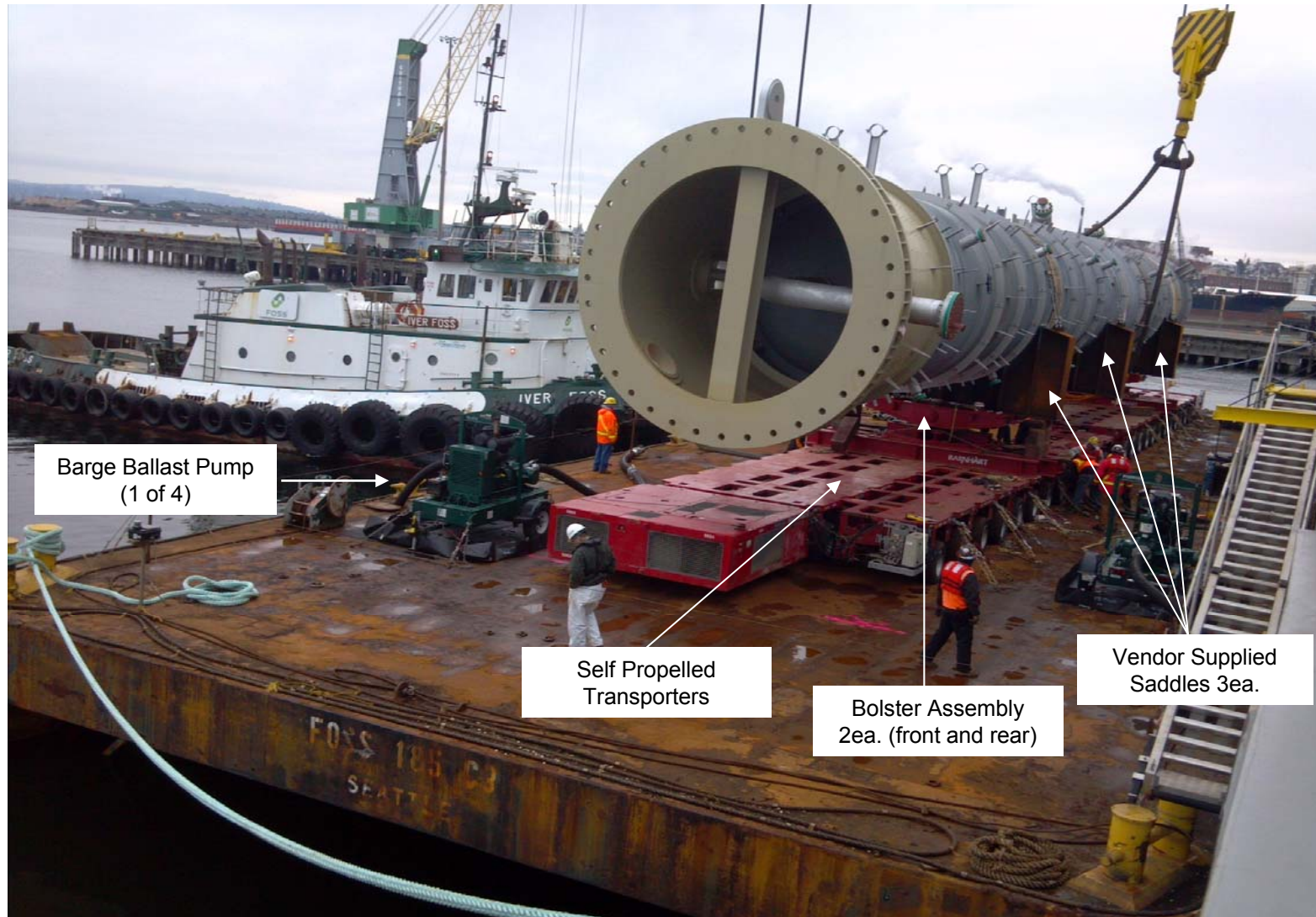




Cherry Point Diesel Reactor Incident

Background: Goldhofer Transporter



Barge Ballast Pump
(1 of 4)

