Abandoned Uranium Mine Technical Services and Cleanup Industry Days

Thursday September 15, 2016

This pre-proposal conference is for informational purposes only. It may answer some offeror questions; USEPA posts all questions at FedConnect.net. Statements or representations made during this conference are not legally binding. Changes resulting from this conference are official only if issued through a written amendment to the RFP.

Tronox Settlement Overview

Kerr McGee/Anadarko/Tronox Settlement History

- In **1929** Kerr McGee was founded as an energy company involved with oil and gas exploration and production, and uranium mining;
- From **1940 – 1980** Kerr McGee conducted uranium mining operations (Cove, AZ and Ambrosia Lake, NM) leaving behind abandoned mines, mine structures, and contaminated waste material;
- In **2005/06** Kerr McGee divided it's business into their chemical business (old Kerr McGee) and their oil & gas business (Kerr McGee) and transferred a significant portion of their environmental liability to old Kerr McGee renamed **"Tronox"**;
  - **"Tronox"** became an independent company;
  - Anadarko acquired Kerr McGee for $18 billion;
- In **2009 "Tronox"** filed suit against Kerr McGee and Anadarko for fraudulent conveyance which resulted in bankruptcy;

Kerr McGee/Anadarko/Tronox Settlement History

- In **2009** the U.S. DOJ intervened to seek a judgement for current/future avoided environmental debts;
- Since **2009 "Tronox"** restructured under Chapter 11 which led to a Consent Decree and Environmental Settlement Agreement" which settled their environmental liabilities;
- In **2011** the Agreement became effective which resulted in cash payments and the creation of the Anadarko Litigation Trust that essentially took over the **"Tronox"** fraudulent conveyance suite against Kerr McGee/Anadarko;
- In **2014**, the U.S. DOJ entered into a settlement agreement with Anadarko Petroleum Corporation that provided almost $1 billion for cleanup of "Designated Navajo Area Uranium Mines" on and very near the Navajo Nation near Cove, Arizona and Ambrosia Lake, New Mexico; and
- **On January 23, 2015, the U.S. District Court approved the settlement.**

Tronox Settlement Overview

- February 11, 2011 **"Bankruptcy Settlement"**
  - US EPA received $12,039,562 in connection with the Designated Navajo Area Uranium Mines.
  - US EPA received $1,263,956 in connection with the Quivira Mine Site.

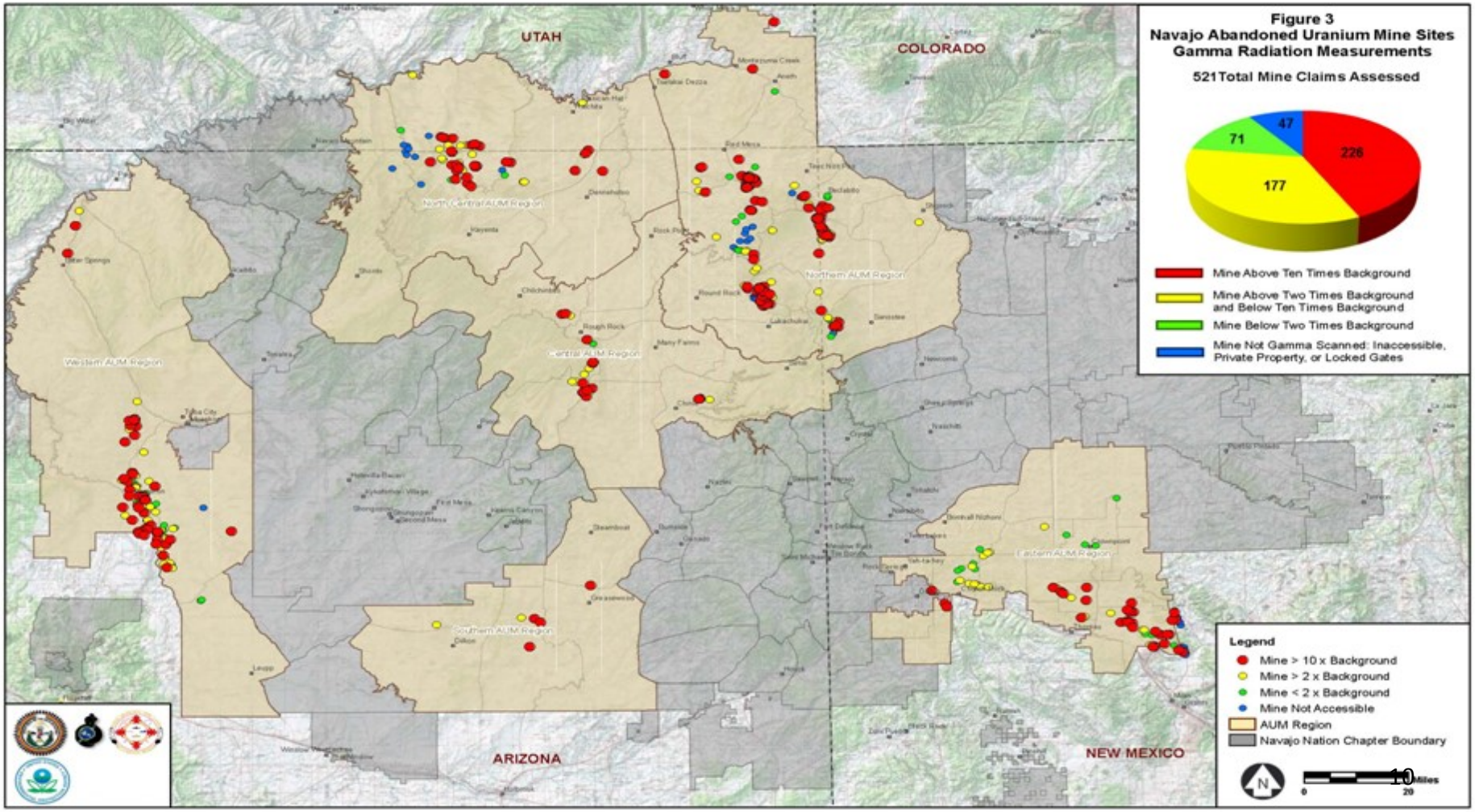
- January 23, 2015 **"Litigation Settlement"**
  - US EPA received, in addition to the bankruptcy settlement, a distribution of 20% (~$905 million) of the Anadarko Litigation Proceeds for approximately 49 uranium mines that were operated, and subsequently abandoned, by Kerr-McGee on and near the Navajo Nation territory.
  - US EPA received, in addition to the bankruptcy settlement, a distribution of 2% (~$90.5 million) of the Anadarko Litigation Proceeds for the Quivira Mine Sites.
  - Navajo Nation received a distribution of 1% (~$45 million) of the Anadarko Litigation Proceeds.

