

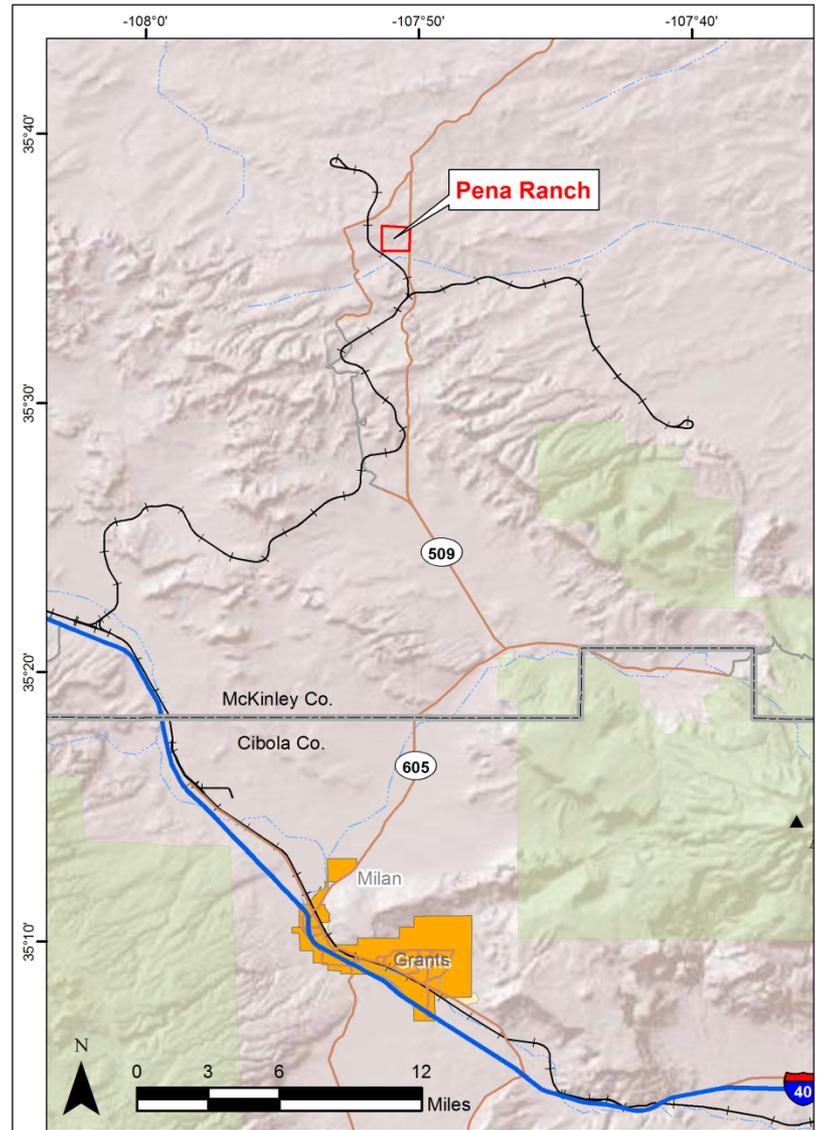
