# Marseilles Dam Repairs

2014 Locks Maintenance Workshop

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Aaron D. Dunlop, PE

Brady P. Beckman

US Army Corps of Engineers
BUILDING STRONG®

# Marseilles Site Plan

# Marseilles Damage Summary

- Dam
  - Gates #2-6 impacted by barges
    - Gates #2-3 inoperable
  - Pier #2 trunnion anchorage destroyed
  - Erosion at dam around Boiler House
- Earth Dike
  - Widespread residential flooding
  - Erosion of earth section

# Dam Gate Damage (Trunnion)

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# Dam(Boiler House) Erosion Damage

# Earth Dike Damage

# Earth Dike Damage

# Marseilles Dam Emergency Timeline 2013

- 18 April – barges impact dam
- Late April to Mid June – barge salvage operations
- Late April to Mid May – rock dike construction
- May 14 – navigation restrictions lifted
- Mid to Late June – Gate 2 & 3 bulkhead installation
- July to September – dam gate assessments
- October – preliminary repair concept development

# Rock Dike Construction

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# Rock Dike Construction

- TIME LAPSE VIDEO

# Bulkhead Panel Fabrication

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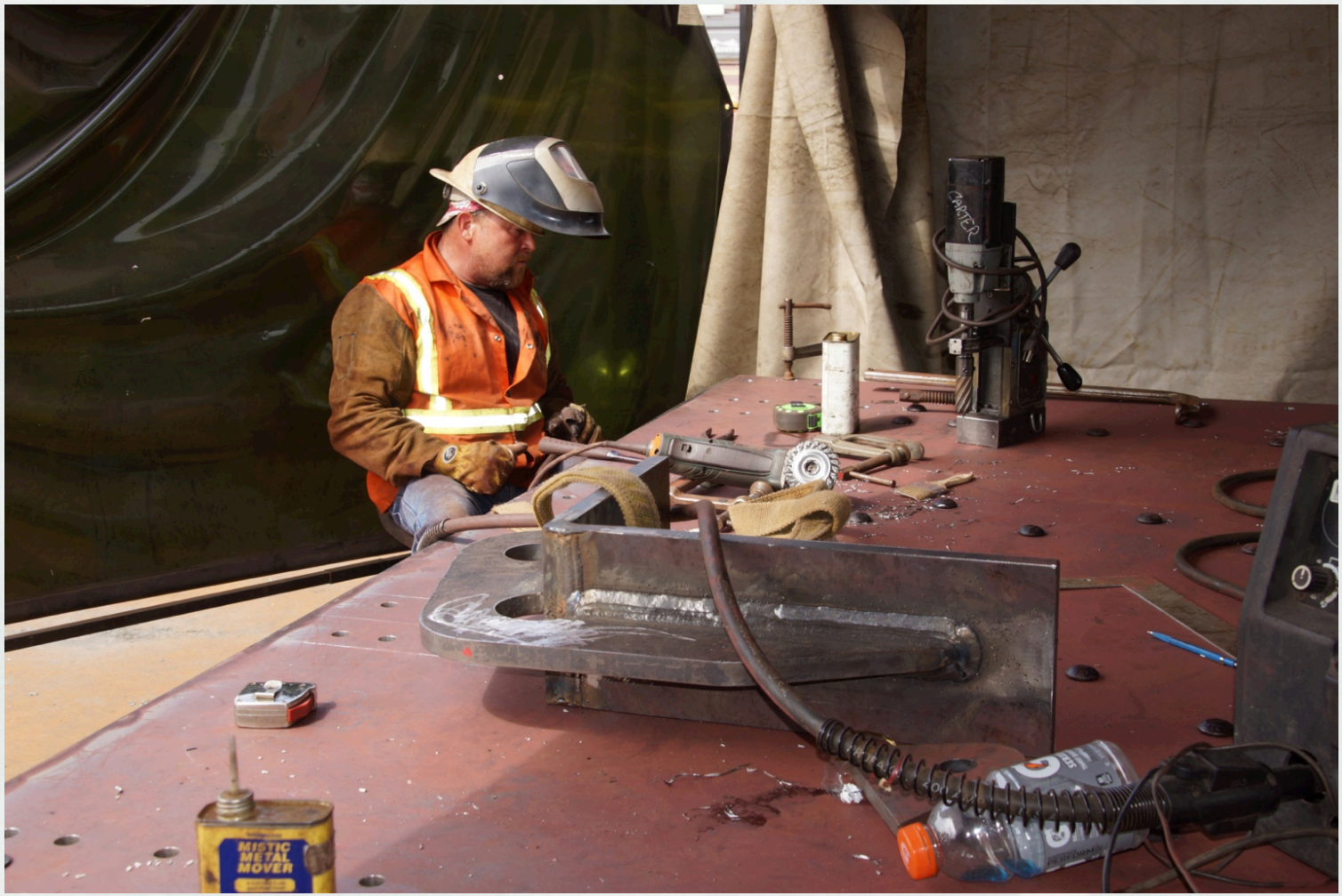