Navajo Area Uranium Mines

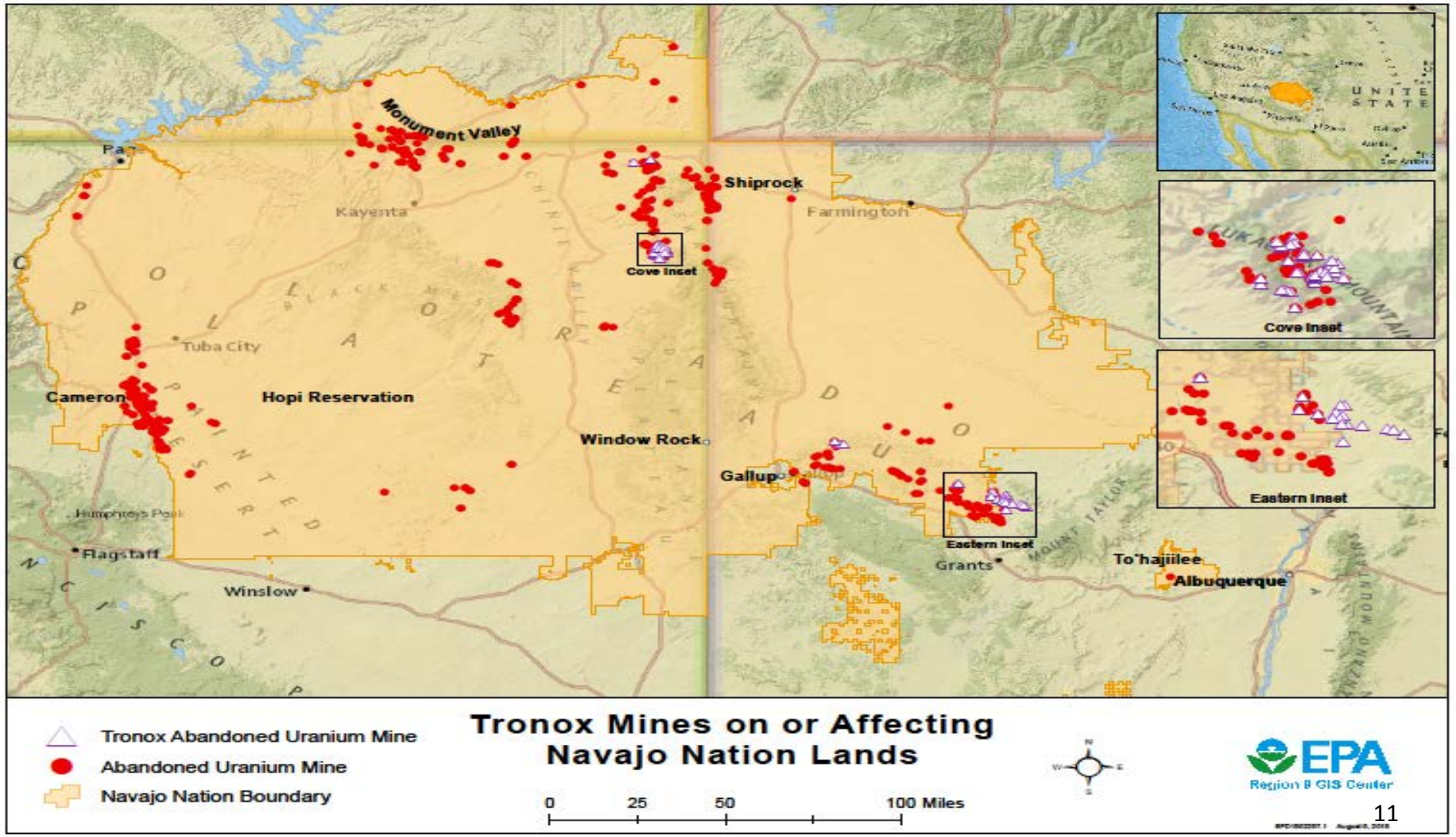
Navajo Area Uranium Mines

- 523 mine claims with 1270 features (waste piles, adits, rim strips);
- Some physical hazards remain, including open adits and vent shafts;
- Gamma radiation at 77% of mines exceeds 2 times background; and
- Varying mine size and ore production.

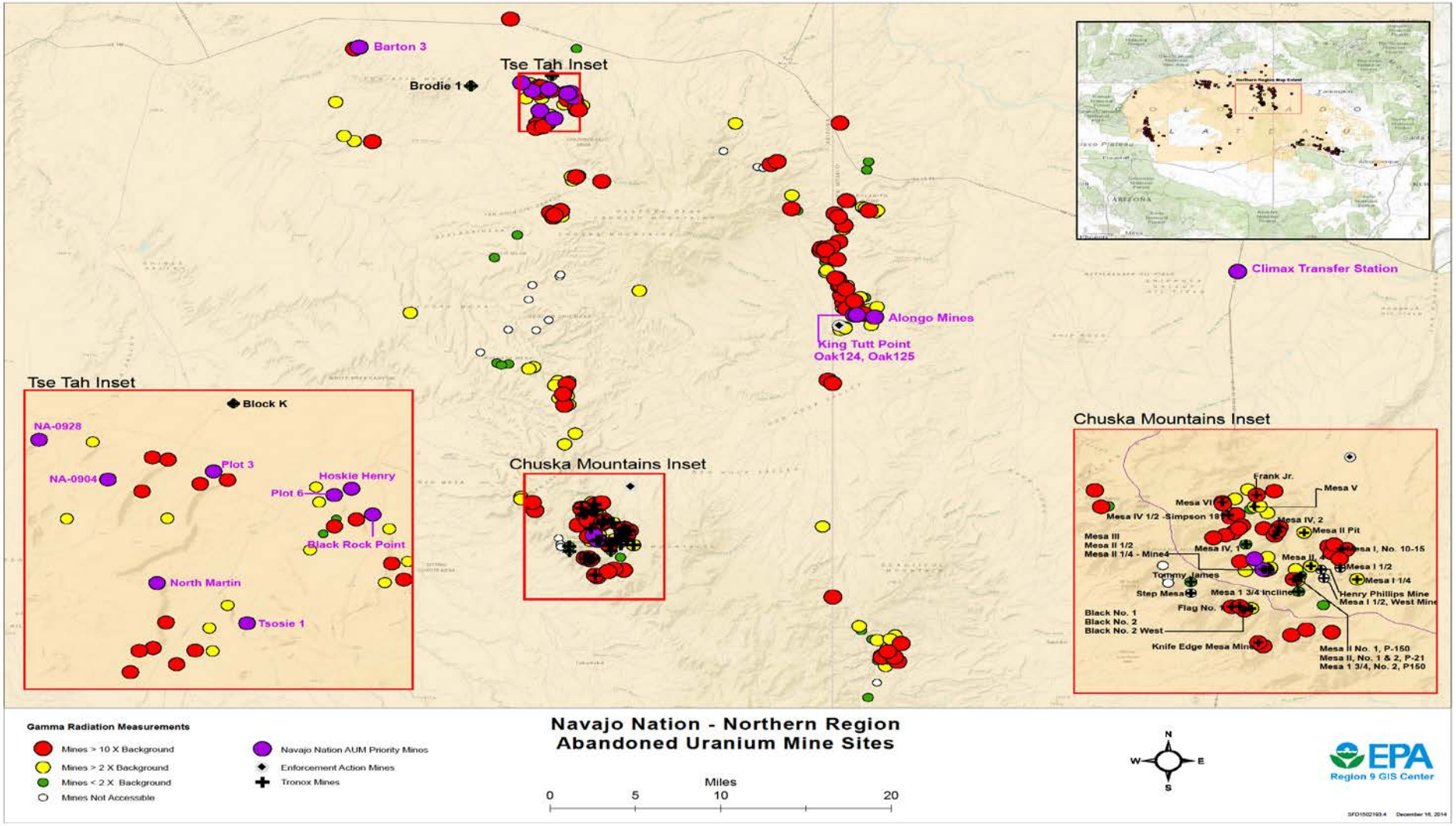
Navajo Abandoned Uranium Mine (NAUM) Sites



