

# Overview of Phase 2 Process

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Panel For the Repository

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# **Steps in Decision Process for LADS Phase 2**

- **Refine evaluation criteria**
- **Strengthen and specify EDAs**
- **Evaluate EDAs against criteria**
- **Rank EDAs against each criterion**
- **Recommend design; possible options**
- **Document**

# Phase 2 Evaluation Criteria

- **Screening Criteria (required of all EDAs)**
  - **Meet 10,000 yr. peak dose rate (25 mrem/yr.)**
  - **Defense-in-Depth: neutralize barriers and stay below 25 mrem/yr.**
  - **Environmental: no unacceptable environmental effects**

# Phase 2 Evaluation Criteria

(continued)

## Evaluation Criteria (applied to each EDA)

### 1. Safety/License Probability

- Design margin
- Degree of Defense-in-Depth
- Uncertainties in post-closure performance
- Performance over post-10,000 yrs.
- Engineering acceptance

# Phase 2 Evaluation Criteria

(continued)

## 2. Cost/Schedule

- **Time required and costs associated with:**
  - » **Site characterization and licensing**
  - » **Construction**
  - » **Operations**
  - » **Monitoring**
  - » **Closure**

# Phase 2 Evaluation Criteria

(continued)

## 3. Construction, Operations, and Maintenance

## 4. Flexibility

- More storage capacity (105,000 MTU)
- Longer pre-closure (300 yrs.)
- Earlier closure (50 yrs.)
- Design changes
- Unanticipated natural features or findings

# Strengthen and Specify EDAs

- **Goal: carry strong EDAs into Phase 2; no significant weaknesses**
- **Compare 8 EDAs from workshop with Phase 2 evaluation criteria**
- **Strengthen weaker elements**
- **Specify EDAs sufficiently for analysis**

# Evaluate EDAs Against Criteria

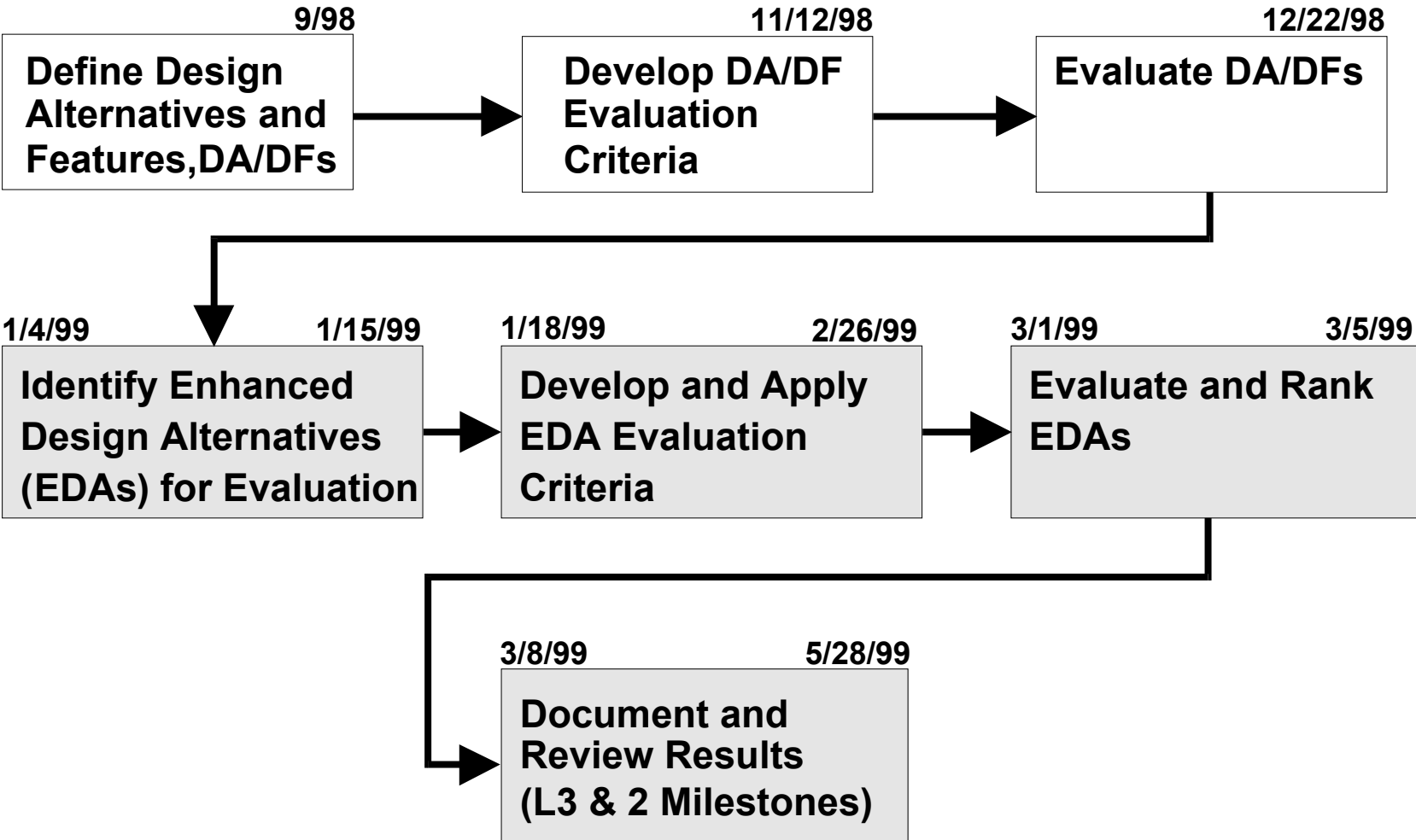
- **Calculations and engineering analyses to address evaluation criteria**
- **Evaluations based on specified design, but latitude to revise/refine as appropriate**
- **Summary and documentation of each EDA evaluation**



# Rank Each EDA Against Each Criterion

<b>Safety/ License Prob.</b>	<b>Cost/Schedule</b>	<b>C,O,M</b>	<b>Flexibility</b>
<b>Design B</b>	<b>C</b>	<b>B</b>	<b>A</b>
<b>A</b>	<b>D</b>	<b>D</b>	<b>B</b>
<b>C</b>	<b>B</b>	<b>A</b>	<b>C</b>
<b>D</b>	<b>A</b>	<b>C</b>	<b>D</b>

# LADS Two Phase Process



# **Phase 2 Process Conclusions**

- Evaluation criteria being refined**
- Phase 2 EDAs have high potential for success**
- Detailed evaluations through March 1-5 workshop**
- EDAs ranked by criterion**
- Design recommendation based on consideration of all criteria**