# Bulkhead Panel Fabrication

# Bulkhead Panel Fabrication

# Bulkhead Panel Fabrication

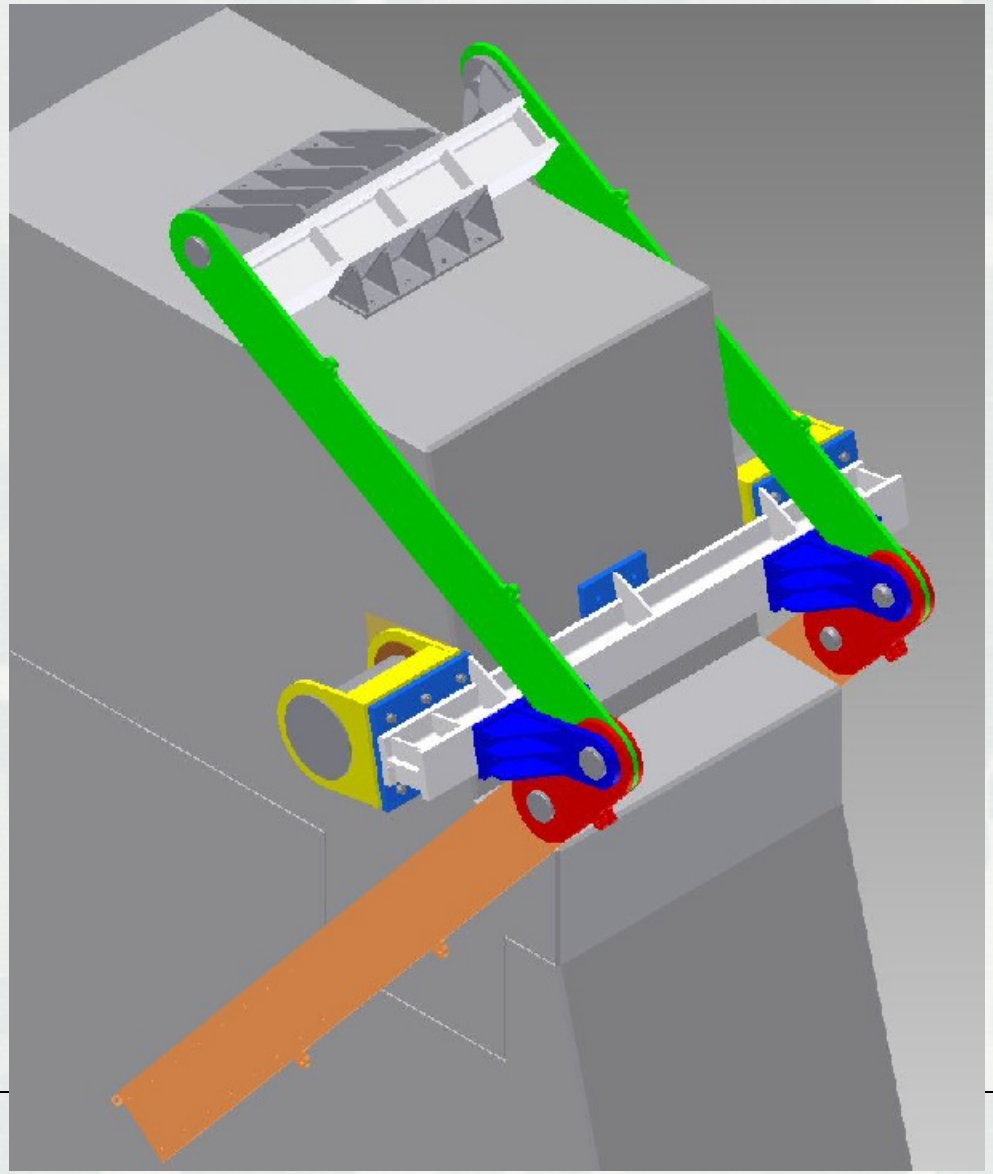
# Bulkhead Panel Fabrication

# Bulkhead at Gate #3

# Trunnion Anchorage Failure

# Trunnion Anchorage Failure

# Trunnion Anchorage Fabrication



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# Trunnion Anchorage Fabrication