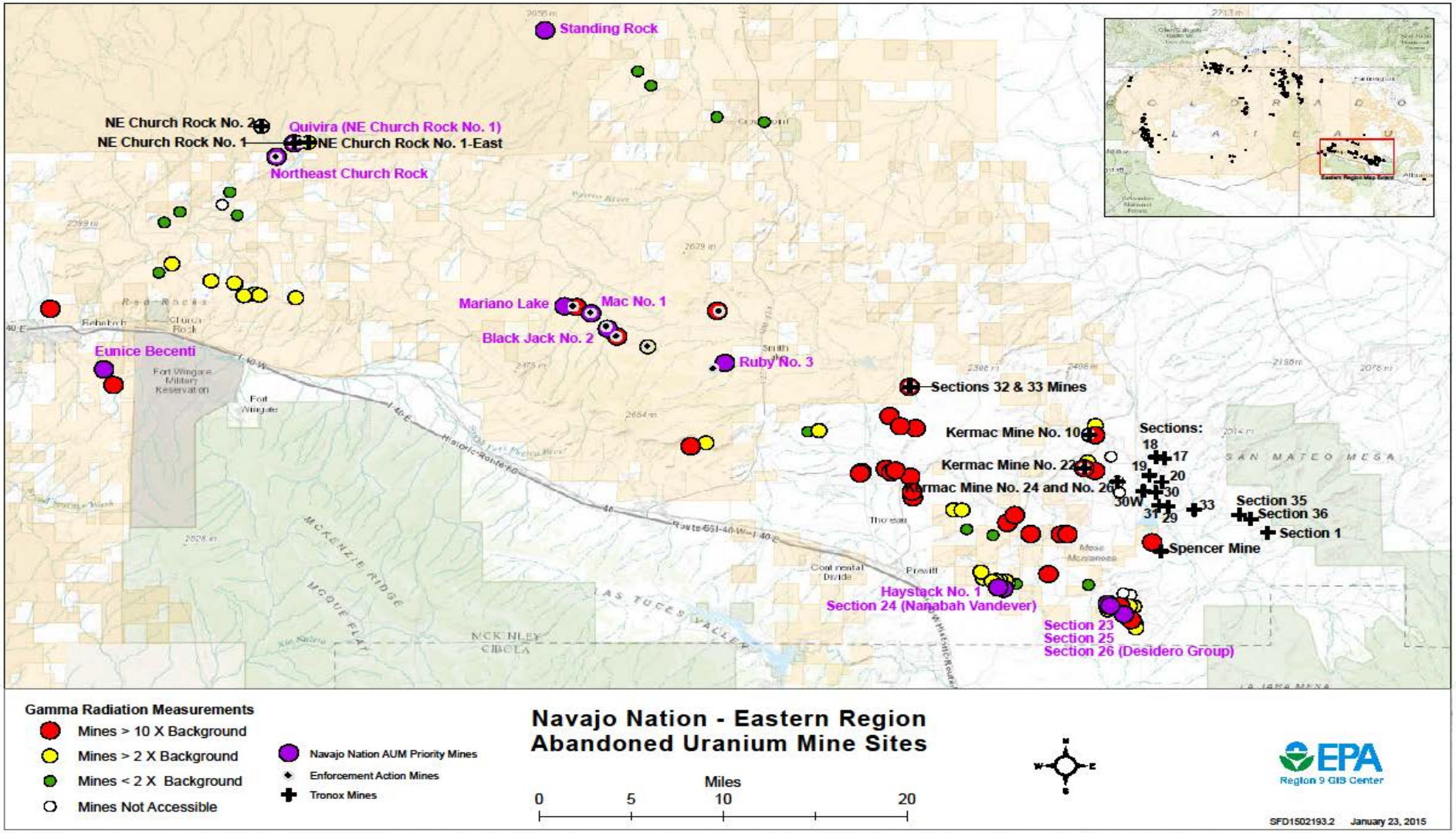
NAUM Tronox Mines



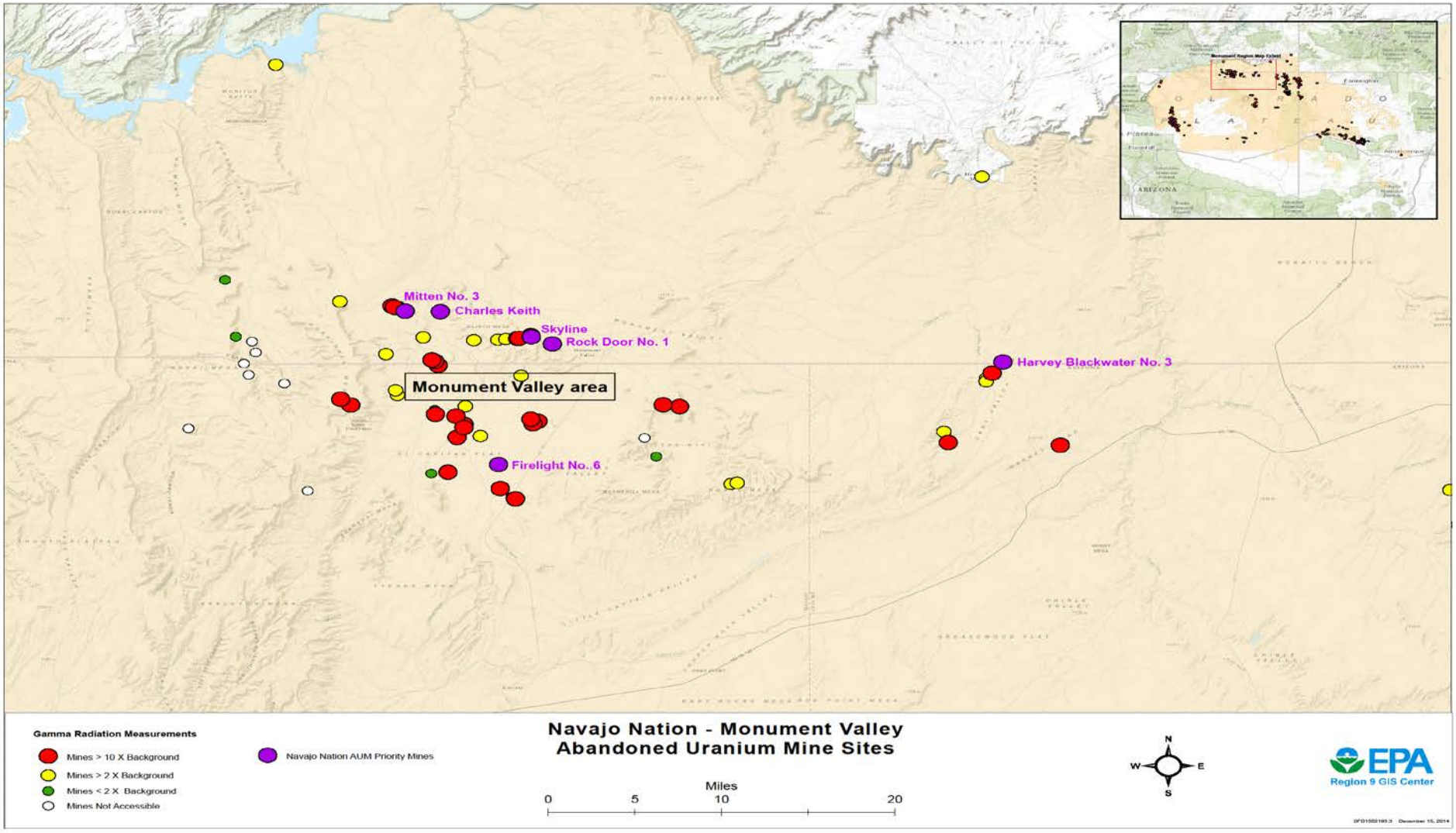
NAUM Northern Region



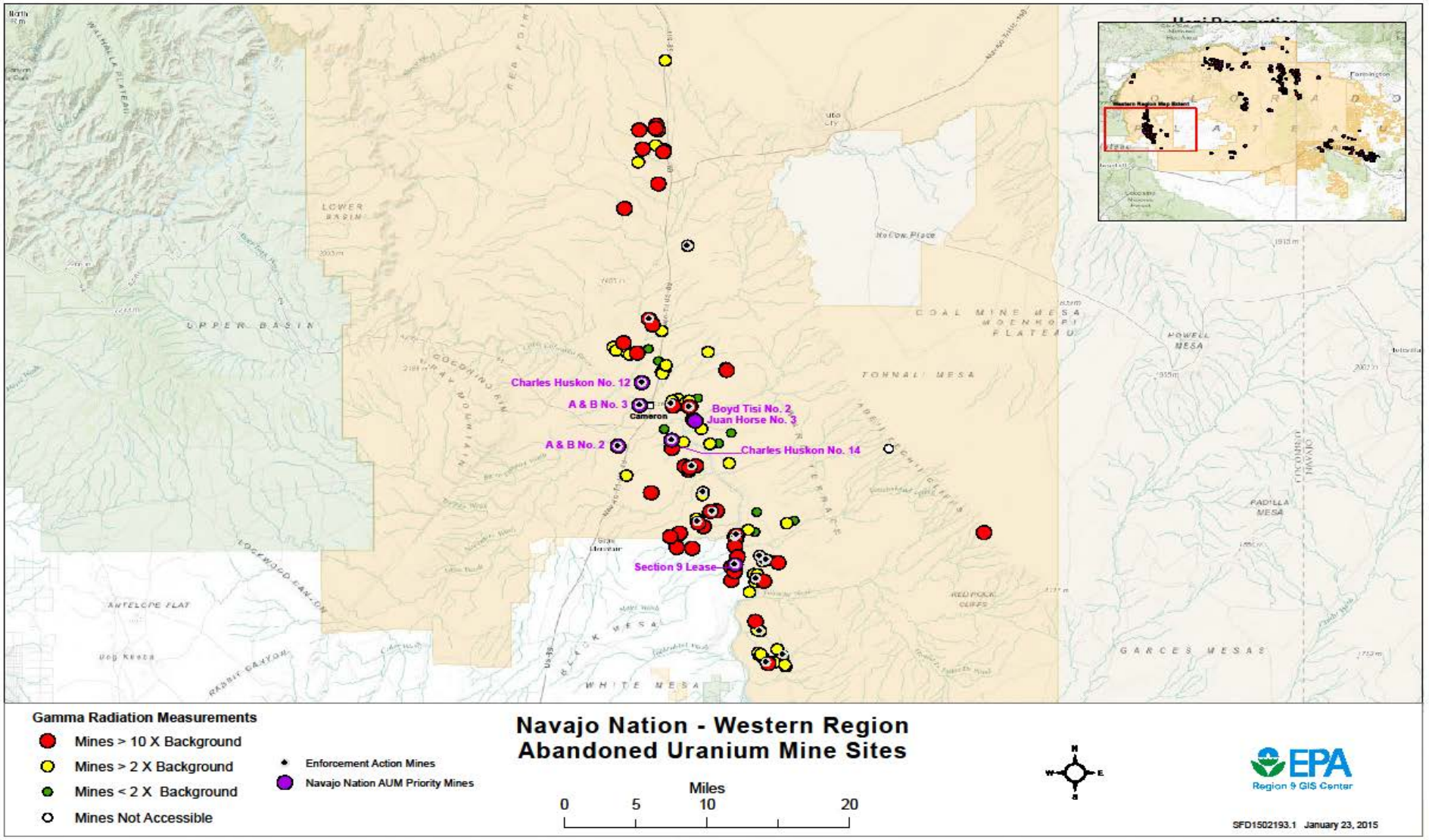
NAUM Eastern Region



NAUM Monument Valley

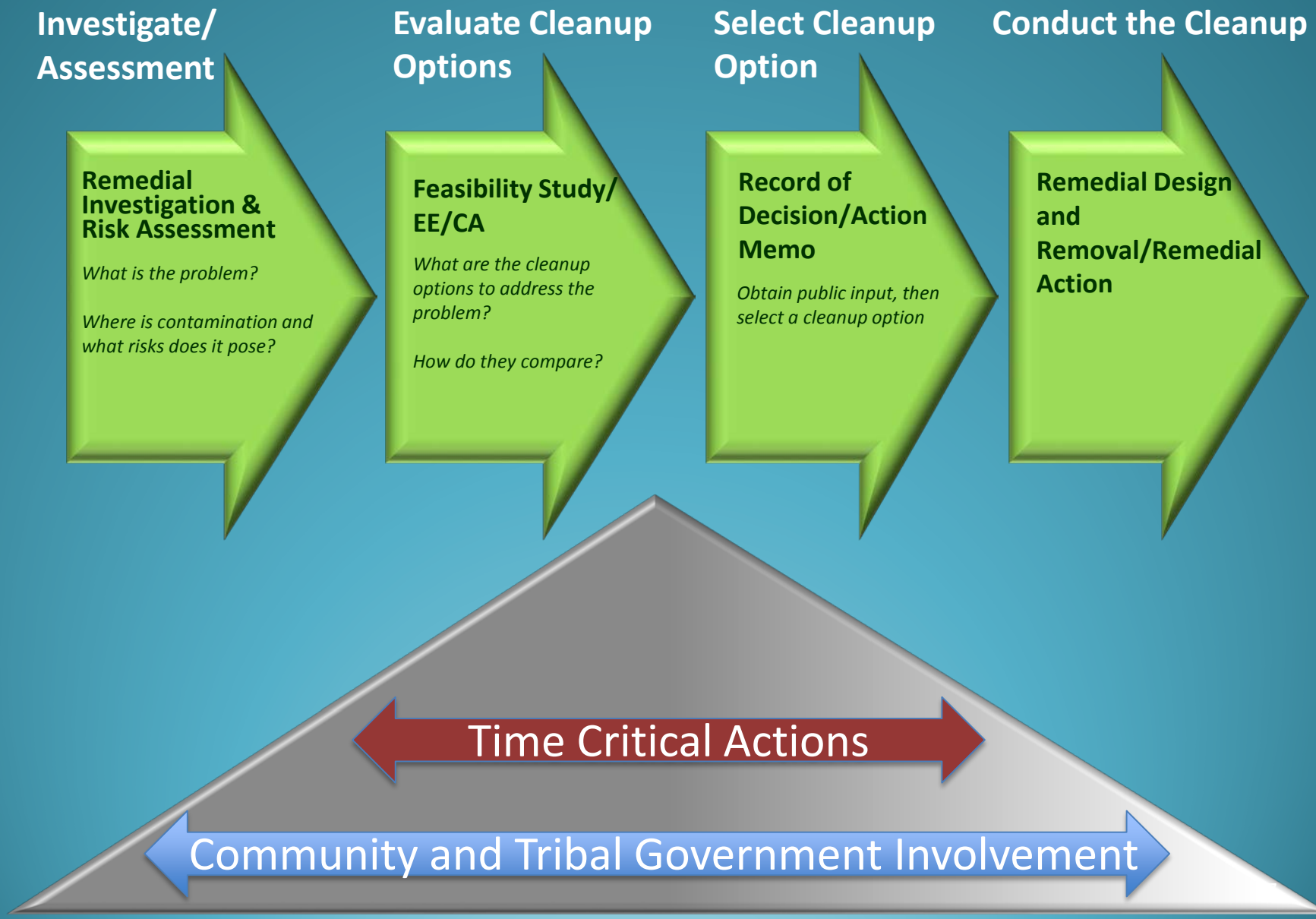


NAUM Western Region



RAES RFP SCOPE

The Superfund Process



Investigation and Cleanup Activities

Assess, Evaluations, and Select Cleanup Actions

Potential Opportunities

- Removal Site Assessment
- Site Reconnaissance
- Cultural Resources Survey
- Biological Survey
- Radiological Survey