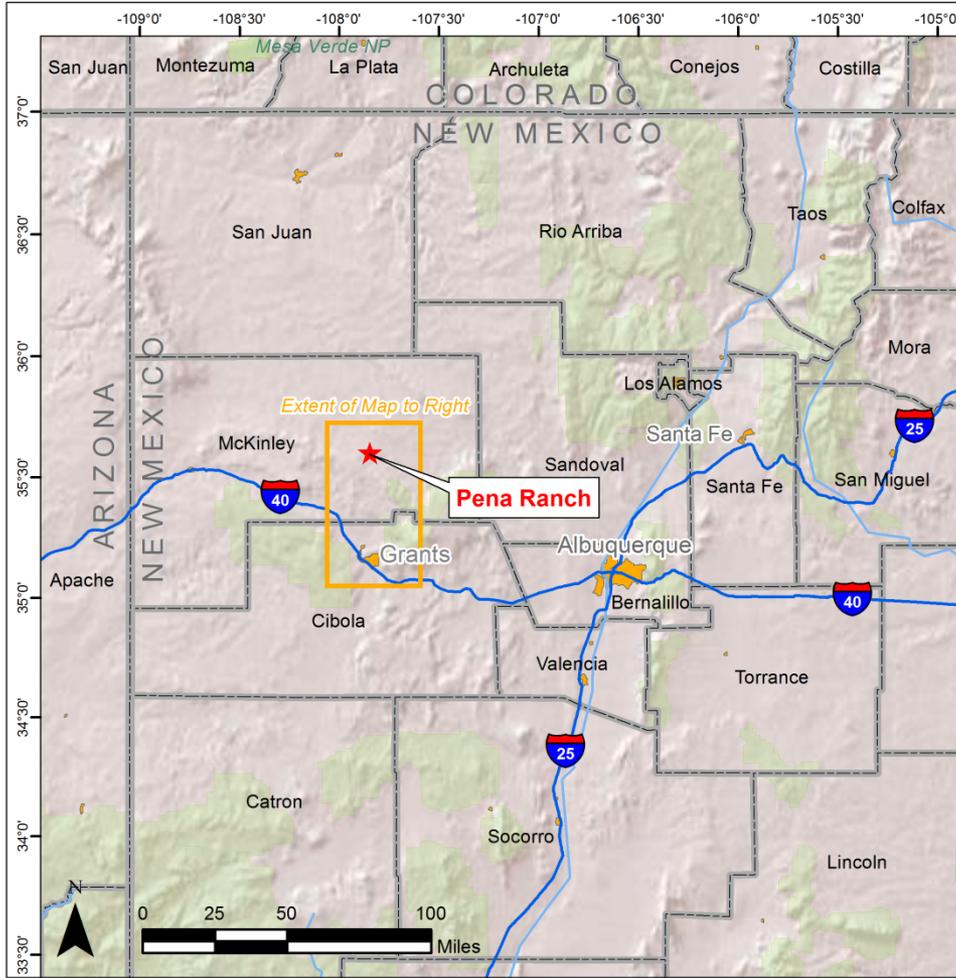
Peña Ranch Meeting Agenda

