

# NEVADA SITE OFFICE

## Coal Tar Flaking in Fire Protection Water Supply

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## Background:

- **Underground steel lead-in piping was installed between a material storage building and the building's water supply source.**
- **Interior surface of underground steel lead-in pipes were treated with a factory-applied, corrosion resistant, coal-tar epoxy coating.**
- **Coal tar lined lead-in pipes were incorrectly installed (early 1990s).**

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## Background (cont'd):

- Instead of mechanical fittings, the installing contractor “field welded” pipe sections together.
- As a result of heat applied during the welding process, the coal-tar epoxy coating was damaged at the joints.
- Coal tar epoxy coating lost its adhesion at the pipe joints and began to flake off.

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## Actions Taken:

- Installed strainers for each of the lead-ins.
- Conducted annual flushing of the lead-in piping to collect any coal-tar epoxy lining that could interfere with the proper operation of the sprinkler system - Limited particulate collected.
- Video inspections of lead-in piping were accomplished in 1995 and 2000 – Little degradation shown.

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## Current Condition:

- Based on the amount of coal tar captured during flushes in 2007, operability may be impacted.
- DNFSB issued letter on January 18, 2008 questioning operability of fire suppression system.

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In FY-07 significant increase in coal tar collected during flush  
(one strainer/one flush)



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## FY 08 Funded Actions (examples):

- Perform Reliability Analysis
- Strainer Replacement Project
- Coal Tar Study
- Flow Testing
- Gather Results and Determine Needed Approach

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## Inputs

- Reliability Study
- Coal Tar Study
- Strainer Design
- Flow Test Results

## Decision Points

Preliminary Recommendations

11/08

12/08  
NSO  
Concurrence

