Background

• Established July 1, 1946
• Operated by University of Chicago
• Continuation of operations from the Metallurgical Laboratory (Met Lab)
• Met Lab operations moved to Site A
• Site A operated 1943-1954
• Operations transitioned to Site D starting in 1948
• Site D operations on-going
Location

ANL-E (Site D): 1948-present

Site A (1943-1954)
Plot M (1944-1948)
Site Operations

- Production, power and research reactors
- Various accelerator facilities
- Associated R&D and support operations
- Fuel development and separations research
- Waste management operations
- Biological research on animals and humans
- Health physics and medical department
NIOSH ANL-E Timeline

- 6 Technical Basis Documents issued 2006, External TBD updated 2014
- SC&A TBD review issued May 2009
- 13 Findings and 7 Secondary Findings
- SC&A TBD review update May 2016
- Board WG established in August 2016
- First WG meeting March 10, 2017
- 10 NIOSH action items remain
NIOSH ANL-E Statistics

- Number of claims in NOCTS: **412** (107 > 50 %)
- No current SEC petition
- SEC-00212 did not qualify for evaluation in 2013
- Number of documents in SRDB: 4276
- Over 50 % of those collected since TBDs were first released
- Additional data capture likely
Open Internal Dosimetry Issues

- Addressing various U and Pu mixture compositions
- DR recommendation on exotics/accelerator produced radionuclides
- Approach for early gross alpha analysis
- MDCs and uncertainties in bioassay methodology
- Guidance for missed dose assignment,
- Dose assignment for unmonitored workers, potential need for coworker model
- Internal dose from Radon
Open medical dosimetry issues

• TBD update with current recommendation based on OTIB-006

• Investigate end data of potential PFG use
Open external dosimetry issues

• Add information on available external dosimetry used and details on updated external dosimetry workbook

• Neutron dosimetry approach needs to be revised and possibility of n:p approach researched

• Dose assignment for unmonitored workers

• Guidance on dose from skin contamination
Open environmental TBD issues

• On-site external exposure before 1972 (use of PROC-0060) to be addressed

• Outdoor inhalation and exposure from incidents at Site A
Other issues

- Insufficient number of incidents and accidents addressed in TBD
- Monitoring of contractors, transferees, and visitors
- Human Radiation Experiments
Additional information needs

• Operations transfer between Met Lab to ANL-E and from Site A to Site D
• Details on operations at Site A and Plot M
• Exposure potential at early reactors and accelerators
• Early health physics procedures and requirements
• Pre-1972 environmental exposures
• Monitoring status of contractors and subcontractors