License Condition 19
Pre-Mobilization Notification
Mary Ann Uranium Mine Waste Pile Remediation
License No. SUA-1605
Docket No. 40-38417

Approving Agency:
U.S. Nuclear Regulatory Commission

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Prepared by:

DISA Technologies, Inc.
1010 Falcon Avenue
Mills, WY 82644

REVISION HISTORY AND APPROVAL

Rev.	Nature of changes	Approval	Date
0	Original release	SJC	03/25/2026

Prepared by: Digitally signed by Stephen J. Cohen, PG, CSP, CHMM Date: 2026.03.25 12:18:13 -06'00'

Stephen J. Cohen, Radiation Safety Officer — Date

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SECTION 1.0 PRE-MOBILIZATION INFORMATION

This document serves as the Pre-Mobilization Notification (PMN) prepared by DISA Technologies, Inc. (DISA) that is required by License Condition 19 (LC-19) of Radioactive Materials License No. SUA-1605 (ADAMS Accession No. ML25226A191). This PMN provides the information required by LC-19 and the list of conditions included in the U.S. Nuclear Regulatory Commission's (NRC's) Environmental Assessment for Proposed Issuance of Multi-Site License to DISA Technologies for Abandoned Uranium Mine Waste (ADAMS Accession No. ML25265A212).

This PMN is for the treatment of the Mary Ann Uranium Mine Waste Pile (Mary Ann Pile) in Montrose County, Colorado, which is owned by NUV2C LLC (NUV2C) (Section 3.1.2). DISA is submitting this PMN at least 90 days prior to the expected beginning of treatment, as required by LC-19 and is organized in the same manner as the information requirements presented in LC-19.

1.1 SITE INFORMATION

The Mary Ann Pile is located on the claims NUV 239/NUV 241, which is currently owned by NUV2C LLC. Section 3.1.2 contains information regarding site ownership, claims, and access. A review of USGS records indicates that the Mary Ann Pile originated from the Mary Ann mine located approximately 120 feet east from the center of the Mary Ann site. Available information indicates the following (westernmininghistory.com):

1. MAS ID 0080850970
2. Commodity: Uranium and Vanadium (secondary)
3. Type: Underground
4. Land Ownership: Federal

Directions to the site are as follows (see Figure 1-1):

From Bedrock, Colorado:

1. From Bedrock, take 90 S
2. Turn right onto Dd19 Rd
3. Continue on Dd19 Rd until Dd 16 Road/Monogram Truck Route, and turn right.
4. Bear right at next fork to stay on Monogram Truck Route.
5. Turn left onto Dd15 Rd and continue until you reach Mary Ann Pile (38.238581° -108.791099°)

1.2 SUMMARY OF OPERATIONS

DISA's treatment of the Mary Ann Pile will encompass the following activities:

1. Walkover Gamma Scans – DISA will perform walkover gamma scans in the area of HPSA treatment as a baseline to ensure that DISA's operations did not contaminate soil during treatment. Figure 1-2 shows the general work flow for the project.
2. Rock Crushing – A rock crusher will be brought to the site to pre-crush all or part of the rock pile prior to mobilizing the HPSA equipment. However, DISA may also mobilize the rock crusher as

part of the HPSA mobilization, and add it to the upstream of the feed. Air monitoring will be established if DISA mobilizes a crusher prior to mobilizing the HPSA equipment. DISA will likely use a dust suppressant, DUSTREAT DC6109, for dust control, because using water will cause clogging of our equipment (see Section 1.8).

3. Site Setup – DISA will perform minor grading of the HPSA treatment area to allow for the safe placement of the HPSA equipment. Secondary containment will be constructed to ensure that any spilled water is contained within the HPSA work area and restricted area. DISA will also establish the restricted area, contamination survey areas treatment area, radiation safety controls, restricted area controls, equipment laydown areas, and air monitoring stations. Disa will also install a 500-gallon diesel tank within a secondary containment for generator fuel. Topsoil will be salvaged and stockpiled.
4. HPSA Treatment – DISA will mobilize its C-10 HPSA unit along with all upstream and downstream equipment. The C-10 unit is a 10 ton per hour unit, which is the smallest throughput unit that DISA operates. All the ancillary equipment will be mobilized as well to the site and placed within the restricted area. DISA will utilize a flocculant, Superfloc A-100, downstream of the HPSA equipment to aid in dewatering (see Section 1.8).
5. Fines Concentrates and Clean Coarse Material. DISA will store the fines concentrates in roll off containers or other containers suitable for transport within the restricted area. The restricted area will include the HPSA treatment equipment, fines concentrates storage, Mary Ann Pile, and the crushed rock stockpile, although impacts for the piles will be accounted for separately. Fines concentrate containers will be transported offsite at a rate of approximately 1 per day. The clean coarse material will be used to reclaim all disturbed areas pursuant to our U.S. Bureau of Land Management (BLM) Plan of Operations. DISA will submit the Plan of Operations to the NRC staff under separate cover after BLM completes its acceptance review. DISA performed a Class III cultural resources survey using Cannon Heritage and Woods Canyon Archaeological Consultants, Inc. However, will not allow this survey to be released due to confidential information. NRC staff will need to consult the BLM to obtain this information.
6. After the HPSA treatment is completed, equipment will be decontaminated, released for unrestricted use by contamination surveys, and transported offsite. Secondary containment materials will be released for unrestricted use and disposed in a sanitary or construction debris landfill. DISA may choose to reuse secondary containment materials for other sites. Walkover gamma scans will be performed to confirm that DISA's treatment activities did not contaminate soils.
7. Disturbed areas will be seeded and irrigated with treated water from the HPSA unit assuming it meets treatment standards or water that is transported onsite.
8. Figure 1-3 shows the general best management practices for sediment and erosion control at the to be used at the site.

DISA will transport all fines concentrates to Energy Fuels' White Mesa Mill in Blanding, Utah, Anfield's Shootaring Canyon Mill in Garfield County, Utah, or to a licensed source material storage facility. DISA will provide a written notification of the final destination prior to mobilizing the crusher or any treatment equipment to the site.

Figure 1-1: Site Location and Directions

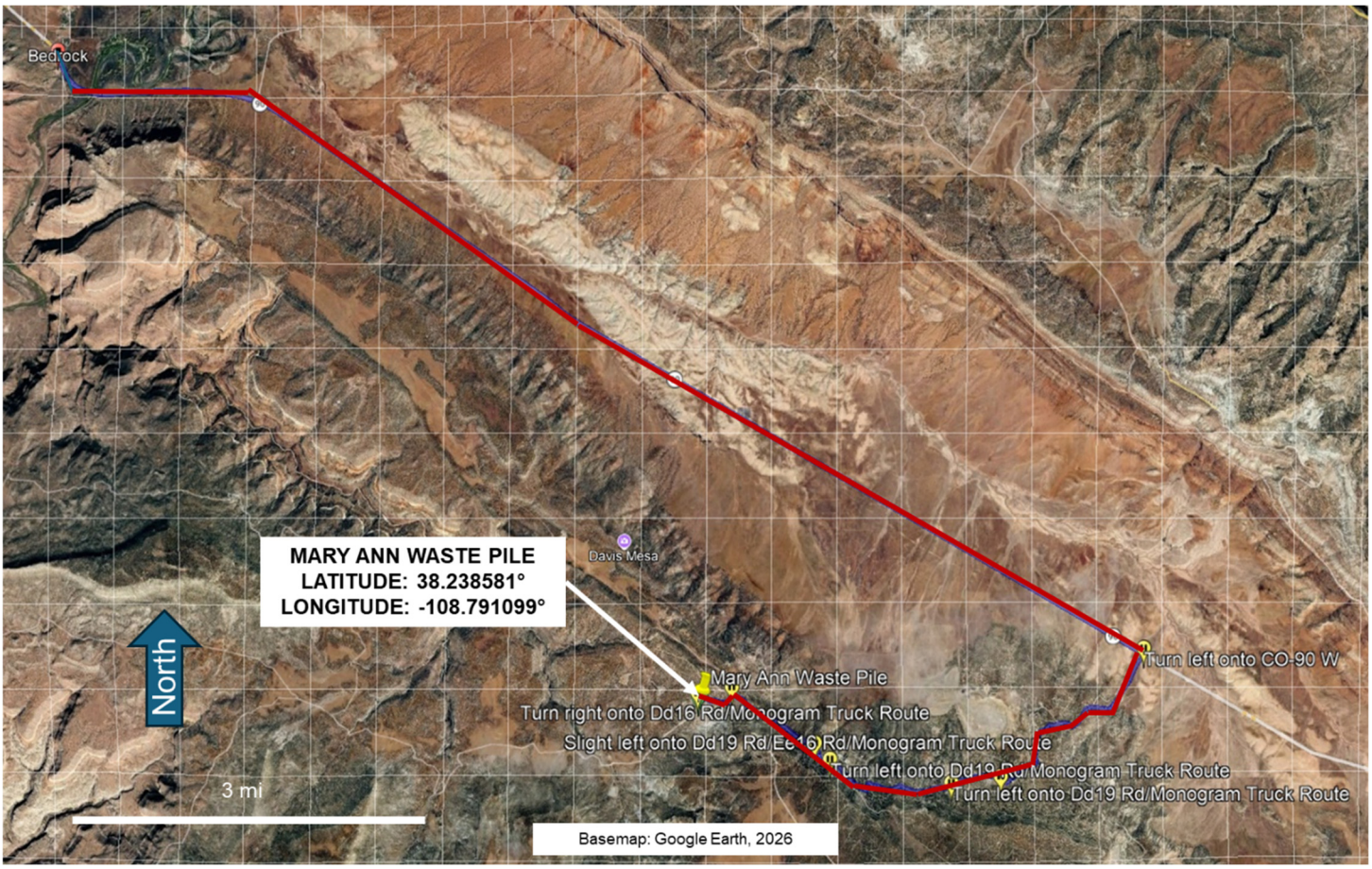
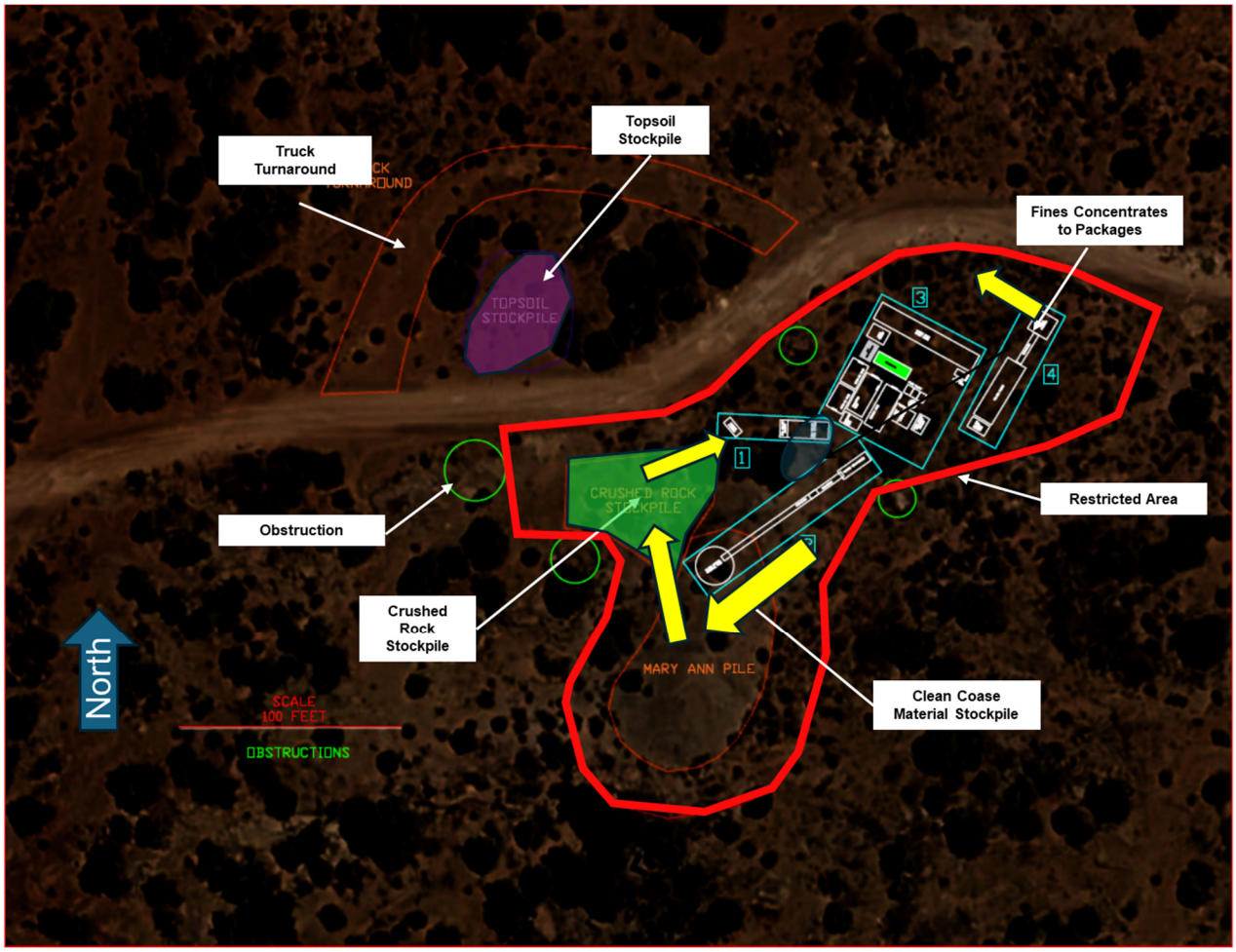


