

**FERNALD CLEANUP PROGRESS BRIEFING
NOVEMBER 2003**

DOE Risk-Based End State Vision

Introduction

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Manager Perspective

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Vision Opportunities

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Question and Answer Session

BACKGROUND

- **“Use of Risk-Based End States” – DOE Policy 455.1 issued in July 2003**
- **Follow up to 2002 Top-to-Bottom Review**
- **Intent – ensure DOE nationwide cleanup effort is driven by clearly defined risk-based end states**

DOE GUIDANCE

- **Fernald is preparing its deliverable in accordance with the guidance**
- **Addressed both sites that have formal cleanup plans (Fernald) and sites that do not have approved Records of Decision**
- **Calls for Vision to initially include *all* technically supportable, risk-based opportunities for consideration**
- **Initial “ brainstorming” is not to be limited by constraints of cleanup agreements**

RISK-BASED END STATE PARTICIPATION TIMELINE

July 3, 2003	DOE Draft Guidance issued
September 11, 2003	Final Guidance issued
September 15, 2003	Preliminary draft sent to DOE-OH
October 14, 2003	Ohio Field Office peer review
November 18, 2003	Public Meeting
December 1, 2003	Draft RBES Vision report to DOE-HQ
December 2, 2003	Continued discussion – FCAB Meeting
January 15, 2004	Deadline for stakeholder input to FCP
January 31, 2004	Final RBES Vision report to DOE-HQ

