

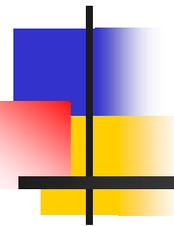
Environmental Liabilities

Fiscal Year 2010



Environmental Liabilities

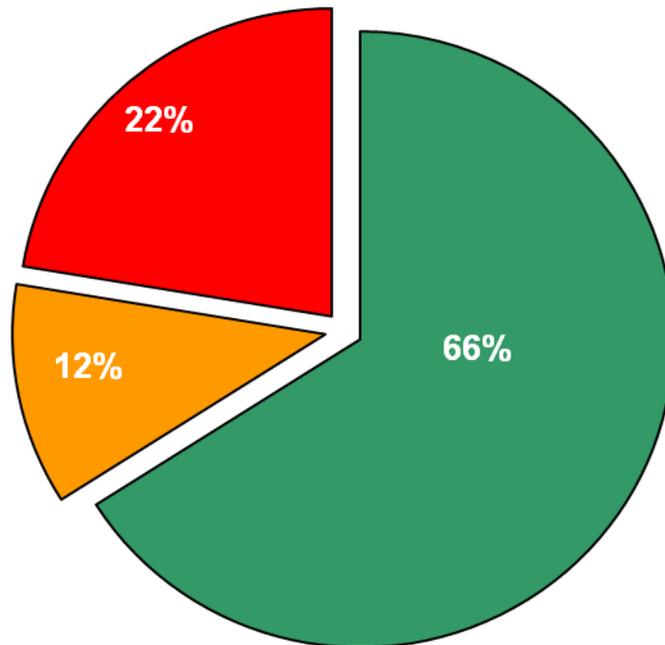
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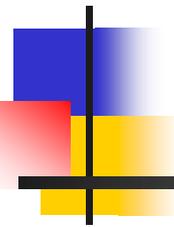
Environmental Liabilities

Overview

DOE Environmental Liability FY 2010 - \$250 billion



- Office of Environmental Management - \$165B
- Active and Surplus Facilities - \$29B
- Other Legacy Environmental Liabilities (including High-Level Waste and Spent Nuclear Fuel) - \$56B



Background



Definition of a Liability

A *Liability* is a probable future outflow or other sacrifice of resources as a result of past transactions or events.

- A liability must be probable and measurable:
 - Probable – More Likely Than Not
 - Laws and Regulations
 - Compliance Agreements
 - System Plans
 - Measurable – Virtually all DOE activities are estimable at this stage of the liability formulation process.



Applicable FASAB Standards

- Accounting standards associated with recognizing and measuring liabilities in federal financial reports:
 - Statement of Federal Financial Accounting Standards (SFFAS) No. 5, "Accounting for Liabilities of the Federal Government";
 - SFFAS No. 6, "Accounting for Property, Plant and Equipment";
 - SFFAS No. 12, "Recognition of Contingent Liabilities Arising from Litigation" (amendment to SFFAS No. 5);
 - Federal Accounting Standards Advisory Board (FASAB) Technical Bulletin 2006-1, *Recognition and Measurement of Asbestos-Related Cleanup Costs*;
 - FASAB Technical Bulletin 2009-1 defers the implementation date of Technical Bulletin 2006-1 to periods beginning after September 30, 2011.

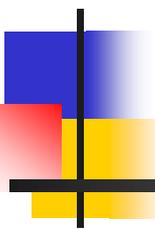


History

- DOE's environmental liability (EL) has been estimated and audited for 15 Years.
 - 75-Year liability reporting period established with the Office of Inspector General (OIG) in 1996 (unless longer period is stated in site-specific agreements with States, etc.—currently applicable to WIPP, SRS, and NV)
 - Reportable conditions and/or significant deficiencies were identified for three years over the life of the liability;
 - Qualification in 1998 due to lack of documentation for new EM clean-up approach and estimates;
 - No reportable conditions or significant deficiencies pertaining to environmental liabilities were identified during the FY 2010 audit cycle.

