



Surplus Plutonium Disposition (SPD) Life-Cycle Cost Estimate (LCCE)

Dilute and Dispose (D&D) Approach

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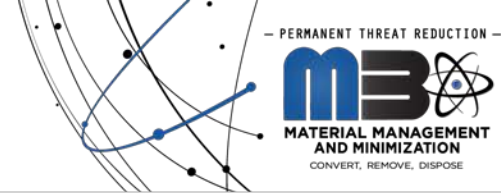
M3-SR-18-0012

Reviewed and determined to be **UNCLASSIFIED**
DC/RO: C. R. Dyer, Sr. QA Specialist
Date: 5/1/2018

— PERMANENT THREAT REDUCTION —

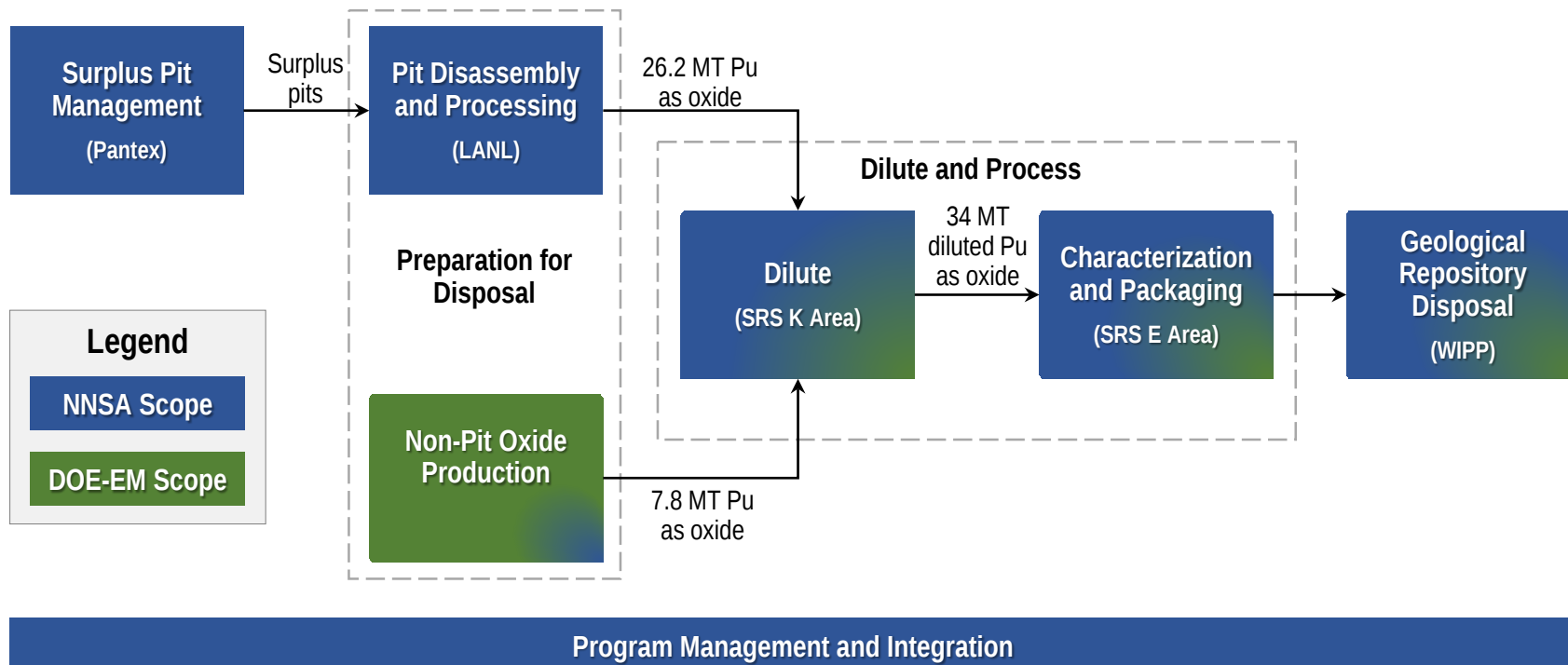


Surplus Plutonium Disposition Dilute and Dispose Scope

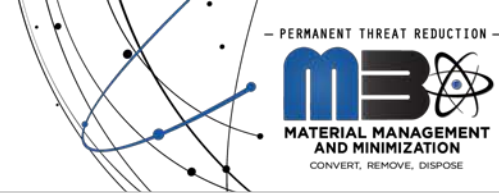


- Program purpose – disposition 34 MT of weapons-grade plutonium
- Dilute & Dispose approach is alternative to MOX approach
- Scope is to dilute plutonium with an adulterant and dispose in a geologic repository
 - 26.2 MT of pit plutonium
 - 7.8 MT of non-pit plutonium
- Scope includes
 - Capital projects
 - SRS – 3 new gloveboxes for dilution; characterization and packaging
 - LANL – additional equipment to meet oxidation capability
 - Other smaller General Plant Projects to establish necessary capabilities
 - Operational activities at sites (Pantex, LANL, SRS, WIPP)

Scope to Dilute and Dispose 34 Metric Tons of Surplus Plutonium