Figure 1-2: Proposed Work Flow



1.3 EROSION AND SEDIMENT CONTROL

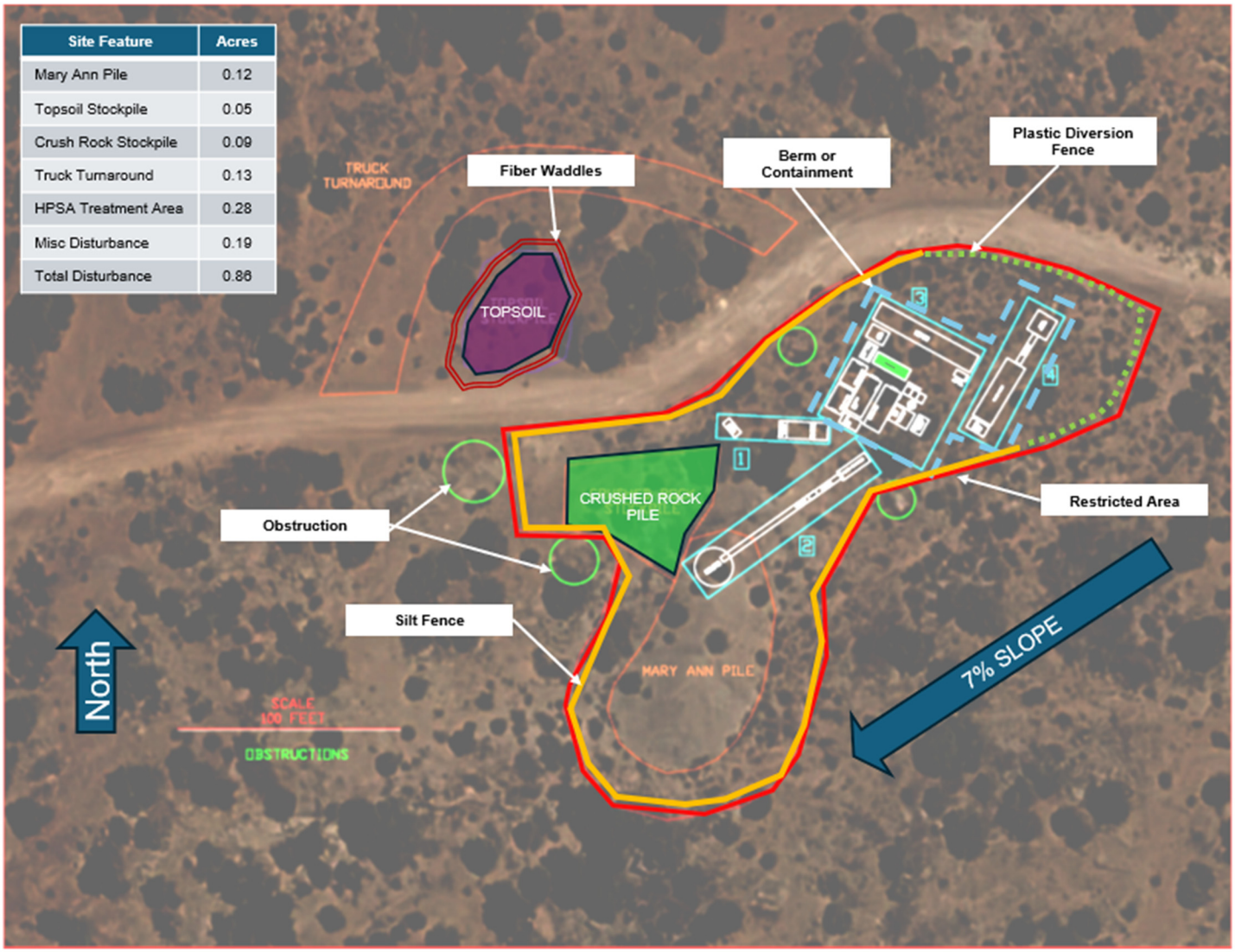
According to the Water Quality Control Commission, Regulation No. 61 - Colorado Discharge Permit System Regulations (5 CCR 1002-61) the need for a permit is determined by the operator. Section 5 CCR 1002-61(3)(b)(i)(D) states the following:

> The operator of an existing or new discharge composed entirely of stormwater from a mining operation is not required to submit a permit application unless the discharge has come into contact with, any overburden, raw material, intermediate products, finished product, byproduct or waste products located on the site of such operations.

DISA's operations will prevent stormwater run-on from contacting these materials because stockpiles will be diverted around the work areas by berms, fiber waddles, silt fencing, trenches or other devices. Furthermore, the HPSA treatment area will be in a containment that will prevent stormwater from containing any equipment or fines concentrates. Clean coarse material will be protected from erosion,

but will be allowed to contact clean coarse material as it will be safe, especially compared to the uranium mine waste that has been allowed to exist onsite.

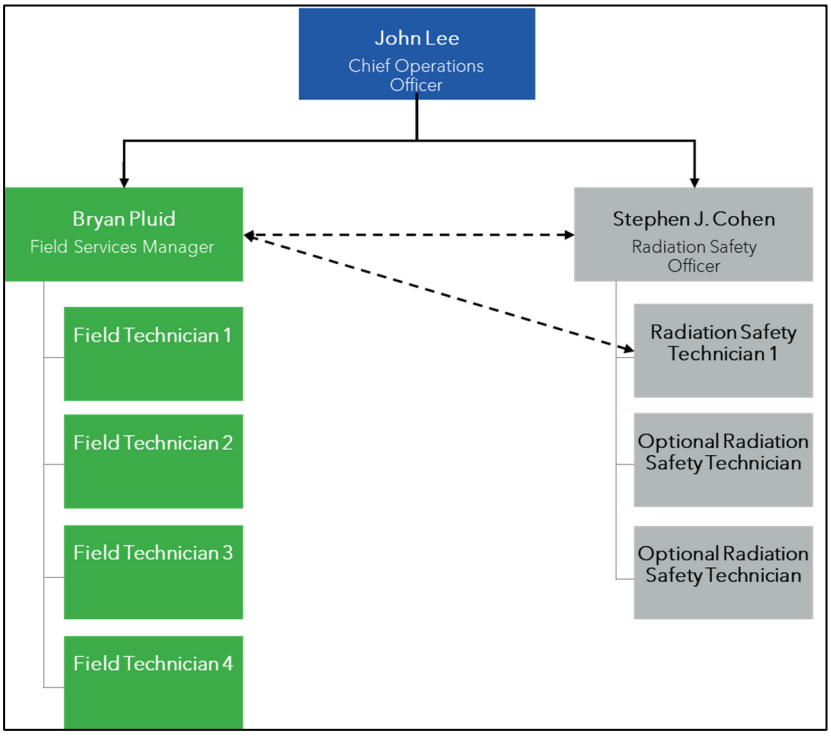
Figure 1-3: Erosion and Sediment Control



1.4 ORGANIZATION

Figure 1-4 presents an organization chart for this project.

Figure 1-4: Mary Ann Pile Organization Chart



1.5 ESTIMATED QUANTITY OF GRAVEL AND RESULTING TRUCK SHIPMENTS PER 10 MILES OF ROAD (LC 19.1)

Based on a site visit in February 2026, DISA does not expect any road improvements will be required to undertake this project.

1.6 SCHEDULE OF TOUCHPOINTS (LC 19.2)

Table 1-1 contains a schedule of contact points. Because of operational issues beyond the scope of the HPSA treatment licensed activity, DISA cannot provide a precise start date for this project. Therefore, the start date provided in Table 1-1 should be considered approximate and subject to change.