1. Introductions
2. Proposed site
3. Overview of basic design considerations
4. Overview of baseline characterization program per RG 4.14 – progress to date
5. Technical Report – Basis for outline, content and approach

Peña Ranch Meeting Agenda

6. Environmental Report – Basis approach
NUREG 1748 and RG 3.8; Basis for EIS
7. Section 106 Tribal Consultation process
8. Schedule
9. Questions and discussion

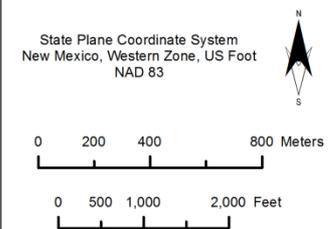
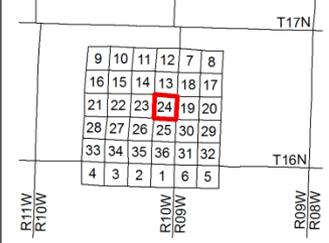
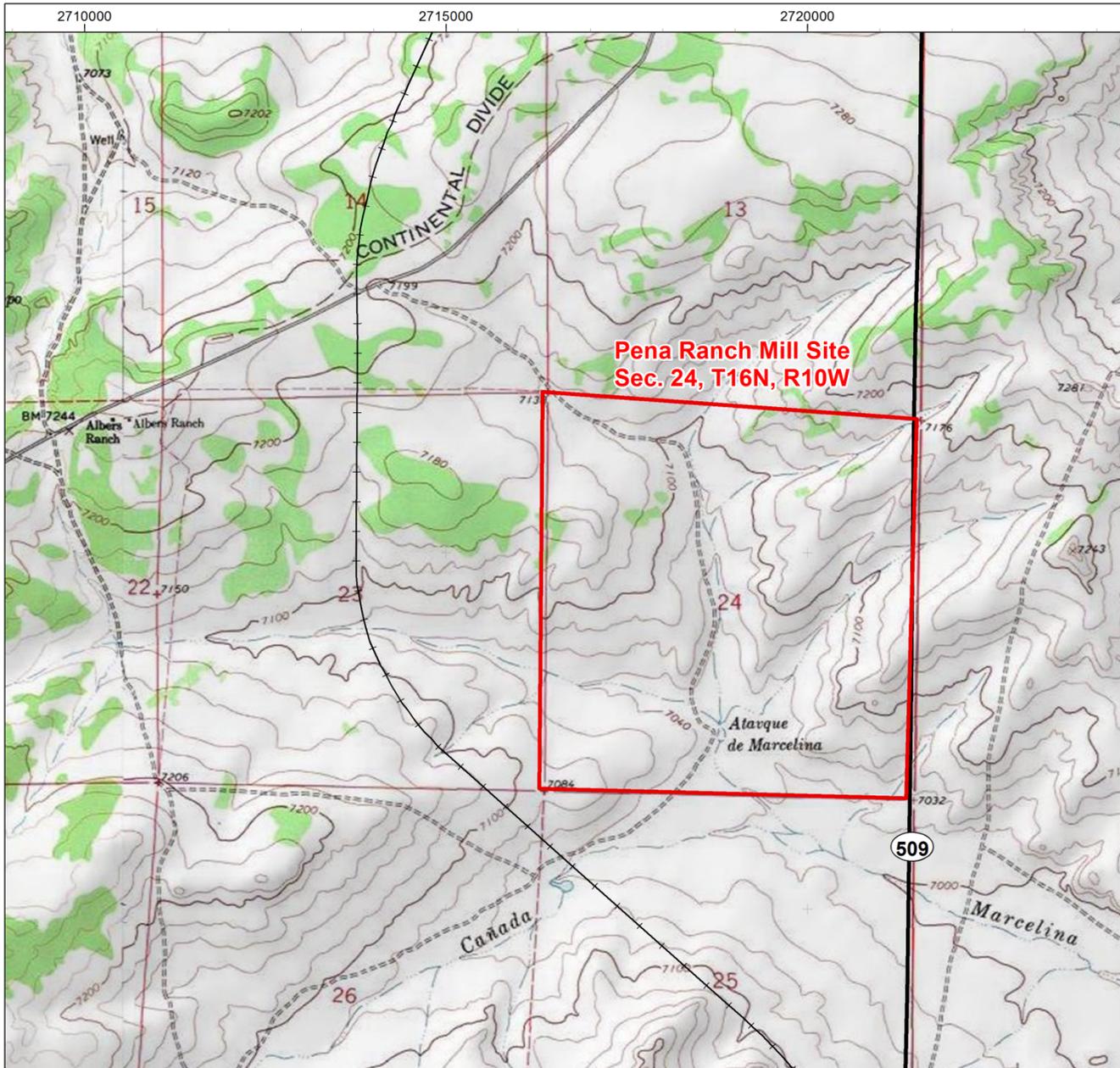
Site Location Maps



