



Los Alamos Technical Associates

Mo-99 NEPA Overview and Issues

**Mo-99 2013 TOPICAL MEETING ON
MOLYBDENUM-99 TECHNOLOGICAL DEVELOPMENT**

**Embassy Suites Downtown - Lakeshore
Chicago, Illinois April 1-5, 2013**

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*In this presentation LATA does not represent any
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Mo-99 NEPA Overview and Issues – Introduction

The **National Environmental Policy Act** or “**NEPA**” (Jan 1, 1970 - 42 U.S.C. 4321-4327)

“The Congress,...declares it is the continuing policy of the Federal government, in cooperation with State and local governments, and other concerned public and private organizations to use all practical means and measures...to promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.”





Mo-99 NEPA Overview and Issues – Introduction

- ❑ In NEPA, Congress prescribed “the NEPA Process” or the “environmental impact assessment process”
- ❑ NEPA requires agencies to undertake an assessment of the environmental effects of their proposed actions – prior to making decisions
- ❑ Purposes of the environmental review process:
 - Make better informed decisions
 - Allow for citizen involvement
 - Make federal government actions more transparent
 - Document the decision-making process





Mo-99 NEPA Overview and Issues – Introduction



- ❑ NEPA established a **Council on Environmental Quality (CEQ)** with members appointed by the President to establish legal requirements binding on all federal agencies
- ❑ The **CEQ enacted NEPA Regulations** in 1978 as 40 CFR Part 1500-1508
- ❑ **Some relevant-agency implementing regulations:**
 - US Department of Energy (DOE): 10 CFR Parts 1021 [and Part 1022 for Floodplains and Wetlands]
 - Nuclear Regulatory Commission (NRC): 10 CFR Part 51
 - US Food and Drug Administration (FDA): 21 CFR Part 25
- ❑ Courts concluded in the 1970's that NEPA is a **procedural not a substantive law** – for NEPA to hold up in court it **must follow the NEPA process**



Mo-99 NEPA Overview

Relevant to Molybdenum-99 (Mo-99) development in the US:

- NEPA is required when these actions involve *federal funding, grants, licenses, or permits*
- Federal agencies responsible** for providing the *funding, grant, license or permit* are responsible for complying with NEPA
- If more than one federal agency is involved, one must become the “**lead agency**” and the other(s) can elect to be “**cooperating agencies**”
- An agency can “**adopt**” another agency’s NEPA so long as the NEPA meets the adopting agency’s NEPA requirements

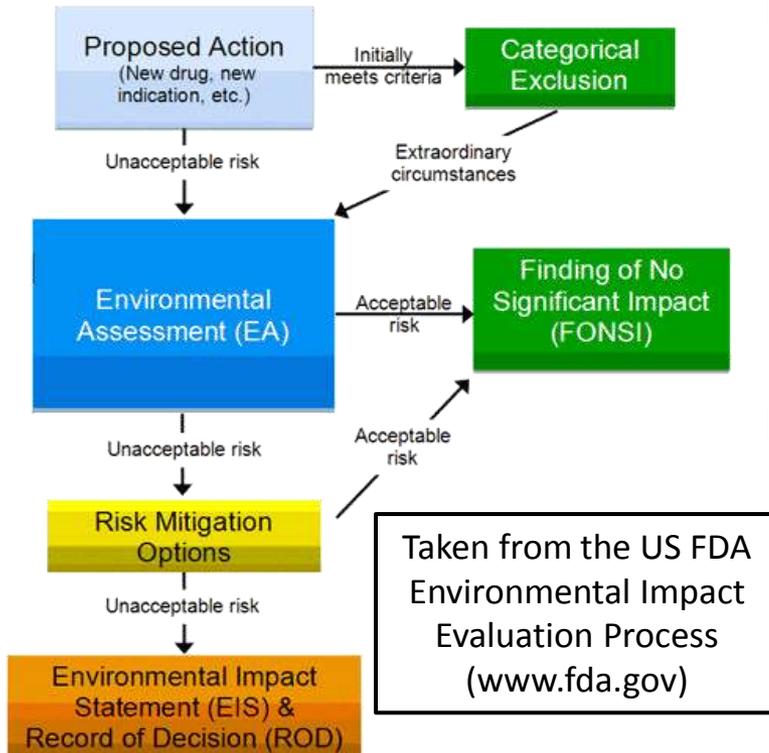




Mo-99 NEPA Overview

NEPA documentation includes:

Categorical Exclusions (CEs),
Environmental Assessments (EAs), and
Environmental Impact Statements (EISs)



- ❑ **CEs** - a category of actions that the agency has determined, based on past experience, do not **individually or cumulatively** have a significant effect on the human environment
- ❑ **EAs** - prepared to determine whether or not a federal action would significantly affect the human environment; Final EA followed by the filing of a **Finding of No Significant Impact (FONSI)** or if it is determined that a significant impact could occur the EA could become an EIS or be withdrawn or otherwise cancelled
- ❑ **EISs** - prepared when it is anticipated that an action may significantly affect the human environment or is environmentally controversial; Final EIS followed by filing **Record(s) of Decision (ROD)** wherein the government selects one or more alternative actions



Mo-99 NEPA Overview



- ❑ The NEPA EA/EIS must present and analyze on a “sliding-scale” the:
 - **Purpose and need** for the “agency” to take an action
 - **Proposed action and all “reasonable” alternatives** including “no-action”
 - **Affected environment** where the action(s) would take place
 - **Probable environmental impacts** of the proposed action and alternatives (+/-)
 - **Agencies and persons consulted** during preparation of the EA
- ❑ Document process in the **Administrative Record**
- ❑ **EISs provide more in-depth evaluation than an EA** of the proposed action and alternatives, take longer to prepare, and include more steps in the process