Table 1-1: Schedule of Touchpoints (Subject to Change)

Event	Date
Mobilization (when the crusher is mobilized to the site	June 23, 2026
Commencement of remediation	June 25, 2026
25% Completion	July 13, 2026
50% Completion	July 27, 2026
Within One Week of Completion	August 2, 2026
Expected Demobilization	August 9, 2026

1.7 COORDINATION WITH OTHER AGENCIES

DISA is currently working with US Bureau of Land Management on a Plan of Operations (POP) and with the Colorado Division of Reclamation, Mining, and Safety (DRMS) on a mine permit for the Mary Ann Pile. DISA will need these authorizations in addition to this PMN to start work on treating the Mary Ann Pile. DISA requests that the NRC staff allow BLM to take the lead on certain review aspects, such as cultural resources, ecological resources, and financial assurance because they are best suited for evaluating the resources and determining any required mitigation. Furthermore, DISA requests that the NRC staff allow DRMS to review and approve the financial assurance, since they will be holding the bond for itself and BLM.

1.8 TREATMENT AIDS

DISA stated in its license application that no chemicals are used during the HPSA process. However, DISA will use two innocuous substances for dust suppression (necessary for radiation protection) and dewatering (necessary for purifying the clean coarse material).

1.8.1 Dust Suppressant

DUSTREAT DC6109 will be sprayed into the dry solids hopper to control dust upstream of the HPSA units. DUSTREAT DC6109 contains 20 to 40% Sodium (C14-16) olefin sulfonate. According to Alfa Chemistry (www.alfa-chemistry.com), sodium (C14-16) olefin sulfonate is a synthetic surfactant commonly used in personal care products such as shampoos, body washes, and facial cleansers. Sodium (C14-16) Olefin sulfonate has excellent foaming, lathering, and cleansing properties. Sodium (C14-16) Olefin Sulfonate is biodegradable and considered safe for use in cosmetic and personal care products. This product will not react with waste rock or alter the mineralogy. Appendix A contains the SDS.

1.8.2 Flocculant

Based on recent laboratory testing, DISA is required to utilize a flocculant called Superfloc A-100 (see SDS in Appendix A), which consists of anionic polyacrylamide. This flocculant is necessary to promote dewatering of the fines concentrates, otherwise fines will mix with the clean coarse material, which is an undesirable result. This material is not hazardous and will neither react with the fines concentrates nor will it alter any mineralogical characteristics. The USDA uses anionic polyacrylamide for runoff and soil erosion control as demonstrated by the fact sheet included as Appendix A.

Neither the dust suppressant nor the flocculant proposed by DISA will be used to process the waste rock or concentrate uranium. The dust suppressant will be used for safety, and the flocculant will be used to promote dewatering of the fines concentrates, both without altering the chemical signature or mineralogical content of the waste rock or fines.

SECTION 2.0 DOSE ASSESSMENT SCENARIO

2.1 DOSE ASSESSMENT SCENARIO (LC 19.3)

Pursuant to the Application Supplement (DISA, 2025), information presented herein provides the dose assessment scenario that will be used for calculating doses for compliance with the 10 CFR 20.1402 unrestricted release criterion. DISA also includes the analysis used to select the scenario. DISA determined which dose modeling scenario to use by analyzing each site based on the following criteria.

2.1.1 Natural setting

The Mary Ann Pile is located in a mountainous region in Montrose County, Colorado. It is located approximately 2,500 feet northwest of Monogram Mesa (see Figure 2-1) (https://ngmdb.usgs.gov/Prodesc/proddesc_792.htm)(Cater, F.W., 1954, Geology of the Bull Canyon Quadrangle, Colorado, U.S. Geological Survey).

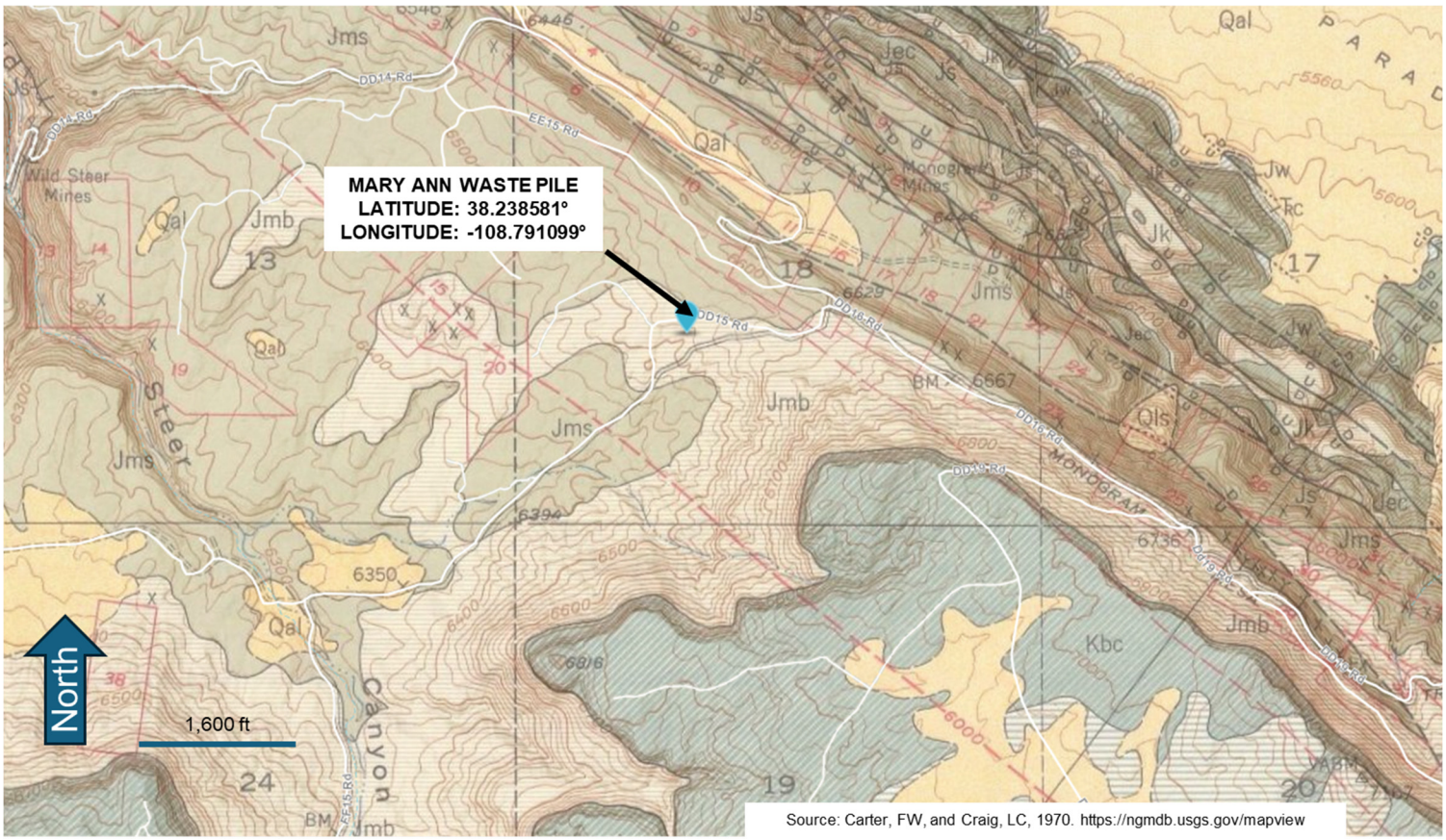
2.1.2 Geology

Geology of the Mary Ann Pile is described in the *Geology of the Bull Canyon quadrangle*, *Colorado*, (Cater, F.W., 1954). Figure 2-1 shows a geologic map of the Mary Ann Pile vicinity. The primary geologic unit underlying the Mary Ann Pile is the Jurassic Age (late: 163.5 to 145 million years ago) Morrison Formation (Jmb/Jms), which is described as follows:

> The Morrison formation, of Late Jurassic age, is of special interest economically because of the uranium-and vanadium-bearing deposits it contains. The formation comprises two members in this area; the lower is the Salt Wash sandstone member, and the upper is the Brushy Basin shale member. In the Bull Canyon quadrangle, the Morrison formation varies in thickness but generally ranges from 700 to 800 feet.
>
> Salt Wash Sandstone (Jms). The Salt Wash Sandstone ordinarily crops out above the slope forming Summerville formation as a series of thick, resistant ledges and broad benches. Sandstone predominates and ranges in color from nearly white to gray, light-buff, and rusty red. Interbedded with the sandstone are red shale and mudstone and locally a few thin lenses of dense gray limestone. Most of the sandstone is fine- to medium-fine-grained, cross-bedded, and massive; single beds or lenses may attain a maximum thickness of 120 feet. Known fossils including wood, carbonaceous matter, and saurian bones, occur locally. The Salt Wash Sandstone member ranges from 320 to 400 feet in thick
>
> Brushy Basin Shale (Jmb). The Brushy Basin Shale consists predominantly of varicolored, bentonitic shale and mudstone, with intercalated beds and lenses of conglomerate and sandstone, and a few thin layers of limestone. Because of-
>
> its high proportion of soft, easily eroded bentonitic shale and mudstone, the Brushy Basin forms smooth slopes covered with blocks and boulders weathered from the more resistant layers of the member and from the overlying formations. The shales and mudstones are thin-bedded and range

in color from pure white to pastel tints of red, blue, and green. The Brushy Basin Shale ranges from 350 to 500 feet in thickness; erratically distributed local variations in thickness of 20 to 30 feet are prevalent throughout the quadrangle.