Environmental Management

Environmental Liability





EM Environmental Liability Update Process

- The Office of Environmental Management (EM) EL is the estimated cost for DOE to meet its present environmental cleanup obligations, including all work required to complete cleanup of facilities; remediation of soil and groundwater; and management and disposition of wastes, spent nuclear fuel (SNF), and surplus nuclear materials managed by EM.
- EM annually updates its EL estimate prior to recording this amount in DOE's Consolidated Financial Statements.
- A number of project baseline summaries (PBS)s are audited at each site selected. Idaho, Richland, Savannah River, Portsmouth Paducah Project Office are audited every year along with 2-3 smaller sites.

EM Environmental Liability Update Process



- EM portion of the EL is based on three components:
 - Approved baseline costs;
 - Pending baseline change proposals; and
 - Adjustments for probable costs and/or increases for EL purposes (placeholder estimates).
 - Adjustments account for new scope, cost growth, and/or changes in fundamental assumptions (such as changes in end state, regulatory approach, inability to consolidate/move materials, changes in anticipated cost efficiencies, etc.)
- Field sites should back-out all pension/post-retirement benefit (PRB) costs that are included in the EM baseline since the EL associated with pensions/PRBs are recorded separately in Footnote 15 of the financial statements.

EM Environmental Liability Update Process



- Estimates are updated based on the most current available information, such as:
 - EM Environmental Liability Standard Operating Processes and Procedures (SOPP);
 - External Independent Reviews;
 - Feasibility Studies;
 - Records of Decision;
 - Risk Assessments;
 - Infrastructure Plans/Site/Laboratory Plans;
 - Project Execution Plans;
 - Reports from entities outside of DOE (National Academy of Sciences, Defense Nuclear Facilities Safety Board, Secretary of Energy Advisory Board, etc.);
 - Independent Cost Estimates;
 - Baseline Validation Process;
 - Headquarters guidance/planning documents/decisions; etc.



EM Environmental Liability Update Process

- Field sites should take all available current information into account when formulating/modifying EL estimates.
- Continuing in FY11, field sites are required to complete:
 - The “EL Checklist” to ensure that all applicable standards/information is being considered during EL formulation; and
 - The “EL forecast” to ensure that all potential impacts to the EL are being considered.

EM Environmental Liability Update Process

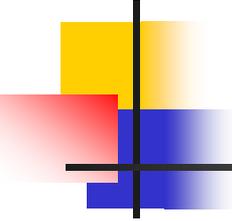


- EM annually updates and distributes an EM EL SOPP to be followed when the field sites are updating their EL estimates;
- Estimates are submitted into the Integrated Planning, Accountability, and Budgeting System (IPABS) by the field sites;
- EM HQ evaluates submittals for consistency between sites and other Program Offices;
- Office of Financial Control and Reporting (OFCR) uses these IPABS estimates (for both the 3rd and 4th Qtrs) as the starting point for the sites, via the "Note 3", to use to cross-walk IPABS to the sites STARS ending EL balances;
- Federal Project Directors review and concur on project estimates for each PBS by signing the project summary section of the IPABS GEN-2 reports;
- The Site Manager or Assistant Manager of EM reviews and concurs on the total EL for each site by signing the site summary section of the IPABS GEN-2 reports; and,
- EM HQ/sites report subsequent events and record final adjustments to the liability prior to issuance of the audit opinion.

EM Environmental Liability Update Process

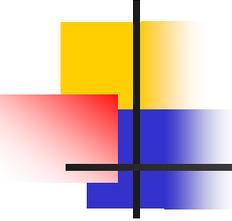


- *Subsequent events* include all events that impact the EL up until the date that the audit opinion is signed. Non-monetary loss contingencies, which are instances in which DOE is not liable for any monetary payout but will more likely than not be required to provide some other form of compensation to the plaintiffs, are included in the subsequent event data calls.



