



# **GSI-191**

## **Treatment of Coatings Debris**

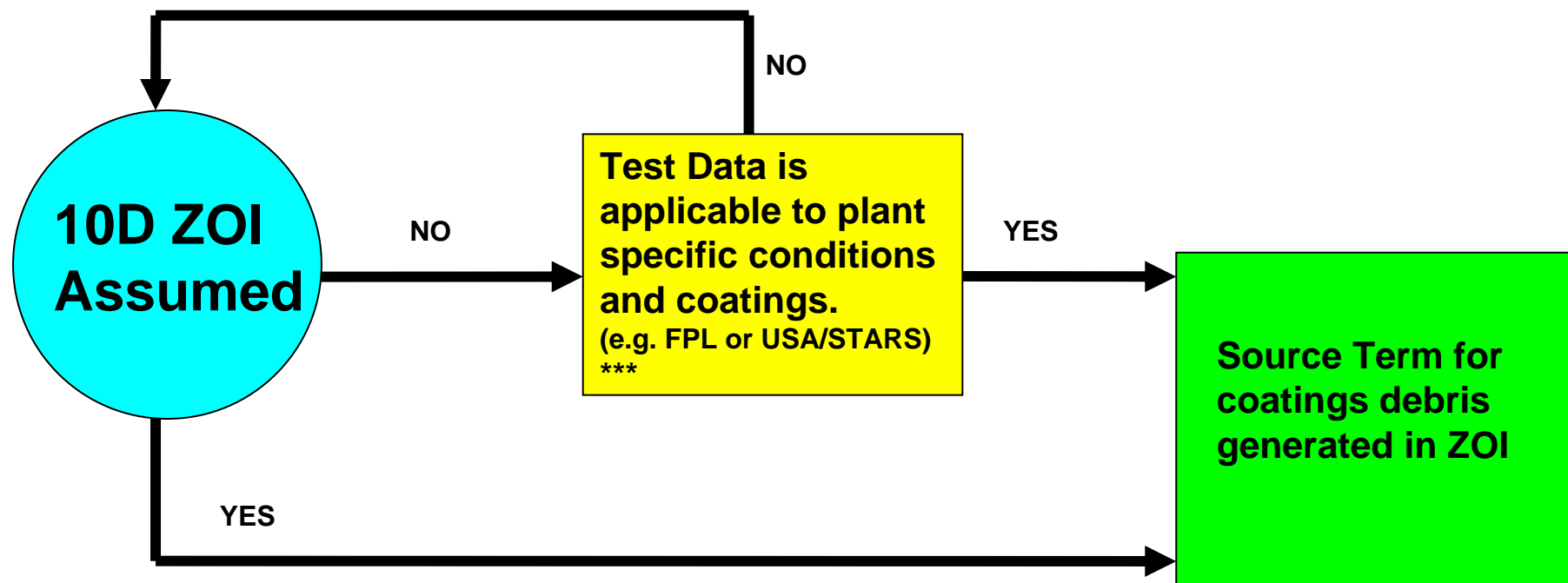
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# Purpose