Figure 2-1: Mary Ann Pile Geologic Map



2.1.3 Soil Cover and Local Soil Units

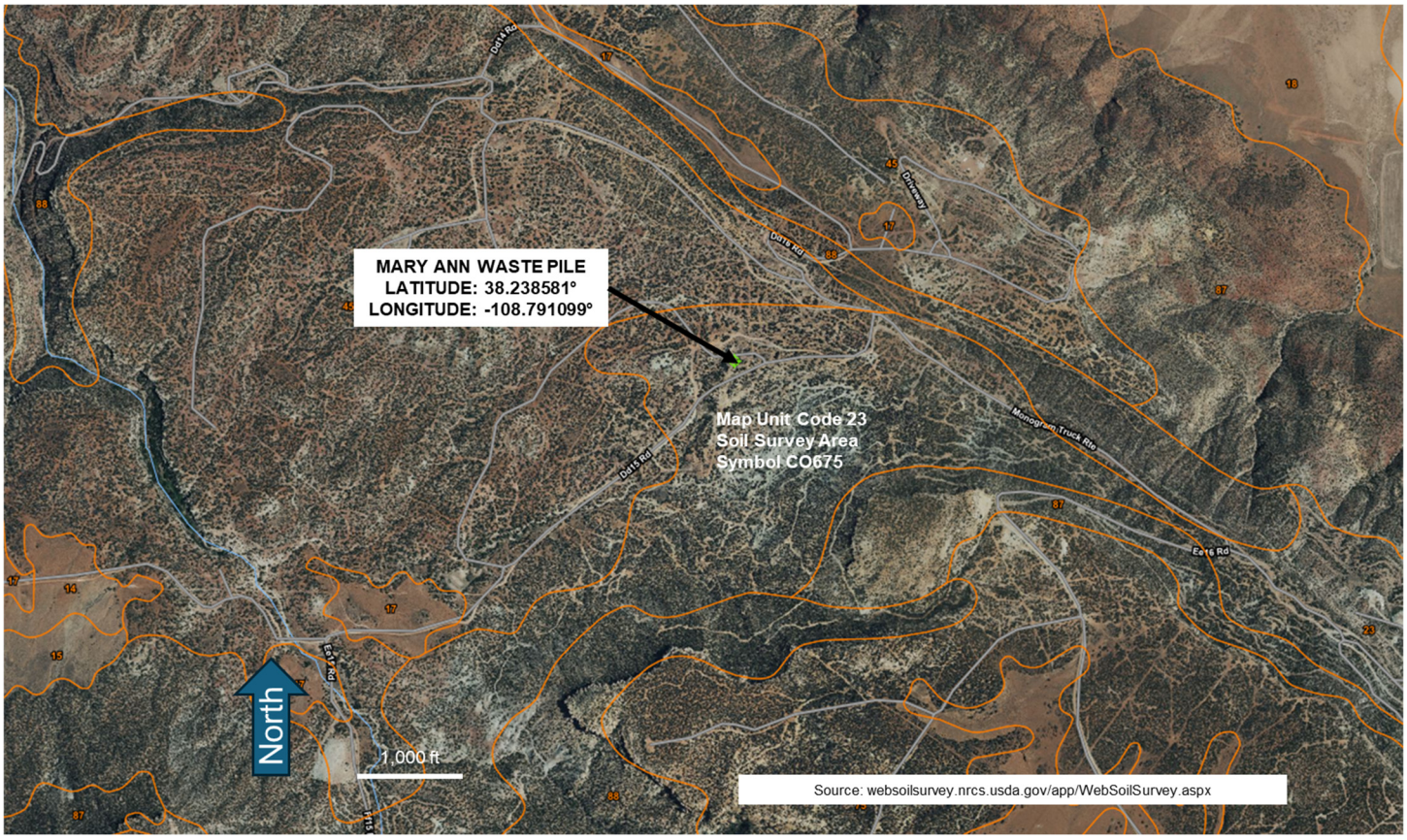
No soil cover is located on the Mary Ann Pile. Soil units located at or near the Mary Ann Pile include the following (Figure 2-2) (websoilsurvey.nrcs.usda.gov, 2026):

23—Bodot, dry-Ustic Torriorthents complex, 5 to 50 percent slopes

- **Map Unit Setting**
  - National map unit symbol: jvd9
  - Elevation: 5,400 to 6,800 feet
  - Mean annual precipitation: 10 to 12 inches
  - Mean annual air temperature: 46 to 48 degrees F
  - Frost-free period: 110 to 130 days
  - Farmland classification: Not prime farmland
- **Map Unit Composition**

- Bodot, dry, and similar soils: 45 percent Ustic torriorthents and similar soils: 40 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the map unit.

Figure 2-2: Mary Ann Soils Map



- **Description of Bodot, Dry**

  Setting
  - Landform: Landslides, Structural benches, Terraces Landform position (three-dimensional): Riser, tread Down-slope shape: Linear
  - Across-slope shape: Linear
  - Parent material: Residuum weathered from shale
- **Typical profile**
  - H1 - 0 to 3 inches: cobbly clay loam
  - H2 - 3 to 30 inches: cobbly silty clay
  - H3 - 30 to 34 inches: weathered bedrock
- **Properties and qualities**
  - Slope: 5 to 50 percent
  - Surface area covered with cobbles, stones or boulders: 5.0 percent
  - Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
  - Drainage class: Well drained

- Runoff class: Very high
- Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum content: 10 percent
- Maximum salinity: Very slight saline to moderately saline (2.0 to 8.0 mmhos/cm)
- Sodium adsorption ratio, maximum: 10.0
- Available water supply, 0 to 60 inches: Low (about 4.0 inches)

- **Interpretive groups**
  - Land capability classification (irrigated): None specified
  - Land capability classification (nonirrigated): 7e
  - Hydrologic Soil Group: D
  - Ecological site: R036XY408CO - Basin Shale
  - Hydric soil rating: No

Description of Ustic Torriorthents

- **Setting**
  - Landform: Terraces, Landslides, Structural benches
  - Landform position (three-dimensional): Riser, tread
  - Down-slope shape: Linear
  - Across-slope shape: Linear Parent material: Residuum weathered from sandstone and shale
- **Typical profile**
  - H1 - 0 to 4 inches: very bouldery clay loam
  - H2 - 4 to 31 inches: cobbly clay loam
  - H3 - 31 to 35 inches: unweathered bedrock
- **Properties and qualities**
  - Slope: 5 to 50 percent
  - Depth to restrictive feature: 10 to 80 inches to lithic bedrock
  - Drainage class: Well drained
  - Runoff class: Very high
  - Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
  - Depth to water table: More than 80 inches
  - Frequency of flooding: None
  - Frequency of ponding: None
  - Calcium carbonate, maximum content: 15 percent
  - Maximum salinity: Nonsaline to very slight saline (0.0 to 2.0 mmhos/cm)
  - Available water supply, 0 to 60 inches: Low (about 3.7 inches)
- **Interpretive groups**

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 7e
- Hydrologic Soil Group: C
- Hydric soil rating: No

- **Minor Components**
  - Rock outcrop. Percent of map unit: 10 percent. Hydric soil rating: No
  - Pinon. Percent of map unit: 3 percent. Hydric soil rating: No
  - Bowdish. Percent of map unit: 2 percent. Hydric soil rating: No

2.1.4 Topography

Elevation of the site is approximately 6,500 ft above sea level. The site occurs near the base of both Davis Mesa and Monogram Mesa. Slope of the site is approximately 7% toward the southwest. See Figure 3-2 for a topographic map.

2.1.5 Land Use of the Treatment Site

Information from this section is from the Montrose County GIS Viewer (https://montrosecounty.maps.arcgis.com). Figure 2-3 shows the location of the Mary Ann Pile. Figure 2-4 shows the current Montrose County zoning map (Adjacent Zoning, Land Use, and Ownership https://montrosecounty.maps.arcgis.com). The current Montrose County Zoning designation is Public Lands.

Figure 2-5 is the future land use map. Future land use for the Mary Ann Pile is undesignated, which indicates that Montrose County does not have any future land use plans for the Mary Ann Pile location. The nearest future land use designation is General Agriculture located approximately 1,500 feet northeast of the Mary Ann Pile.

Figure 2-6 shows the land ownership of the Mary Ann Pile is the following:

USA (BLM)
Uncompahgre Field Office
2465 S Townsend Ave, Montrose, CO 81401-5436
(Montrose County, Colorado Parcel Map Viewer).

Figure 2-7 shows the BLM land use map (Source: experience.arcgis.com/experience, Department of the Interior, Bureau of Land Management Colorado Interactive Web Map). According to BLM data the Mary Ann Pile and the area around it are available for mineral leasing. Currently no mineral extraction is occurring at the Mary Ann Pile location.

2.1.6 Grazing

The Mary Ann site is located within the Mesa Creek Allotment, which occupies 94,053.09 acres (Figure 2-8). The Mesa Creek Allotment Number is 17014 (BLM Colorado Interactive Web Map). No individual pastures are identified. Information regarding the Mesa Creek Allotment area as follows:

Table 2-1: Mesa Creek Allotment Information

Number	Name	Kind	Begin	End	Federal Land %	Status	AUMS
CO17014	MESA CREEK CRMP	CATTLE	03/01	06/06	99	ACTIVE	1853
CO17014	MESA CREEK CRMP	CATTLE	10/25	02/28	99	ACTIVE	2402

Note: AUMs = Animal Unit Months, are a measurement used to quantify the amount of forage needed to sustain one animal unit, typically defined as one cow and her calf, one horse, or five sheep or goats, for one month on public lands managed by BLM.

2.2 RELEASE CRITERIA

2.2.1 Dose Scenario

Based on the information presented above, DISA has determined that the dose scenario for treating the Mary Ann Pile is primarily RECREATIONAL. However, DISA addressed the grazing component of the site, in the next section. Therefore, the dose screening criteria are the RECREATIONAL criteria presented in Table 2-1 below.

Table 2-1: Dose Screening Criteria

Scenario	Ra-226 (pCi/g)	U-238 (mg/kg)	Natural Uranium (mg/kg)	Th-230 (pCi/g)
Resident Farmer	1.7	556	1,697	12
Resident Gardener	4.1	866	2,643	30
Rural Resident	5.3	970	2,961	42
Rancher	12	2,360	7,203	86
Recreationalist (no meat ingestion)	63	2,688	8,204	295

Note: 1. Orange fill indicates the screening criteria for this project.
2. Mass concentration of natural uranium and thorium-230 (based on 0.0206 Ci/g) must be less than 500 mg/kg.