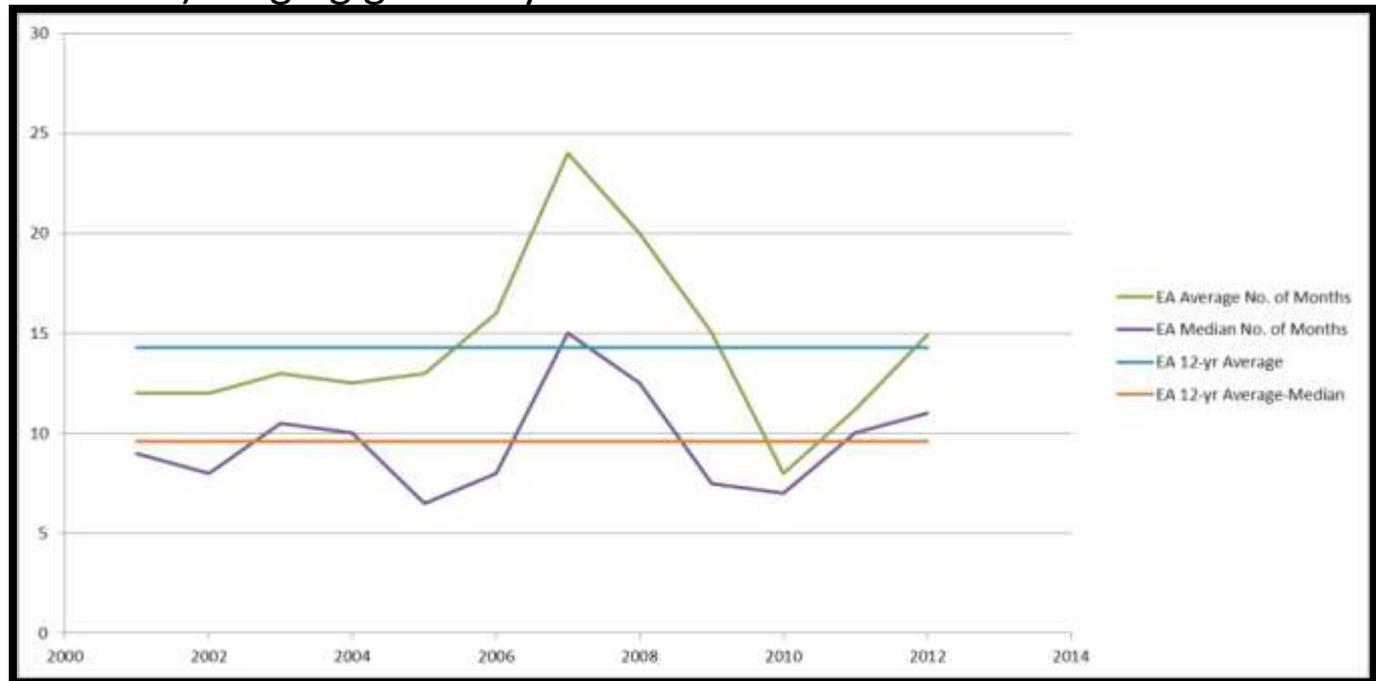


Mo-99 NEPA Overview – EA Timeline

DOE EA Completion Timeline

- ❑ Most DOE EAs from 2000 to 2012 took around **10 months**
- ❑ Straight forward EAs can be done in as little as **4 or 5 months**
- ❑ Complex, Programmatic, or Site-Wide EAs can take as long as an EIS to complete (start to signed FONSI) ranging generally from **12 to 24 months**

Data taken from DOE Lessons Learned Quarterly Reports for the respective years.



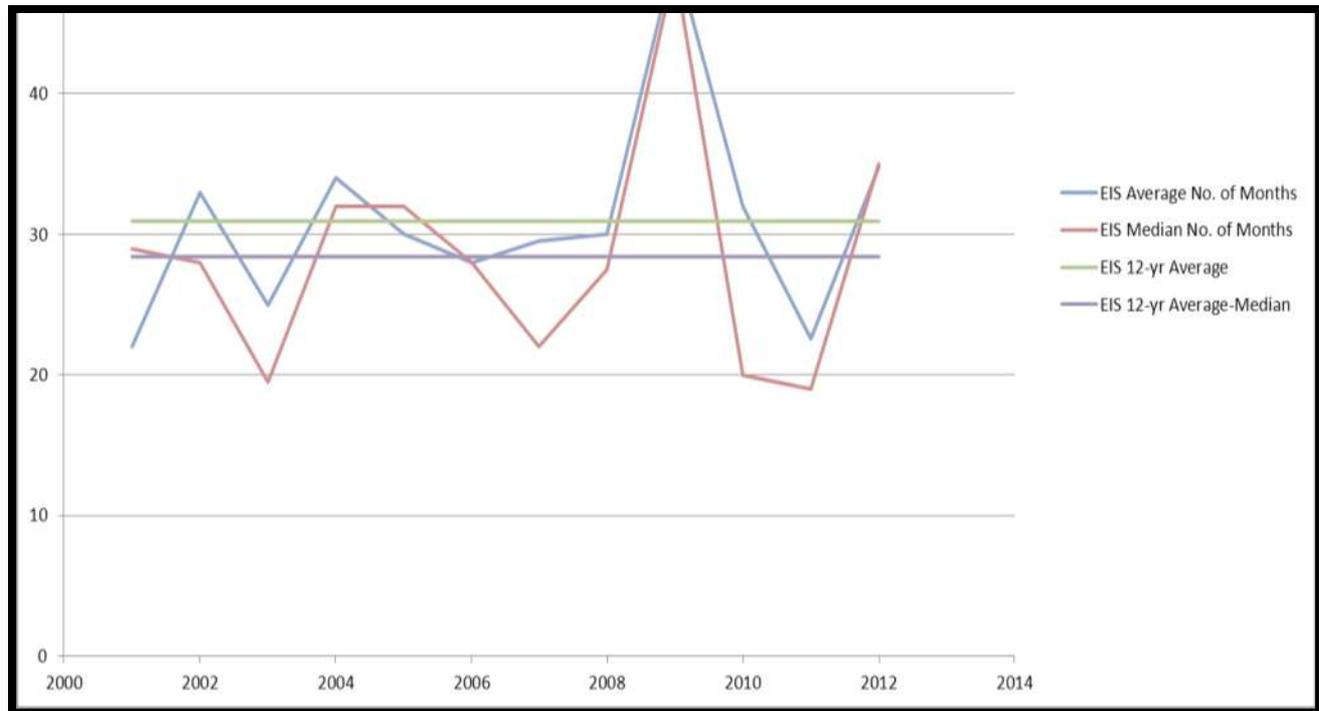


Mo-99 NEPA Overview – EIS Timeline

DOE EIS Completion Timeline

- ❑ Most DOE EISs from 2000 to 2012 took around **30 months**
- ❑ Straight forward EISs can be done in as little as **9 months**
- ❑ Complex, Programmatic, or Site-Wide EISs can take longer to complete (start to signed ROD)

Data taken from DOE Lessons Learned Quarterly Reports for the respective years.