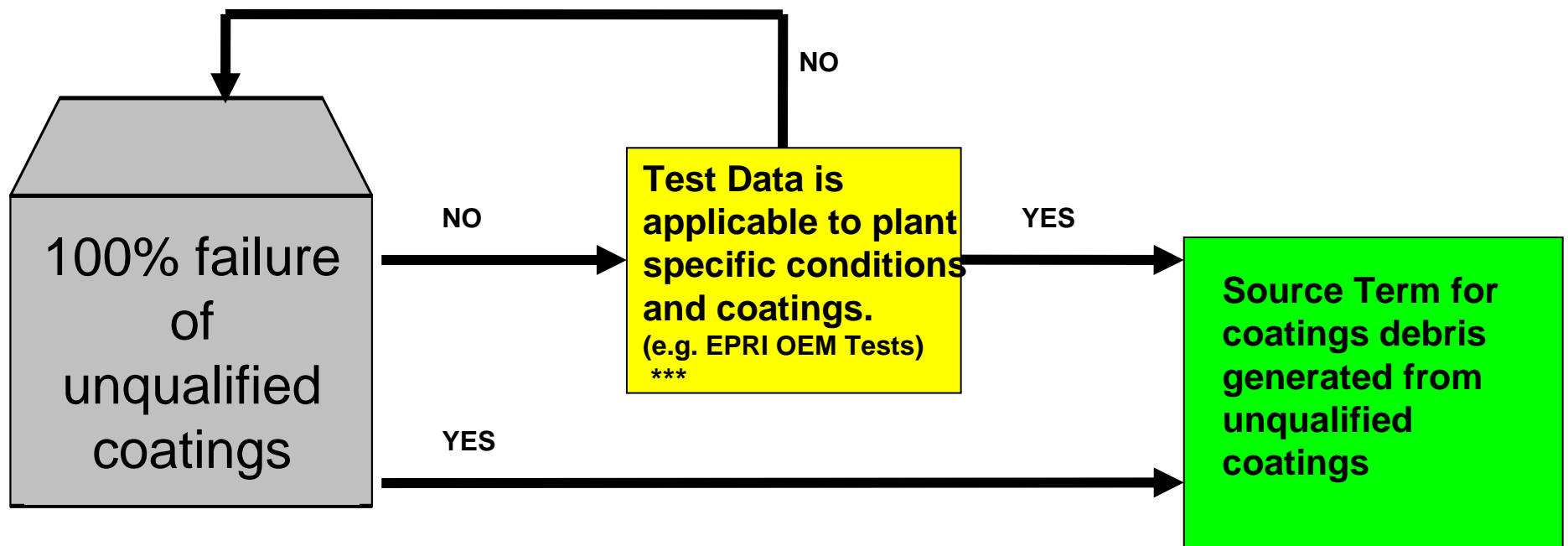
- Provide NRC expectations for treatment of all coatings debris
  - Debris Generation
    - ZOI, Unqualified, & Degraded Qualified
  - Debris Characteristics
    - Chips vs. Particulate
  - Debris Transport
    - Applicability of NRC Chip Transport Data
- Provide NRC expectations for testing to verify adequacy of visual assessment