- Site Characterization
- Land Surveying
- Engineering Evaluation/Cost Analysis
- Geology and Scientist
- Environmental sampling
- Analytical Services
- Data Management and Access
- Equipment Maintenance
- Logistics Support

Conduct Cleanup Action

Potential Opportunities

- Road building
- Construction Services
- Demolition Service
- Traffic control
- Mine Stabilization activities
- Cleanup activities
- Drilling, installation and development of groundwater monitoring wells
- Environmental sampling
- Waste disposal
- Trucking/transportation
- Logistics support

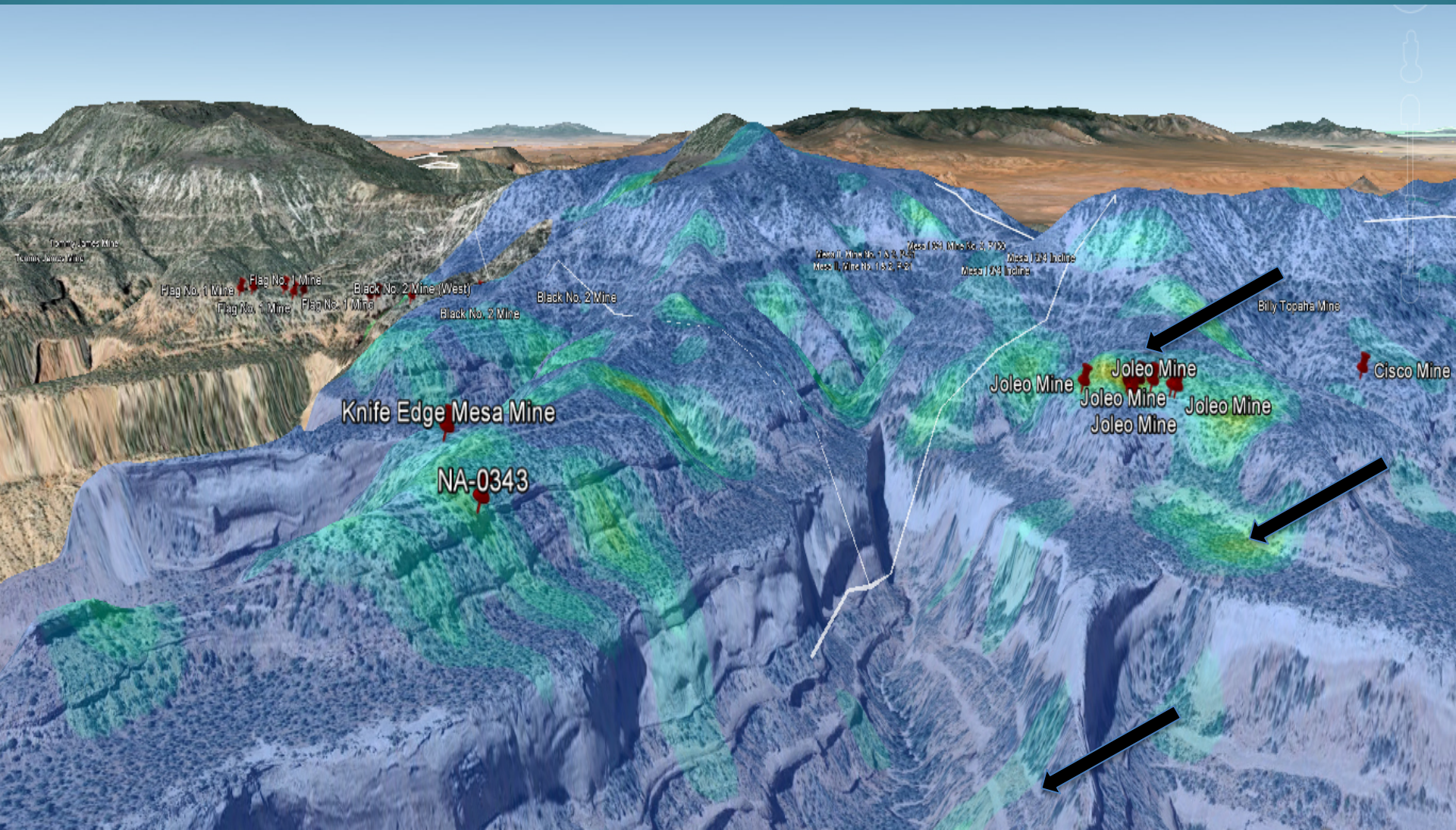
Community Involvement *(fact sheets, community liaison, translation)*

Time Critical Response Actions *(fencing, signs, removal, trucking)*

NAUM Primary Hazardous Substance

- The primary hazardous substance on these sites is radiological mine and mine related waste; therefore, a significant knowledge base of radiological material handling, environmental data interpretation, and data collection will be required to perform the activities within this SOW.