Process to Develop the Lifecycle Cost Estimate



- LCCE prepared in accordance with GAO 12 step process
- All sites provided estimate inputs (Pantex, LANL, SRS, and WIPP)
 - Scoping documents
 - Cost estimates (detailed task analyses/bases of estimates at reporting level WBS elements)
 - Schedules
 - Risk assessment input
 - LCCE being coordinated with EM and NNSA Field Offices
- SRS Management and Operating contractor is integrator
 - Prepared planning documents with input from other sites
 - Developed cost model
 - Integrated schedule
 - Performed schedule uncertainty and risk analysis
 - Final packaging of LCCE

GAO Cost Estimating Guide

12-Step Estimating Process

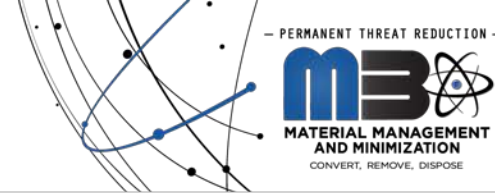


Figure 1: The Cost Estimating Process

Initiation and research

Your audience, what you are estimating, and why you are estimating it are of the utmost importance

Assessment

Cost assessment steps are iterative and can be accomplished in varying order or concurrently

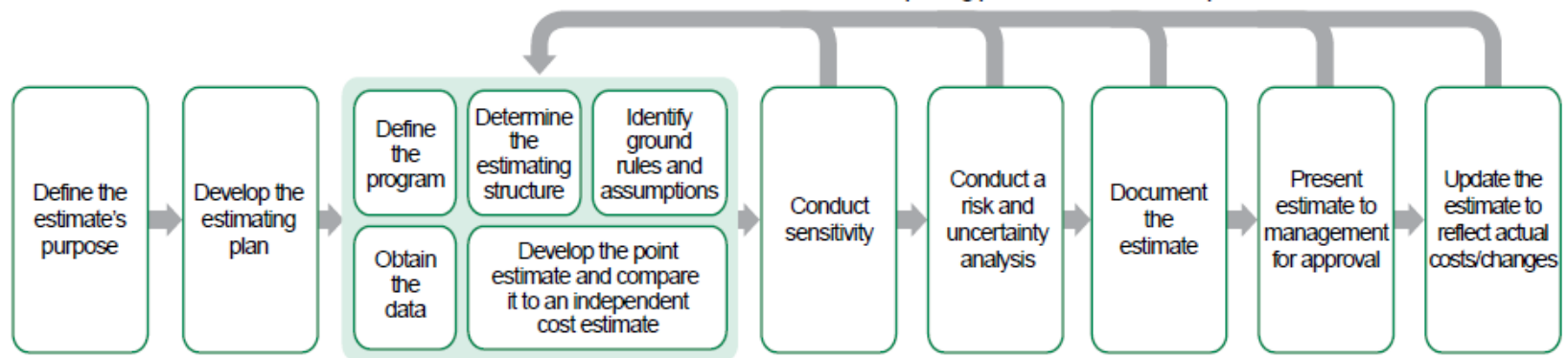
Analysis

The confidence in the point or range of the estimate is crucial to the decision maker

