

Newport Chemical Depot Slides



Presentation for **Army Basing Study Group**

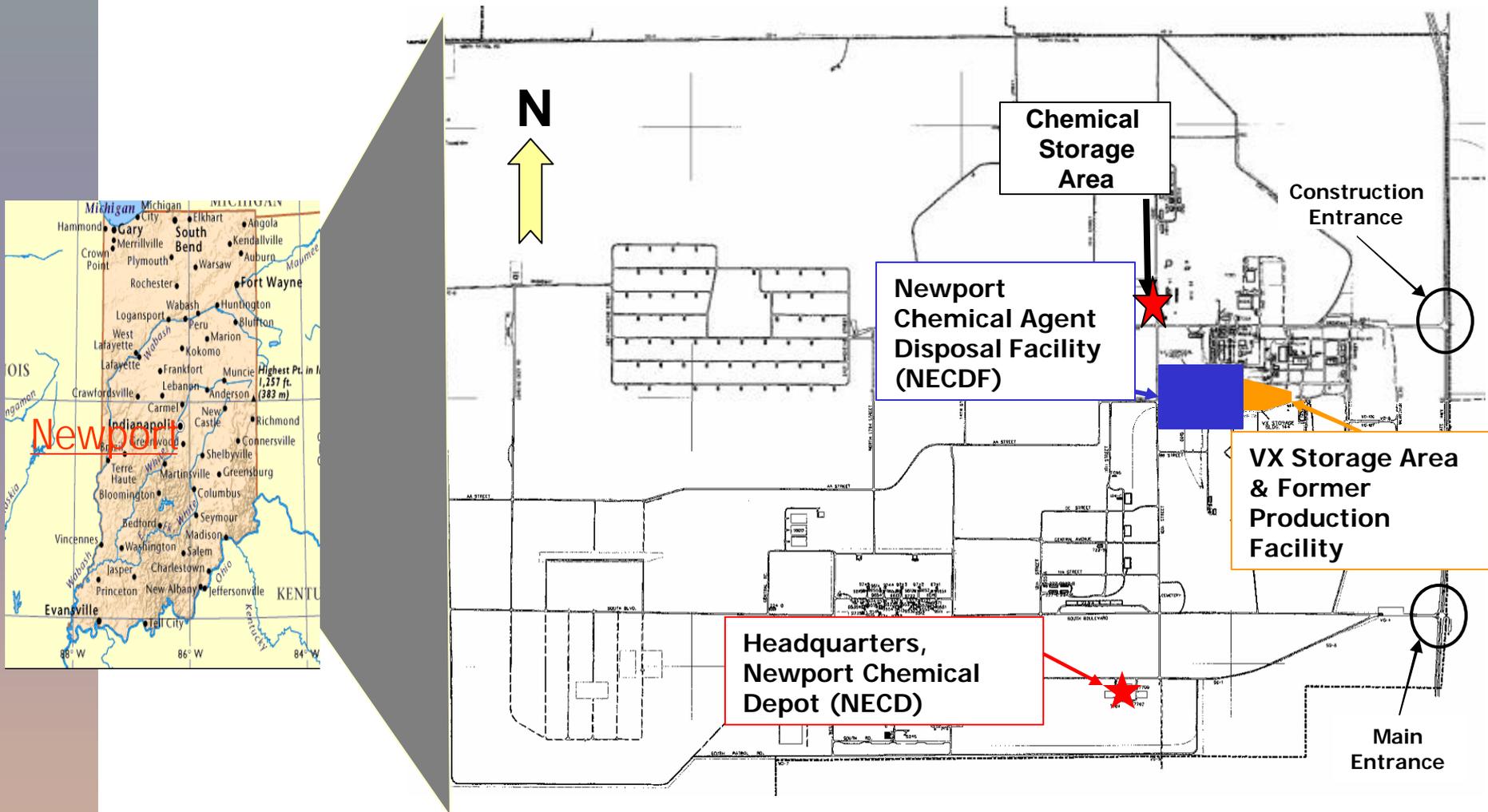




History

- 1941 Est. Wabash River Ordnance Works
- 1943-46 Manufacture RDX Explosive
- 1943-44 Constructed Facility For Heavy Water
- 1944-46 Heavy Water Production
- 1951-57 Manufacture RDX Explosive
- 1952-57 Heavy Water Production
- 1958-61 Built VX Facility
- 1961-68 Manufactured Chemical Agent VX
- 1969 Moratorium on VX Production & Shipment
- 1968-73 Construction of TNT Facility
- 1973-74 TNT Production
- 1993 Lost TNT Mobilization Mission

Newport Chemical Depot Slides



Mission

- **Safe and Secure Storage *and Destruction* of Agent VX**
- Environmental Compliance & Stewardship
- Chemical Treaty Compliance Program
- Chemical Stockpile Disposal Program
- Chemical Stockpile Emergency Preparedness Program
- Train Soldiers
- Maintain Plant Facilities
- To safely destroy the stockpile of nerve agent VX while protecting the public, employees and the environment.
- Demonstrate neutralization based destruction technology