Figure 2-3 Site Location

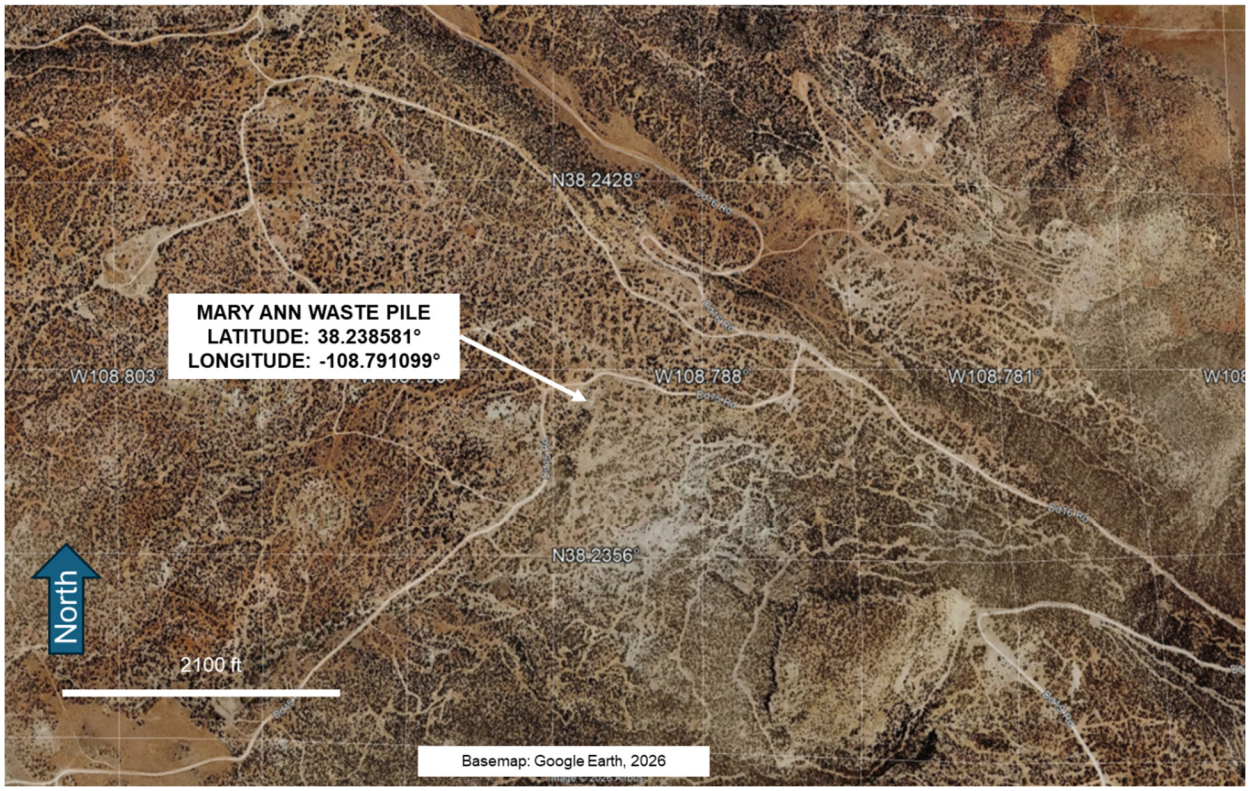


Figure 2-4: Zoning Map

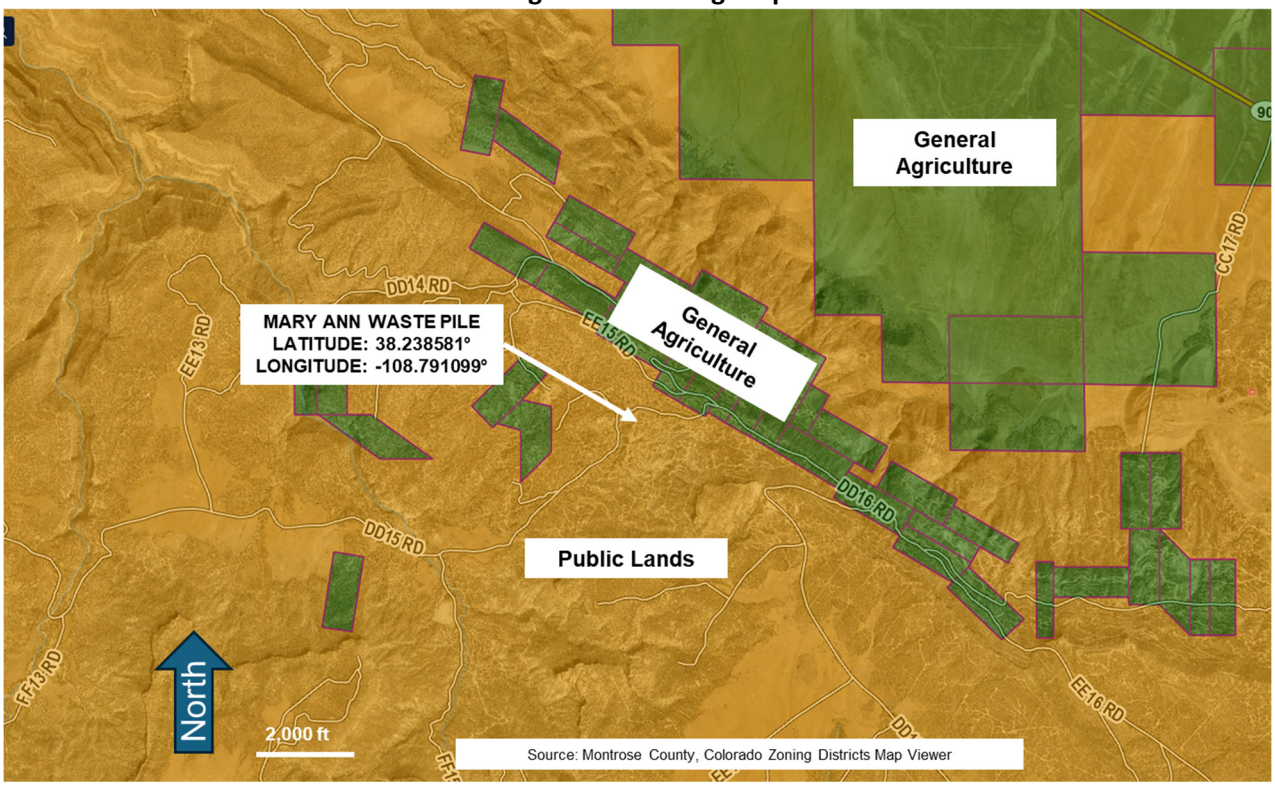


Figure 2-5: Future Land Use

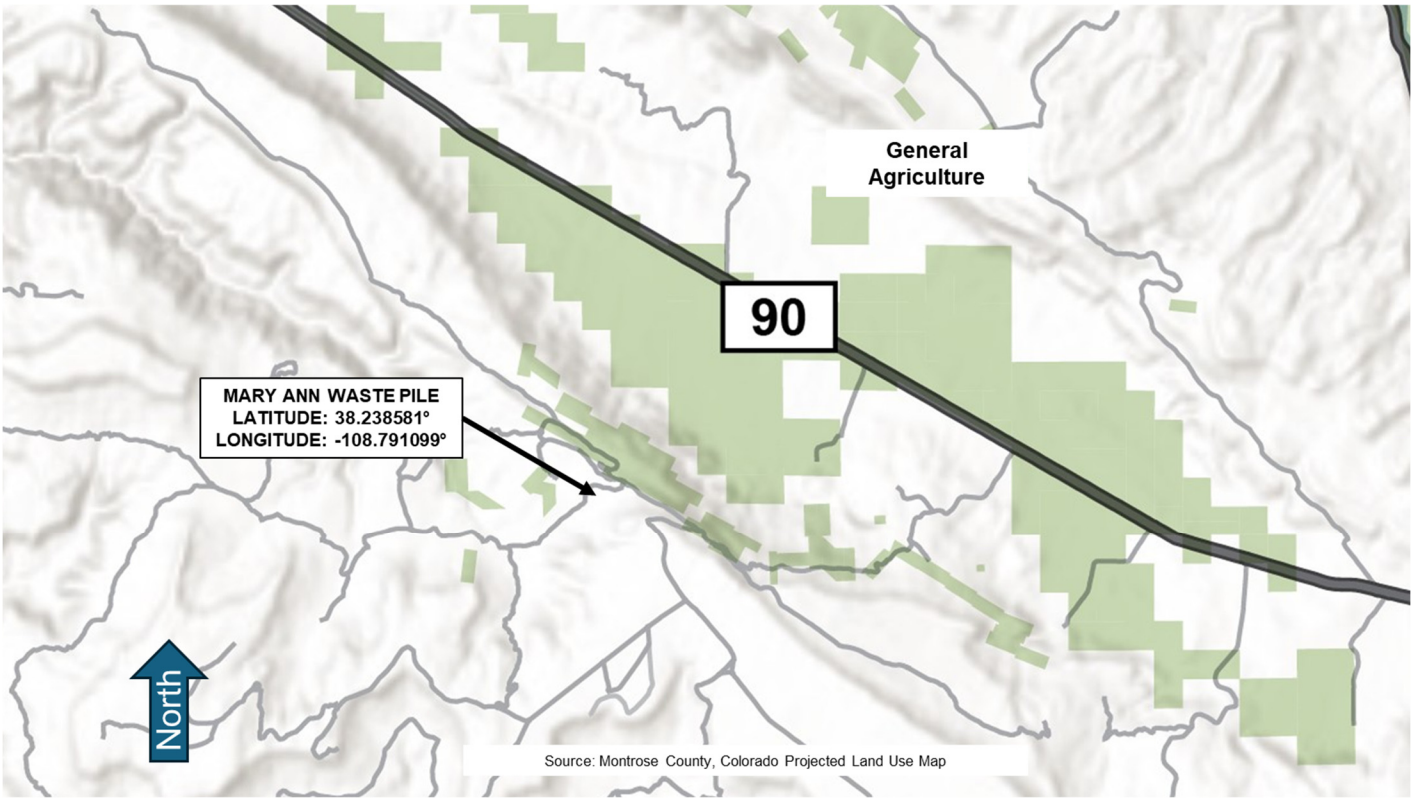


Figure 2-6a: Land Ownership Map

