



Integrating NEPA into Long-Term Planning at the U.S. Department of Energy

Exhibits

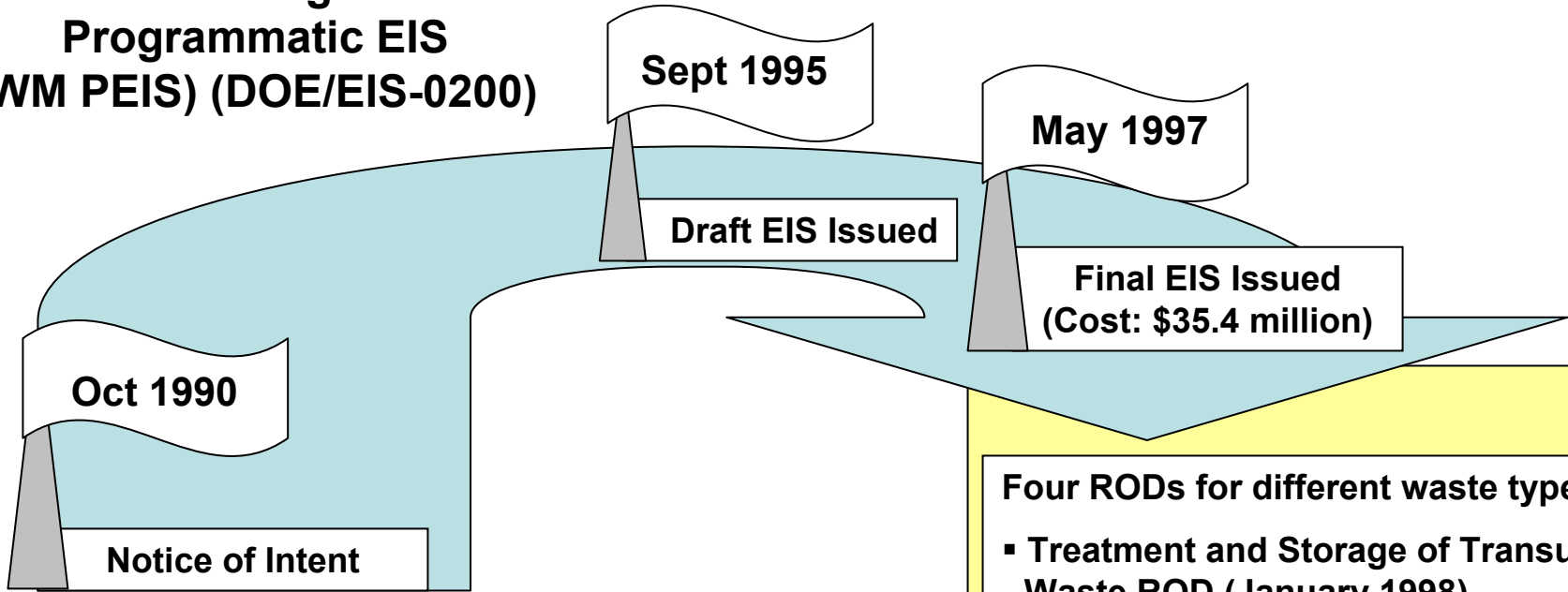
Carol Borgstrom, Director
Office of NEPA Policy and Compliance

NEPA at 40 Conference
March 23, 2009

DOE Experience

- DOE has prepared more than 50 PEISs, including:
 - Storage of U.S. Spent Power Reactor Fuel (1980)
 - Clean Coal Technology Demonstration (1989)
 - Stockpile Stewardship and Management (SSM) (1996)
 - Storage and Disposition of Weapons-Usable Fissile Material (1996)
 - Waste Management PEIS for Managing Treatment, Storage, and Disposal of Radioactive and Hazardous Waste (1997)
 - Nuclear Infrastructure (2000)
 - Lawrence Livermore National Laboratory Site-wide EIS and Supplemental SSM PEIS (2005)
 - Los Alamos National Laboratory Site-wide EIS (2008)
 - Complex Transformation Supplemental PEIS (2008)

Waste Management Programmatic EIS (WM PEIS) (DOE/EIS-0200)



