



U.S.NRC

UNITED STATES NUCLEAR REGULATORY COMMISSION

Protecting People and the Environment

NRC Internet Event Briefing

**Palisades SIRWT Leak Repair and
Inspections**

July 16, 2013

Welcome

Jack Giessner
Branch Chief
NRC Region III

Introductions - NRC

- Jack Giessner, Chief, Branch 4 (Presenter)
- Mel Holmberg, Senior Reactor Inspector, Branch 1
- David Alley, Senior Materials Engineer, NRR
- Richard Conatser, Health Physicist, NRR
- Thomas Taylor, Senior Resident Inspector, Palisades

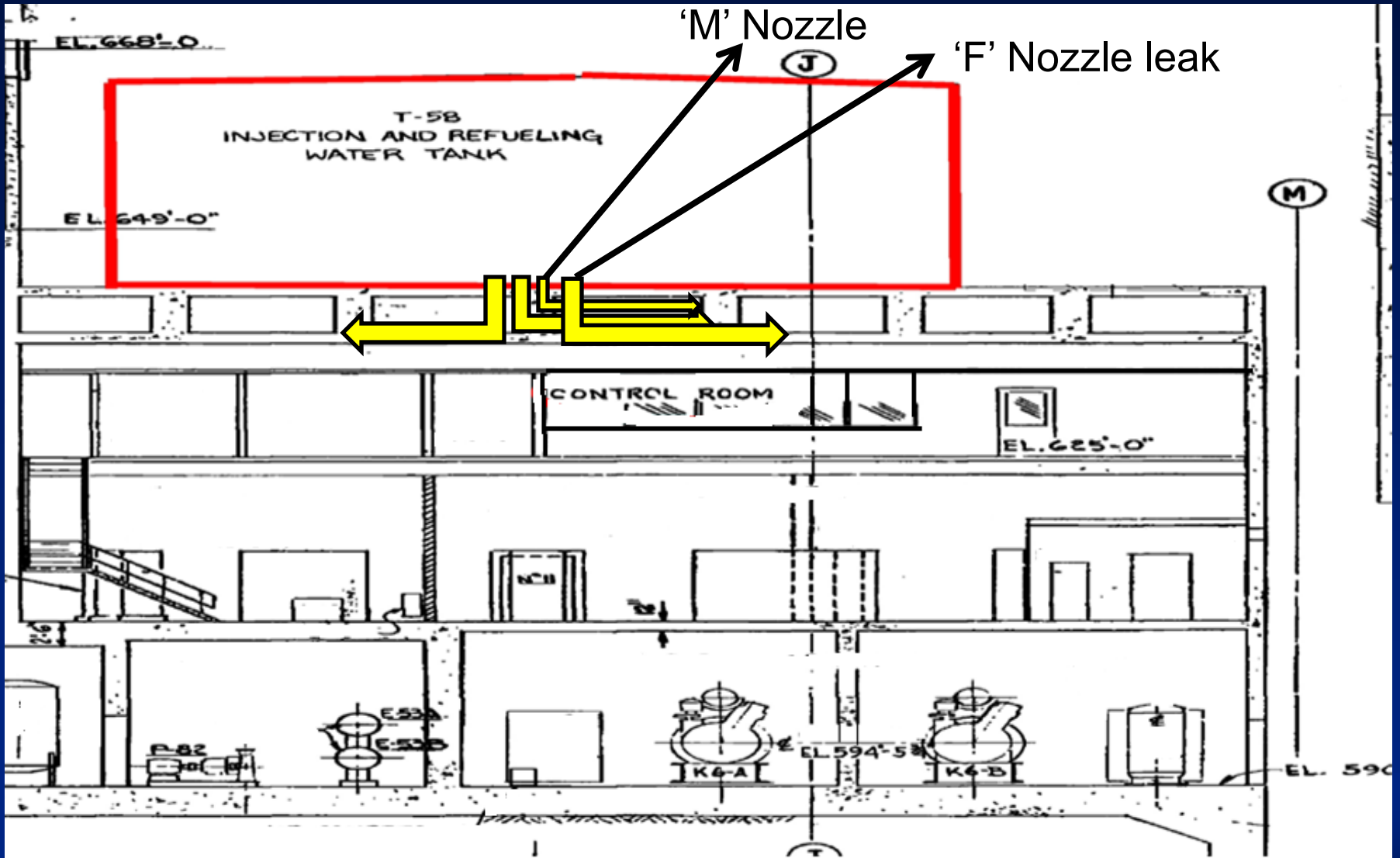
Meeting Agenda

- Meeting Purpose
- SIRWT leak, repairs and examinations
- NRC inspections
- Q&A Session
- Closing Remarks