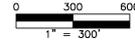
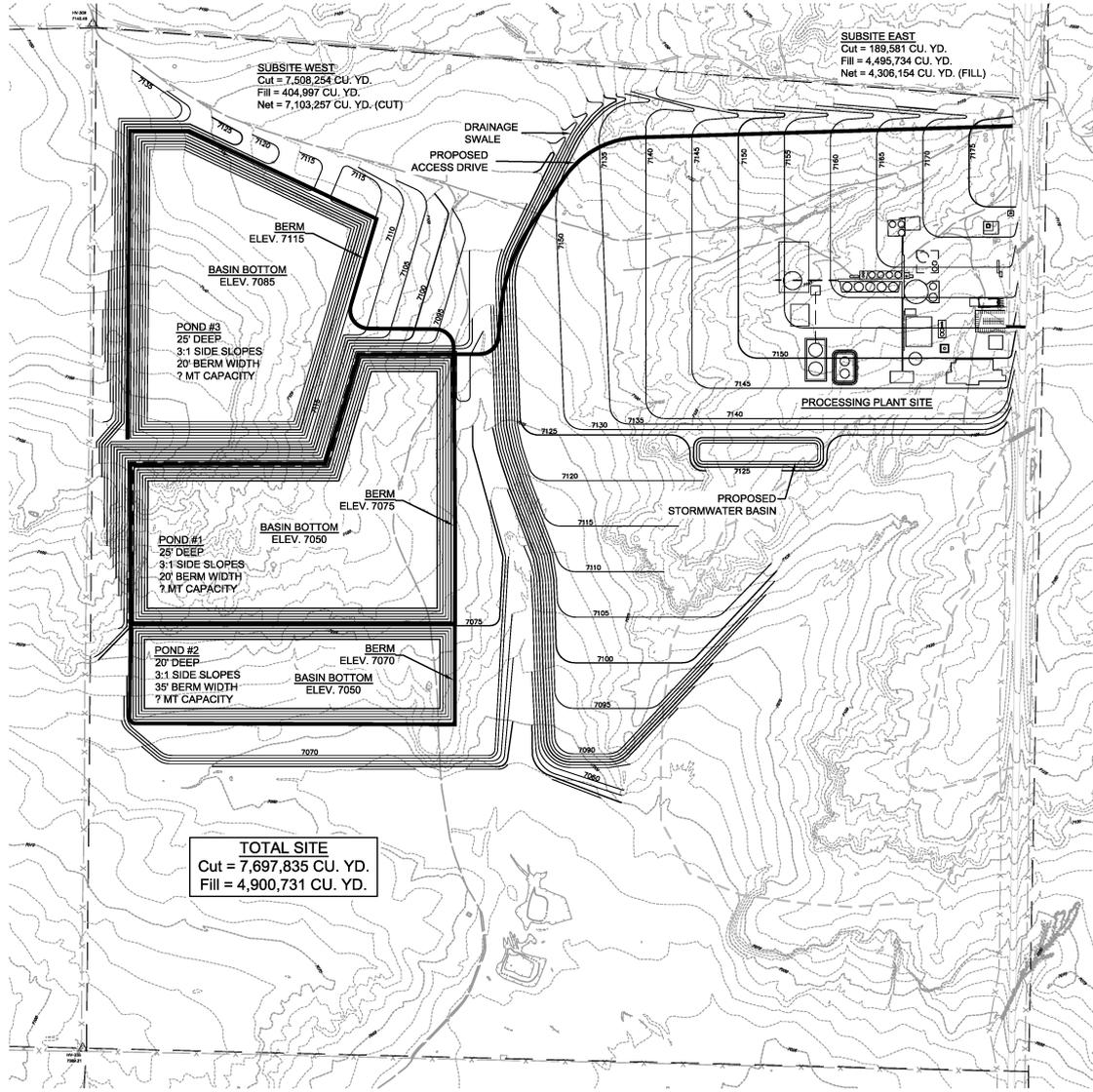
Legend

- Interstate
- Major Road
- Local Road
- + Railroad
- Stream
- - - Ephemeral Stream
- City Boundary
- National Forest
- County Boundary





ROCA HONDA RESOURCES LLC. 4001 Office Court Dr. Ste. 102 Santa Fe, NM 87507		
PENA RANCH MILL SITE TOPOGRAPHIC MAP McKinley County, New Mexico		
Geology:	Drafting:	Scale:
	D. Kapostasy	1:24,000
Notes:	Date:	
	04.27.11	



DATE	NO.	REVISIONS	BY

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RHR MILL AT PENA RANCH
 MONKNEY COUNTY, NEW MEXICO, USA

PROPOSED PHASE II
SITE PLAN

ROCA HONDA RESOURCES
 10000 N. GARDEN AVENUE, SUITE 100
 SANTA FE, NEW MEXICO 87507

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 PLAN NORTH	JOB NO. STIM 1001
	SHEET 2 OF 3