## Logic to Determine Debris Generation from Coatings within the ZOI



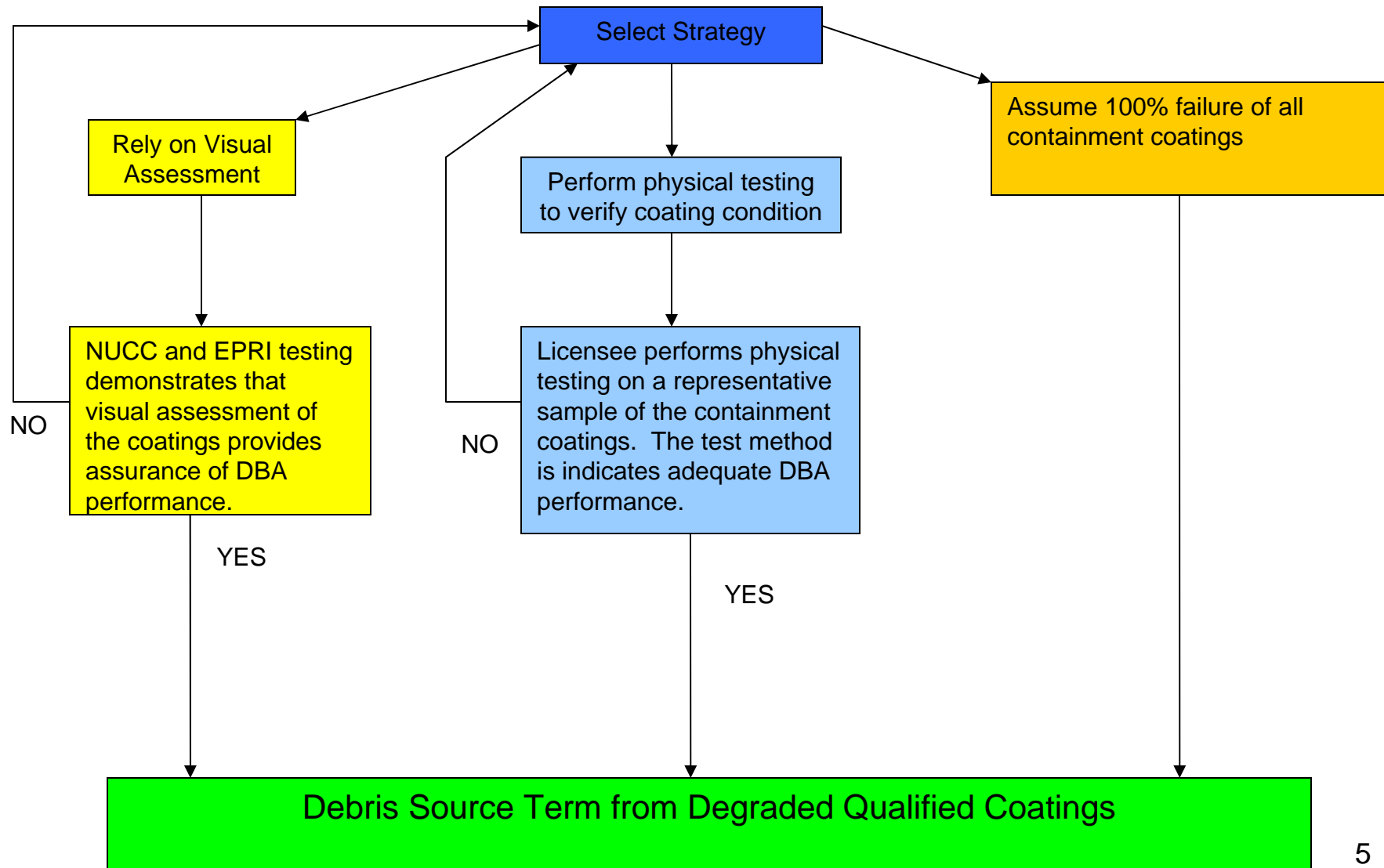
\*\*\*Note that NRC has not completed its review of this testing. Licensees may need to address technical issues in order to credit test results in their analysis.

