

Problem Rounds Path Forward Briefing Series



National Environmental Policy Act (NEPA) Process

26 January 2010

Presented to:

Design Options Working Group

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A PARTNERSHIP FOR SAFE
CHEMICAL WEAPONS DESTRUCTION

www.pmacwa.army.mil



U.S. Army Element, Assembled
Chemical Weapons Alternatives



Pueblo Chemical Agent-
Destruction Pilot Plant

NEPA Process - Agenda

- Addressing Pre-Determination Issue
 - Considerations / Approach
 - Acquiring Technology Emissions Data
- Overall Schedule
- NEPA Process
 - Background
 - ACWA NEPA Approach
 - Public Involvement
- Oak Ridge National Laboratory
 - Background / Experience / Capabilities
 - EA Approach



NEPA Process – Addressing Pre-Determination

- Original approach was to allow Bechtel to down select an EDT vendor based on “Best Value” and conduct an EA that would include an EDS and the down-selected EDT
- Concerns were raised within this Working Group and by the EPA and others that this would circumvent the NEPA process by excluding potential solutions prematurely
- The decision has now been made to include all viable commercial EDT systems as well as the EDS in the NEPA process



NEPA Process – Addressing Pre-Determination

- ACWA has contacted each of the known EDT vendors and has requested emission data associated with a particular system that could be deployed at the PCAPP
 - PM Non-Stockpile - Explosive Destruction System (EDS)
 - CH2M Hill - Controlled Detonation Chamber (CDC)
 - UXB/DYNASAFE - Static Detonation Chamber (SDC)
 - VERSAR/Kobe Steel - Detonation in a Vacuum Assisted Chamber (DAVINCH)



Pueblo Chemical Agent-Destruction Pilot Plant

NEPA Process – Schedule

Activity	Calendar Year				
	2011	2012	2013	2014	2015
NEPA PROCESS					
FONSI OR NEED FOR EIS					
EDT IMPLEMENTATION					
PCAPP START OF OPS					
PERMIT SCHEDULE FOR EDT					
EDT START OF OPS (TBD)					



Pueblo Chemical Agent
Destruction Pilot Plant

NEPA Process – Basic Logistics

- NEPA Background
 - Signed into law January 1, 1970
 - First major environmental law in the United States which established this country's national environmental policies
 - Federal agencies are required to determine if their proposed actions have significant environmental effects and to consider the environmental and related social and economic effects of their proposed actions
 - Disclosure document that provides information to the public on major Federal actions
 - NEPA applies to a very wide range of federal actions to include: federal construction projects, plans to manage and develop federally owned lands, new operational programs, and activities



Pueblo Chemical Agent
Destruction Pilot Plant

NEPA Process – Basic Logistics continued

- NEPA Documents
 - Categorical exclusion (CE): A category of actions that the agency has determined does not individually or cumulatively have a significant effect on the quality of the environment
 - Record of Environmental Consideration (REC)
 - Describes the proposed action and timeframe
 - Identifies the proponent and approving official(s)
 - Clearly shows how an action qualifies for a CE, or is already covered in an existing Environmental Assessment or Environmental Impact Statement



Pueblo Chemical Agent
Destruction Pilot Plant

NEPA Process – Basic Logistics continued

- NEPA Documents continued
 - Environmental Assessment (EA)
 - Concise document that briefly provides sufficient evidence and analysis for determining whether to prepare an EIS or not
 - Aids an agency's compliance with NEPA when no environmental impact statement is necessary
 - Facilitates preparation of an Environmental Impact Statement when one is necessary



Pueblo Chemical Agent
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NEPA Process – Basic Logistics continued

- NEPA Documents continued
 - Environmental Impact Statement
 - A Federal agency must prepare an EIS if it is proposing a major federal action that could significantly affect the quality of the human health and environment
 - The regulatory requirements for an EIS are more detailed than the requirements for an EA or a categorical exclusion
 - Environmental impact statements shall be analytic rather than encyclopedic - 40 CFR 1502.2(a)