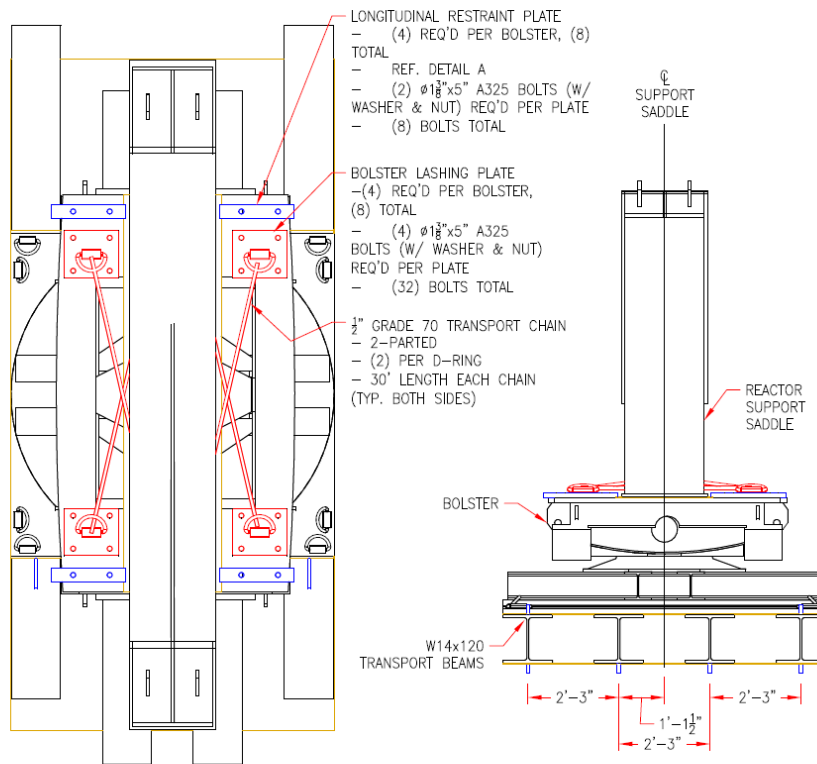
Self Propelled
Transporters

Bolster Assembly
2ea. (front and rear)

Vendor Supplied
Saddles 3ea.

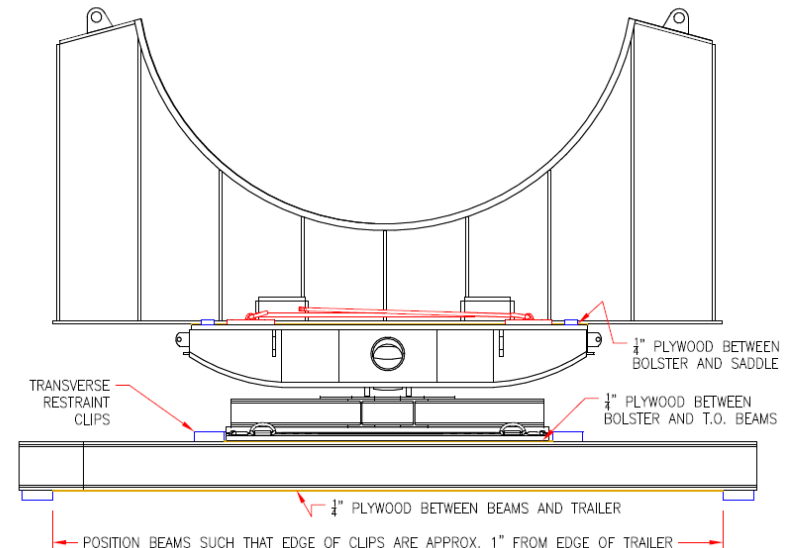
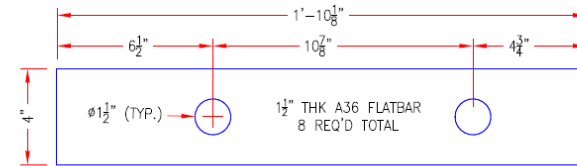
December 3rd, 2011: Offload from MV Kraszowski at Port of Everett