NAUM Site Conditions and Access



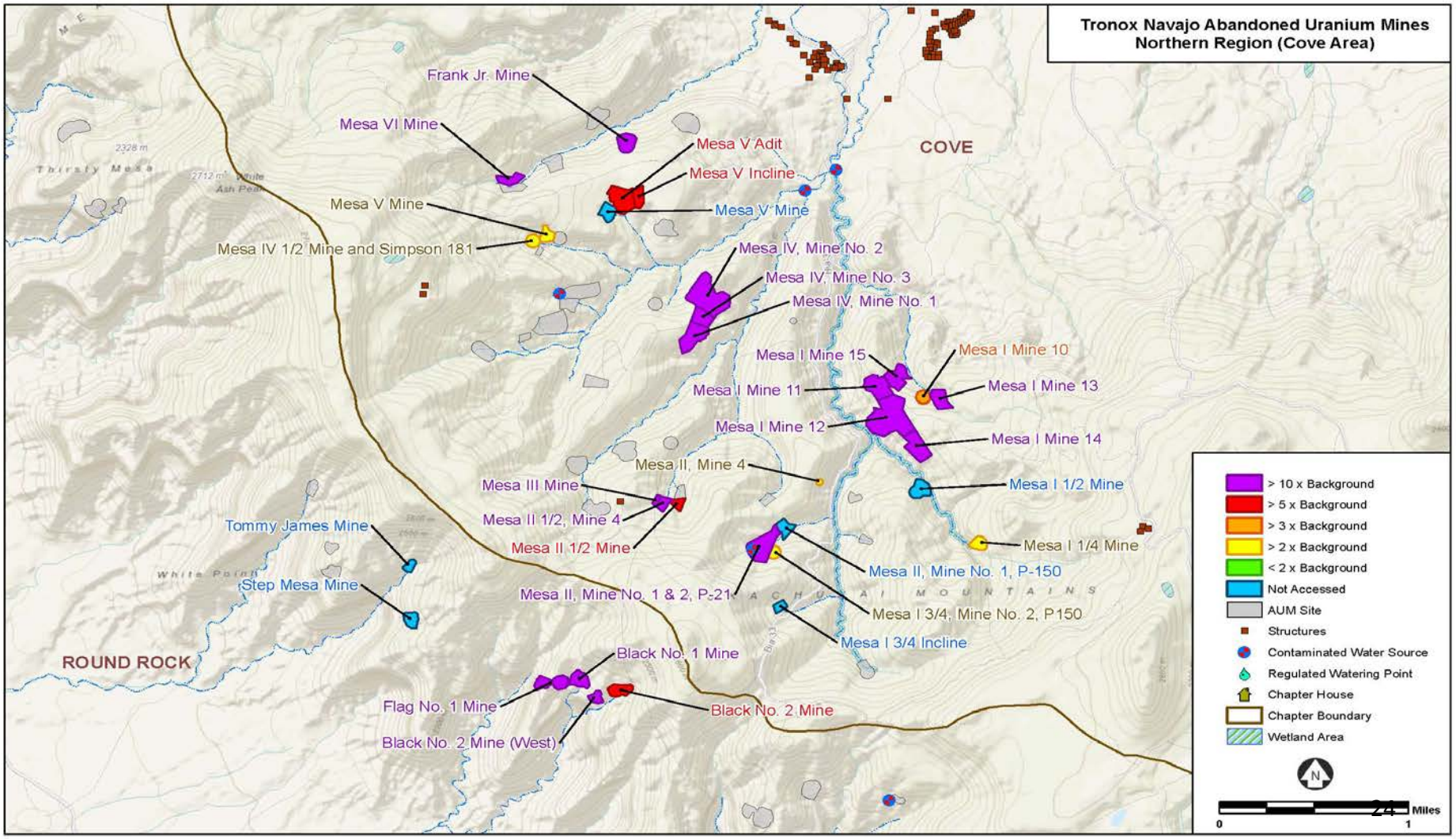
NAUM Site Conditions and Access

- The terrain to access site locations is rough, water is scarce and the weather is often extreme in most areas.
  - Trails and/or road to the sites are not improved or maintained. To reach the site locations four wheel drive vehicles (capable of driving over rough dirt/rocky roads) and/or long hiking are necessary. Roads can become impassable in wet weather, and conditions can change quickly;
  - In summer, site conditions are hot and dry; in winter, elevations make the sites subject to severe cold and high winds; and
  - Accessibility to the site locations may be obstructed or limited due to the lack access roads and/or poor road conditions. **Minimal road construction or repair** may be required for the purpose of accessing a site.

NAUM Site Conditions and Access

Northern Region – Cove Area

Northern Region – Cove Area



Cove Area Background

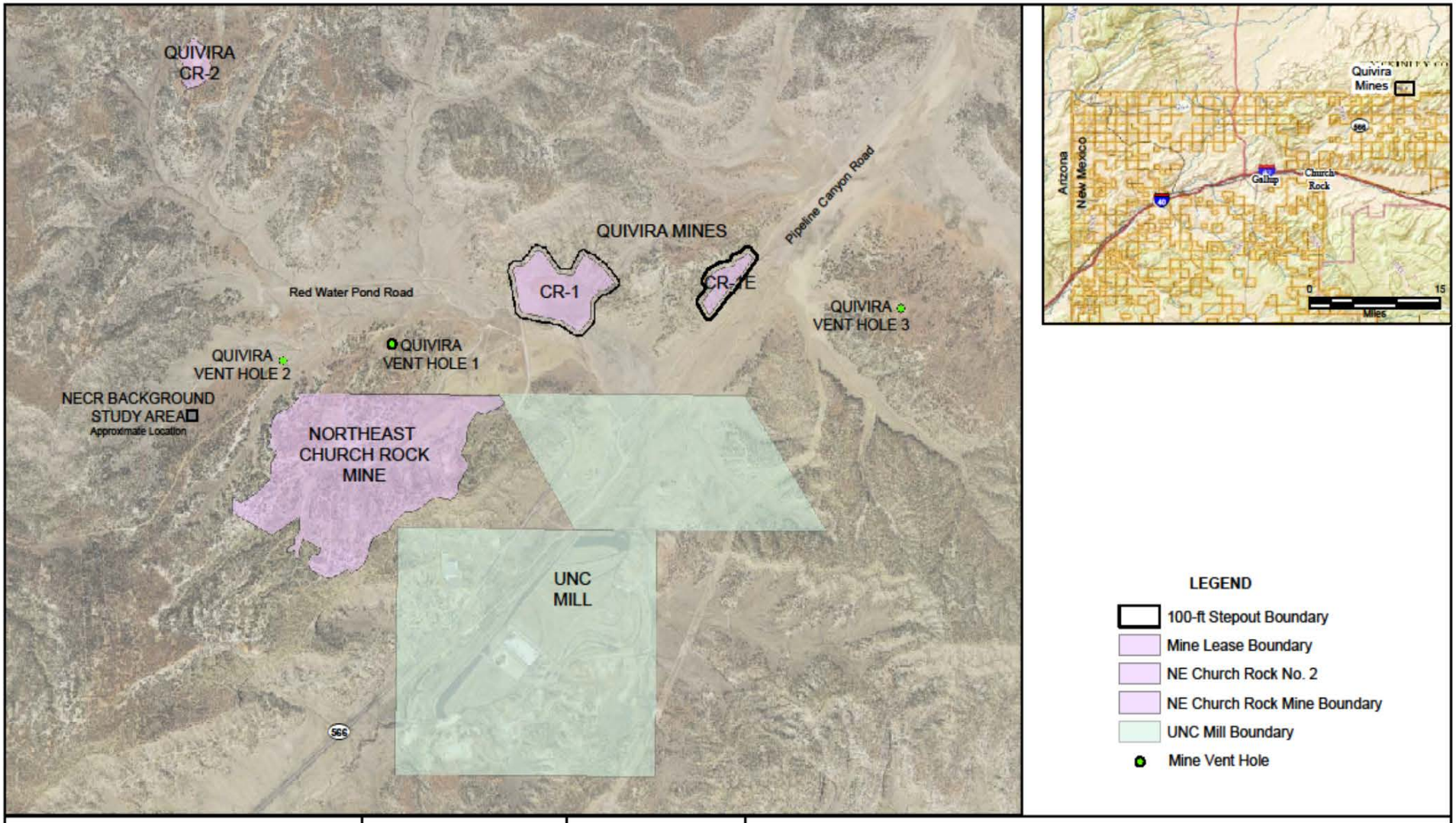
- 50 AUMs at top of mesas, with subsurface features;
- Waste piles on mesas and in surface waters;
- Drinking water wells, livestock water impacted; and
- High value natural and cultural resources.