EM Environmental Liability Update Process

- Contingency is added to each PBS to account for uncertainties by one of two methods:
 - Sites report the upper range (80% confidence level) for the projects that have certified near-term baselines; or
 - Sites use the uncertainty model in IPABS, which calculates contingency based on project definition, innovation (one-of-a-kind technology), and complexity of the project.
 - Field offices assign uncertainty ranges (5=100%.....1=10%) for each project based on three factors:
 - Project Definition;
 - Innovation; and
 - Complexity.



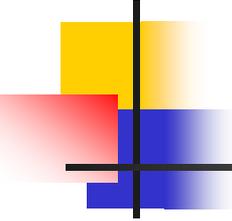
EM Environmental Liability Update Process

- EM prepares a placeholder estimate for LTS costs at sites where EM has an active cleanup mission.
- After EM work is complete, the responsibility for performing LTS activities transfers to the Office of Legacy Management (LM) (or other Program Secretarial Offices) and this entity is then responsible for recording the LTS liability from the expected transition date forward.
- Both the EM and non-EM LTS estimates must be updated annually and include liability covering a minimum of 75 years (unless a longer period is stipulated in agreements with the States, etc.)



EM Environmental Liability Update Process

- When reviewing the EL estimate, EM performs numerous activities to ensure the accuracy and completeness of the EL, including but not limited to:
 - Ensuring that the adjustment narratives/explanations are complete and that the rationale supports the adjustment;
 - Ensuring consistency between:
 - Shipping and receiving sites for waste shipments destined for WIPP;
 - Number of canisters of HLW and SNF destined for a future repository; and
 - Inter-site shipments of waste, SNF, and nuclear materials.
 - Ensuring that LTS costs start dates coincide with PBS end dates for completion of EM work at each site;