Bolsters – Utilized to support the reactor load away from the two transporters, the bolsters allow for separate rotation during turns



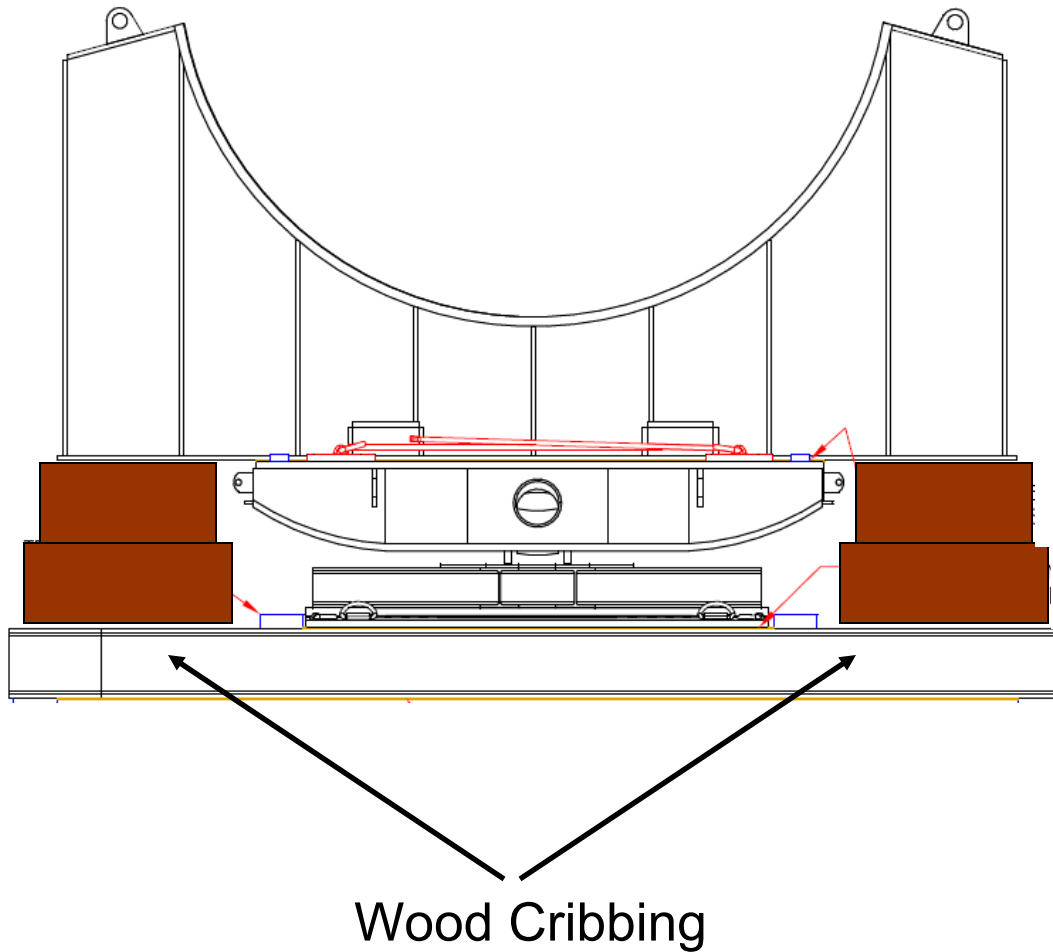
1 PLAN VIEW

2 END VIEW

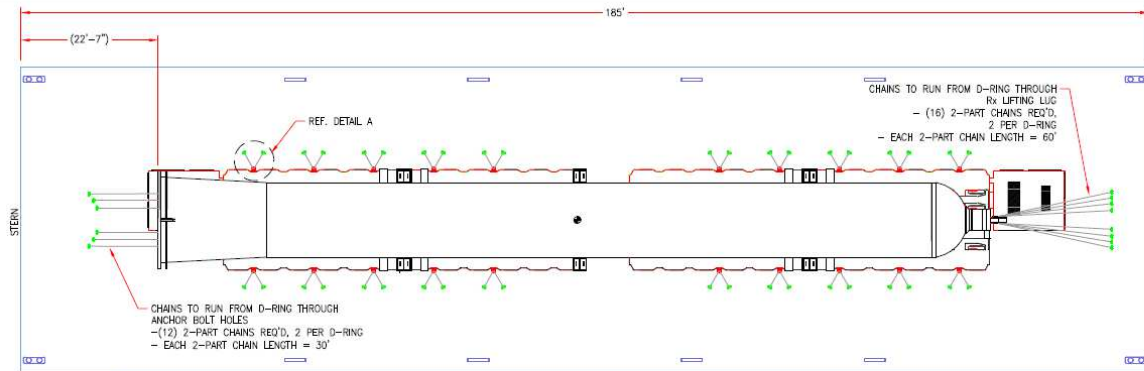


3 ELEVATION VIEW

Cribbing between Bolster and Saddle



Transporters- Used to transport the reactor from the barge to staging area; the two separate units are operated independently to allow for maximum control during turns and elevation changes encountered during transport.