NECD Features

- 7,097 Acres
 - 4,000 Leased for Agriculture
 - 1,900 Standing Timber
 - Wildlife
- Security/Fire Department
- 3 Installation Wells -- 7 Mil. Gal. Reservoir
- Sewage Treatment Plant (3,000 pop.)
- State Hwy 63 Frontage (Connects I-70 & 74)
- 5 Cemeteries
- 8 Storage Magazines (52 Richmond Mags)

Personnel

- GOCO - Government Owned, Contractor Operated
 - Mason & Hanger Corporation, (Day & Zimmermann)
Philadelphia, PA.
 - Operating Contractor Since 1986 **(325)**
- Gov't Staff - 1 Military, 13 DoD Civilians
 - 1 Military IMA
- Additional Population:
 - **Newport Chemical Agent Disposal Facility (556)**
 - **Chemical Stockpile Defense Force (CSDF) (70)**
 - **Tennessee Valley Authority (110)**
 - **SAIC (10)**
- Second-largest Employer in Vermillion County

Chemical Agent VX Storage Bulk Liquid in Ton Containers

- All Agent Stored Indoors
- **Security**
 - Installation closed
 - Storage Area:
 - Fenced, high security area
 - Intrusion Detection System
 - Continuous Surveillance
 - Testing and Exercises
- **Safety**
 - Sloped floors
 - Agent monitoring system

Newport Chemical Depot



Non-Stockpile Former VX Production Facility

**Step III
August 2000 - 2007**



**Steps 0,I,II
COMPLETE**

Environmental Restoration Status

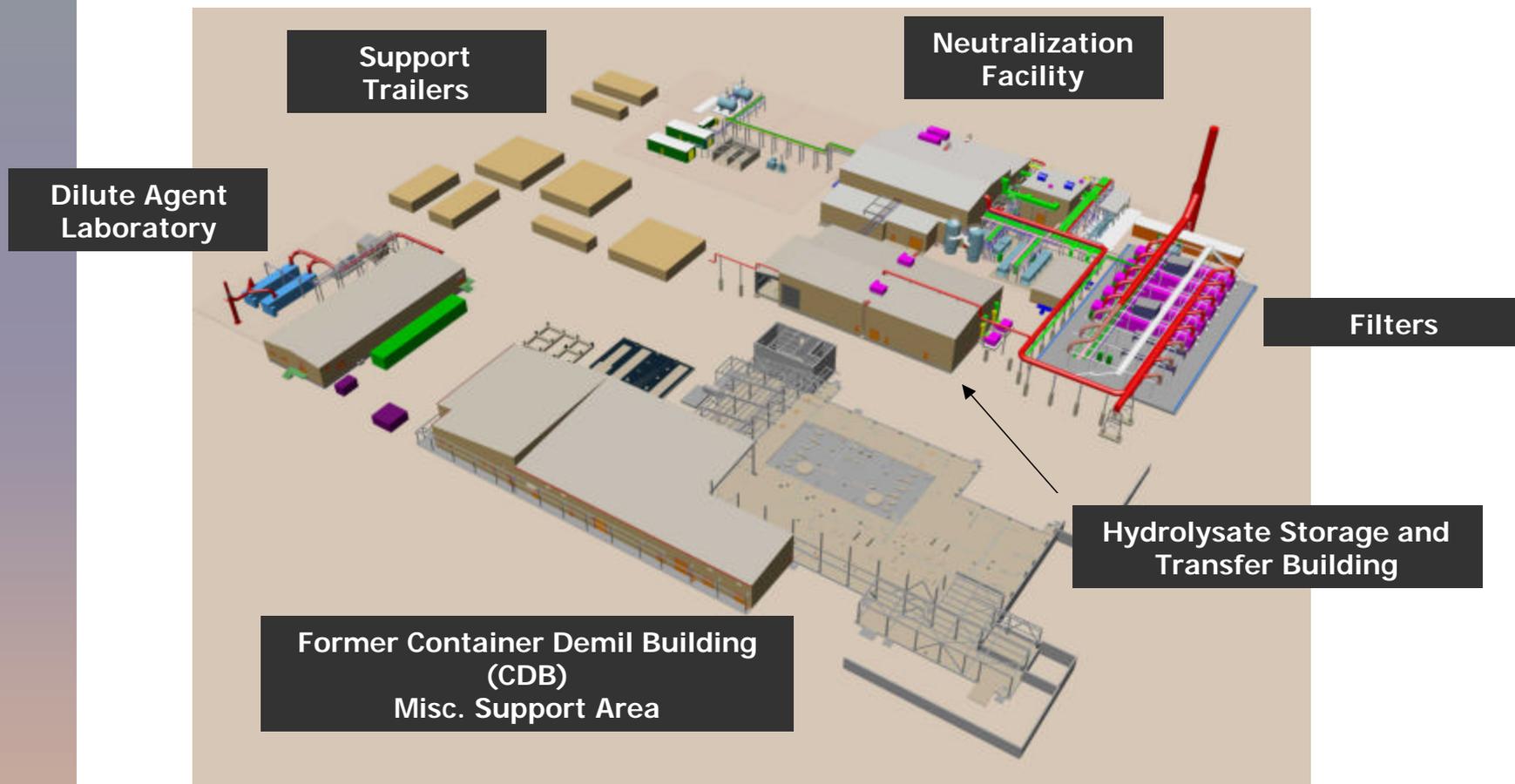
- Not On Base Realignment and Closure List
- Not On National Priority List
- NECD is a Resource Conservation and Recovery Act (RCRA) Installation
- Primacy transferred from EPA Region V To IDEM
- Remediation Areas Comprise About 540 Acres
- Formed Restoration Advisory Board