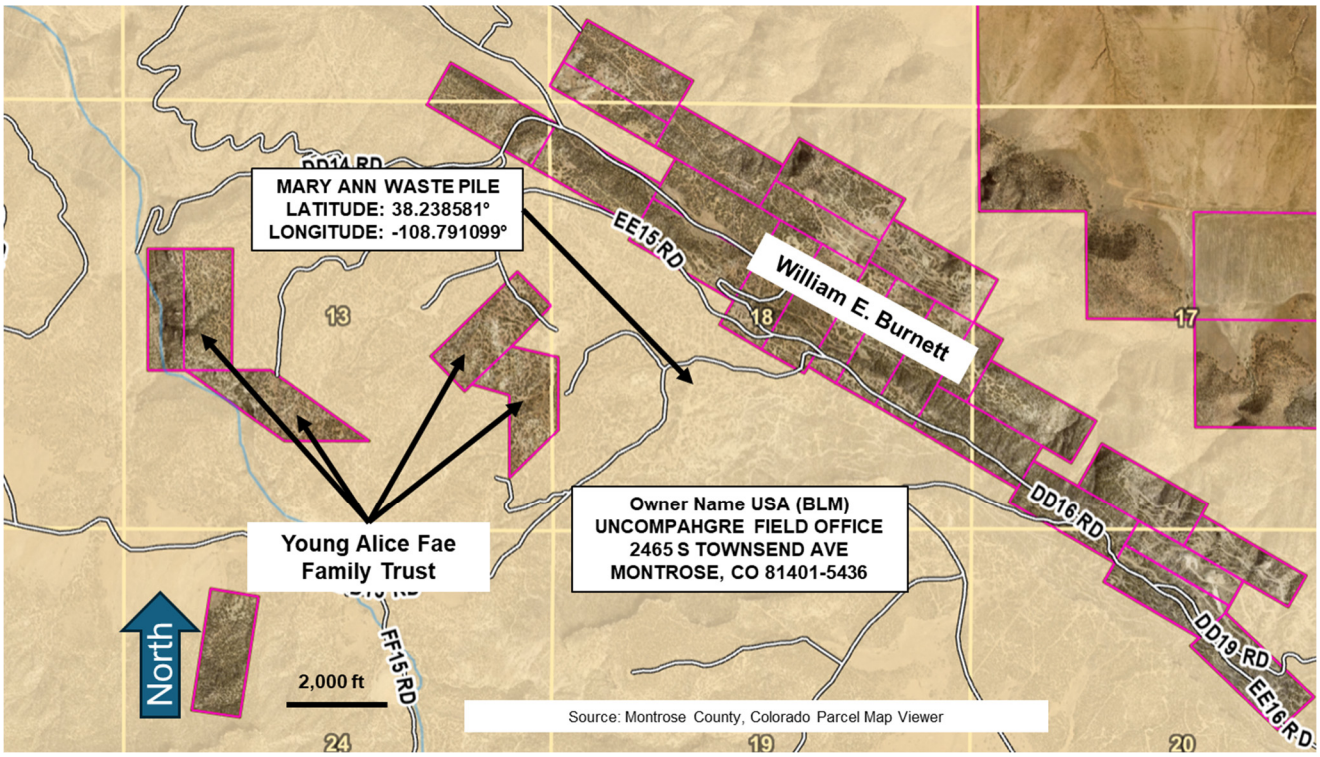


Figure 2-6b: Master Plat

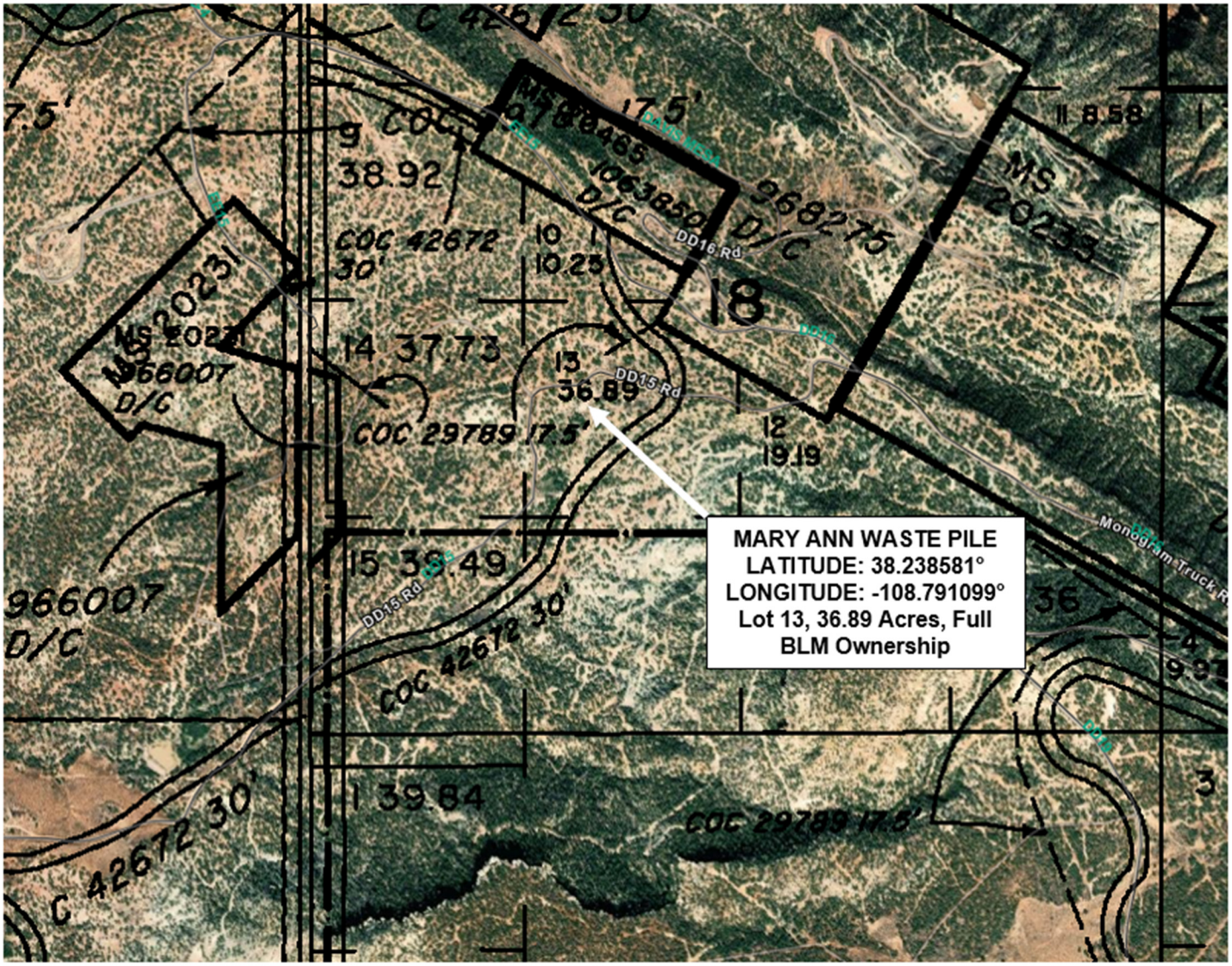


Figure 2-7: BLM Land Use

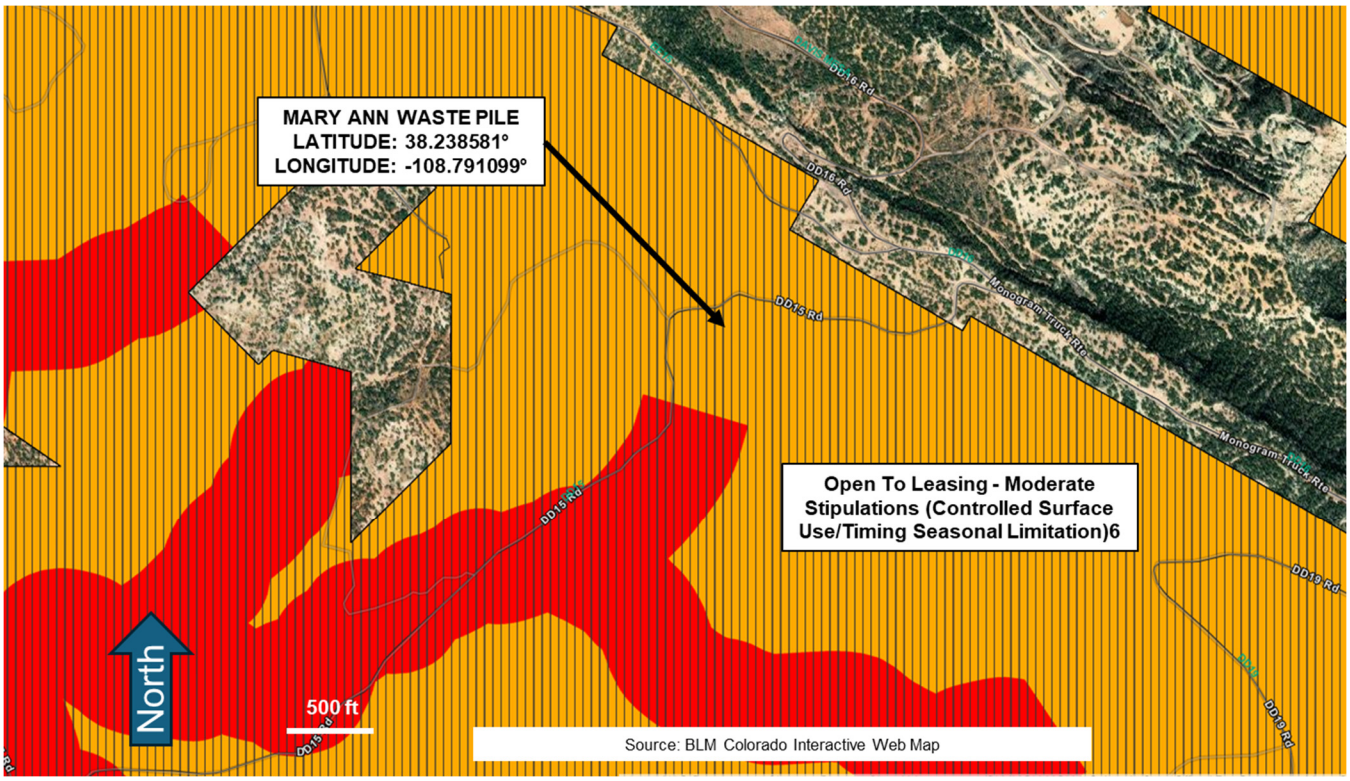
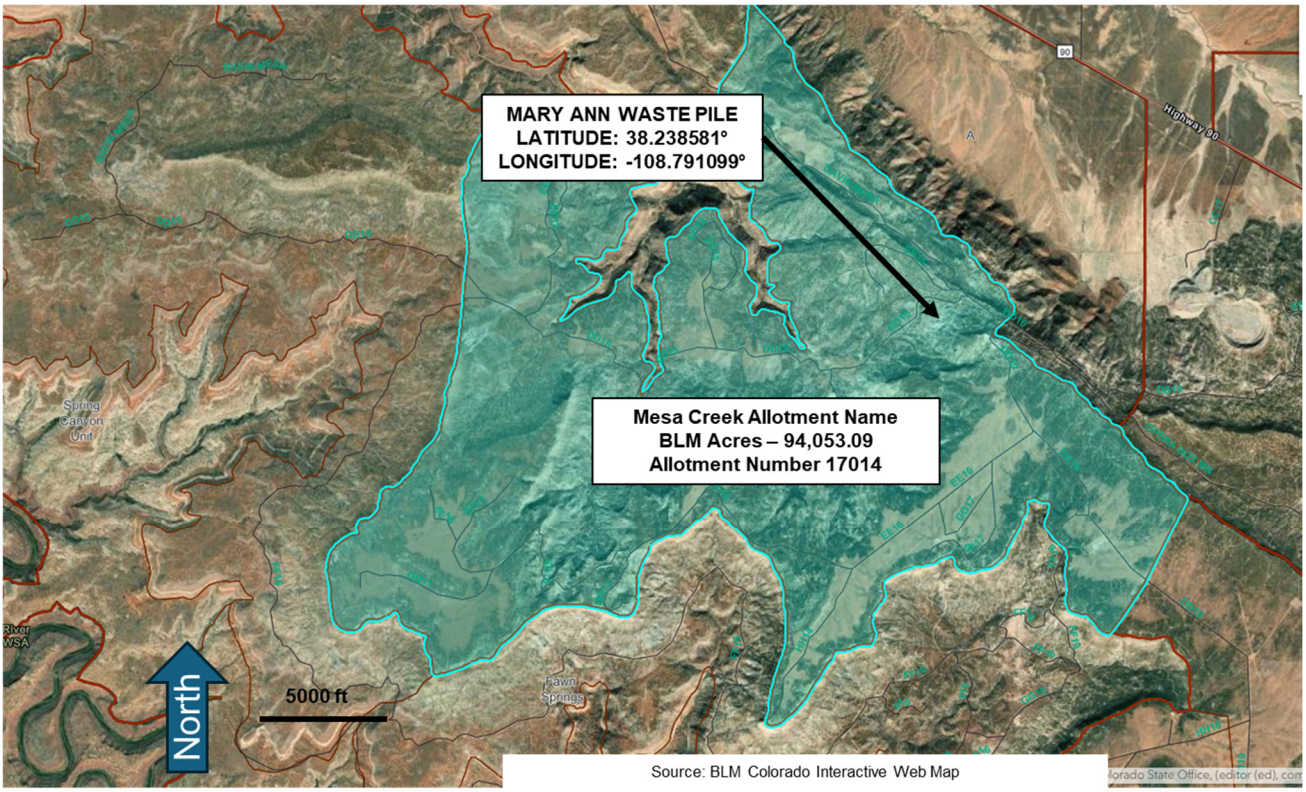