SCALE 1" = 300'	DRAWING NO. C-2
DRAWN BY TDC	
DATE 9/23/2011	
APPROVED DCL	

Pennoni Associates Inc. 1215 Manor Drive Suite 100 Mechanicsburg, PA 17055 Consulting Engineers

Basis for Baseline Characterization

- What are and where are the effluent sources ?
- Which way does the wind blow and water flow relevant to these sources ?
- What and where are the targets (media) that could be impacted
- Where are the people relative to those targets

Generic to Site Specific CSM Characteristics

- Defined sources/ nature/ locations of effluents
- Identified transport mechanisms to media potentially impacted
- Identified locations of nearest residences & general characteristics of local demographics
- Identified potential exposure pathways

Regulatory Guidance

- Regulatory Guide 4.14, *Radiological Effluent and Environmental Monitoring at Uranium Mills*
- Regulatory Guide 4.15, Quality Assurance for Radiological Monitoring Programs (Normal Operations) – Effluent Streams and the Environment
- DG 3024, Standard Format and Content of License Applications for Conventional Uranium Mills
- NUREG 1569, *Standard Review Plan for In Situ Leach Uranium Recovery License Applications, 2003.*
- NUREG 1748, *Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, 2003.*

RG 4.14 Radiological Program

- Long lived alpha emitting particulates
- Radon gas (continuous)
- Radon flux
- Ground water (quarterly)
- Surface water and sediments
- Vegetation and food products - human food chain
- Soil – surface and profiles
- Direct radiation measurements - real time gamma surveys and integrating dosimeters (continuous)

Support Documentation For Radiological Baseline Program

- Sampling and Analysis Plan (SAP) – defines sampling, measurement protocols, frequencies, locations and analytical requirements for each program element
- Standard Operating Procedures (13 SOPs) – defines detailed field methods for each program element
- Annotated Outline for Environmental Report Chapter 6, Section 6 (*Environmental Measurements and Monitoring Programs*) - more later