Environmental Investigations to Date

- 1996-98, 2000-02 Field work
- 32 sites investigated to date
 - Army has recommended 19 sites for no further action or land use restrictions only (IDEM concurred January 2004)
 - Remediation complete at one site (TNT burning ground) and ongoing at RDX mfg area
 - 7 other sites in 2 areas planned for remediation
 - 4 sites now under review
- Approx 300 of 7,097 acres will require land use controls

NECDF

Facility Layout



NECDF Facilities



- **Permanent Facilities**
 - **Utility Building**
 - 19,500 square feet pre-engineered metal building
 - Main processing building
 - TC draining and VX neutralization
 - Potential TC container processing area
 - **Process Auxiliary Building**
 - 14,000 square feet pre-engineered metal building
 - Supports Neutralization by housing sub systems
 - Sodium hydroxide storage
 - Process water
 - Personnel protective equipment
 - Loading/unloading dock

- **Permanent Facilities (Continued)**
 - **Filter Farm Building**
 - Six - 300 square feet, pre-engineered activated carbon filters, (one spare)
 - Removes organic material by use of HEPA Pre-filters, and activated carbon beds
 - **Lab Building**
 - 9,500 square feet, pre-engineered with support facilities
 - Activated carbon filters, boiler/chillers and waste storage vault
 - Provides all chemical analysis to support operations

- **Permanent Facilities (Continued)**
 - **Old Chemical Demilitarization Building**
 - Partially completed concrete metal building from original baseline
 - Usage will be maintenance offices, secondary waste containment, and maintenance work area
 - **Medical/Safety Building**
 - 4700 square feet, prefabricated wood modules
 - Personnel emergency medical area during operations
 - **Entrance Control Building**
 - 1400 square feet, prefabricated steel modules
 - Monitoring and control of facility security

NECDF Facilities



- Support Facilities
 - 4160 KVA substation
 - Two Stand by Diesel Generators with fuel oil storage
 - 36,000 square feet office building complex
 - 16,000 square feet site warehouse
 - General Purpose – Modular construction (trailers)
 - 3,600 square feet - maintenance Locker/showers
 - 1700 square feet - treaty office
 - 1,700 square feet - maintenance break room
 - 790 square feet – Gas bottle storage area

NECDF Manpower As of 1/12/04



- Systems Contractor Staff: 525 (Inclusive of subcontractors)
- Field office staff: 31 (Inclusive of Government staff and support contractors)

NECDF Operations



- VX destruction scheduled to begin 3rd Quarter Fiscal Year 2004
 - Additional manpower being applied to achieve schedule
 - Predicated on off-site disposal of hydrolysate
- Achieving hydrolysate that is non-detect for VX (MDL < 20ppb) has been problematic
- Operations at Newport will likely begin with reduced VX loading
- Will look to optimize VX loading during controlled start-up
- Reduced loading could significantly lengthen operations
 - Operation duration is believed to be 20 to 24 months
 - Operations could grow to as much as 48 months if 8% loading can not be improved
 - Evaluating impacts to plant and laboratory operations

NECDF Closure



- Decontamination of process equipment and piping by Systems contractor
- Disposal of all waste product to landfill
- Dismantling of contaminated process equipment and piping including laboratory
- Remaining facilities will be certified as clean and remain in place
- Duration 12 to 24 months

Accomplishments

- Constructed state of the art Chemical Storage Site
- Relocated VX Chemical Stockpile to new secure site -
- Construction of Demil Facility completed
- Successfully dismantled & liquidated the TNT production facility
- VX production facility over 60% dismantled
- Secretary of the Army Environmental Award 2003
- Sampled and disposed of PCB contaminated items
- Closed NECD Sanitary Landfill
- Upgraded heating of most buildings with individual heating systems