PUBLIC PARTICIPATION OPPORTUNITIES

Three Parallel Initiatives

- **Risk-Based End State Vision**
- **Comprehensive Groundwater Strategy Report**
 - **Mod 38 required evaluation of groundwater infrastructure**
- **Ongoing Cleanup Opportunities**



Purpose

- **Develop and understand the Risk-Based End State for all sites, even beyond EM closure sites**
- **This may or may not be the same as the current end state**
- **Directed by Secretary of Energy**
- **Interest from Congress**



Background

- **RBES Policy approved on July 17, 2003**
- **Purpose: Focus DOE management on cleanup that achieves clearly defined, risk-based end states.**
- **Risk-based end states:**
 - **Reflect the planned future use of the property**
 - **Are appropriately protective of human health and the environment**
 - **Are consistent with that {end state} use**
- **Complies with CERCLA and RCRA**



RBES Implementation

- **Continue to comply with existing requirements**
- **Based on an integrated site-wide perspective (including the current and future use of surrounding land)**
- **Based on exposure scenarios developed in baseline risk assessments that help establish acceptable exposure levels**
- **Consider all nine CERCLA remedy selection criteria when a CERCLA cleanup**
- **Consult with affected and interested stakeholders and ask regulators to concur**

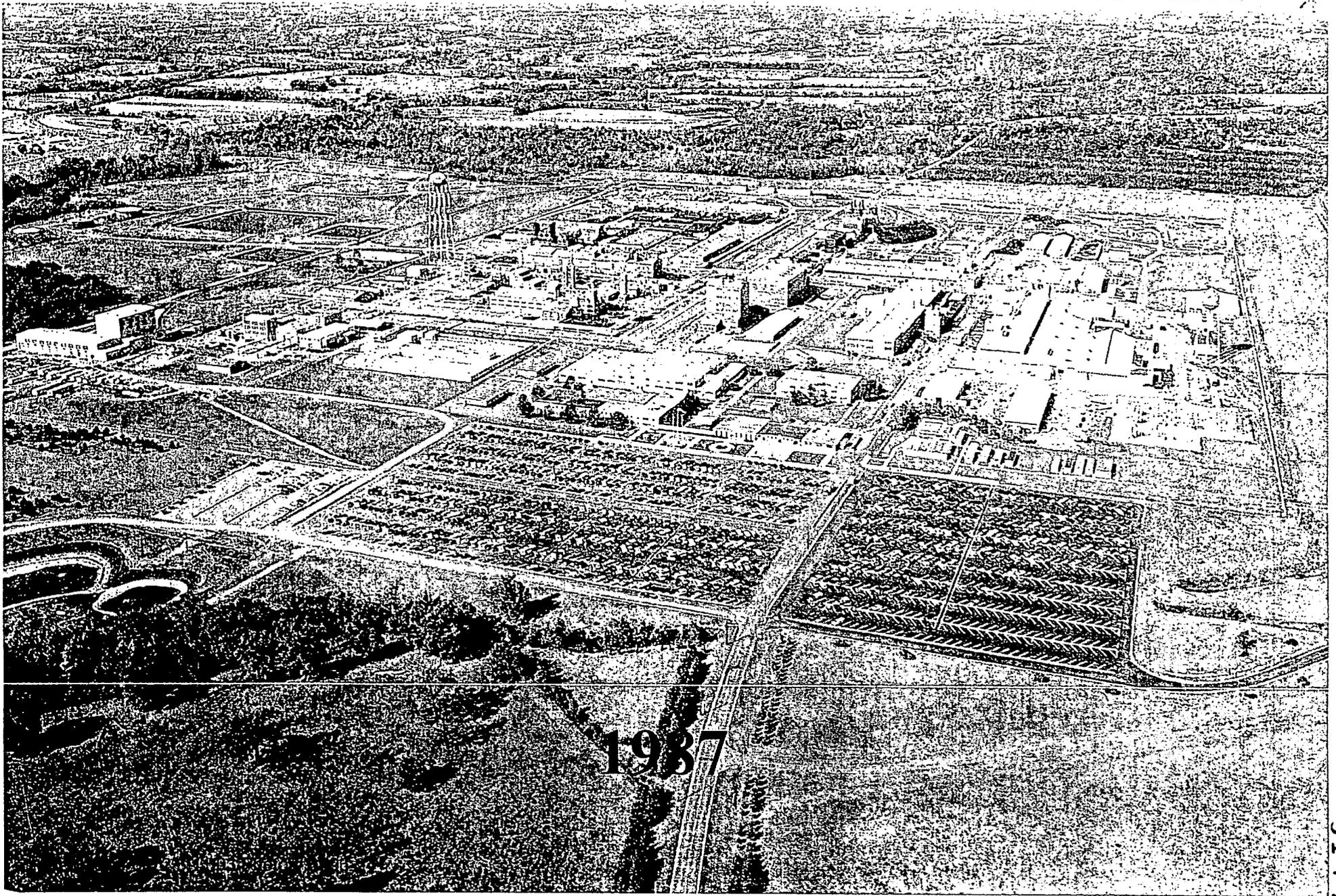
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Safe, Compliant
Closure 2008