Radionuclides of Interest Per RG 4.14

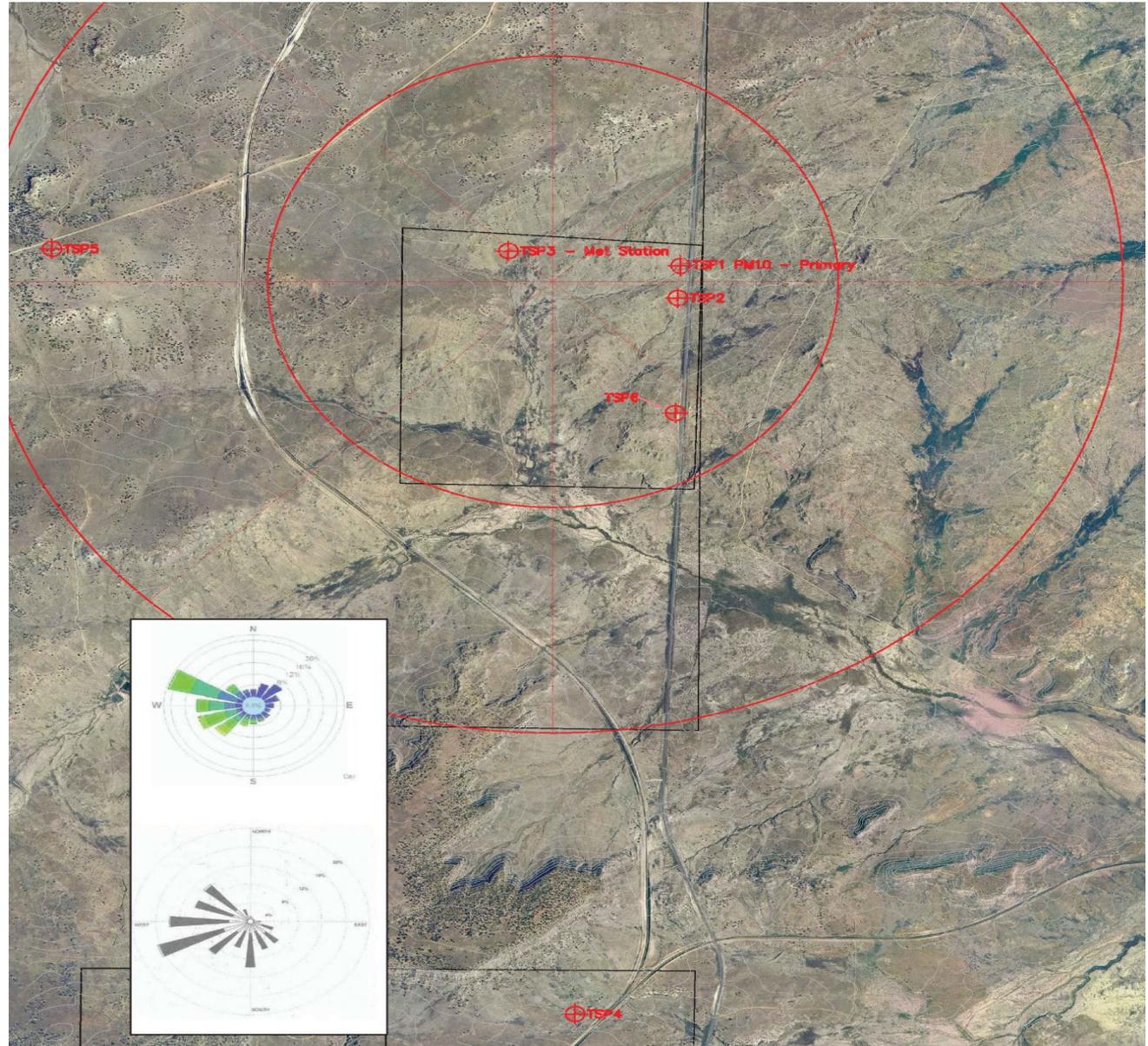
- Air: U-nat, ^{226}Ra , ^{230}Th , ^{210}Pb
- Soil: U-nat, ^{226}Ra , ^{230}Th , ^{210}Pb
- Radon in air and flux
- Water: U-nat, ^{226}Ra , ^{230}Th , ^{210}Pb
- Vegetation and Animal Tissue: U-nat, ^{226}Ra , ^{230}Th , ^{210}Po , ^{210}Pb

Air Particulate Sampling

- Six air sampling stations - continuous air monitoring for 4 quarters (continued use during operation):
 - ✓ nearest residence (nw of the permit area)
 - ✓ Remote, upwind direction from mill area
 - ✓ 4 areas at or near the site boundary
 - ✓ First 2Qs of data collected

Airborne Radionuclide Particulate Sampling Locations

Wind roses represent 1 yr of data near to site & 1 quarter from on-site met station.



Soil Sampling

- Reg Guide 4.14 defines polar coordinate grid
- Established “Areas of Interest” for this site:
 - ✓ Particulate monitoring stations
 - ✓ Residence close to permit area
 - ✓ Grid centered at potential locations for mill and tailings impoundment

Soil Sampling - Cont.

- Soil samples collected at 0-15 cm depth per future decommissioning standards
(10 CFR 40, App A. and 40 CFR 192 Subpart D)
- Supplemented with 0-5 cm samples per RG 4.14
- Profiles: Traditional RG 4.14 based on a polar coordinate grid, 5 total profiles.
- All profile locations also included a surface sample