Presentation

Documentation and presentation make or break a cost estimating decision outcome

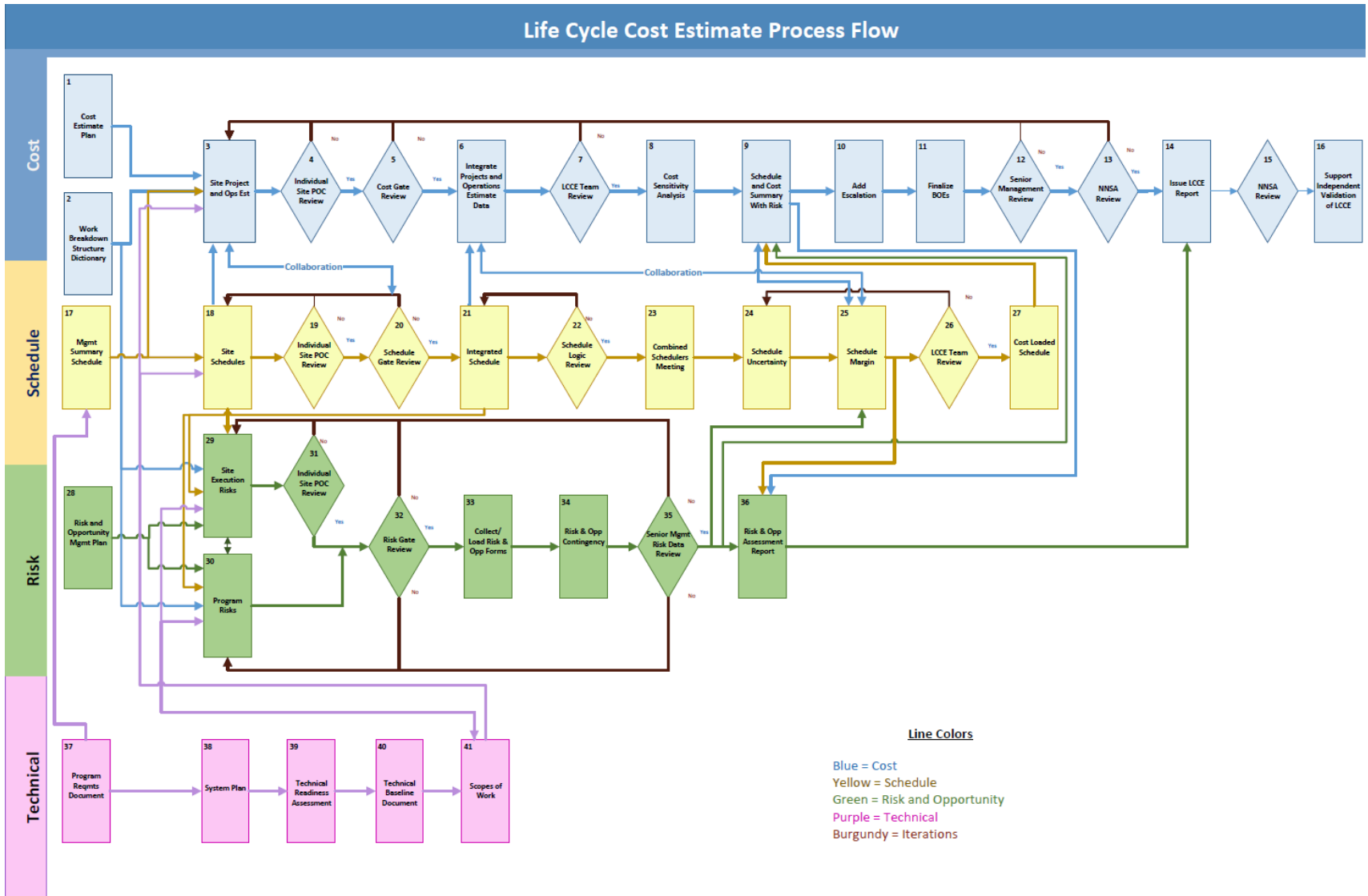
Analysis, presentation, and updating the estimate steps can lead to repeating previous assessment steps



Source: GAO.