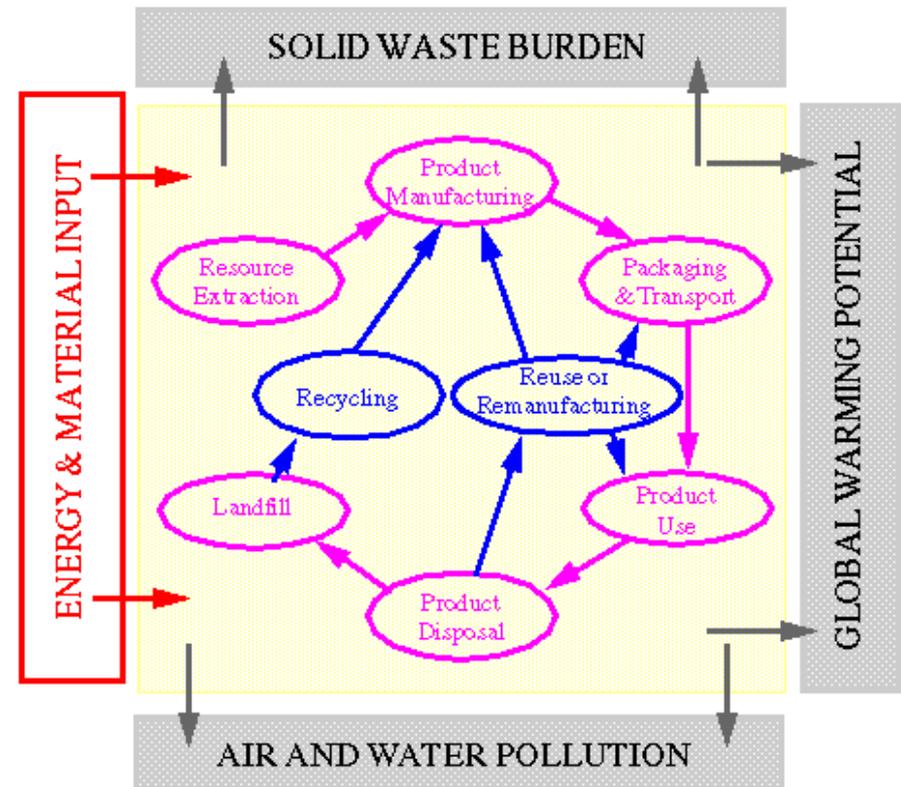




Mo-99 NEPA Issues – Data Needs

Data Needs to support NEPA:

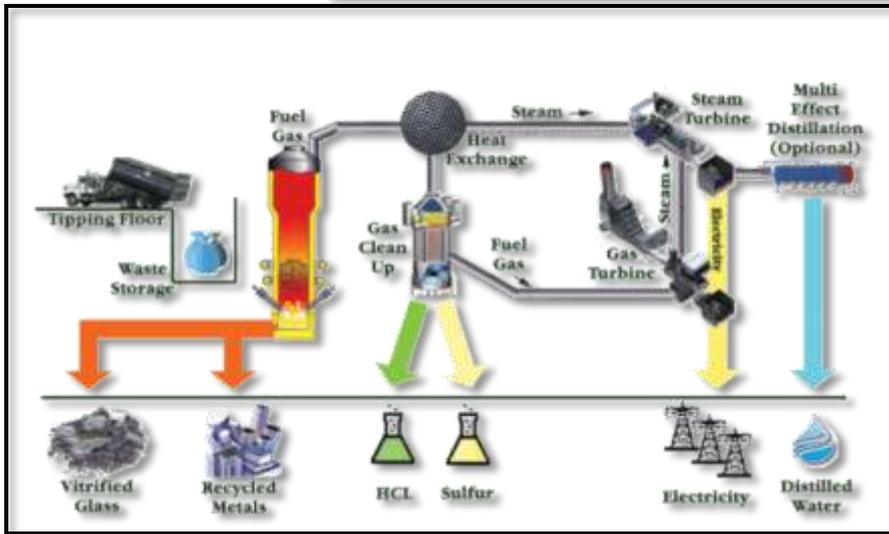
- Proposed Action and Alternative(s)
- Affected Environment Description
- Consequence/Impact Analysis
 - Proposed Action & Alternatives
 - Cumulative Impacts
- Mitigations
- Commitment of resources