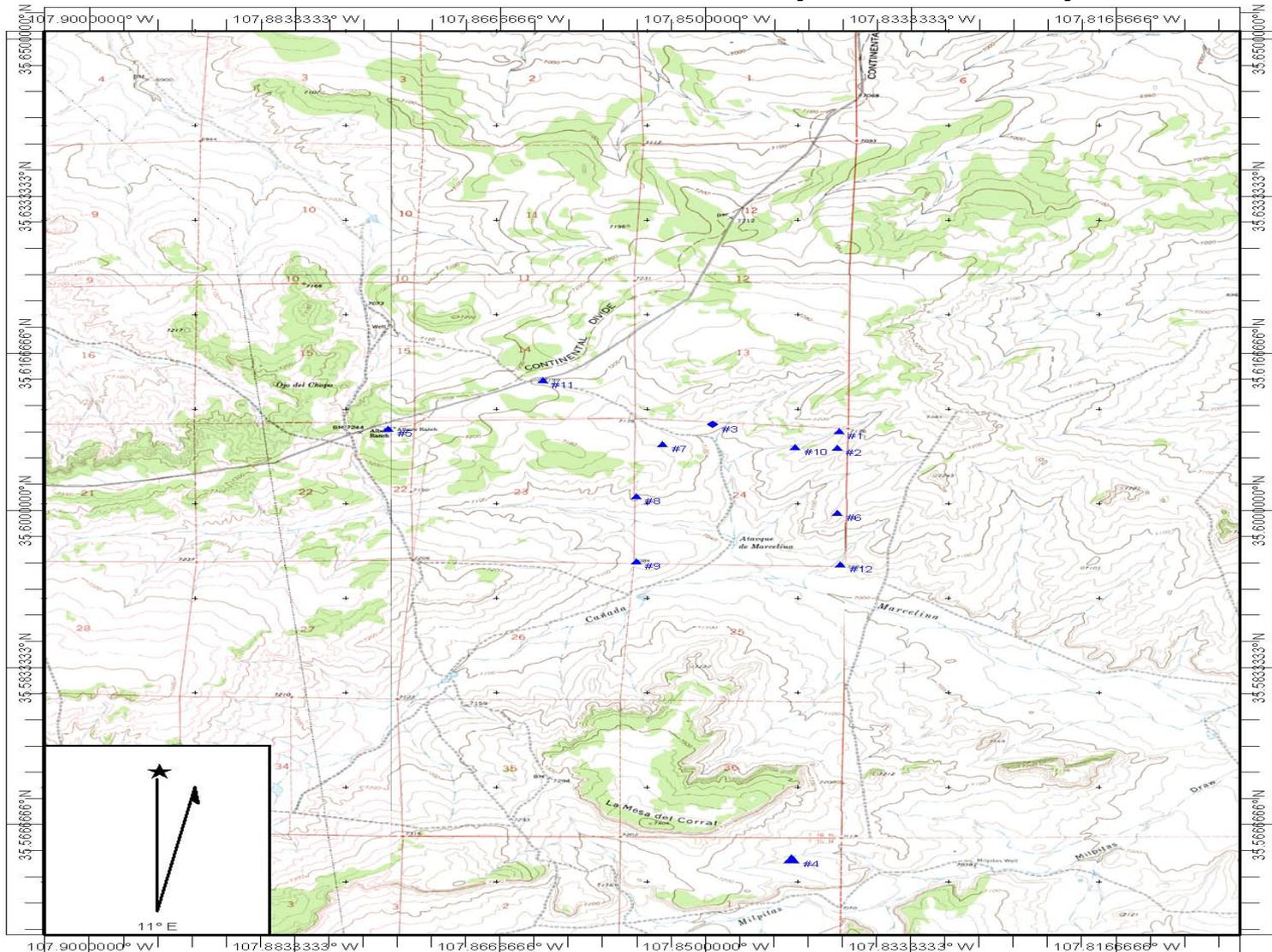
Radon in Air

- Reg Guide 4.14 - 5 locations
- On going sampling for radon in air with Landauer track-etch style detectors at “areas of interest” (12). Quarterly exchanges of monitors to account for seasonal variation.
- First 2Qs of data collection completed

Direct Radiation

- Reg Guide 4.14 guidance - polar coordinate grid system - 80 locations
- Placed Landauer TLD monitors at 12 areas of interest, quarterly exchange to assess long term averages and potential seasonal variation
- Performed scan of direct gamma radiation using NaI detectors and GPS systems.