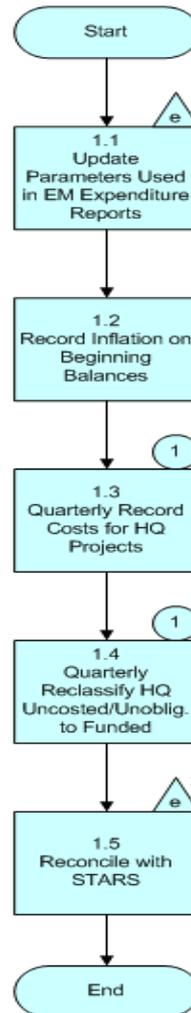


EM Environmental Liability Update Process

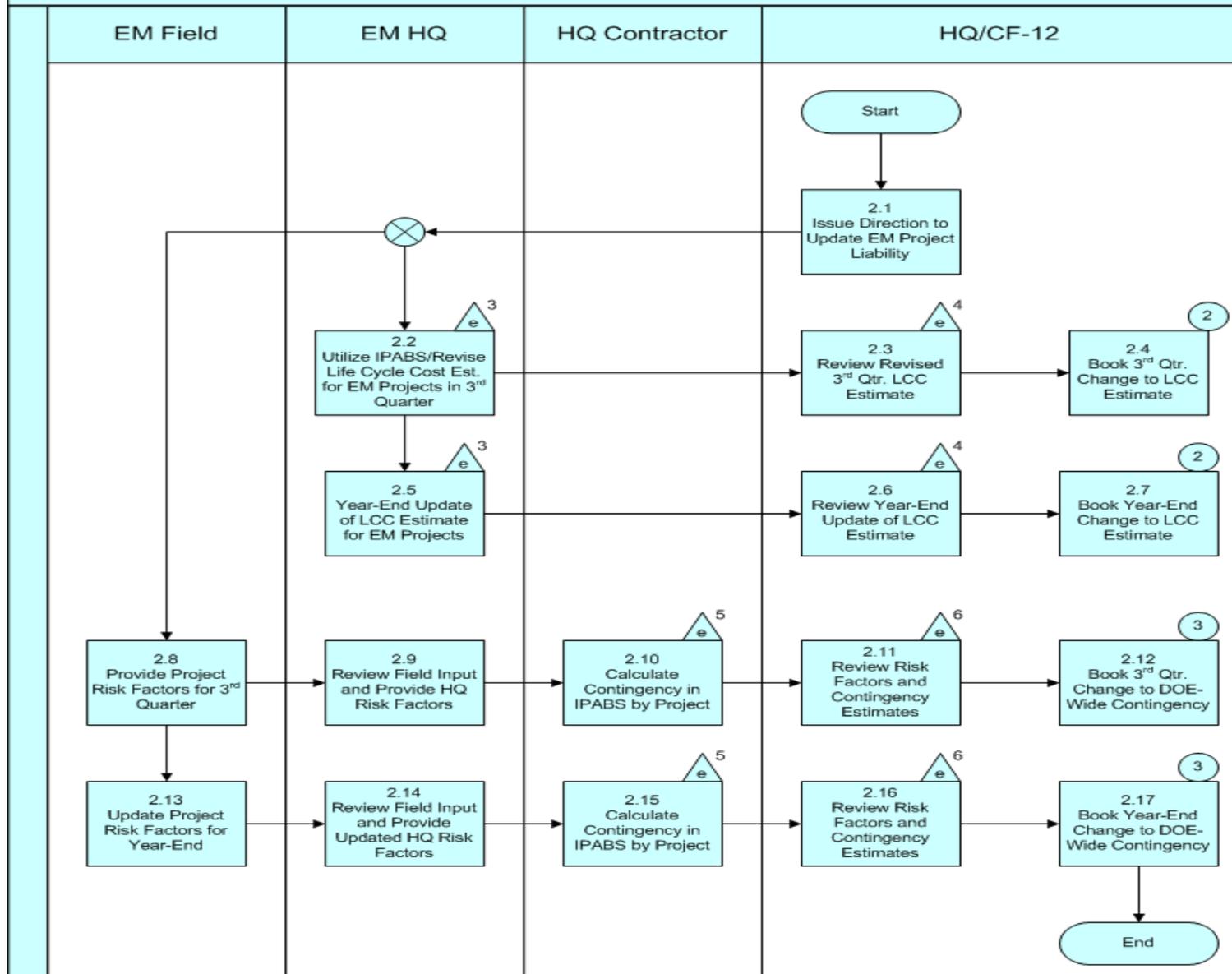
- Verifying that D&D costs are included for only those facilities owned by EM:
 - Ensuring that active and surplus facilities are recorded by LM or the appropriate Program Secretarial Offices in the financial statements; and
 - Ensuring that EM is not accounting for non-EM facilities until these facilities are officially accepted into the EM Program (to avoid double-counting these facilities in the liability estimate).

1.0. EM Environmental Liability – Record Expenditures/Inflation

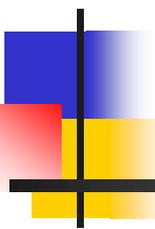
HQ/CF-12

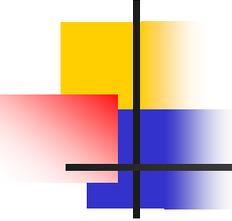


2.0. EM Environmental Liability – LCC Estimate Adjustment



Active and Surplus Facilities Environmental Liability

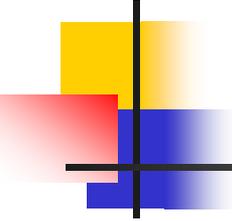




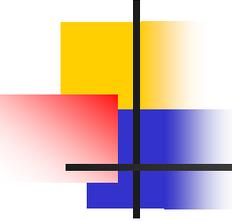
Active and Surplus Facilities Liability Estimate

- The active facilities EL represents the anticipated remediation costs:
 - for contaminated facilities still in active use by active programs (active facilities); and
 - for retired contaminated facilities awaiting transfer to EM (surplus facilities).
- The active facilities EL modeled by the Active Facilities Data Collection System (AFDCS) cost-estimating model.
- The contractor that maintains this system on behalf of OFCR is Project Performance Corporation (PPC).