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FEED MATERIALS PRODUCTION CENTER

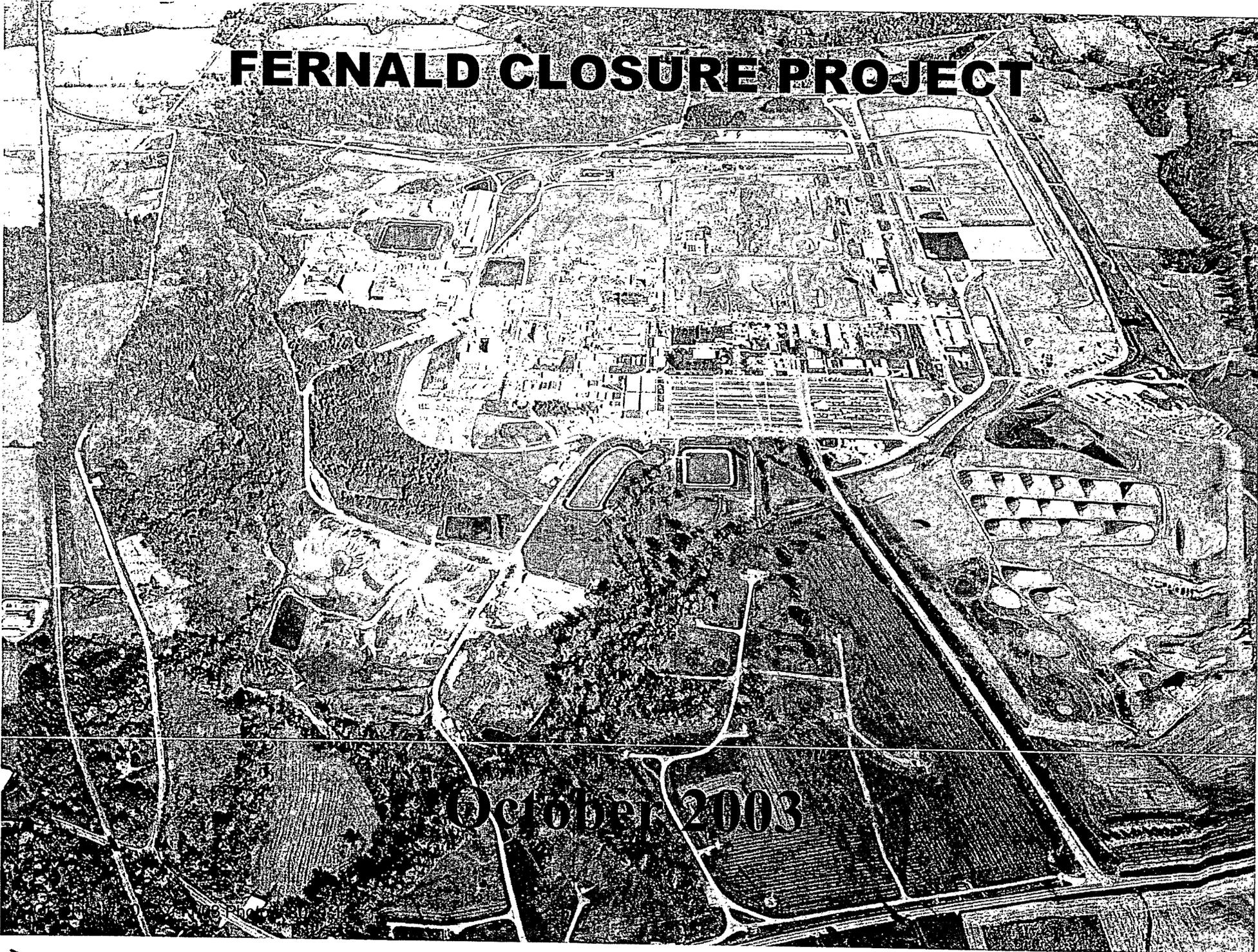


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FERNALD CLOSURE PROJECT

October 2003



RISK-BASED END STATE VISION

- **Hazard Area 1 - On-Site Disposal Facility**
 - Application of WAC by averaging in each cell of OSDF
 - Discharge OSDF leachate that meets surface water cleanup levels to on-site ponds
- **Hazard Area 2 - Subsurface Soils/Sediments**
 - Application of sediment FRLs for streams and ponds
 - Use cross-media preliminary remediation goals for subsurface soil
- **Hazard Area 3 - Surface Water/Groundwater**
 - Monitored Natural Attenuation
- **Hazard Area 4 - Access/Infrastructure**
 - Stabilize and abandon outfall lines, cofferdam and monitoring wells

HAZARDS AREA 1

On-Site Disposal Facility

- **Current End State**
 - **Application of “not-to-exceed” Waste Acceptance Criteria (WAC)**
 - **Continuous treatment of leachate as generated**
- **RBES**
 - **Application of WAC by averaging in each cell of OSDF**
 - **Discharge of leachate (1 gpm) to surface water bodies without treatment as long as surface water Final Remediation Level (FRLs) are met**
 - **On-site disposal of 30,000 cubic yards above WAC soil**

HAZARDS AREA 2

Subsurface Soils/Sediments

- **Current End State**
 - **Application of surface soil FRLs (e.g. 82 ppm uranium) for streams, ponds and subsurface soils**
- **RBES**
 - **Application of sediment FRLs (210 ppm uranium) for streams and ponds**
 - **Application of Cross-Media Preliminary Remediation Goals (CPRGs) for subsurface soils**
 - **Subsurface soil to be used as backfill**

HAZARDS AREA 3

Surface Water/Groundwater

- **Current End State**
 - **Full restoration of Great Miami Aquifer both off and on property**
 - **Treatment to meet uranium discharge requirements to Great Miami River (GMR)**
 - **Completion anticipated in 2021**
- **RBES**
 - **Full restoration of off-property area**
 - **Monitored Natural Attenuation (MNA) of remaining on-property area once off-site restoration is complete**
 - **This approach changes groundwater end state**

HAZARDS AREA 4

Access/Infrastructure

- **Current End State**
 - **Remove all concrete storage pads, parking lots, roads and below-grade piping**
- **RBES**
 - **Stabilize and abandon outfall lines, cofferdam and monitoring wells**
 - **Schedule reduction of 90 days**