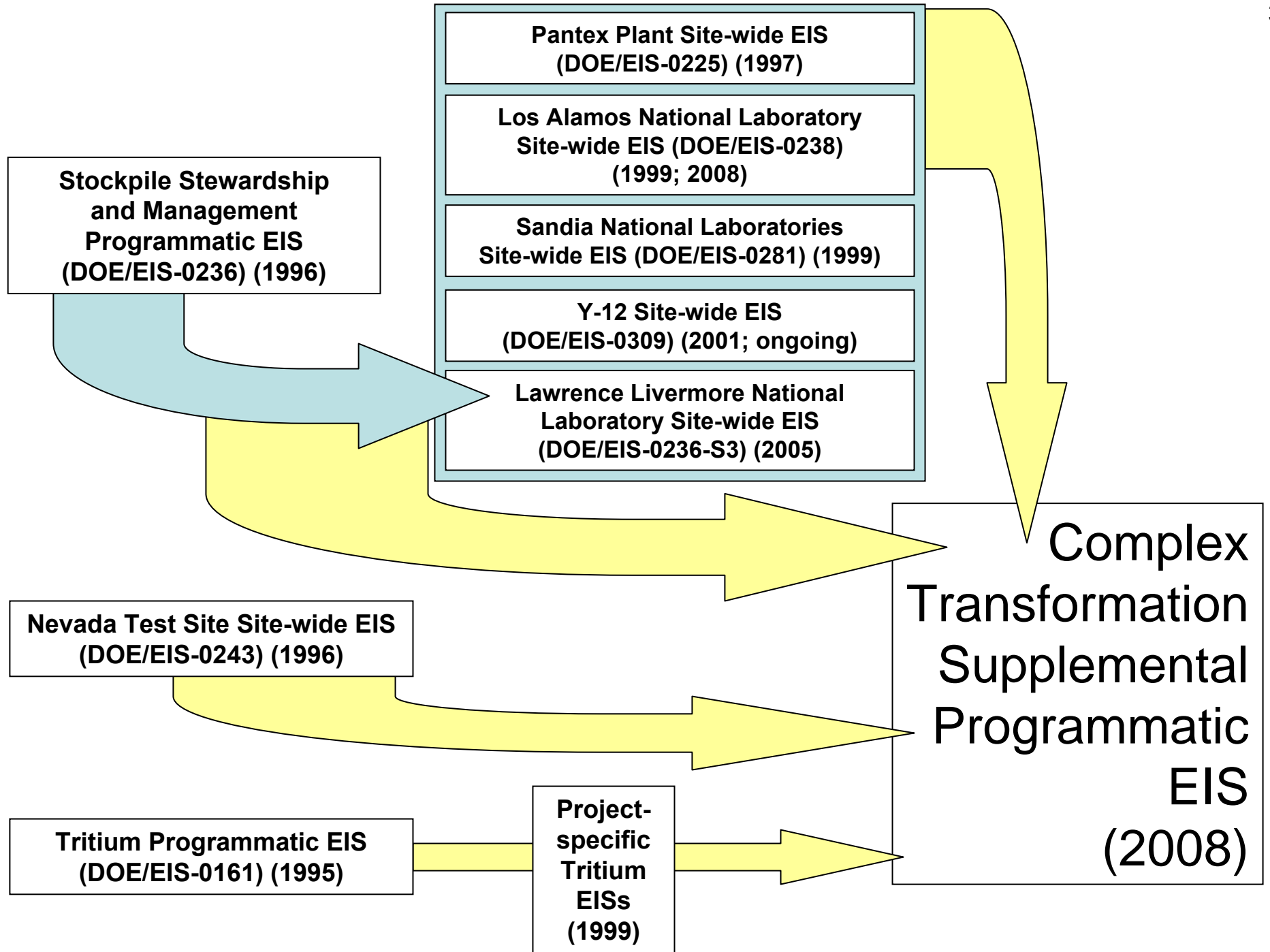
Decisions Supported by the WM PEIS

| Decisions | Type of Waste and Whether DOE Will Decide on Basis of WM PEIS (Yes or No) | | | | |
|----------------------|---|---|--|---|--|
| | Low-Level Mixed Waste | Low-Level Waste | Transuranic Waste | High-Level Waste | Hazardous Waste |
| Where to treat? | YES LLMW could be treated at 1 to 37 DOE sites. | YES LLW volume reduction and treatment could be conducted at 1 to 11 DOE sites. Minimum treatment could occur at all sites. | YES TRUW could be treated at 3 to 16 DOE sites. | NO HLW will be treated at 4 DOE sites where it was generated. | YES HW could be treated at DOE sites, or DOE could rely on commercial treatment. |
| Where to store? | NO LLMW will be stored at sites where generated until treatment and disposal. | NO LLW will be stored at sites where generated until treatment and disposal. | YES TRUW could be stored at 3 to 16 sites, pending final