Estimate Process Flow

Life Cycle Cost Estimate Process Flow



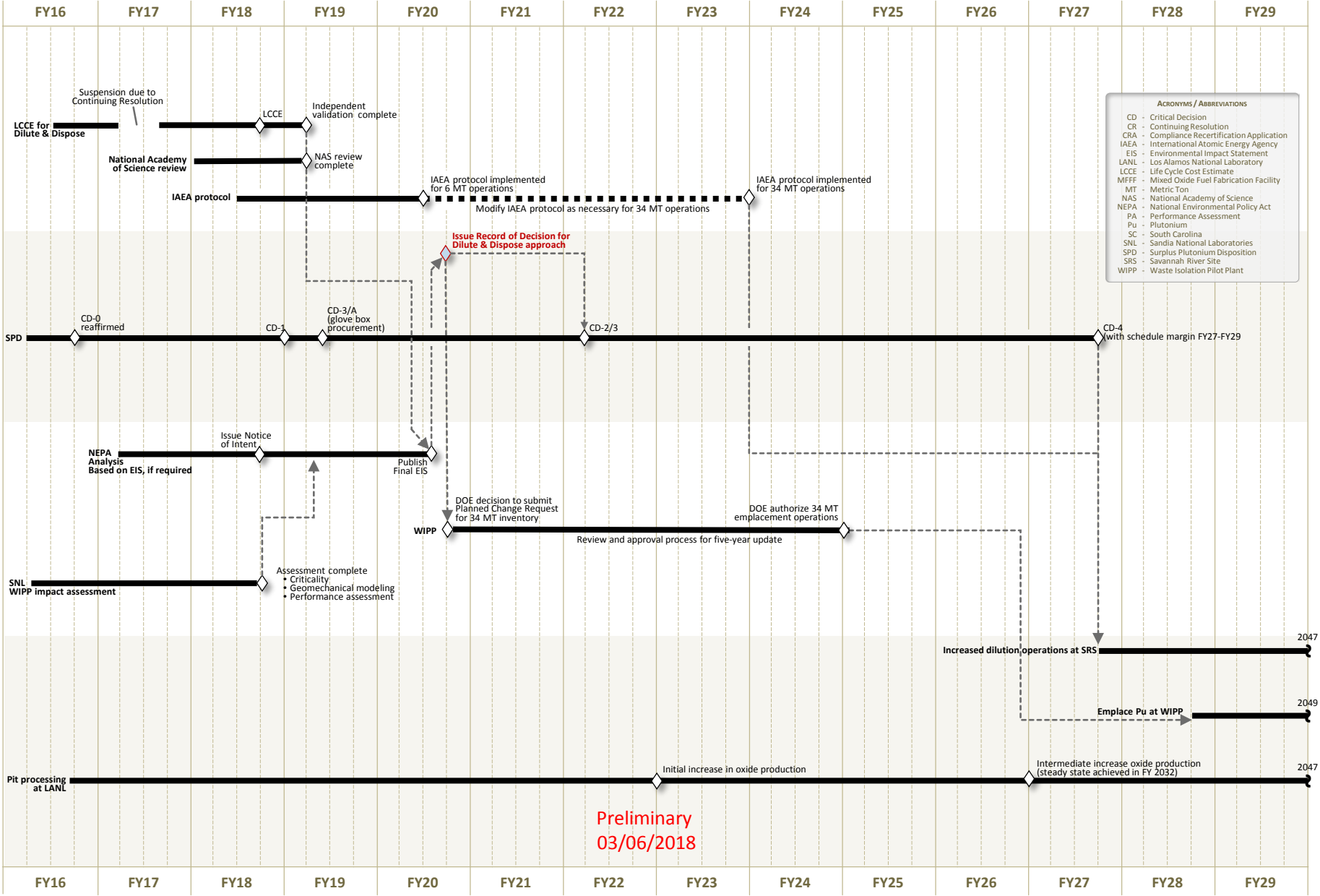
34 MT Surplus Plutonium Disposition Plan

PROGRAM

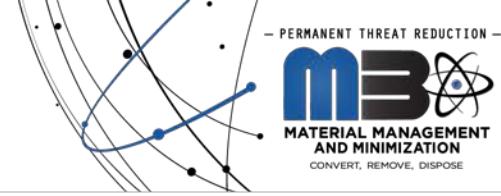
PROJECTS

REGULATORY

OPERATIONS



Lifecycle Cost Estimate Status



- ✓ Draft LCCE completed February 2018
- ✓ NA-233 completed deep dive review March 2018
- Milestone to complete LCCE June 2018
- Independent validation following package submittal