

# **NATC CZT Data Analysis Working Group Achievements**

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The paper describes the technical analysis performed by ISOE utility members from 2014 to 2016 in evaluating the various in-plant ALARA uses of the new CZT technology. The NATC CZT Data Analysis Working Group has conducted monthly conference calls to discuss new uses of the technology in isotopic mapping of in-plant radiation fields. Techniques to reduce worker dose and control contamination are discussed. Important understanding of the new CZT 3D isotopic mapping capabilities and limitations are also described in the presentation. Specific Examples of CZT 3D isotopic mapping discussed in the presentation include the following topics

1. PWR Failed Fuel Investigation and I-131 imaging on Charcoal Filters
2. Charging Pump Motor Replacement 3D imaging for Worker ALARA good practices
3. Foreign Material Investigation
4. Particle Identification and Mitigation Analysis
5. Transfer Canal Job Coverage

The presentation provides a good example of ISOE member information sharing to improve utility ALARA programs and achieve new outage work efficiencies.