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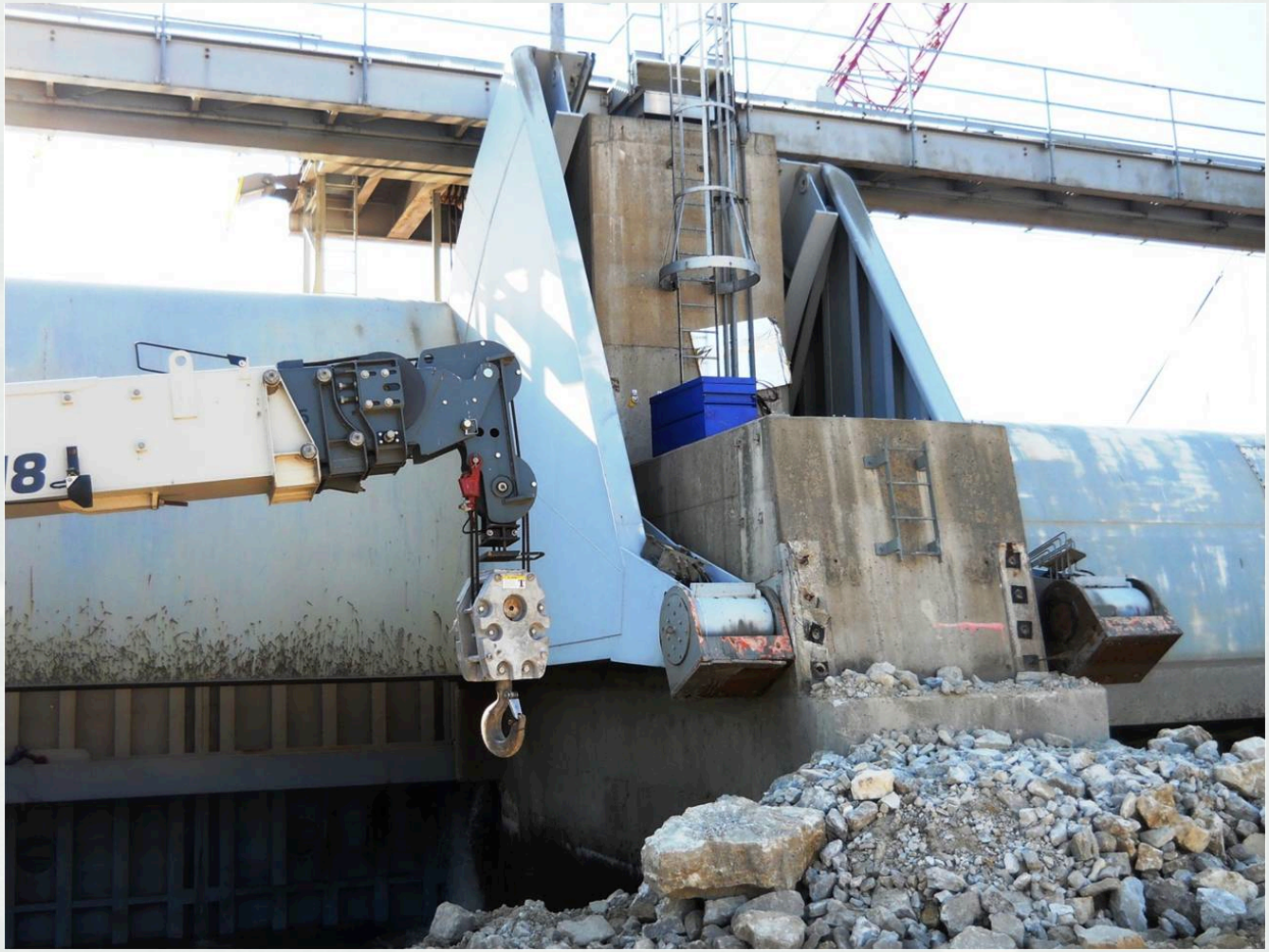
# Trunnion Anchorage Fabrication

# Trunnion Anchorage Installation



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# Marseilles Dam Repair Summary

- Rock Dike: Cost – $3.8M
  Time – 2 Weeks (const), 6 Months (decons)
- (2) Bulkheads: Cost – $1.2M, Time – 3 Months
- Trunnion: Cost – $175K, Time – 2 Months

- Dam Repair Contract – 2014-2017 (fund dependent)
- Earth Dike Contract – 2017-2018 (fund dependent)
- Phase I Repair Estimated Costs - $10M
- Phase II Repair Estimated Costs - $30-50M
- Funding from O&M Program

# Questions?