disposition. | YES HLW canisters containing treated HLW could be placed into storage at 1 to 4 DOE sites. | NO HW sent to commercial facilities will be stored for less than 90 days unless there is a permitted storage facility. |
| Where to dispose of? | YES LLMW could be disposed of at 1 to 16 DOE sites. | YES LLW could be disposed of at 1 to 16 DOE sites. | NO Separate evaluation of Waste Isolation Pilot Plant (WIPP) Disposal Phase is being prepared. | NO Separate evaluations to be prepared pursuant to the Nuclear Waste Policy Act as amended. | NO Commercial HW disposal facilities will continue to be used. |

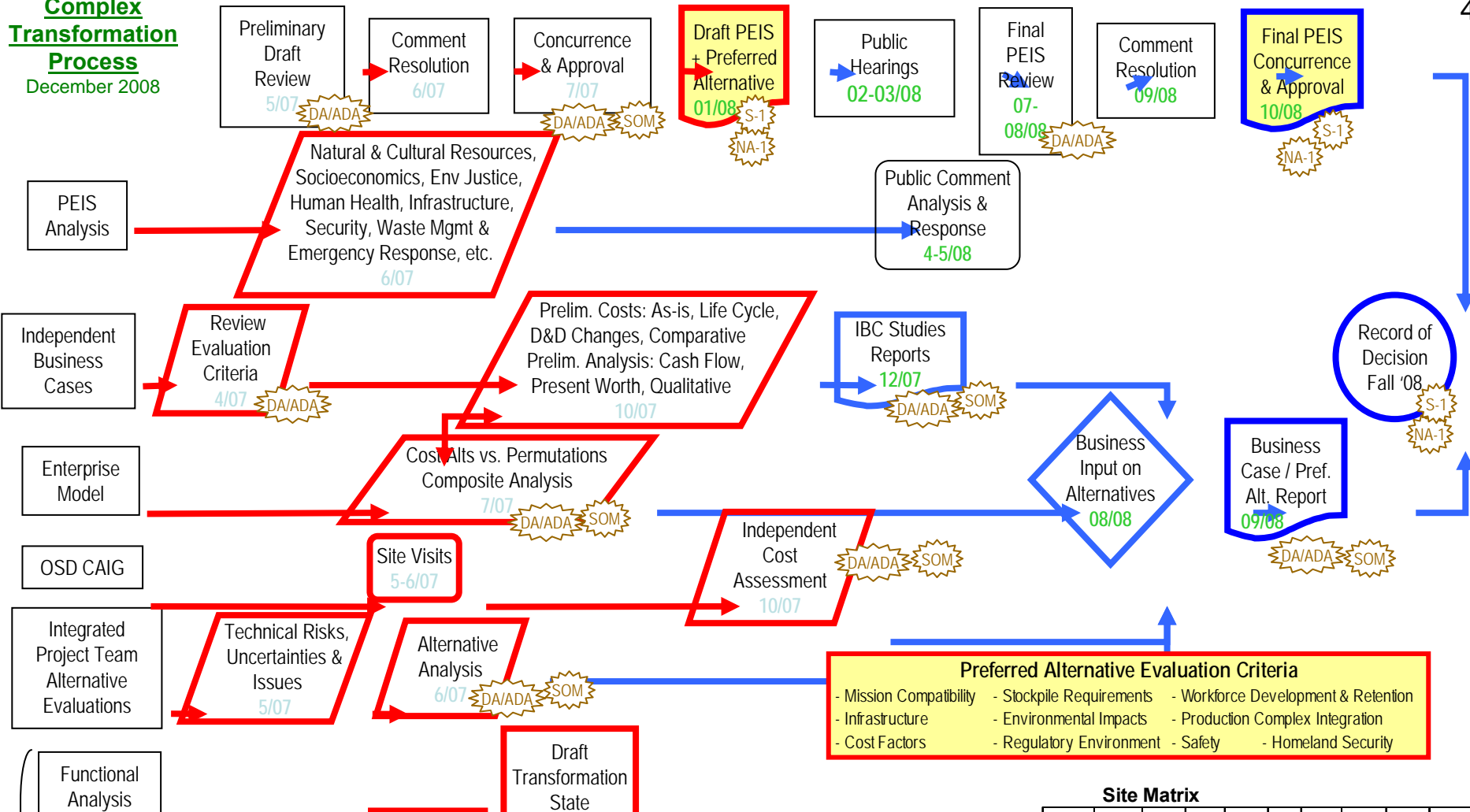
- Four RODs for different waste types:**
- Treatment and Storage of Transuranic Waste ROD (January 1998)
 - Non-wastewater Hazardous Waste ROD (August 1998)
 - Storage of High-Level Radioactive Waste ROD (August 1999)
 - Treatment and Disposal of Low-Level Waste and Mixed Low-Level Waste ROD (February 2000)