Meeting Purpose

- Discuss the NRC's response to the recent leak from the safety injection refueling water tank at Palisades
- Answer questions from the public

Safety Injection Refueling Water Tank (SIRWT)



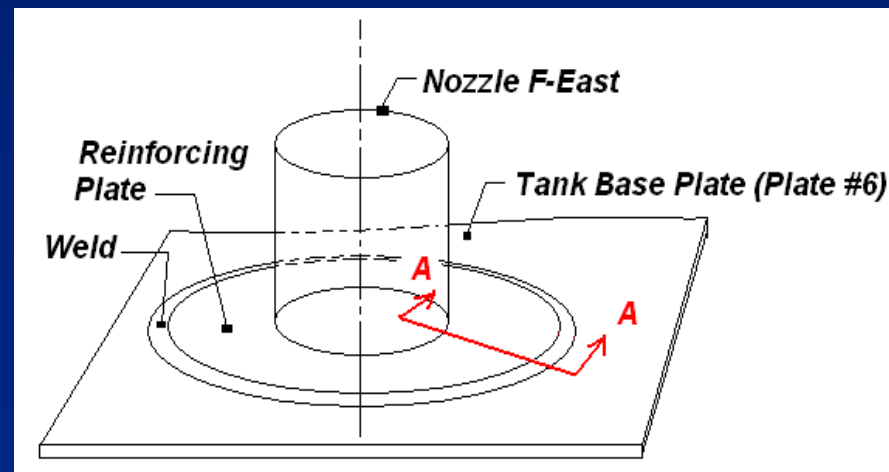
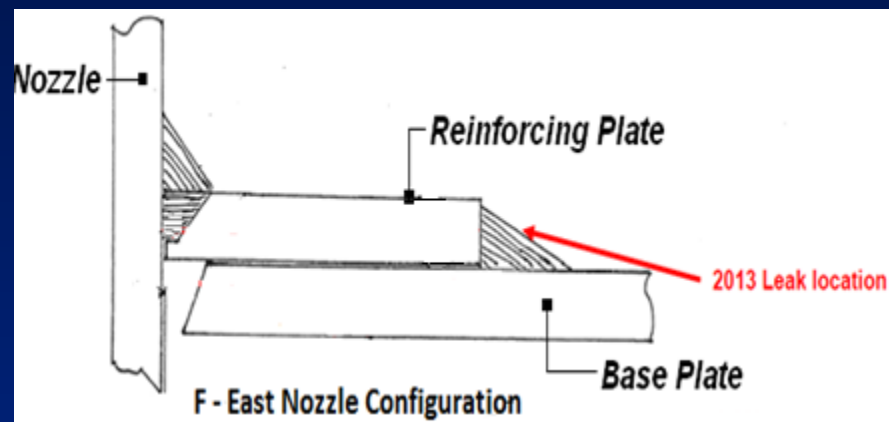
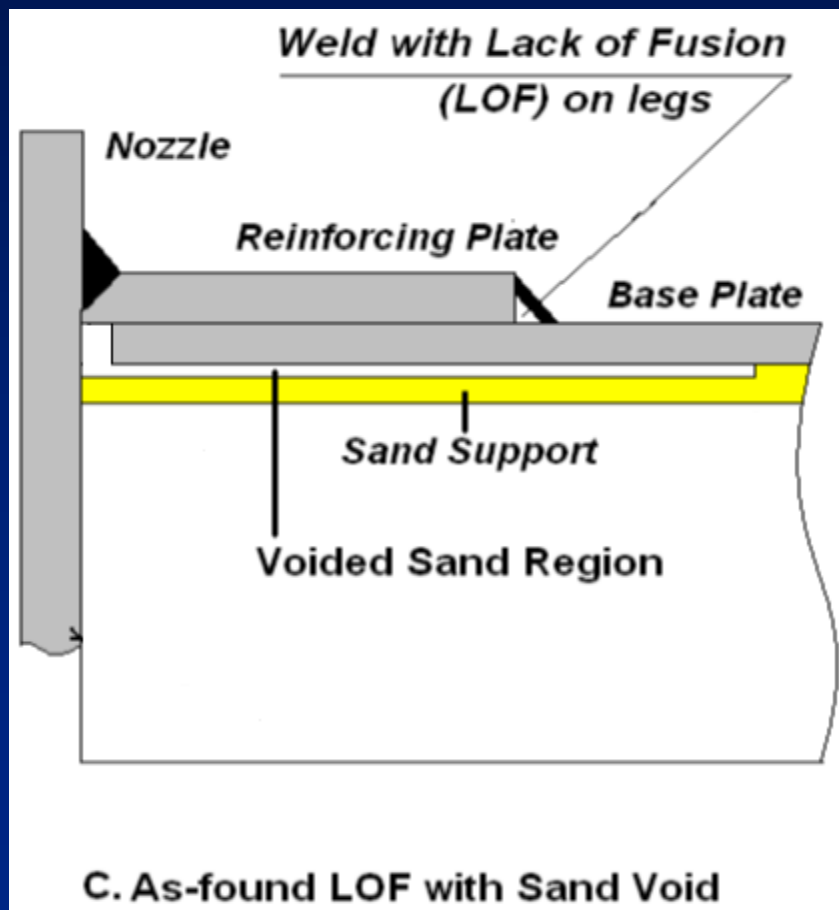
* Image for demonstration purposes only