Cove Mine Sites – Potential Work

- Potential type of work over the next 10 years
  - Removal Site Evaluations (RSE);
  - Engineering Evaluation / Cost Analysis (EE/CA);
  - Remedial Investigation / Feasibility Study (RI/FS);
  - Removal Action oversight;
  - Establishing field laboratories in support of NAUM fieldwork;
  - Surveying and tracking Mine access roads for maintenance;
  - Database Management;
  - Historical data record and document entry and management; and
  - Developing and updating field protocol and procedures.

Mine Access Challenges

Eastern Region – Quivira



Quivira Mines Background

- Two large subsurface mines located directly within a community;
- Estimated 800,000 cubic yards of contaminated waste rock;
- Several interim actions have been completed to consolidate the waste on to the two waste piles.

Quivira Mines - Potential Work

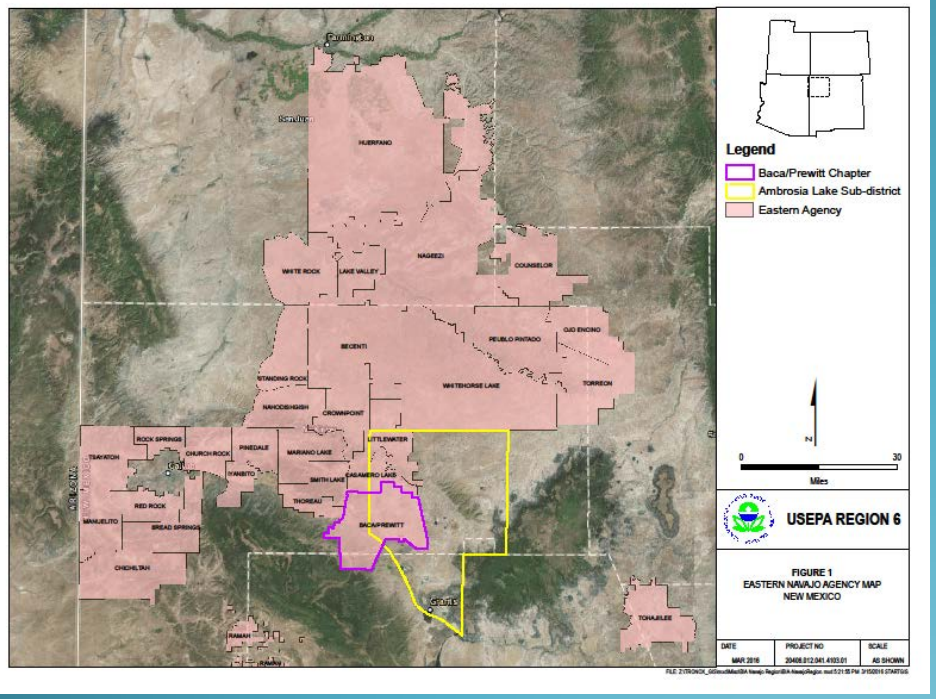
- Technical Support
  - Design of final action;
  - Air monitoring, soil sampling, gamma scanning, and other support during the final action;
  - Field lab development and operations;
  - MARSSIM Final Status Surveys and closeout documentation.

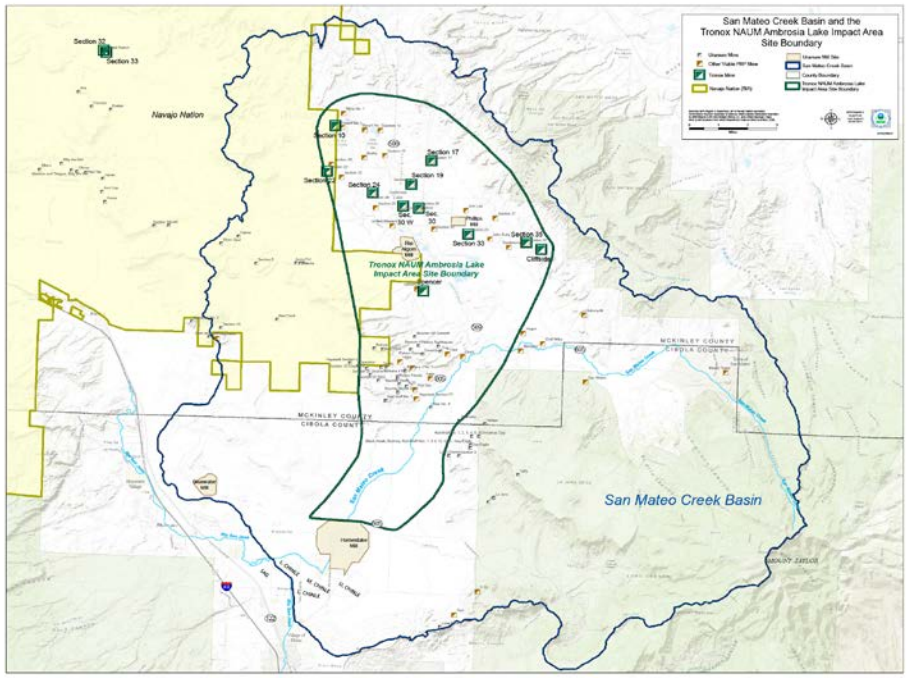
- Construction
  - Maintenance of current covers for several years until the final action begins;
  - Final remedy has not yet been selected, but any remedy will involve large amounts of earth moving and rock and soil transportation to address 800,000 cubic yards of material.

Repair of the Existing Cover at the Quivira Mine Site

Eastern Region - Ambrosia Lake Sub-district

AMBROSIA LAKE SUB-DISTRICT





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

Ambrosia Lake Sub District Background

- 12 uranium mine surface expressions in the ALSD area of the Tronox settlement
  - 8 EPA 6 lead
  - 3 EPA 6 and 9 co-lead (Section 10, Section 22 and Section 32/33)
  - 1 BLM lead
- ALSD Removal Assessment Areas
  - Section 32/33
  - 3 Geographic Sub-Areas