Supplement Analyses support amended RODs – PEIS still used today

Tiered Site-Wide/Project-Specific EISs (e.g., Hanford Site, Nevada Test Site, and Savannah River Site)



Complex Transformation Process
December 2008

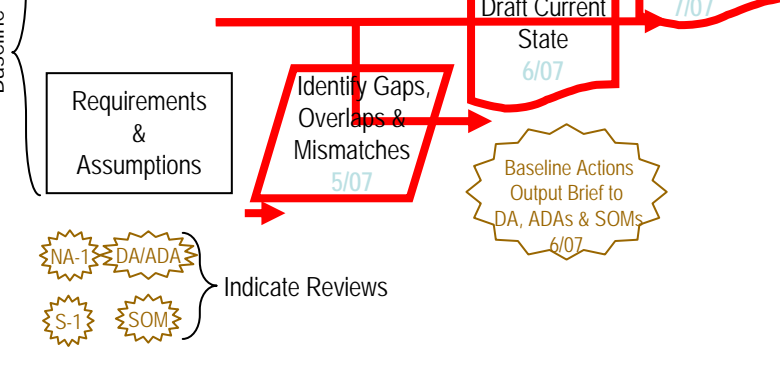


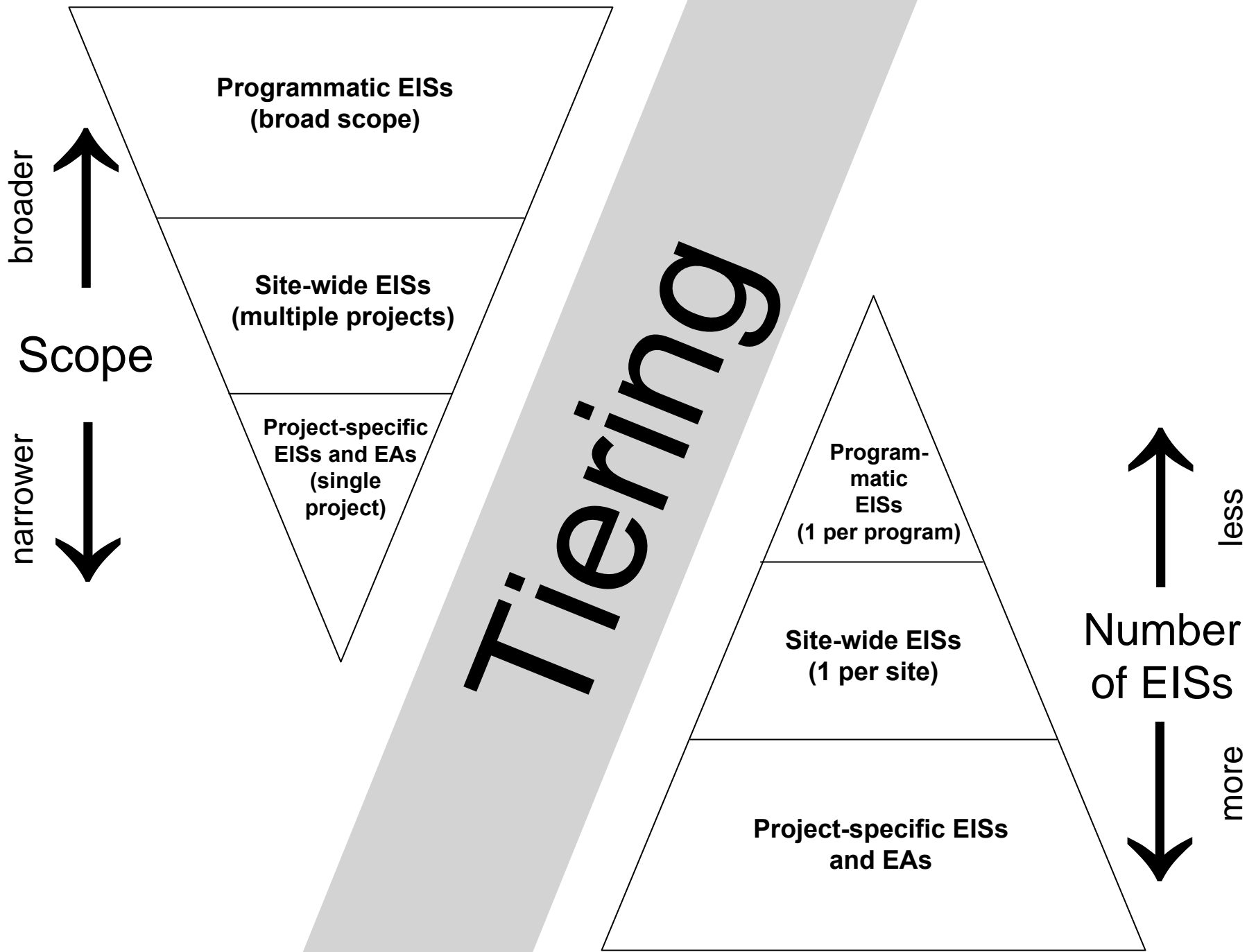
4 Major Alternatives

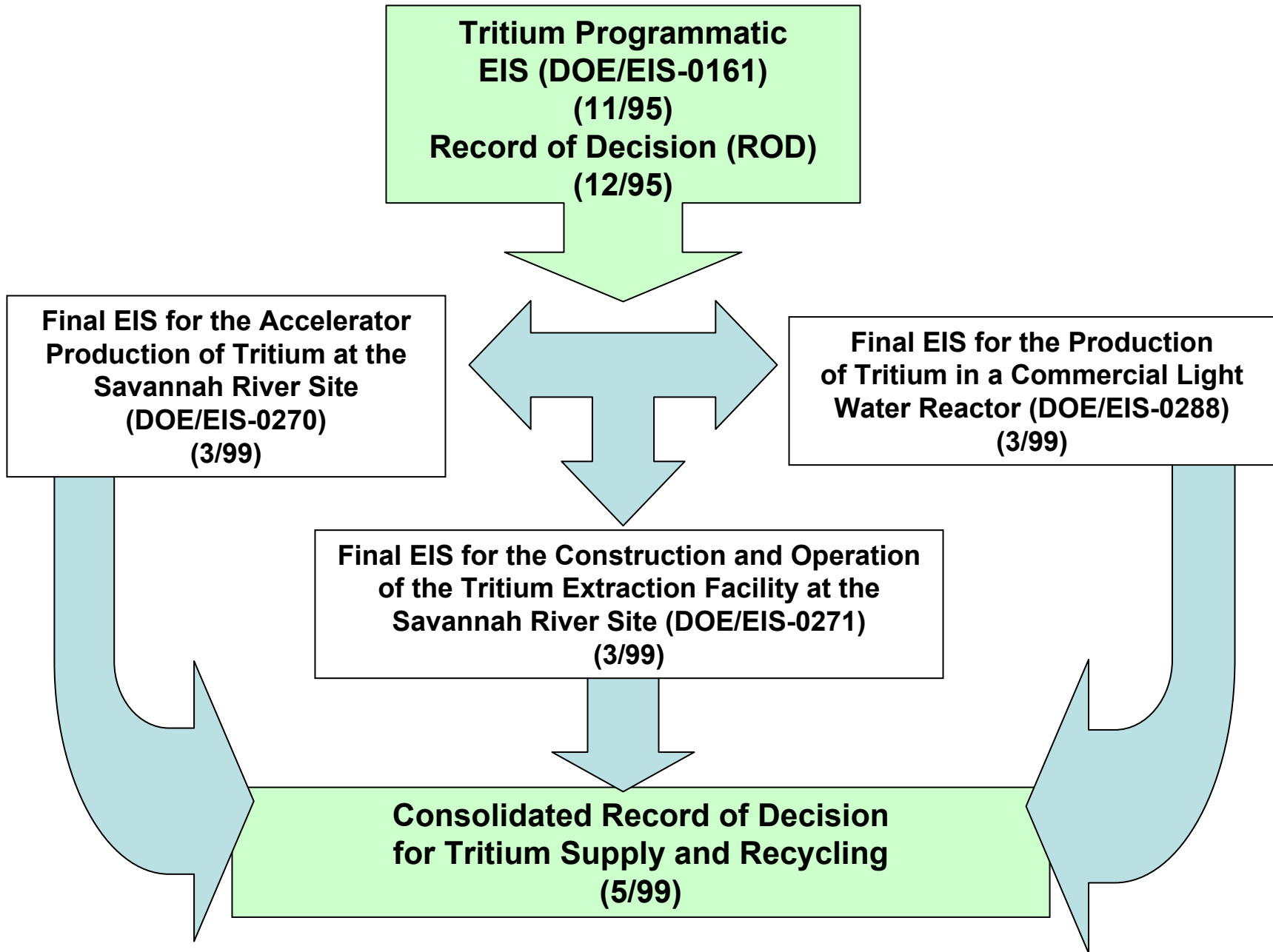
| |
|---|
| No Action |
| Distributed Centers of Excellence |
| Consolidated Nuclear Production Centers |
| Capabilities-Based |

