


US EPA ARCHIVE DOCUMENT



# **Contaminated Structures**

**By Will Duncan, EPA & Sara Goldsmith, EPA**



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# What are we going to talk about . . .

- ◆ Overview of Contaminated Structures Problem and the Five Year Plan to Address it
- ◆ Phase I Completed Assessments & Cleanups
- ◆ Phase II: Walk Through Current Process & Lessons Learned from Phase I
- ◆ Challenges
- ◆ Questions and Answers

## The Problem

- ◆ Residential structures may have been constructed using abandoned mine materials or built on or near abandoned mines
- ◆ Materials include:
  - ◆ Chunks of ore and waste rock used for foundation, walls, or fireplaces
  - ◆ tailings mixed into cement used for foundations/floors
  - ◆ cinder blocks contaminated by tailings
- ◆ Radioactive materials used in the construction of homes and hogans as well as contamination in surface soil can result in exposure of current and future residents to elevated levels of radiation

# Example Structures



# Ceremonial Hogan



## Five Year Plan – The Big Picture for Structures

- ◆ **EPA with NNEPA will Assess ~500 structures in 5 years**
- ◆ **EPA will cleanup structures w/elevated radiation levels under CERCLA/Superfund authority**
- ◆ **Structure Assessments - Initial Screens by NNEPA**
  - ◆ Existing lists
  - ◆ List of ~ 500 ¼ mile of AUM
  - ◆ NNEPA interviews with Chapter Officials & Residents
- ◆ **NNEPA Refers Structures/Yards to EPA**

EPA in coordination with NNEPA completes radiological assessments and makes final determination on structures/yards requiring cleanup
- ◆ **EPA Remediation and Compensation**
  - ◆ Demolish or partially demolish structures & provide alternative lodging
  - ◆ Remove contaminated soil/landscape and replace/restore
  - ◆ Provide Replacement Structures or Financial Compensation

# Phase I Summary

- ◆ **Geographic Area:**  
Teec Nos Pos, Cane Valley, Red Valley, Cove & Tuba City
  
- ◆ **Time-line:**  
Winter 2007 through Fall 2010
  
- ◆ **The Final Numbers:**
  - ◆ Assessed - 113 structures on 56 homesites
    - Tuba City Reassessed May 2009: 4 structures on 3 homesites
  - ◆ Demolished - 27 structures (8 occupied)
    - Tuba City 1 hogan to be demolished in Fall 2010
  - ◆ Yards Cleaned - 10 yards
  - ◆ Financial Compensation – 10 Financial Cashout Settlements
  - ◆ Rebuild by Owner – 1 Settlement covering 2 structures
  - ◆ EPA Rebuilt Structures – 14
  
- ◆ **All Phase I EPA Rebuilds Complete by Fall 2010**



# Phase II Summary

- ◆ **Geographic Area:** Churchrock
- ◆ **Timeline:** Summer 2009 to Present
- ◆ **The Numbers:**
  - ◆ NNEPA referred 27 homesites with 24 structures of concern
  - ◆ EPA in partnership with NNEPA assessed all 81 structures on the 27 homesites
  - ◆ EPA determined 6 structures & 2 retaining walls required action
  - ◆ EPA authorized \$4.2 million to remediate these structures/yards
- ◆ **Next Steps**
  - ◆ EPA Fieldwork to begin Spring 2011

# Replacement Structures



## Replacement Structures



Log Home and Hogan



## Phase II – Improved Process

- ◆ **Access for EPA Radiological Assessment**
  - ◆ Establish all ownership interests as early as possible
  - ◆ Preference - copy of Homesite Lease or Grazing Permit
  - ◆ Issue when persons other than lessee has interest in structure
  - ◆ Issues identifying/locating heirs when owner deceased
  - ◆ Consent or Decline audio/video/photographic recording
  
- ◆ **Lesson Learned:** EPA prefers structure owner provide copy of homesite lease, grazing permit, or probate documents and identify all known persons with interest in structure early in process
  - ◆ Contacting and reaching consensus with large extended families
  - ◆ Obtaining documents from Navajo Lands Dep't or probate documents