NAUM Sites – Potential Work

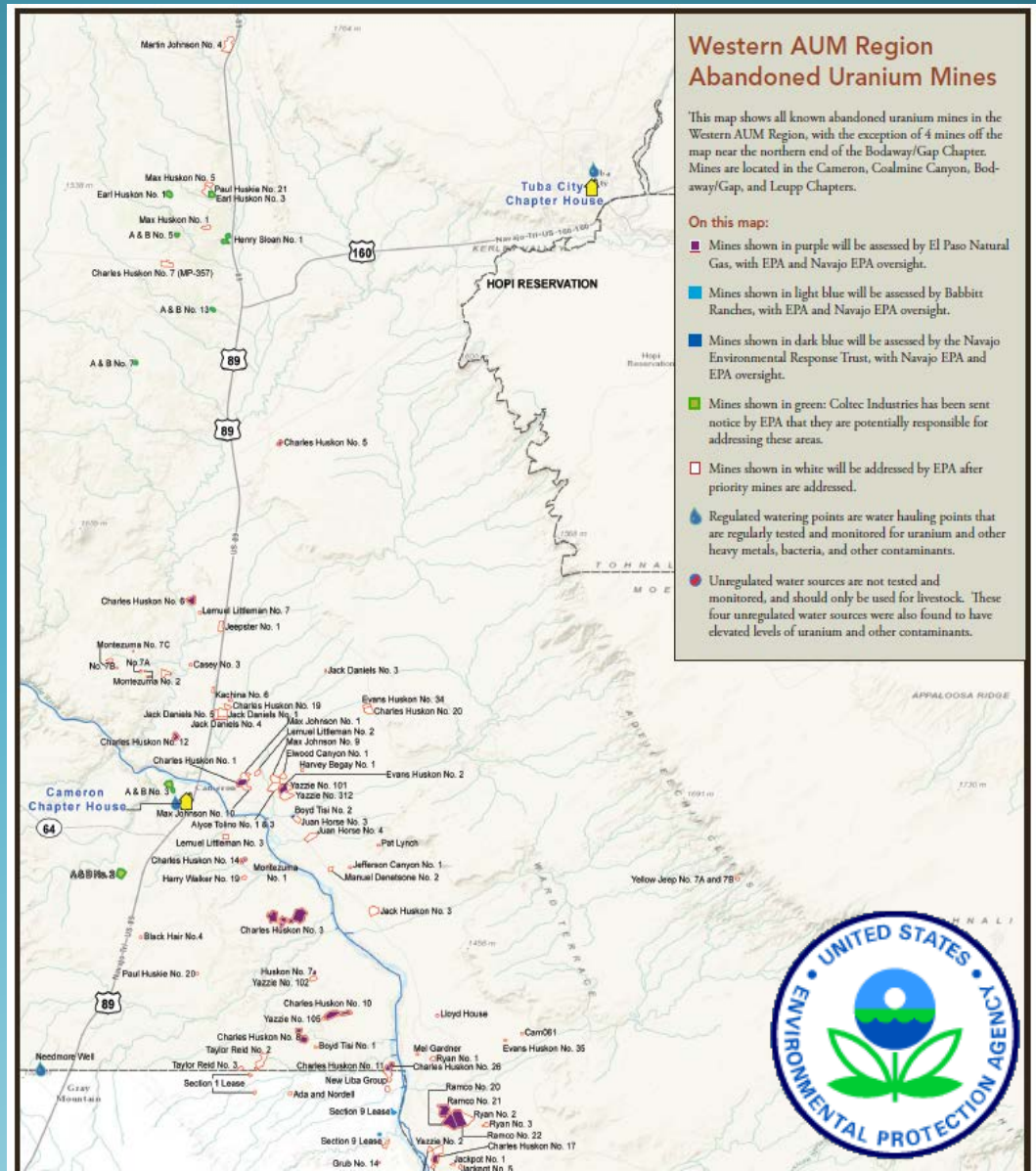
- Potential type of work over the next 10 years
  - Removal Site Evaluations (RSE);
  - Engineering Evaluation / Cost Analysis (EE/CA);
  - Remedial Investigation / Feasibility Study (RI/FS);
  - Removal Action oversight;
  - Establishing field laboratories in support of NAUM fieldwork;
  - Surveying and tracking Mine access roads for maintenance;
  - Database Management (Portal) – Developing and maintaining a database system; that would integrate all historical and current NAUM work;
  - Historical data record and document entry and management; and
  - Developing and updating field protocol and procedures.

Example of Site Terrain in ALSD

Western Navajo Region

Snapshot of Mines in the Western Region

- Over 100 mine claims in the Western Region, including mines on and near Navajo Nation
- EPA enforcement activities in progress
  - El Paso Natural Gas (19 mine claims)
  - Coltec Industries (8 mine claims)
  - Babbitt Ranches (1 mine claim)
  - Wells Cargo (3 mine claims)
- All EPA activities in the Western Region are PRP Lead



Background Western Region

- Open pits ranging from trenches to multi-acre complexes make up the mine sites
  - Most mines have been reclaimed
- Mines are located in former Bennett-Freeze area
  - EPA must consider local development plans as part of assessment and removal
- At this time assessment is focused on impacts to soil. Mining impacts to water resources has yet to be determined.

NAUM Sites – Potential Work

➢ Removal Site Evaluations (RSE)

- Background selection oversight – Requires geologic and MARSSIM expertise
- Soil sampling oversight – Requires geologic expertise and method development
- Investigation Level determination – Requires statistical expertise
- TENORM vs. NORM identification – Requires geologic expertise
- Correlation model development – Requires MARSSIM, statistical expertise
- Lateral delineation of contamination
- Vertical delineation of waste – Requires MARSSIM, geologic, statistical, subsurface sampling expertise, subsurface field sampling method development
- Culturally considerate risk assessment
- Community involvement support

➢ Engineering Evaluation / Cost Analysis (EE/CA)

- Listing of cost and feasibility of critical removal action options that consider Navajo land use and development plans

➢ Removal Action oversight

Example Western Region Terrain

RESPONSE ASSESSMENT AND EVALUATION SERVICES (RAES)

REFERENCE NUMBER SOL-R9-16-00002

HTTPS://WWW.FEDCONNECT.NET

MARIA ALBERTY – CONTRACTING OFFICER

AUMCONTRACTS@EPA.GOV

Request for Proposal Overview

- Reference #: SOL-R9-16-00002
- Potential Contract Magnitude: $85 million
- Contract Type:
  - Full and Open: Fixed Rate, single (anticipated) award IDIQ
  - Partial Small Business Set-aside: Single (anticipated) award IDIQ with Firm Fixed-Price Task Orders
- Module 1- Large or Small
- Module 2- Small businesses only
- Questions Due: September 29, 2016 at 3:30 pm PST
- Proposals Due: October 21, 2016 at 3:30 pm PST

D.1- Navajo Employment Opportunities

Offerors shall demonstrate their ability to successfully employ local Navajo owned businesses and/or individuals during the performance of this contract. Primes, Teaming Partners and Subcontracts shall be taken into consideration and recognized during evaluation of this factor. Offerors shall discuss the employment plan in terms of the entire potential contract duration, projecting the plan out over a five year period and providing annual goals as well as total contract goals.

The Offeror shall prepare a concise and attainable employment plan that details the percentage and type of work to be performed by local Navajo entities, either through self-performance or through the use of subcontracts. The employment plans shall have specific goals which identify the full degree of potential participation, which at a minimum should include a percentage of total number of contract dollars going to local Navajo entities and individuals, and if applicable, the specific number of full time equivalent (FTE) jobs created for Navajo individuals. The Offeror shall provide a rationale for how the plan supports the performance of the contract requirements…….

D.2- Navajo Training Program

The Offeror shall create a detailed plan to establish an internal local training program and/or utilize an existing program, such as those provided by local tribal colleges and other local universities (see Attachment O- Potential Resources for Navajo Business Outreach). The Offeror may discuss any past experience with providing training to Navajo, Tribal or other small business entities, including mentor protégé efforts, which supports the attainability of the proposed plan. The offeror shall demonstrate how the internal training program(s) will provide capacity building for local Navajo businesses and/or individuals in labor, technical, scientific, contracting and other professional skill sets required for the successful performance of this contract and the continued implementation of the EPA's Navajo Abandoned Uranium Mines Clean-up Program.

Offerors shall also provide a detailed outline of the proposed training program. At a minimum the outline shall include: the proposed curriculum (classroom, hands-on, and/or other), a description of the training areas (potential areas to consider: general labor, skilled labor, management, contract management, clerical, technical and scientific), a description on how the Offeror plans to maintain continual training opportunities and outreach efforts, potential job opportunities that will be available after completion of the program (either internal or external), as well as a matrix that demonstrates how the success of the program will be measured. If prior experience and/or certifications are required in certain areas, the offeror shall discuss how this impacts the program, and whether or not recruiting or partnerships through local universities will be utilized. This program will be incorporated into any resultant contract…..

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