Locations of Long Term Gamma Radiation (TLDs) and Radon Dosimeters (Track –Etch)



Name: MESA DE LOS TOROS
Date: 10/26/2011
Scale: 1 inch equals 3636 feet

Location: 035.6029144° N 107.8552063° W
Caption: RHR Pena Ranch Mill
Radon and TLD Monitoring

Surface Water

- Site has no large water impoundments on or near the site, only ephemeral arroyos
- Arroyos pass through site enter at three locations, converge into one drainage that flows out of the site.
- Storm water samples taken at or near the site boundaries where arroyos enter & exit the site

Groundwater

Regulatory Guide 4.14 – quarterly sampling:

- Existing wells within 2 km of tailings area that could be used for potable water, livestock or irrigation;
- Well(s) located up-gradient from tailings area;
- 3 wells located down-gradient from the tailings area;
- 3 wells near other sides of the tailings area.
- First 2 Qs of sampling have been completed

Vegetation, Food & Animal Products

- Vegetation samples collected 3 times from 3 sectors with highest predicted airborne radionuclide concentration due to milling operations
- No food crops grown in the vicinity of the site. Nearby resident does not have a home garden
- Animal meat samples will be collected from deer or elk and from cattle raised near the site

Technical Report

Basis for Outline, Content and Approach

- DG-3024, *Standard Format and Content of License Applications for Conventional Uranium Mills*
 - ✓ Considered current guidance by NRC
 - ✓ Recent FR notice on withdrawal was in error
- Recent licensing actions
 - ✓ USNRC In Situ Recovery (3 recent licenses, historical RAI processes, etc)
 - ✓ State of Colorado, Piñon Ridge Mill – final license 5/11

Technical Report Cont.

- NUREG-1569, *Standard Review Plan for In Situ Leach Uranium Extraction License Applications*
 - ✓ SRP for conventional mills is in the works, no draft yet available
 - ✓ Useful for authors – considerable guidance relevant for all U recovery facilities

Technical Report Cont.

- DG-3024, three major areas
 - ✓ Processing – Chapter 3, Mill Process and Equipment
 - ✓ Waste management – Chapter 4
 - ✓ Qualifications & In-plant safety – Chapter 5
 - ✓ Complete in itself, minimal reference to ER
 - ✓ May duplicate some information in ER, which is also meant to be stand-alone

Environmental Report

Basis for Outline, Content and Approach

- NUREG-1748, *Environmental Review Guidance for Licensing Actions Associated with NMSS Programs, Chapter 6: The Environmental Report*
 - ✓ Primary basis for ER outline
- RG 3.8, Preparation of Environmental Reports for Uranium Mills (1982)
 - ✓ Older Mill document, not current for NEPA
 - ✓ Incorporated into our outline for completeness
- Both referenced in DG-3024
- Compliance matrix/crosswalk will show NUREG 1748 vs. RG 3.8 relationships

Environmental Report Cont.

- Significant conventional mill licensing experience
- Recent licensing actions - Piñon Ridge Mill in Colorado, NRC In Situ Recovery SEISs,
- NUREG 1910 – GEIS for ISRs
- Will be independent from Technical Report
 - ✓ Multiple cross-references
 - ✓ Stand-alone for public/regulatory review

Environmental Report – Additional Drivers

- Foundation for NRC to write EIS per NUREG 1748, Chapter 5
- 10 CFR 51.20, Criteria for and Identification of Licensing and Regulatory Actions Requiring EIS
 - ✓ For Uranium mills
- 10 CFR 51.45, Environmental Report – General Requirements
- 10 CFR 51.60, Environment Report – Materials Licenses

Environmental Report - Approach

- Scope will be balanced against credible threat to environment
- Will follow recent SEISs issued by US NRC to extent applicable
- Alternatives
 - ✓ Proposed action (Alternative 1)
 - ✓ No-action (Alternative 2)
 - ✓ Reasonable Alternative(s) (Alternative 3)

Environmental Report - Approach

- Will address impacts to each resource (land, air, water, ecological, etc) during three time periods:
 - ✓ Facility Construction
 - ✓ Operations
 - ✓ Decommissioning
- General discussion of each for Alternatives, with some exceptions
- Public and Occupational Health and Safety - will address Impacts for each Alternative