## Phase II Con't - Improved Process

- ◆ **Establishing Background By Geographic Region**
- ◆ **Cleanup Action Level**
  - ◆ 15mRem/yr above background
  - ◆ > 4 picocuries/liter for Radon Gas
  - ◆ Hotspot readings in building materials
- ◆ **EPA Makes Final Cleanup Determinations**
  - ◆ Issues Action Memo authorizing funding

## Phase II Con't - Improved Process

- ◆ **Sign Access Authorization & Compensation Agreements with All Owners Before Demolishing**
  
- ◆ **Cash Out Settlement Agreement**
  - ❖ Based on value of “Materials” to rebuild “decent, safe and sanitary” (DSS) comparable replacement structure
  - ❖ No real estate market for comparing “appraisals”
  - ❖ Phase I : Homes approx \$50,000 and Ceremonial and B&B Hogan approx \$30,000 - \$39,000
  - ❖ **No longer offering Rebuild by Owner Agreement Settlement**
    - Could not assure timely completion & DSS and limited interest
  
- ◆ **Rebuild by EPA**
  - ◆ Phase I Options: Log Homes or Hogans & Modular Homes (3bdr/2bath)

**Rebuild Models and Cashout Values may vary by Region & Builder**

## Phase II Con't - Improved Process

- ◆ **Temporary Housing Options and Agreements**
  - ◆ **New** - U.S. Army Corps of Engineers Administering
  - ◆ **New** - Residents sign Temporary Housing Agreements
    - identifying all receiving benefits
    - terms/obligations
  - ◆ Hotels, per diem, livestock & pet costs, travel costs
  
- ◆ **EPA Resident Interviews w/NNEPA**
  - ◆ **Purpose** - Identify owners and operators liable under CERCLA to allow EPA to recover its costs
  - ◆ **Structure Information** – When built and source of materials used to construct structures
  - ◆ **Mine Information** – Location of mines and mills relative to structure, and family members who worked at mines
  - ◆ **Any other info** helpful to identifying source of contaminated material used in structure or found in yard

## Phase II Con't - Improved Process

### ◆ Demolition at Beginning of Building Season

- ◆ Exception for emergency “hot” structures
- ◆ Minimize disruption and time out of home
- ◆ Limited construction season – Winter too harsh for building
- ◆ Coordination with Navajo Tribal Utility Authority (NTUA) to disconnect utilities and reconnect when Rebuilt complete

### ◆ Rebuilding by EPA

- ◆ Subcontractors (builders) may vary by region so rebuild options and monetary values may also vary
- ◆ Lack of utilities at some locations (DSS issues)



# Phase II Con't New & Improved Process

- ◆ **Completion of Rebuilt Structure**
  - ◆ **Structure Inspection with EPA & Structure Owner**
    - Time to Identify any defects/problems
  - ◆ **Notice of Completion**
  - ◆ **Termination of Temporary Housing Benefits**
  - ◆ **Problems with Structure – Warranty with Builder (Residents should call Builder not EPA)**

## Challenges

- ◆ Translating Language and Cultural Differences
- ◆ Discussing Superfund/CERCLA Risk Concept
- ◆ Finding and Meeting with Residents (No “9 to 5” day)
- ◆ Locating and notifying all interested Owners when structure abandoned
- ◆ Peacekeeper Option if structure ownership in dispute or if multiple owners can’t reach consensus
- ◆ Timely disconnecting and re-connecting utilities
- ◆ Incidental damage to personal property
- ◆ Preventing future homesite locations on uranium contaminated land

## Upcoming Actions

- ◆ **Tuba City (last part of Phase I)**
  - ◆ EPA issued Action Memo on August 16, 2010 authorizing up to \$228,551 to demolish 1 unoccupied hogan
  - ◆ EPA to begin fieldwork in Fall 2010
- ◆ **Church Rock (Phase II)**
  - ◆ EPA issued Action Memo on July 21, 2010 authorizing up to \$4,218,439 to demolish 6 structures and 2 rock walls
  - ◆ EPA to begin fieldwork in Spring 2011
- ◆ **Phase III Homesite Assessments**
  - ◆ NNEPA to complete initial homesite screens - Date TBD
  - ◆ EPA in partnership with NNEPA will conduct homesite radiation assessments – Date TBD