Figure 2-8: Grazing Land Use Map – Allotment



DISA has reviewed grazing as an potential dose pathway in the Mary Ann Pile PMN because the Mary Pile falls within Mesa Creek Allotment. Based on RESRAD modeling to for the site, the RECREATIONAL standards were deemed appropriate because the modeling resulted in higher screening criteria than the RESIDENTIAL scenario (see Section 2.2.2). The Mary Ann Pile comprises <1 acre out of 94,053.09 acres of the Mesa Creek Allotment, and the maximum number of cows is 2,402. Also, BLM states that grazing is allowed for 3 months during the spring, and 4 months during the winter. Because the maximum number of cows is 2,402 (39 acres per cow) and Mary Ann Pile occupies 0.001% of the allotment, the contribution of dose due to grazing is infinitesimally small and can be discounted.

2.2.2 Grazing Component

The Mary Ann Pile is situated in the Mesa Creek Allotment. To determine the impact of grazing on the screening concentrations shown in Table 2-1, DISA created a site-specific model used to recalculate the screening concentrations. Assumptions in the model were as follows:

1. The RECREATIONAL scenario was maintained because this is a legitimate land use considering the county road access to the site.
2. A grazing component was added, but it was not ranching because grazing in this area is open range. Cattle are set loose in the pasture and are then collected after the grazing period.
3. Recreationalists will not eat the meat from the cattle.
4. The Mary Ann Pile represents <1 acre of disturbance out of the entire 94,053.09 acres of pasture (0.001%)
5. Other modeling assumptions are as follows:
    a. Inhalation rate: 14,000 m3/y used (recreationalist scenario) where rancher scenario uses 11,400 m3/y.
    b. Mass loading factor for inhalation: 0.001 g/m3 used (recreational scenario) which is 10 times higher than the default value used for the rancher scenario, 0.0001 g/m3.
    c. Exposure duration: 30 years used (recreationalist scenario) where rancher scenario assumes 25 years of site exposure.
    d. Outdoor time fraction: Recreationalist scenario exposure fraction accounts for 2 weeks outdoor (14 days) was held steady. There is no expectation for a human rancher to be meaningfully exposed during grazing periods.
    e. Livestock water pathway: Value = 0.0001 (0.01%). This pathway is not accounted for in the recreationalist scenario but is turned on for this site-specific model due to cattle grazing. Fraction is 2 orders of magnitude higher than actual fraction of the pile acreage to the allotment acreage.
    f. Meat consumption pathway Value = 0.0001 (0.01%). This pathway is not accounted for in the recreationalist scenario but is turned on for this site-specific model due to cattle grazing. Fraction is 2 orders of magnitude higher than actual fraction of the pile acreage to the allotment acreage.
    g. Thickness of the clean coarse material is 1 ft, matching actual site reclamation conditions.

Screening criteria from this modeling analysis are as follows:

1. Radium-226: 65.3 pCi/g
2. Uranium-238: 2,832 pCi/g
3. Thorium-230: 596 pCi/g

These results are actually higher than the generic screening criteria presented in Table 2-1. Therefore, DISA confirms that the RECREATIONAL screening criteria will be used at this site. Appendix B contains the modeling files for this analysis.

2.3 NUMBER OF SAMPLES OF CLEAN COARSE MATERIAL (LC 19.4)

DISA intends to base its compliance with the 10 CFR 20 Subpart E release criterion on sampling of the clean coarse material. Based on information DISA supplied to the NRC, DISA will collect at least 5 samples of clean coarse material as it is being generated because the total mass of the entire pile is approximately 4,217 tons (Section 3.3). This is based on DISA's licensing commitments wherein DISA will collect a minimum of 5 samples of clean coarse material from any waste pile that is less than 40,000 tons in mass (Section 3.2.1, DISA, 2025).

SECTION 3.0 LOCATION AND DESCRIPTION OF SITE

3.1 SPECIFIC LOCATION OF THE SITE AND ORIGIN OF THE WASTE (LC 19.6)

3.1.1 Site Location

The location of the Mary Ann Pile is as follows:

- County – Montrose, Colorado
- Township – 46N
- Range – 17W
- Section - 18
- Lot 13
- Surface Ownership – US Bureau of Land Management (BLM)
- Mineral Ownership – BLM
- Site Holder: NUV2C LLC
- Coordinates: Latitude - 38.238581°, Longitude - -108.791099°

3.1.2 Waste Origin

NUV2C is the Claim Holder of Record for the NUV 239 and NUV 241 claims. NUV2C, LLC is undergoing acquisition by American Atomics, successor in interest via name change from Great Northern Energy Metals, Inc (GNEM). DISA has access to treat the Mary Ann Pile based on an agreement between GNEM, NUV 2C, and AURA GRIT LLC, and DISA signed a services agreement with AURA GRIT LLC to perform the treatment work at the Mary Ann Pile. Appendix C contains the Memorandum of Waste Treatment and Use Agreement between GNEM and AURA GRIT LLC. DISA is submitting its agreement with AURA GRIT LLC under separate cover and under a 10 CFR 2.390 request to withhold information from the public because of the sensitive nature of this agreement.

The uranium mine waste is assumed to originate from the Mary Ann Mine, which is located in the same general area as the Mary Ann Pile. Table 3-1 shows information regarding the claims on which the Mary Ann Pile is located.

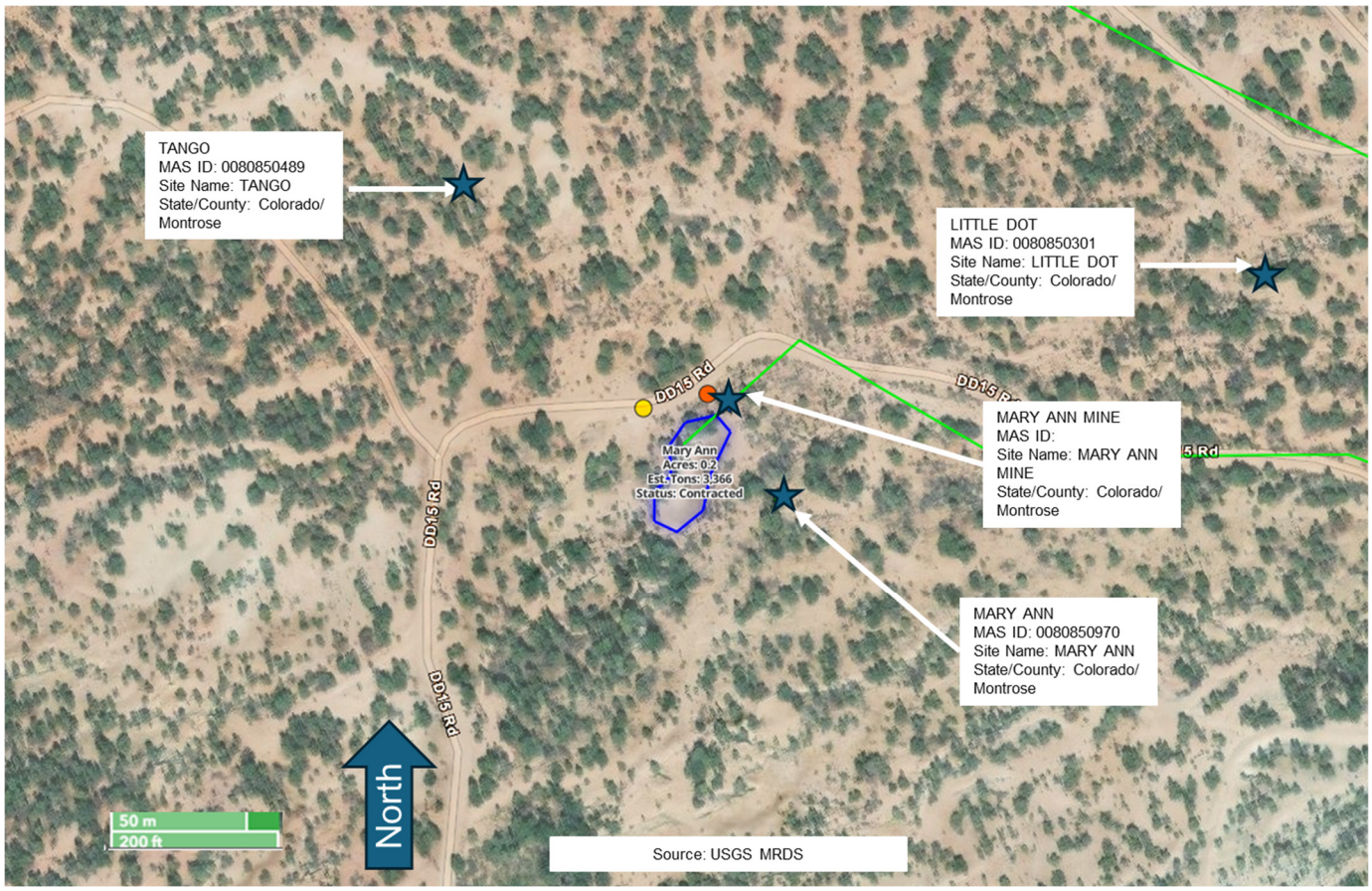
Table 3-1: Claim Information

Claim Name	Serial #	Lead File #	County	Claim Type	Date Location	Meridian, Township, Range, Section	Subdivision
NUV 239	CO101318709	CO101318709	Montrose	Lode	4/29/08	23, 46N, 17W, 18	Lot 13
NUV 241	CO101318711	CO1013187711	Montrose	Lode	4/29/08	23, 46N, 17W, 18	Lot 13

