and ensure that a secondary braking system is used on cranes that currently only have hydraulic braking systems.
- No single person or persons was held liable for damage or destruction of Gov’t property.
- Current Health and Safety Requirements were met with the addition of a locally manufactured chocking system.

# 15-6 Finding and Recommendations

- Maintenance of the crane had been performed as required for annual and monthly inspections. All crane maintenance was reported in FEM.
- EM 385-1-1, Paragraph 16.A.16 was met. This states that cranes should only be chocked when on an incline.

# Bridge Cranes in MVR

- New chock systems were purchased and installed for all bridge cranes in MVR.
- Chock systems were purchased from train industry (GA Smith Railway Supply in Troy, IL) and installed at all locations.
- 2 each “double wheel chock with handle and chain” – cost is $138 each.
- Installation – one set of double wheel chocks installed snugly on upstream wheel. Other set installed snugly on downstream wheel.

06/27/2011 11:45

# Removal of L/D20 Crane

- OD-MM met with local crane company for salvage operations.
- 11-15 July – preparation of site; fence removal; boom removal; rail grabber removal; installation of pad eyes for crane pick.
- 18-22 July – 210 ton and 165 ton mobile truck cranes to pick derailed crane.

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No Trespassing
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No Trespassing
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QUESTIONS ??????????????

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