

INL Criticality Process Evaluation Methodology

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INL Process Evaluation Methodology

- Document criticality safety evaluations to DOE-STD-3007-2007
- Most important sections are Process Evaluation (Section E) and Controls/Assumptions (Section G)
- Don't talk contingencies- describe accident scenarios, process upsets, parameters, and controls/barriers
- All controls must be derived in Process Evaluation Section
- Distinguish between "not credible" and "not physically possible"
- Don't talk to the DOE-STD-3009 probability definitions of "unlikely" or "extremely unlikely"

INL Process Evaluation Methodology (continued)

- Team approach (entire criticality safety group, CSO, safety analyst, design engineer, process engineers, and other technical contributors)
- Laboratory Criticality Safety Procedure describes/requires INL approach and organizational responsibilities
- Mandatory training for CSOs and Facility Managers describing roles and responsibilities (includes lessons learned)
- Most scenarios straightforward – others require specific meetings for scenario development and parameter identification

INL Process Evaluation Methodology – Peer Review

- Roundtable reviews



- Meeting won't occur without CSO or other important contributors

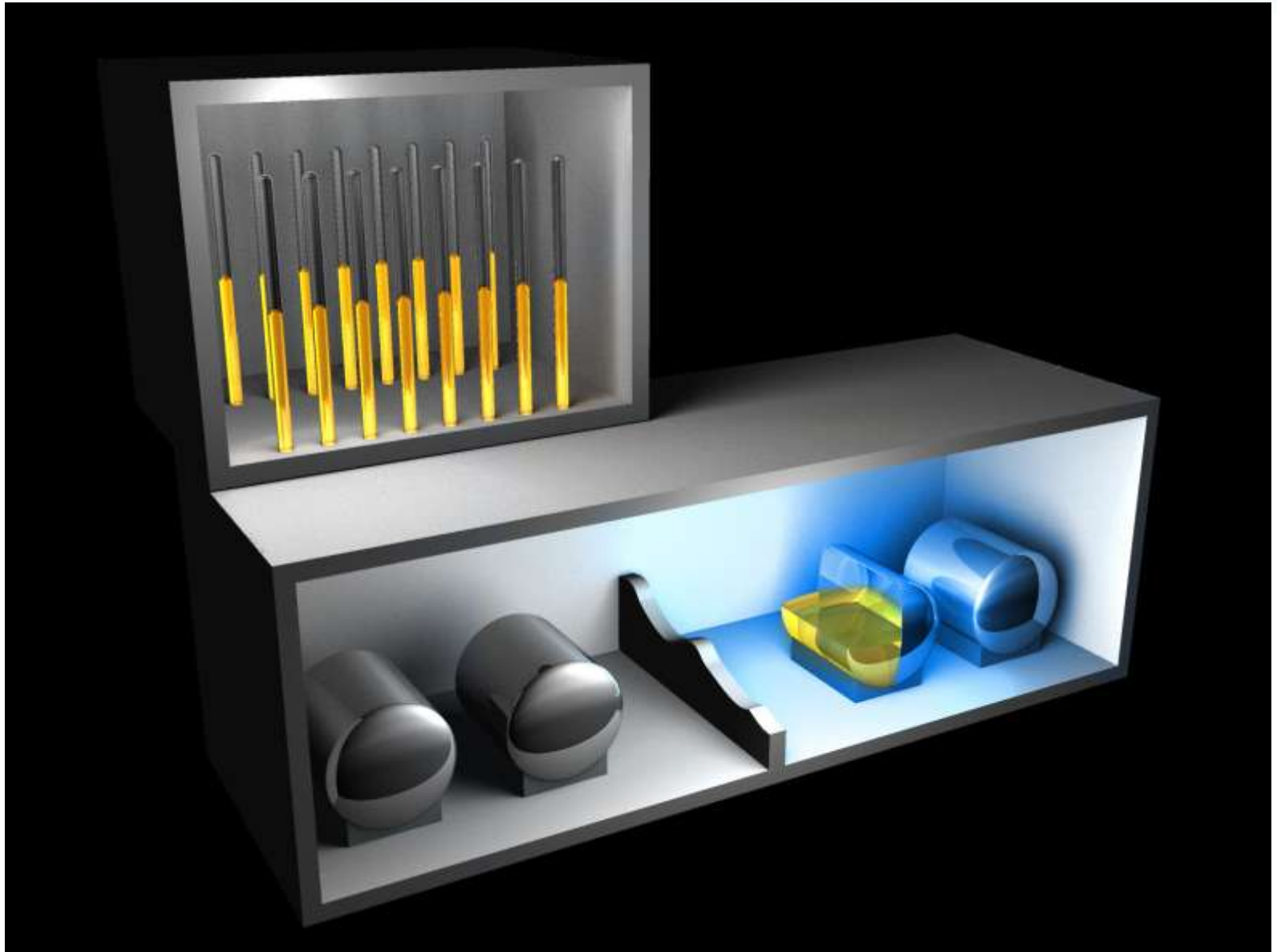
Roundtable Reviews - Pros

- Collective knowledge and experience of the group applied to every problem
- All members learn from and gain experience with every evaluation performed by the group
- Allows less experienced personnel (Operations and Criticality Safety) to work and grow
- Controls are more efficient and less prone to change during implementation – facilities feel ownership and influence
- Develops and builds relationships

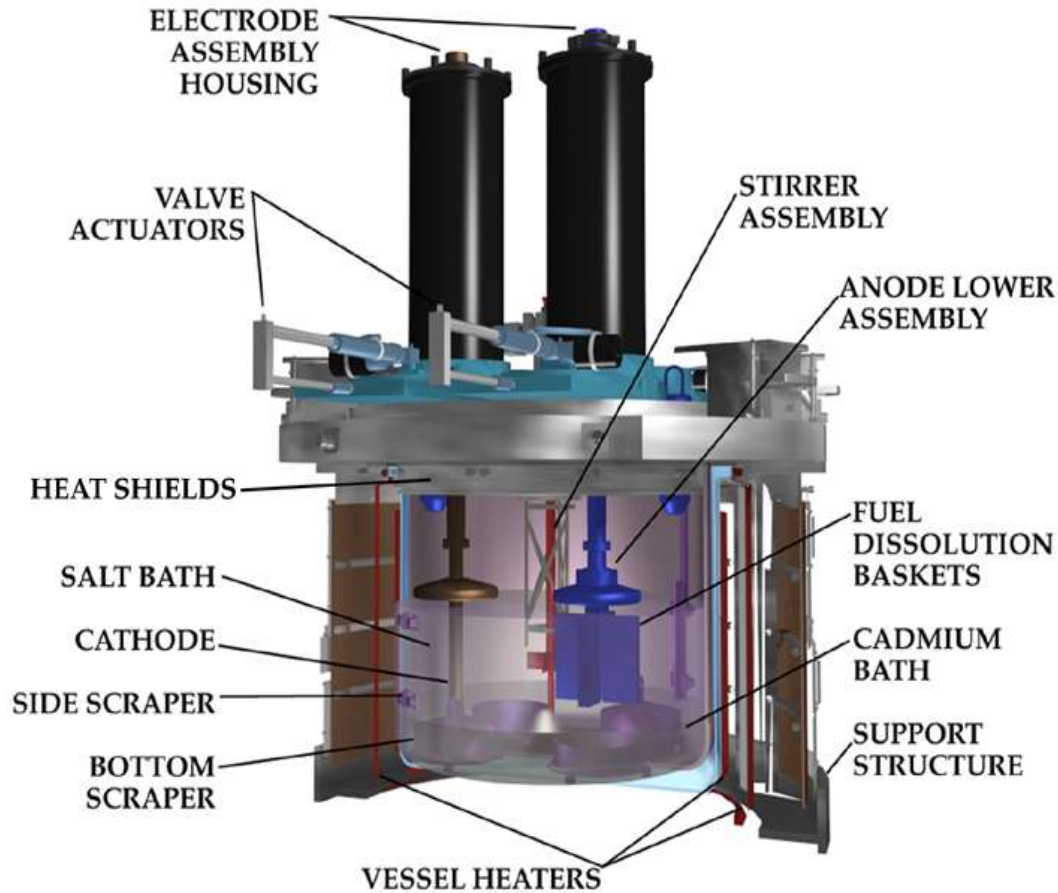
Roundtable Reviews - Cons

- Review process takes more time – adds to schedule
- Costs more up front (savings in the long run...)
- Requires a facilitator
- It isn't easy – sometimes people cry...

WG/WH Tank



Mark IV Electrorefiner



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"Questions"