Site Matrix

| | LANL | LLNL | SRS | Y-12 | NTS | PX | SNL | KCP | TTR | WSMR |
|--|------|------|-----|------|-----|----|-----|-----|-----|------|
| CMR Upgrades | | | | | | | | | | |
| HEUMF | | | | | | | | | | |
| CPC | | | | | | | | | | |
| UPF | | | | | | | | | | |
| CNC = CPC / UPF / HEUMF* | | | | | | | | | | |
| A/D | | | | | | | | | | |
| CNPC = CPC / UPF / HEUMF* + A/D | | | | | | | | | | |
| Reduced Operations | | | | | | | | | | |
| LANL analysis will also include an analysis using existing/planned facilities (i.e. CMRR-NF) | | | | | | | | | | |
| Tritium R&D | | | | | | | | | | |
| High Explosives R&D | | | | | | | | | | |
| Large Scale Hydrotesting | | | | | | | | | | |
| Major Environmental Testing | | | | | | | | | | |
| NNSA Flight Testing | | | | | | | | | | |







**Tritium Programmatic
EIS (DOE/EIS-0161)
(11/95)
Record of Decision (ROD)
(12/95)**

**Final EIS for the Accelerator
Production of Tritium at the
Savannah River Site
(DOE/EIS-0270)
(3/99)**

**Final EIS for the Production
of Tritium in a Commercial Light
Water Reactor (DOE/EIS-0288)
(3/99)**

**Final EIS for the Construction and Operation
of the Tritium Extraction Facility at the
Savannah River Site (DOE/EIS-0271)
(3/99)**

**Consolidated Record of Decision
for Tritium Supply and Recycling
(5/99)**

Programmatic Analyses

Broad proposals/broad alternatives

Timing – usually first

Less detailed, more qualitative impact analyses

More uncertainty in impacts

National/regional impacts

General mitigation measures

May enable site selection, but usually not construction

Wider range of cumulative actions/general cumulative impacts

May support multiple decisions/longer shelf life

May involve interim action questions

VS

Project-Specific Analyses

Specific proposals/specific alternatives

Timing – after programmatic

More detailed, more quantitative impact analyses

Less uncertainty in impacts

Local/site-specific impacts

Specific mitigation measures

Intended to enable construction and operation

More specific cumulative actions/focused cumulative impacts analysis

Likely supports one site-specific/project-specific decision

Unlikely to involve interim action questions