NEPA Process – ACWA Path Forward

- Supplement Pueblo Chemical Depot 2002 Site Specific EIS
 - Supplemental EA
 - Will consider all concerns from previous EA
 - Parallel Review Process With EPA Region 8 and the Colorado Department of Public Health and Environment
 - Written as a Stand Alone Document
 - Vendor Data under PCAPP Site Configuration
 - Health Risk Assessment for Subject Site and Configuration
 - Environmental Justice Analysis for Subject Site and Configuration



NEPA Process – Public Involvement

- Continue Public Involvement with CAC and DOWG on Program Path forward
- Consider all Comments on Previous EDT EA
- Purpose and Need for Action Vetted with Local Stakeholders
- Public Review of NEPA Analysis

NEPA Process: Environmental Assessment for Explosive Destruction Technologies at the Pueblo Chemical Depot

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OAK RIDGE NATIONAL LABORATORY (ORNL)

January 26, 2011

Agenda for Today's Presentation

- **What is the Oak Ridge National Laboratory?**
 - **Background**
 - **Experience**
 - **Capabilities**
- **Proposed Approach for the Pueblo EA**
- **Issues and Concerns to be Addressed**
- **Proposed Schedule**

The Oak Ridge National Laboratory (ORNL) is a Science Laboratory of the U.S. Department of Energy (DOE)

- **Largest and most diverse of DOE's ten (10) National Laboratories**
- **Established in 1943 for the Manhattan Project**
- **Continued expertise in all aspects of energy research, nuclear power, materials science, and supercomputing**
- **Managed by a partnership between the University of Tennessee and Battelle**
- **Sixteen (16) scientific research divisions**
- **Over 4,800 staff members**

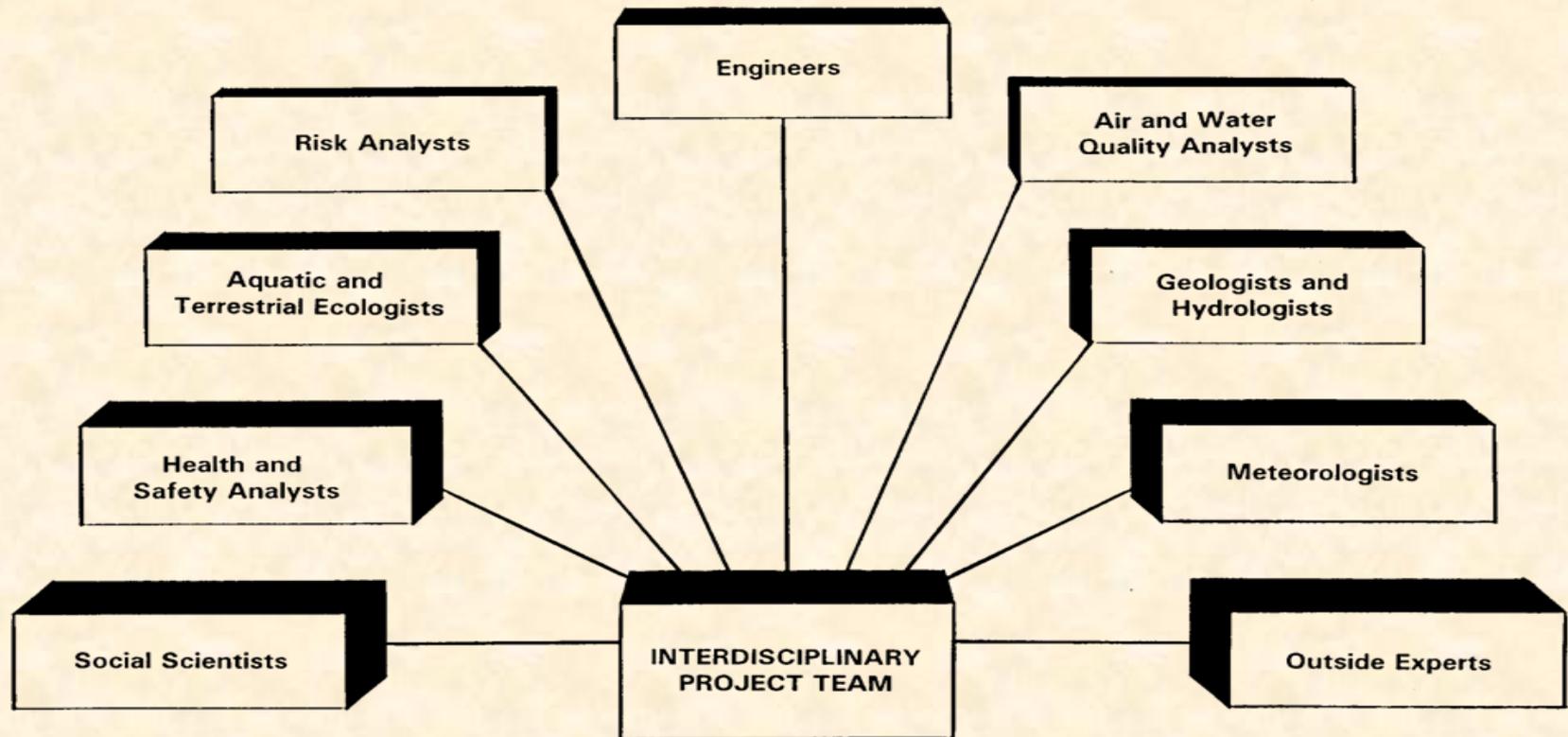
Oak Ridge National Laboratory (continued)