## Logic to Determine Debris Generation from Unqualified Coatings

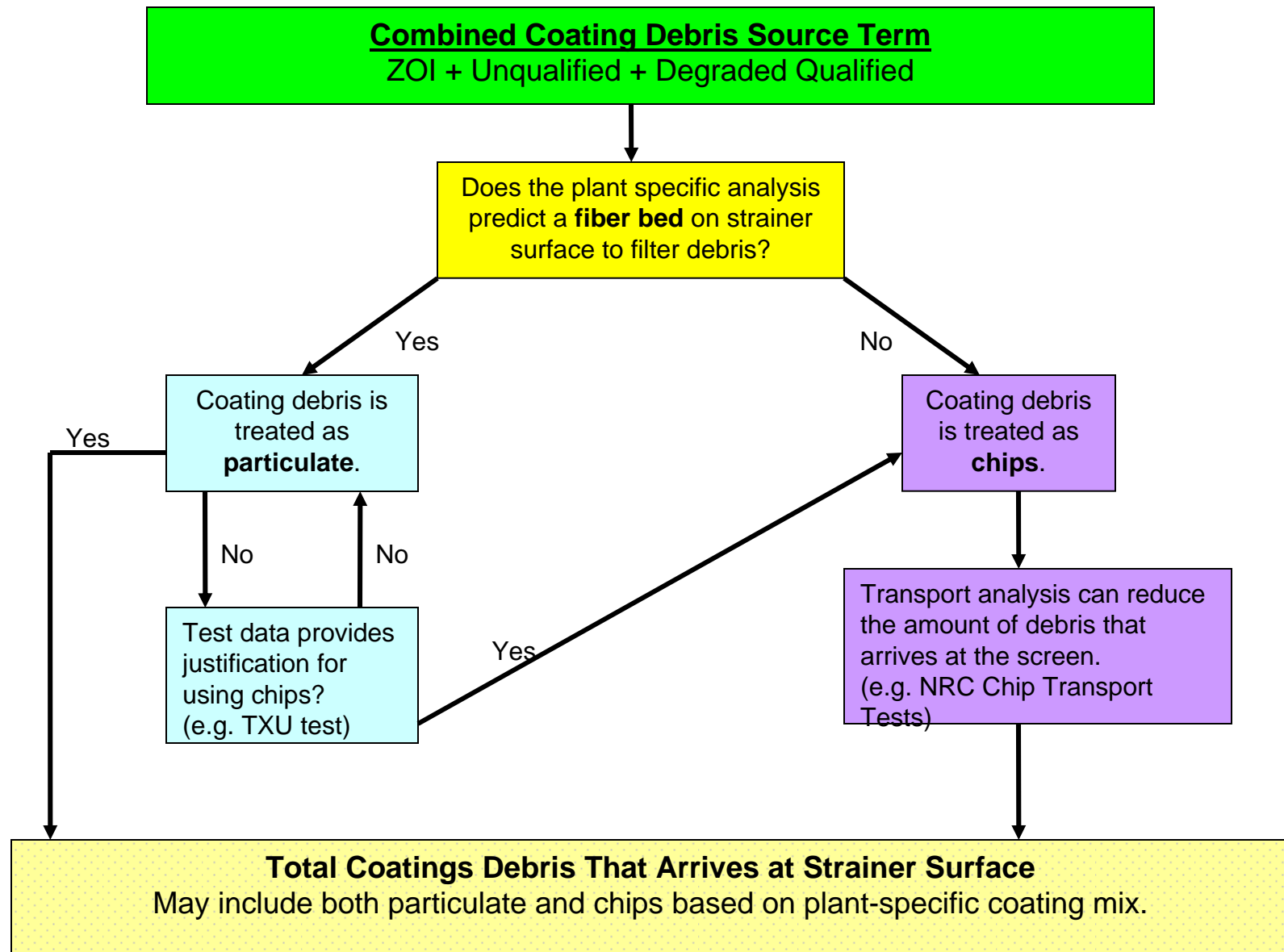


\*\*\*Note that NRC has not completed its review of this testing. Licensees may need to address technical issues in order to credit test results in their analysis.

# Logic to Determine Debris Generation from Degraded Qualified Coatings (Outside ZOI)



# Debris Characteristics & Transport to the Strainer



# Visual Assessment

- NRC Expectations for NUCC/EPRI Testing
  - A representative data set should be provided
    - Testing should encompass as many coating types as feasible.
    - Testing should provide a reasonable sample of actual plant conditions.
    - Testing should be informed by EPRI survey data on likely locations for degraded coatings and coating types that are likely to be degraded.
  - Testing should include incremental testing near visually degraded coatings
    - How far beyond a visual defect is the coating degraded?
    - How far do you have to go before an acceptable adhesion value is recorded?
    - This may provide valuable information for plants to use when estimating total areas of degradation during routine assessments.

# Visual Assessment

- NRC Comments on NUCC/EPRI Testing
  - Justification for passing criteria
    - Industry test procedure establishes 200 lbs as the passing value for an Elcometer adhesion test.
    - Justification (beyond citing ANSI N5.12) should be provided as to why this value represents a threshold for DBA performance.
  - NRC observations of testing to date
    - NRC staff has observed testing at 1 plant (San Onofre).
    - Initial indication is that testing was successful.
    - More data needed: additional plants, additional coating types, and further inspection of degraded areas.
    - What is the projected date for issuance of the final report?



# Acronyms

DBA - design basis accident

EPRI - Electric Power Research Institute

FPL test - Florida Power & Light, refers to the zone of influence testing sponsored by FPL

NUCC – Nuclear Utilities Coatings Council

OEM - Original Equipment Manufacturer, refers to EPRI testing of unqualified coatings

TXU test – refers to the simulated DBA testing of failed coatings chips by Comanche Peak

USA/STARS test - refers to the zone of influence testing sponsored by the USA/STARS plants

ZOI - zone of influence