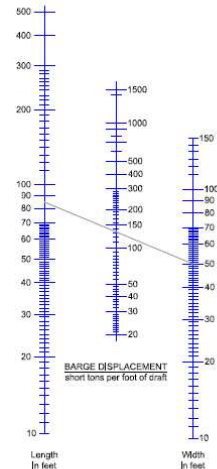
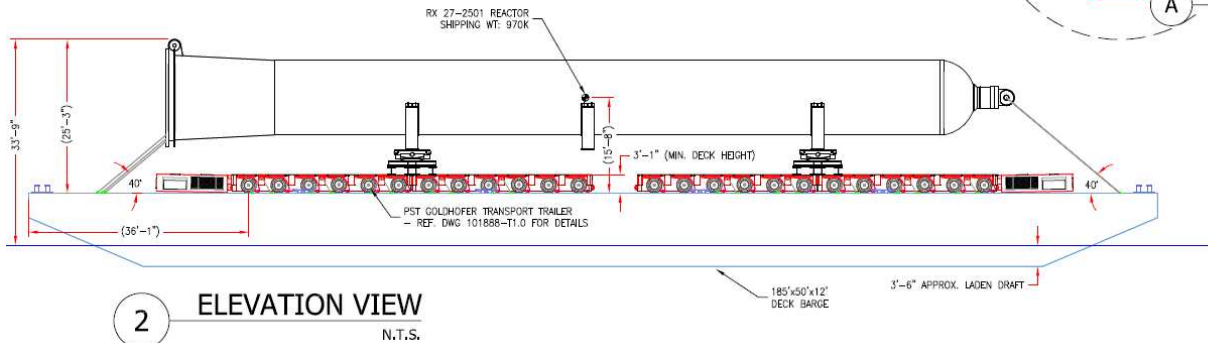
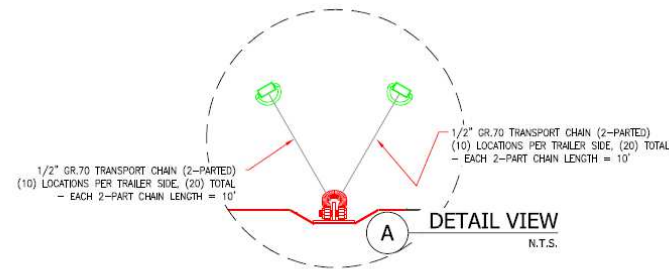


NOTES:

- (1) CHAIN LINE IN DRAWING REPRESENTS TWO $\frac{1}{2}$ " GRADE 70 TRANSPORT CHAINS. EACH CHAIN IS 2-PARTED W/ LOAD BINDERS (U.N.O.).
- CHAINS ARE INTENDED TO TAKE ALL BARGE MOTION FORCES.
- ATTACH CHAINS TO DECK USING 25t PECK & HALE LASHING RINGS (MODEL #F654) OR EQUIVALENT INSTALLED PER MFG. INSTRUCTIONS.