- **Over \$1.65 billion annual funding**
- **Our current research portfolio includes work conducted for almost all branches of the U.S. government, as well as the private sector**
- **To date, our staff members have prepared over 600 environmental impact assessments as related to NEPA**
- **We prepared the 2002 Site-Specific EIS for the destruction of the chemical weapons stored at the Pueblo Chemical Depot**

ORNL's Expertise and Capabilities are Diverse

- **Multi-disciplinary, collaborative teams of specialists**
- **Transport and fate analysis of hazardous or toxic substances in the environment (atmospheric dispersion, water, food chain)**
- **Identification of populations at risk**
- **Human health and ecological risk assessment**
- **Risk communication**
- **Socioeconomic and demographic analysis (including environmental justice)**
- **Land use, habitats, and/or wetlands assessments**
- **Water quality and water usage assessments (surface water and groundwater)**
- **Air quality assessments**
- **Waste generation and waste management impacts**

We Use Integrated, Multi-Disciplinary Teams



Proposed Approach for the Pueblo EA

- **Tier from the 2002 Site-Specific EIS for the Pueblo stockpile/inventory**
- **Evaluate the potential for significant impacts to all resource categories, including:**
 - **land use**
 - **water resources**
 - **ecological resources (terrestrial and aquatic)**
 - **socioeconomics and environmental justice**
 - **air quality**
 - **human health**
 - **cultural resources**
 - **waste management**

Proposed Approach (continued)

- **Focus primarily on human health, consumption of resources (e.g., water) and generation of wastes**
- **Currently, we are still in the scoping process**
- **The EA would have one of two possible outcomes:**
 - **A finding of no significant impact to any resource category**
 - **A recommendation to proceed with a more detailed Environmental Impact Statement**

Issues and Concerns: Human Health Risk

- **The EA will include a screening-level risk assessment for the emissions from the EDTs**
 - **Obtain lists of anticipated chemicals and compounds emitted, and their quantities (including criteria pollutants as regulated under the National Ambient Air Quality Standards, NAAQS)**
 - **Model the atmospheric dispersion of those emissions**
 - **Develop estimates of downwind airborne concentrations and also deposition concentration values**
 - **Evaluate these concentrations for their potential to create adverse human health effects**
- **The framework and approach for the proposed risk assessment is currently under review by EPA and the State of Colorado**



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