Active and Surplus Facilities Liability Estimate

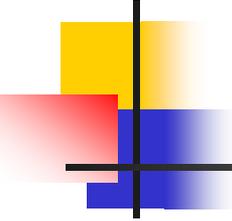


- Cost estimates for active and surplus facilities are updated each year, during both the 3rd and 4th quarters, to reflect:
 - Current year constant dollar value, either by:
 - Escalating the prior year constant dollar amount by the site-specific inflation factor;
 - Escalating the prior year constant dollar amount by the inflation factor provided by OFCR in the annual EL guidance memo; or
 - De-escalating current dollar amounts back to present year constant dollar amount.
 - the transfer of cleanup and management responsibilities for active facilities to EM from other programs;
 - changes in facility size or contamination assessments; and/or
 - estimated cleanup costs for newly contaminated facilities.



Active and Surplus Facilities Liability Estimate

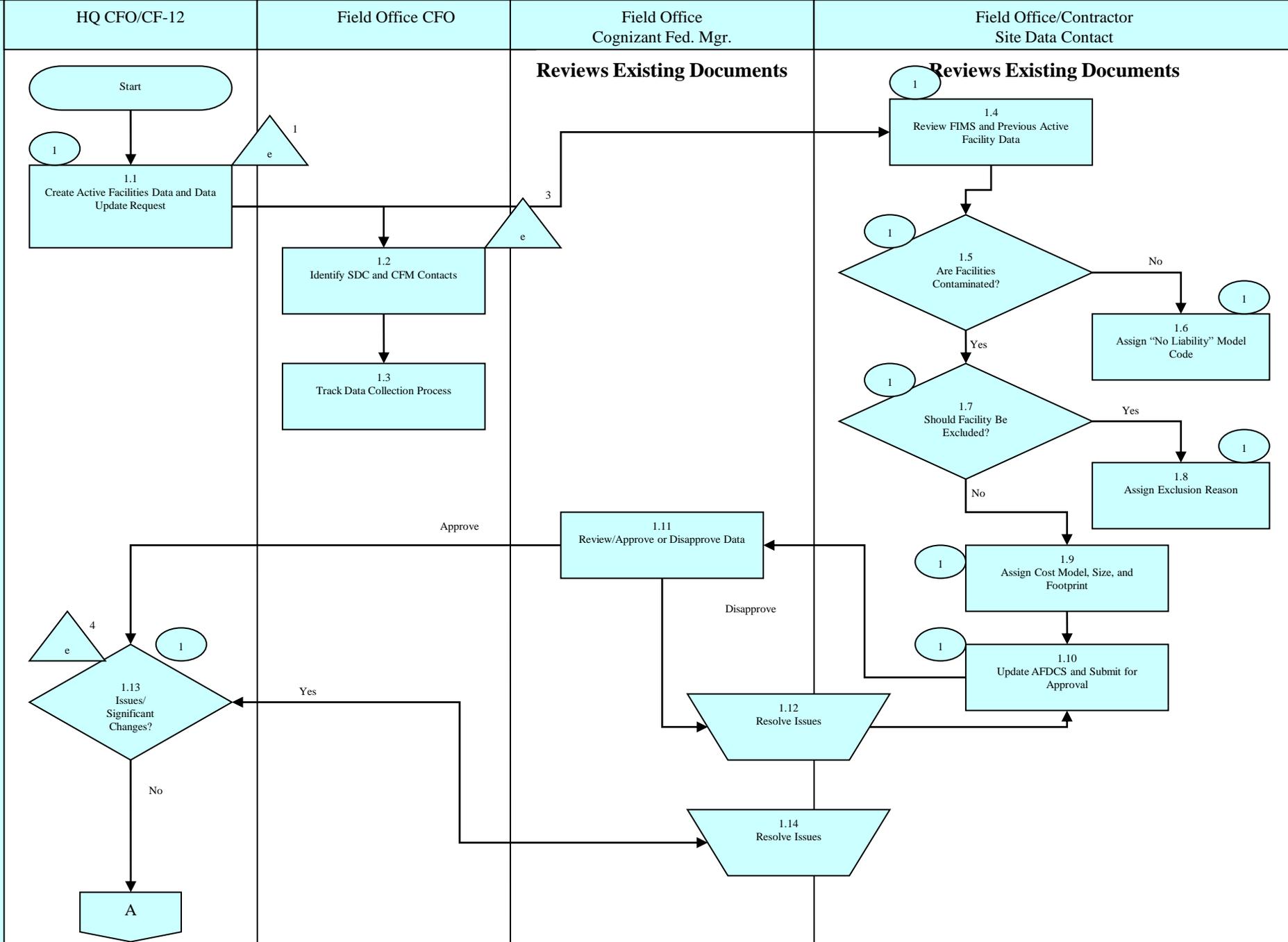
- AFDCS includes over 12,000 facilities at 30 sites.
 - PPC updates prior year's data with current FIMS pull and opens web-based application for field input every February;
 - Site Data Contacts (usually contractors) enter/edit:
 - Facility Gross Square Footage;
 - Facility Footprint; and
 - Cost Model Code (contamination type) for each facility.
 - Cognizant Federal Managers review and approve the updated facility data for their respective sites.
 - OFCR and PPC perform various reviews of data and makes necessary adjustments and provides the database to the auditors in June.
 - 4th Quarter update includes additional FIMS extract and field inquiries.