SECUREMENT EQUIPMENT REQ'D

- (54) 25t PECK & HALE LASHING RINGS W/ STRAPS
- (16) $\frac{1}{2}$ " GR. 70 CHAINS LENGTH 60'
- (12) $\frac{1}{2}$ " GR. 70 CHAINS LENGTH 30'
- (40) $\frac{1}{2}$ " GR. 70 CHAINS LENGTH 10'
- (54) GR. 7 LOAD BINDERS RATED AT 12,000 LBS
- (20) 17t SHACKLES

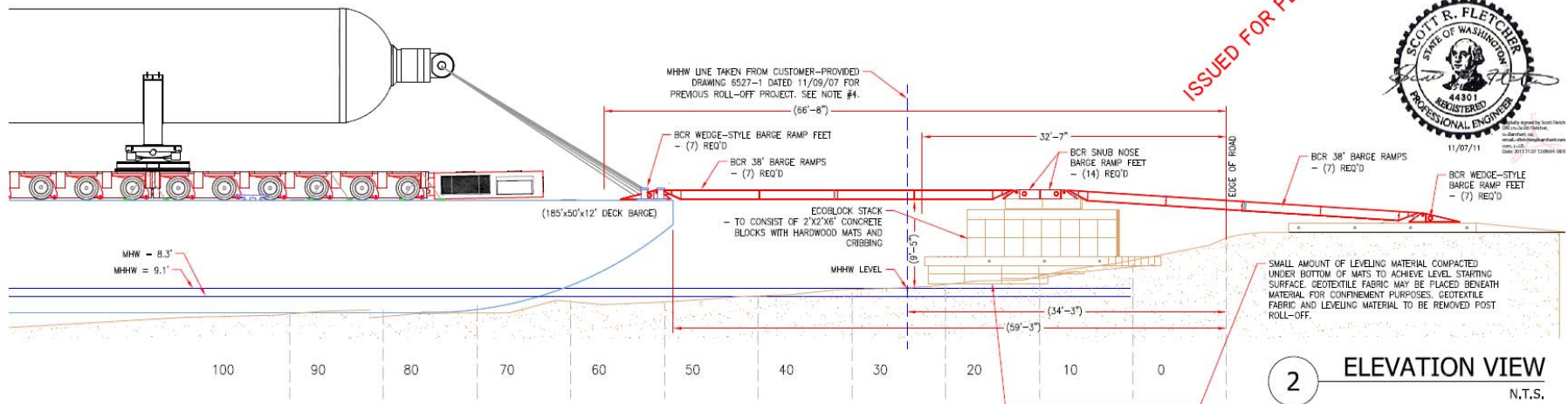
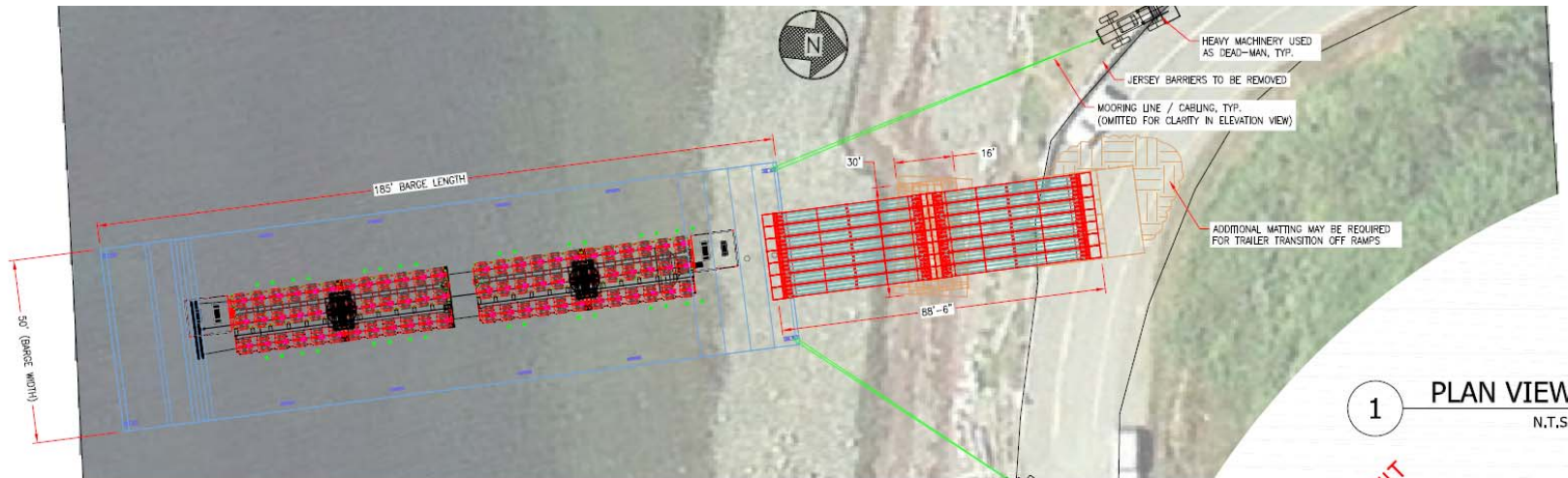


