

Contaminated Structures Project

Vivian Craig
Sr. Environmental Specialist
Navajo Superfund Program
NAVAJO NATION EPA



Contaminated Structures Project

- Background:
 - Radioactive sand/rock waste from mines used for building homes in the past (foundations).
 - 2007 – EPA mapped and identified ~500 structures near mines
 - Plan: Assess 100 structures per year, clean up or replace contaminated homes
 - First 5-Year Plan was initiated in 2008



Sad, Emotional, Disheartening



End Result

CSP Process

- Structures found above Investigation Level are referred to EPA
- EPA conducts detail assessment, removal of structures/soil from yards, and rebuilds as necessary

CSP S



6/ 5/2013



**Scan with a Ludlam 2221
Scaler Ratemeter**



Waiting to be Manifested

Project - Updates

- Summary:

- Total number of structures screened to date: 1,080 (including Phase I)
- Remediated: 40 structures
- Removed and rebuilt: 38 structures
- Cash settlement for removal only: 2 structures
- Residential yards cleaned-up: 22 yards
- Rock walls
- Contaminated soil/rocks on yards

- NSP was already performing radiological surveying in 2008 but not widely on structures
- In 2008, USEPA was the lead and NSP built capacity while assisting USEPA
- CSP was a new technical horizon that Navajo Nation embarked in 2009
- NSP purchased similar equipment used by USEPA, completed assessment of 965 structures, and referred to USEPA only structures above Investigation Level

Building Capacity of Navajo Superfund Program

Equipment Calibration

- Equipment is calibrated by third party annually to get reliable and legally defensible data
- Every field work day, NSP conducts calibration checks before and after work in the field with source to make sure standard calibration is valid

Field Work

- Once NSP team gets access agreement, NSP performs radiological survey inside/outside home/structure and yard
- Investigation Level = Average Background
- Reading + (10 x Standard Deviation)

Priority of Selecting Home Sites

- Residents who live within a quarter mile around the AUMs
- Residents who request for home radiation survey, stating mine materials may have been used to build their structure(s)
- Residents who live within a quarter mile to a mile around the AUMs

Community Outreach

- Planning/Chapter Meeting
- Announce CSP work in the region
- Provide sign-up sheet for CSP work at chapter meetings
- Word of mouth
- Local Radio Announcement

Work Progress

- Northern AUM Region (2008)
- Eastern and Northern AUM Regions (2009-2010)
- Western AUM Region (2011)
- Northern, North-Central, Central, Southern AUM Regions (2012-2015)

Phase 1-Northern & Western Regions

• Chapters	• # of Structures Surveyed
◦ Teec Nos Pos	◦ 18
◦ Red Valley	◦ 56
◦ Cane Valley	◦ 40
◦ <u>Tuba City</u>	◦ <u>1</u>
Total	115

Phase II-VII-Total 965 CSP Screened

Northern	178
◦ Cove, Newcomb, Red Valley, Shiprock, Sweetwater Teec Nos Pos, Mexican Water	
Central	103
◦ Hard Rock, Blue Gap/Tachee, Tselani/Cottonwood, Whipporwill	
Eastern	431
◦ Baca/Prewitt, Breadsprings, Church Rock, Iyanbito, Mariano Lake, Pinedale, Standing Rock, Thoreau, Nahodishgish,	
Western	238
◦ Dennehotso, Oljato, Shonto, Chilchinbeto, Cameron, Bodaway/Gap Tuba City, Tonalea	
Fort Defiance	15
◦ Greasewood, Indian Wells, Jeddito, Whitecone	

Removal Work Progress at Eastern AUM Region

- 8 structure replacements , one cash settlement, and 10 yard clean up work completed
- Rebuilding of one structure is in progress
 - House turned over on April 1, 2016
- NN Community Housing and Infrastructure Department (CHID) was awarded a Grant to rebuild structure for USEPA



BH-034H



**American
Disability
Act**





Before and After



SW-001







**Before
and
After**





Before



After

Issues

- Home Site Lease or transfer of name
- Utility Connections (Safe, Sanitary & Decent)
 - Electric
 - Water
- Probate
- Disputes
- CONFIDENTIALITY

Community Voices

- Residents are optimistic to get home scanned and replaced if necessary
- Some residents are frustrated that the CSP did not start till 2008
 - Uranium mining occurred in 1950's - 1980's
 - Residents live with realizing danger in their home

Streamlining Process

- EPA and NSP are working towards streamlining the process with the combined survey work
- Reduces the duration from scanning to removal work



Thank you.