What happened with the SIRWT?

- Palisades plant shutdown on May 5, 2013, due to observed SIRWT leakage of ~90 gallons per day (gpd)
- Exceeded the 38 gpd limit to shut down established by NRC's confirmatory action letter (CAL EA 12-155; ML12199A409)
- ~80 gallons of low radioactivity water spread onto the roof, down roof drains, into drains that go to Lake Michigan
- Released radioactivity to Lake Michigan (0.000002 rem) is well below regulatory limits (.1 rem/year) and did not impact the safety of plant workers or the public
- The sand samples taken near the plant discharge indicated no impact to the public – independently verified by NRC

What happened with the SIRWT?

Licensee determined the root cause of the SIRWT leak to be a failure of a nozzle weld resulting from an inadequate fusion at the weld root, i.e., a poorly performed weld from 2012



NRC Inspections

- Around 12 inspectors were involved in NRC review of code repair, structural and non-destructive examinations of the SIRWT
- The NRC inspectors observed work activities inside the tank
- NRC reviewed the SIRWT root cause report and design change evaluation to ensure the tank performs its required safety function
- Resident inspectors are periodically inspecting the SIRWT roof for leakage

SIRWT Repair

- The NRC reviewed the following actions by the Licensee:
 - Tank bottom replacement
 - Replacement of all welds associated with the floor inside the tank
 - Nozzle replacement
 - Installed a layer of fiber board between the concrete slab and new aluminum plating

- The NRC reviewed the following actions by the Licensee :
 - Welding workers got hands-on training on the aluminum welds
 - Completed a range of tests on the new plate and welds



Main Control Room Leak

- On June 4, 2013, a few drops of water from the control room ceiling dripped onto one of the panels
- The leak originated from the 'M' nozzle during tank repairs
- The licensee established a catch device to capture the leakage
- The leakage lasted for ~4 hours at 3 drops per minute
- The resident inspector walked down the control room and verified there was no impact to any equipment
- The licensee has to repair the concrete ceiling in accordance with the NRC Confirmatory Action Letter (CAL)

Ongoing Actions

- In accordance with the NRC CAL, the licensee is required to:
 - Continue inspections of the concrete support structure above the control room, control room hallway, and the concrete support structure ceiling
 - Repair the control room ceiling before the end of the next refueling outage
- Ongoing inspections of the tank by the licensee and NRC show no leakage
- Follow-up NRC inspections will be conducted on site
- Report with NRC conclusions will be issued

Service Water Leak

- On July 10, 2013, the NRC resident inspector discovered a pin-hole service water leak during a routine inspection in the auxiliary building
- The leak rate is about one milliliter/minute (less than a cup per hour)
- The leak is not radioactive and is not a threat to public safety
- The leak is not impacting other equipment
- Licensee is not required to report the leak to the NRC per 10CFR 50.72
- NRC inspectors have reviewed the licensee's assessment and their conclusion that it does not interfere with the system's ability to perform its function
- NRC inspectors continue to evaluate this issue and monitor the leakage

Summary

- NRC reviewed licensee's work related to repairs and examinations of the SIRW tank:
 - root cause
 - design change evaluation
 - tank repairs
- Tank will be monitored for leakage
- The SIRWT is performing its safety function and the plant is safe

Questions

Meeting Closure

Jack Giessner
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NRC Region III

Meeting Contacts

**For Follow-up Questions - Contact the NRC
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