Active and Surplus Facilities Liability Estimate

- In a few instances the field sites have detailed EL estimates for individual active facilities, in these cases, the sites must:
 - Submit the detailed estimate to OFCR;
 - OFCR reviews the estimate to determine the validity and reasonableness of the estimate.
 - If the estimate appears reliable, the facilities in question are excluded in AFDCS; and
 - The site records the detailed estimates for these facilities in STARS and includes the detailed estimates on the site's Note 3 as an "adjustment outside of AFDCS".
- Contact Stacy Bleigh (301-903-0149) when more detailed cost estimates are available.

1.0 Active Facilities Liability



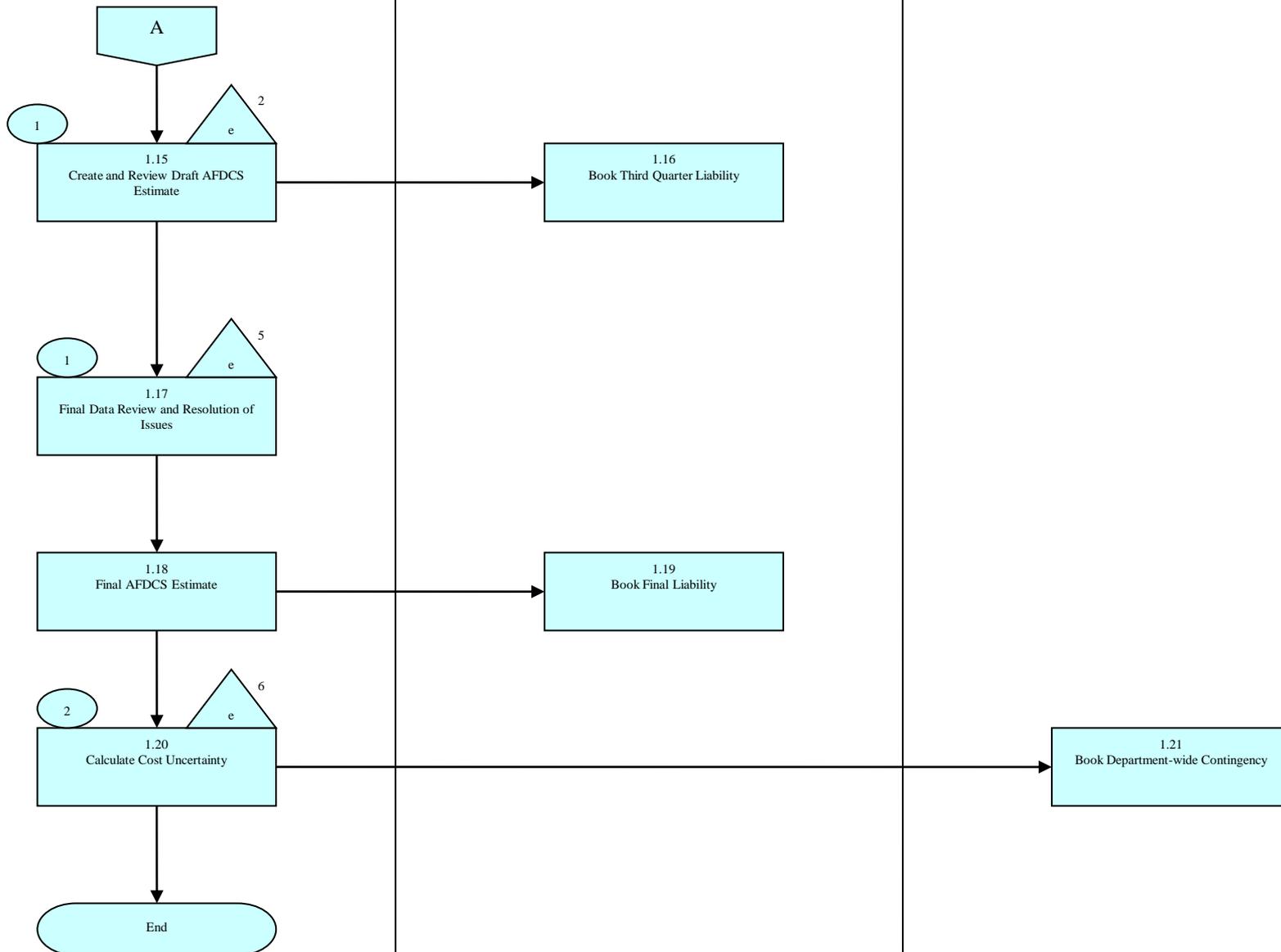
1.0 Active Facilities Liability

HQ CFO/CF-12

Field Office CFO

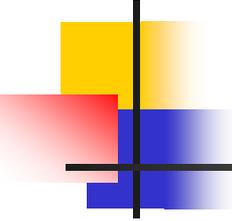
HQ CFO/CF-10

Reviews Existing Documents



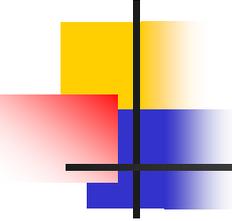
Defense HLW/SNF

Environmental Liability



Defense HLW/SNF Liability

- The Nuclear Waste Policy Act of 1982 (NWPA) established the Department's responsibility to provide for permanent disposal of the nation's high-level waste (HLW) and SNF.
- All owners and generators of this waste, including the Department, must pay their respective shares of the full cost of the disposition program.
- The TSLCC, Fee Adequacy and Defense Share Calculation are audited each year.

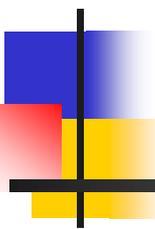


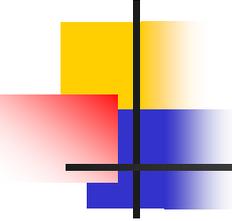
Defense HLW/SNF Liability

The TSLCC Estimate of the Civilian Radioactive Waste Management Program:

- Limited update annually – FY2008 TSLCC is 1st full update to be provided to the public since 2001;
- Developed in accordance with Published Federal Register Rules;
- Used to assess Nuclear Waste Fund fee adequacy;
- Used to calculate the defense cost share of the repository;
- The 2008 TSLCC was the **last** TSLCC completed until the Department establishes a path-forward regarding the existence of a future geologic repository to store HLW/SNF.