Planned Series of Events



- Wait approximately 400 yards offshore for high tide
- Beach barge onto shore
- Set up ramps from barge to shore
- Drive transporter off the barge and onto temporary offload structure at Gulf road
- Straight shot from road to refinery
 - 1.1 mile trip

Reactor Barge Landing Plan and Elevation



Ramp Setup from Barge to Road



~9:00 AM, Dec. 9th: Ramps set up to enable barge clean-up investigation

Satellite Photo of Landing Area



Actual Series of Events



- Barge waiting for high tide since ~11:00 PM, Dec. 8th
 - approximately 30 minutes to go
- Shift in load ~5:40 AM, ongoing investigation to determine cause
 - Per beaching plan, the reactor and transporter were to be moved 10' toward the rear
 - Chains securing the reactor and transporter to the barge were disconnected
 - Support cribbing between the Bolster I-beams and the bottom edge of the saddles were being removed as the last step, prior to moving the transporters
- Saddles and reactor slid off bolster assembly
- Saddles hit barge and rolled overboard with reactor
- Reactor landed in Puget Sound
 - Skirt lodged in ocean floor and reactor sitting at 27° angle

Barge with reactor waiting for high tide

-all weather conditions well within limits



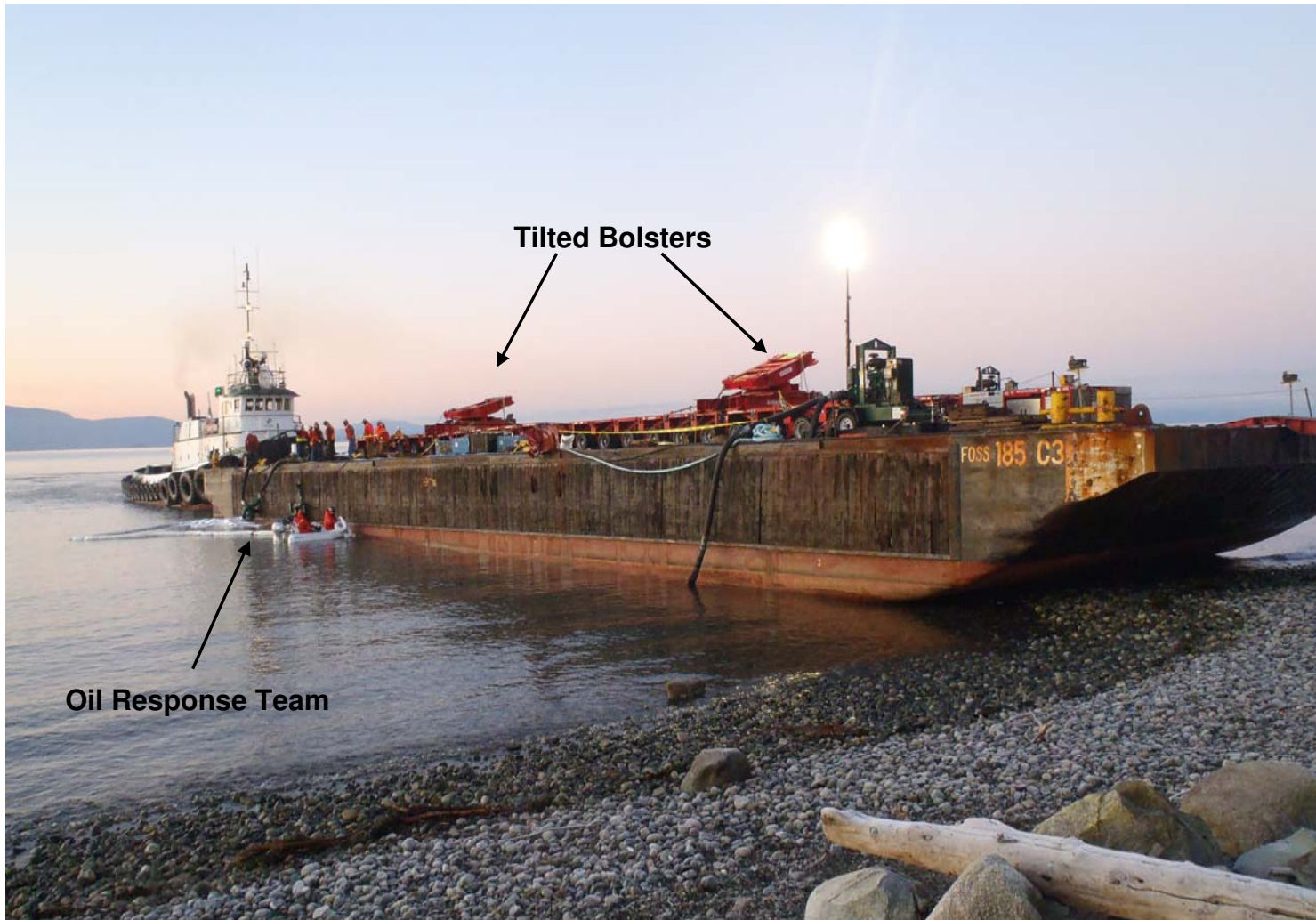
5:40 AM, December 9th

Unknown shift in load of bolster assembly, causing it to tilt unexpectedly



~9:00 AM, Dec. 9th

~9:00 AM, Dec 9th



Reactor and saddles slide off bolster assembly

- saddles likely hit and damage barge deck, then roll into ocean with reactor
- believe reactor to be undamaged



~6:30 AM, Dec. 9th

Damage to barge deck from saddle



~6:30 AM, Dec. 9th

Mechanical Damage to Bolster Assembly



Damage to I-Beam
-likely caused by contact with saddles

Wood Cribbing
-for barge transport only



Ongoing Barnhart Investigation still taking place, expect preliminary results by the end of the week