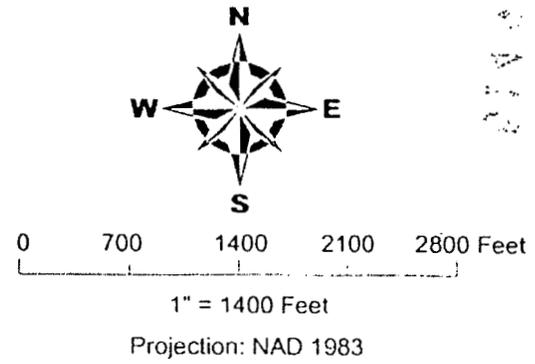
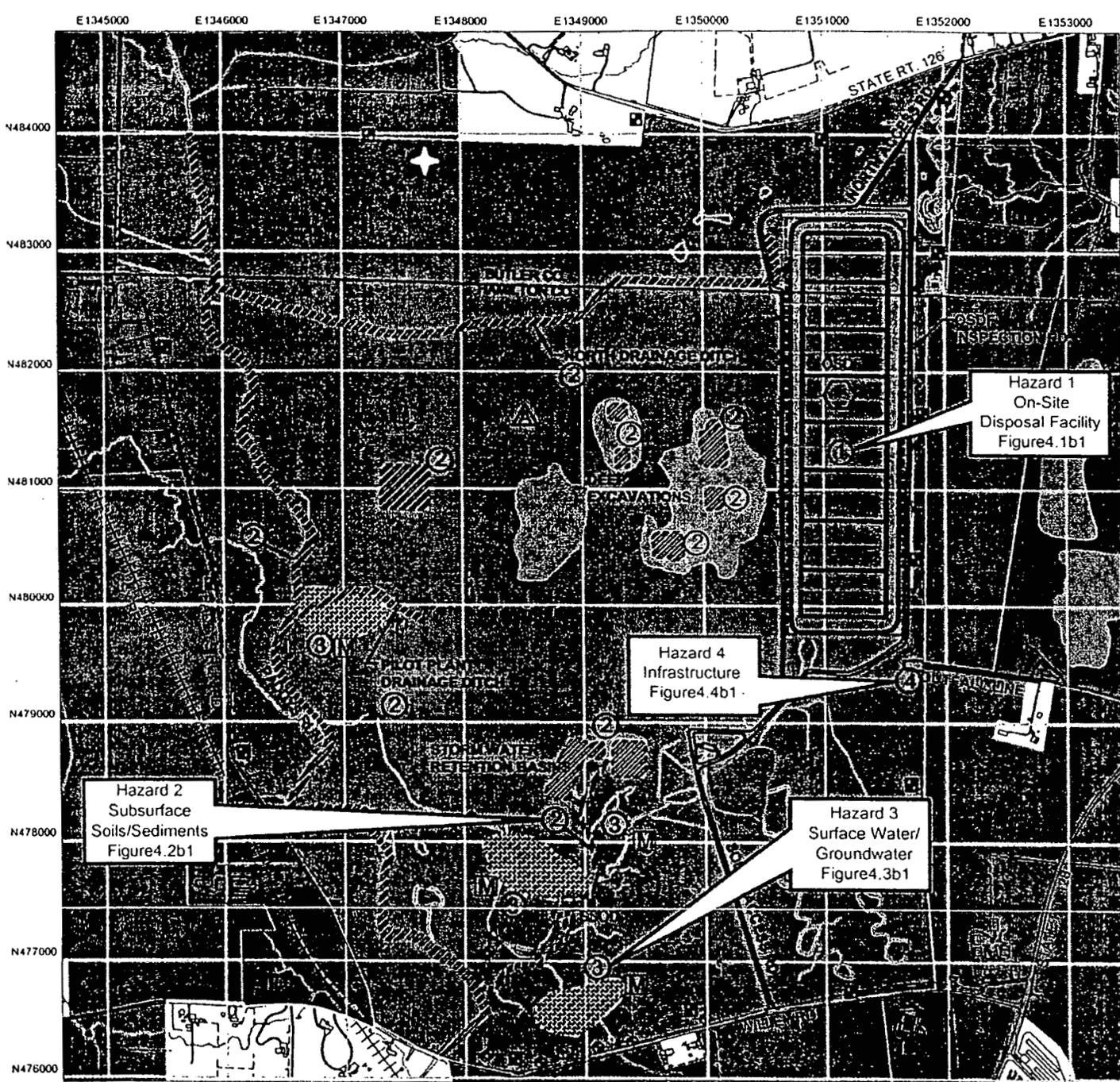
COMPREHENSIVE GROUNDWATER STRATEGY REPORT

Proposed Participation Timeline

October 21, 2003	Public Meeting
December 2, 2003	FCAB Meeting – range of options
January 13, 2004	FCAB Meeting – continue deliberations
February 2004	Seek FCAB recommendation
March 2004	Concurrence on groundwater decision

ONGOING CLEANUP OPPORTUNITIES

- **Initiatives that do not affect end state residual contaminant levels**
- **Some Examples**
 - **Leave some roadways and parking areas**
 - **Use clean rubble and gravel as fill**
 - **Leave clean buildings to support Legacy Management needs**
- **Continue Normal Public Participation Process**



- Legend:**
- Roads
 - +—+— Railroad
 - County Boundary
 - - - - Federal Site Boundary
 - - - - Fence
 - ~ Waterways
 - ⬡ Disposal Cell
 - ▨ Area of Concern - Soil
 - ▩ Area of Concern - Plume
 - ⚡ Extraction Well
 - ⊕ Injection Well
 - ⚡ Monitoring Well
 - ~ Private Well
 - ⊠ Air Monitoring Station
 - ⊕ Hazard Area
 - ⚠ Institutional Control
 - Ⓜ Monitored Natural Attenuation
 - ⋆ FCP is a National Priority List Site
 - Leachate Transmission System
 - OSDF On-Site Disposal Facility
 - SSOD Storm Sewer Outfall Ditch

- Land Use Color Legend:**
- Residential
 - Agricultural
 - Restricted Access
 - Commercial

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