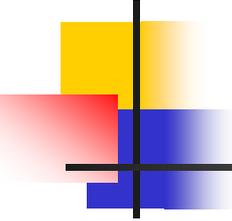
NNSA Fissile Materials Disposition Liabilities





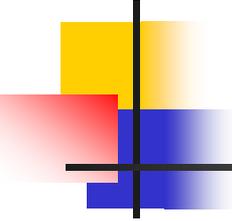
Surplus Plutonium Disposition

- In September 2000, the U.S. and Russia signed the Plutonium Management and Disposition Agreement, which committed each country to dispose of 34 metric tons of surplus weapon-grade plutonium (Pu).
- To dispose of weapons-grade plutonium, both the U.S. and Russia must convert the plutonium into fuel to be used in nuclear reactors (once irradiated, the plutonium is no longer readily usable for nuclear weapons).
- The Department has designed and is in the process of constructing a Mixed Oxide (MOX) Fuel Fabrication Facility, a Pit Disassembly and Conversion Facility, and a Waste Solidification Building at SRS to convert the Pu into fuel suitable for use in nuclear reactors.



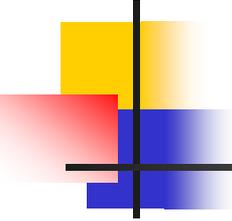
Surplus Plutonium Disposition

- The MOX liability includes:
 - Design;
 - Construction;
 - Operation;
 - Facilities Decontamination and Decommissioning (D&D); and
 - Disposition of all wastes projected to be generated during the project life-cycle.
- The liability is reduced by the projected revenues from MOX fuel sales.
- The MOX liability estimate is audited each year.



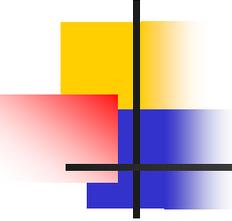
Highly Enriched Uranium Disposition

- Under the current uranium market the Department's revenues from down-blended HEU exceed the project costs.
- No liability is currently being recorded.



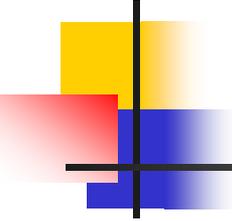
Regulatory Environment

- Multiple Regulatory Authorities: (at a minimum)
 - State environmental or ecology agencies; and
 - Environmental Protection Agency (EPA).
- Multiple Laws and Regulations: (at a minimum)
 - Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA);
 - Resource Conservation and Recovery Act (RCRA); and
 - Hazardous and Solid Waste Amendments (HSWA) or State equivalent.
- Overlapping legally binding clean-up agreements, consent decrees, settlements, and compliance agreements.



Examples of the EL Regulatory Environment

- Hanford Site - \$68 billion in EM PBSs and \$2 billion in LTS and other environmental liabilities.
 - Primary Agreement – Tri-Party Agreement signed in 1989 and constantly being re-negotiated/arbitrated/etc.
 - All waste removed from all 149 single-shelled tanks – revised milestone date is from 2018 to 2040;
 - Start of Vit Plant operations revised from 2011 to 2019.
 - Primary Governing Laws – CERCLA, RCRA, and HWMA
 - Washington State’s Department of Ecology is the lead regulatory authority over almost all activity under RCRA and HWMA.
 - There are approximately 55 Treatment, Storage or Disposal Groups under RCRA.
 - EPA is the lead regulatory authority over activities under CERCLA.
 - There are approximately 1000 past practice units requiring investigation and clean-up as needed under CERCLA.



Related Liabilities

- Legal Contingencies;
- Pensions and PRBs;
- Energy Employees Occupational Illness Compensation Program Act (EEOICPA);
- Radiation Exposure Compensation Act (RECA); and
- Environment, Safety and Health.