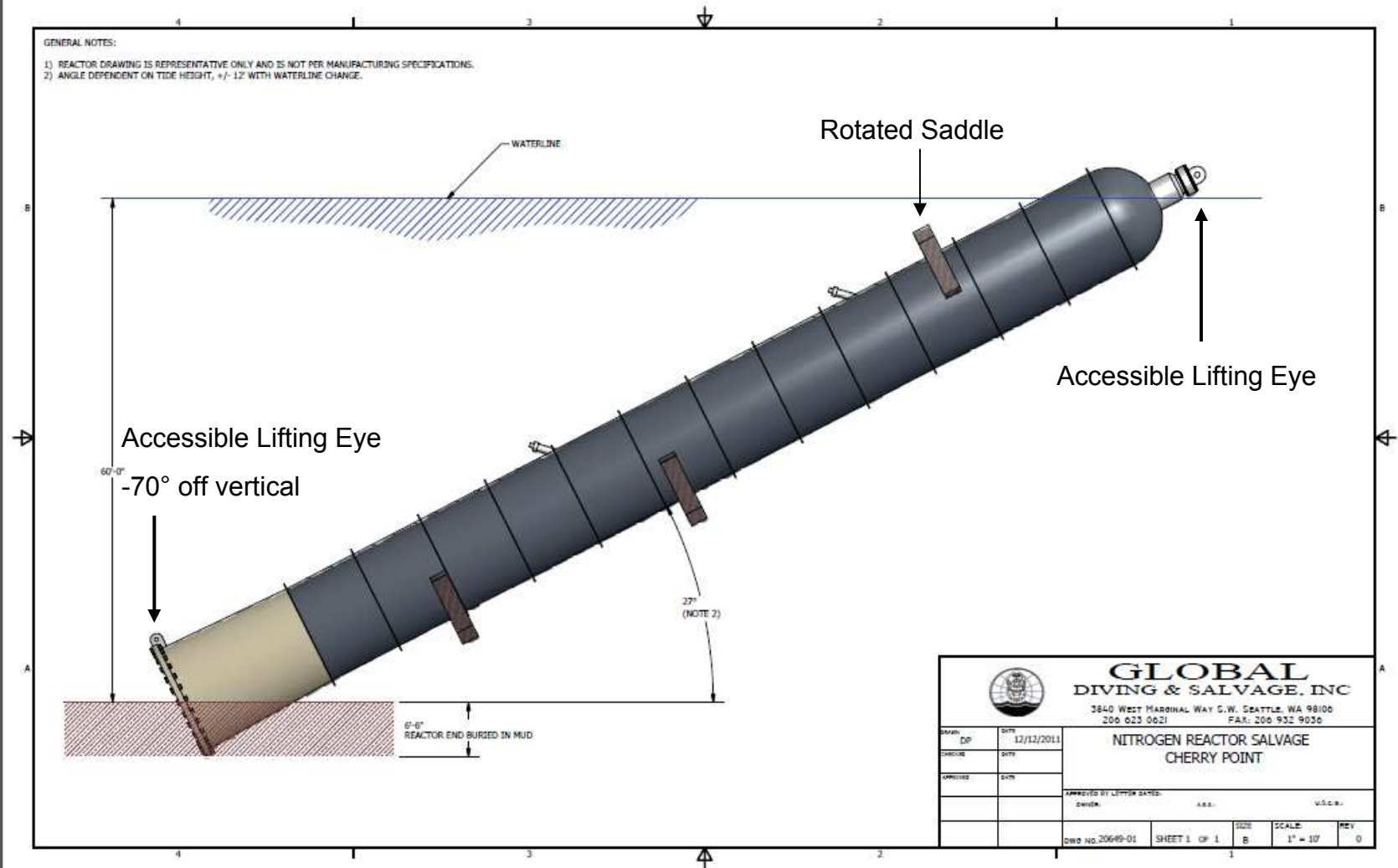
What we Do Know:

- Reactor and electric man lift submerged in ~60 ft of water
 - Reactor sitting on top of man lift
 - Reactor skirt half buried in ocean floor
 - Reactor is stable and secure



~12:00 PM, Dec. 9th

Representative Reactor Drawing



Barge Ballast Pump damage and minor oil spill

-lube oil leak due to gearbox damage



What's Next?



- Incident Command style response organizational setup
- John Hughes here (GOM expert)
- Utilize other BP resources
- Barnhart identified as responsible party
 - BP in Assurance role
- Preliminary survey indicates that there are acceptable waterborne crane assets available in Puget Sound