Mo-99 NEPA Issues – Data Needs

Changing the footprint - new construction at existing facility



Example process flowchart

Proposed Action and Alternative(s):

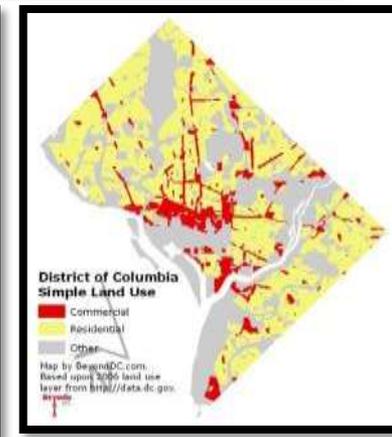
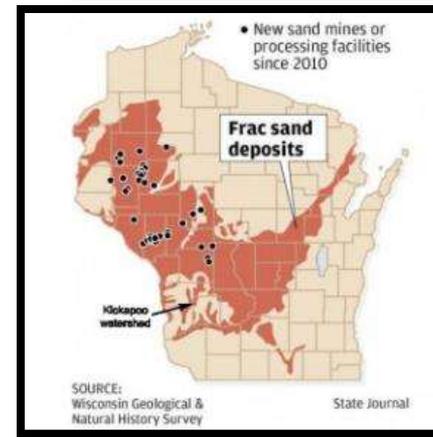
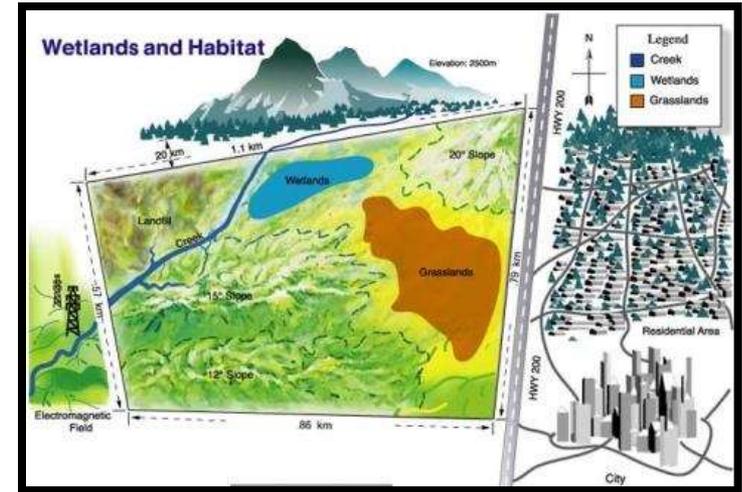
- ❑ Details of **existing** infrastructure and **location(s)** for target irradiation, transport, chemical processing, product manufacture etc.
- ❑ Details of **new construction, renovation, or additions** for target irradiation, chemical processing, product manufacture etc. [sumps/tanks etc.]
- ❑ Changes or additions to **employment, economics, permits/authorizations**
- ❑ **Process description** [quantities **input** to production e.g. electricity/gas/water, acids, bases, radioactive materials **AND** quantities/form of materials/waste **output** and where it would end up]



Mo-99 NEPA Issues – Data Needs

Affected Environment resource area descriptions:

- human health - worker/public/accidents
- geology/soils/seismology/geomorphology
- ecology/wetlands/protected species
- socioeconomics/environmental justice
- traditional cultural & historic properties/archeology
- land use
- visual/aesthetic
- utilities/infrastructure/waste management
- air quality/greenhouse gas emissions/climate/noise
- transportation





Mo-99 NEPA Issues – Data Needs



Potential consequence/impact areas, examples:

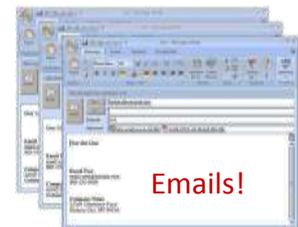
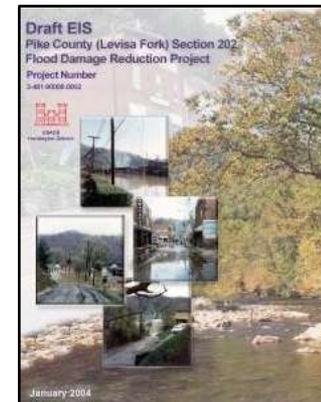
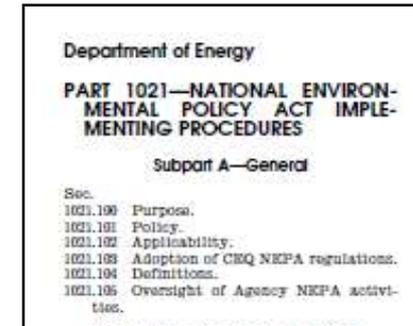
- Electricity/water/natural gas use
- Sanitary/industrial wastewater sewer discharges
- Storm/cooling water runoff causing pollution/siltation of wetlands and/or habitat changes to sensitive or endangered plant/animal species
- Operations/accident emissions of hazardous/radioactive air pollutants, greenhouse gases
- Increased worker/public radiation dose
- Conversion/loss of prime farmlands
- Traffic congestion
- Etc.



Mo-99 NEPA Issues – Administrative Record

The **Administrative Record** contains documents:

- ❑ Required by each federal agency's NEPA implementing regulations
- ❑ Required by the CEQ (40 CFR Parts 1500-1508)
- ❑ Draft or final, which are prepared or referred to by the agency (and its contractors) in the development of the facts/issues that lead to the final agency decision – [e.g. Data Needs]
- ❑ That address the evolution of the agency's analysis, including any facts, ideas or arguments that run counter to the decision ultimately reached.
- ❑ Which include various media such as, microfilm, microfiche, photographs, compact disks, and electronic mail as well as printed matter.

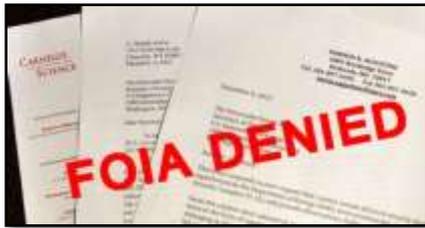




Mo-99 NEPA Issues – Protected Information

NRC definition of Proprietary Information:

Privately owned knowledge or data, such as that protected by a registered patent, copyright, or trademark.



FOIA definition (5 USC 552(b))

"**Proprietary Information**" means information which is developed at private expense, is marked as Proprietary Information, and embodies (1) trade secrets or (2) commercial or financial information which is privileged or confidential under the Freedom of Information Act (5 USC 552 (b)(4)).

Each agency defines what information shall be protected and how it is protected:

- ❑ **CEQ Freedom of Information Act** (FOIA) implementing regulations (40 CFR 1515)
- ❑ DOE/NNSA *Understanding Official Use Only, Pamphlet 07-2011*, The Office of Health, Safety and Security, Office of Classification; and DOE Order O 471.3 *Identifying and Protecting Official Use Only Information*
- ❑ NRC 10 CFR 2.390 *Public inspections, exemptions, requests for withholding*; 10 CFR 51.16 *Proprietary Information*; and Regulatory Issue Summary (RIS) 2004-11; *Supporting Information Associated with Requests for Withholding Proprietary Information* (ML041180231)



Mo-99 NEPA – Conclusions

Conclusions:

- Be patient**, the NEPA process takes time to complete
- Be ready to supply Data Needs** when requested, only provide what's requested, ask if you don't understand why it is needed
- Identify uncertainties** in data provided as soon as possible
- When information is requested that you believe is proprietary/**FOIA-protected**, **immediately notify the lead agency**
- Be Aware** - everything in the **Administrative Record** is open to the public – unless FOIA-protected

NEPA is procedural, help the lead agency **follow the NEPA Process**





Mo-99 NEPA Overview and Issues – The End



Questions?

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