Although it is assumed the Mary Ann Pile originated from the Mary Ann mine DISA cannot confirm that this was the sole source of the waste pile due to the number of mines in the general proximity of the Mary

Ann Pile, as illustrated in Figure 3-1. As DISA stated during the licensing process, mine waste piles are not often found on the actual claims of the mines from where they originate. A common mining practice that was allowed by BLM was to place mine waste outside the permitted claim or permit boundary under certain circumstances. Many of the uranium waste piles that we encounter are from unconfirmed origins.

Figure 3-1: Mines Located Near Mary Ann Pile



3.2 DESCRIPTION OF THE SITE (LC 19.7)

3.2.1 General Description

The Mary Ann Waste Pile is located in Montrose County, Colorado, at the base of both Monogram and Davis Mesas and southwest of Paradox Valley. Dd15 Road traverses immediately to the north of the site, and is the main access road for this HPSA treatment project. Site topography is relatively featureless except for the waste pile, and the site slopes toward the southwest at approximately 7% (Figure 3-2). According to the USGS topographic data, a spring is located approximately 1,000 feet southwest of the Mary Ann Pile (Figure 3-2). Mine databases, as identified above, identify two Mary Ann Mines. While it is unclear which particular mine created the waste rock, it is likely that at least one of the two mines did.

3.2.2 Disturbance Areas

Figure 3-3 shows the operational areas and work flow for the Mary Ann Pile. The basic areas of the project will be the waste pile, restricted area, truck turnaround area, and the crushed rock staging area. Fines concentrates containers will be stored in the restricted area prior to transportation offsite. No temporary roads will be constructed, and no road grading will occur. Table 3-2 contains estimates of the disturbed areas.

Figure 3-2: Mary Ann Pile Topography

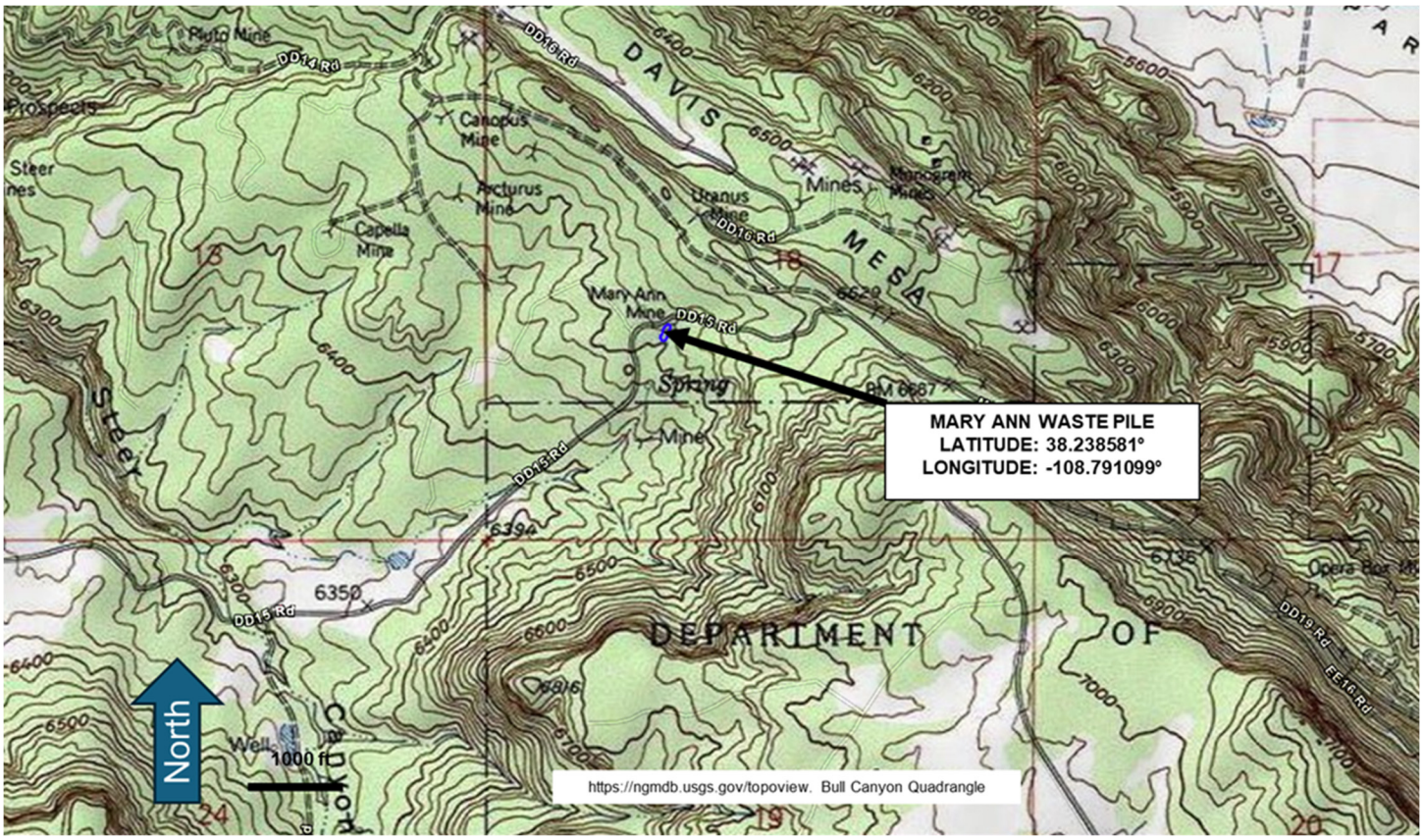


Figure 3-3A: Site Layout

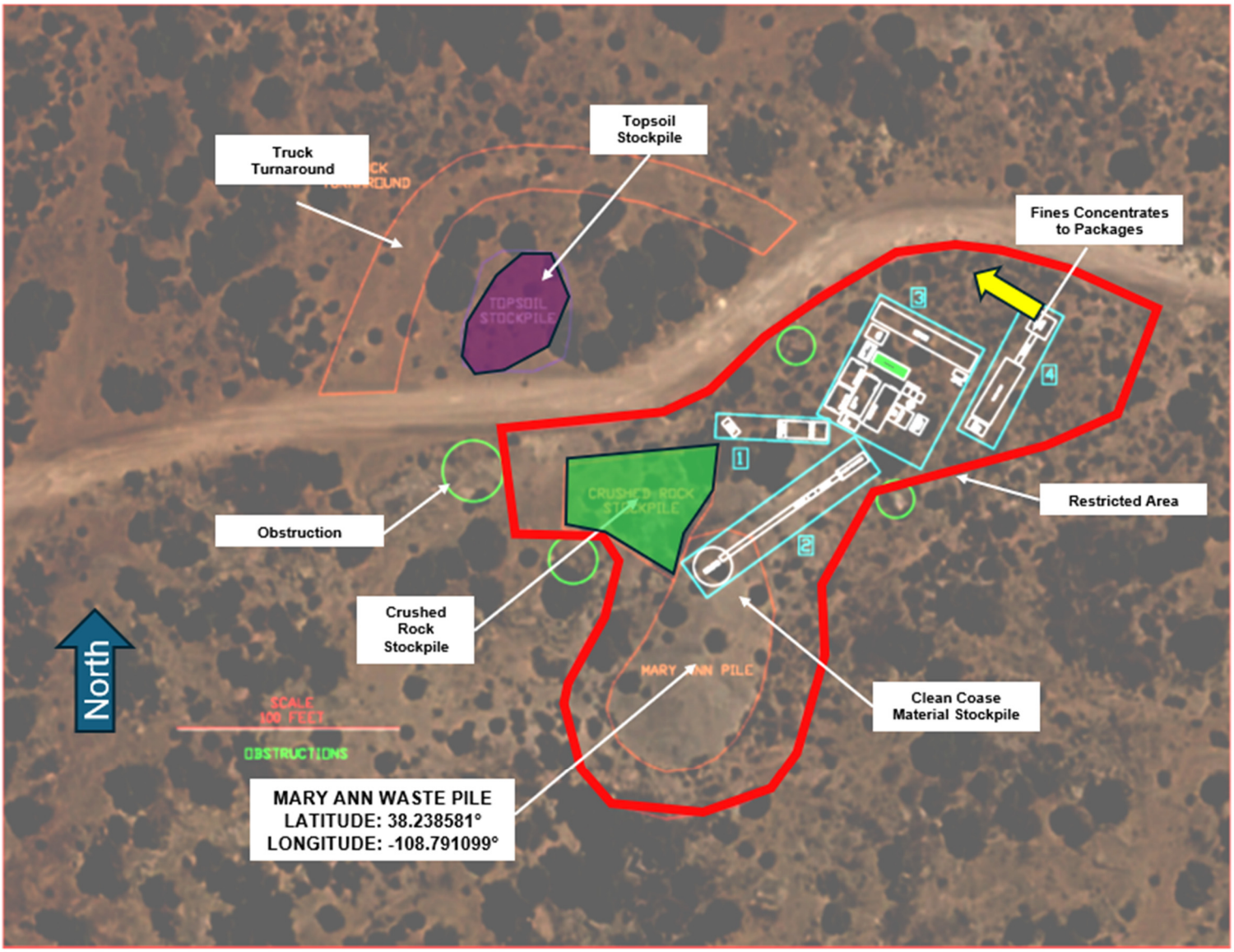


Figure 3-3B: Call Outs

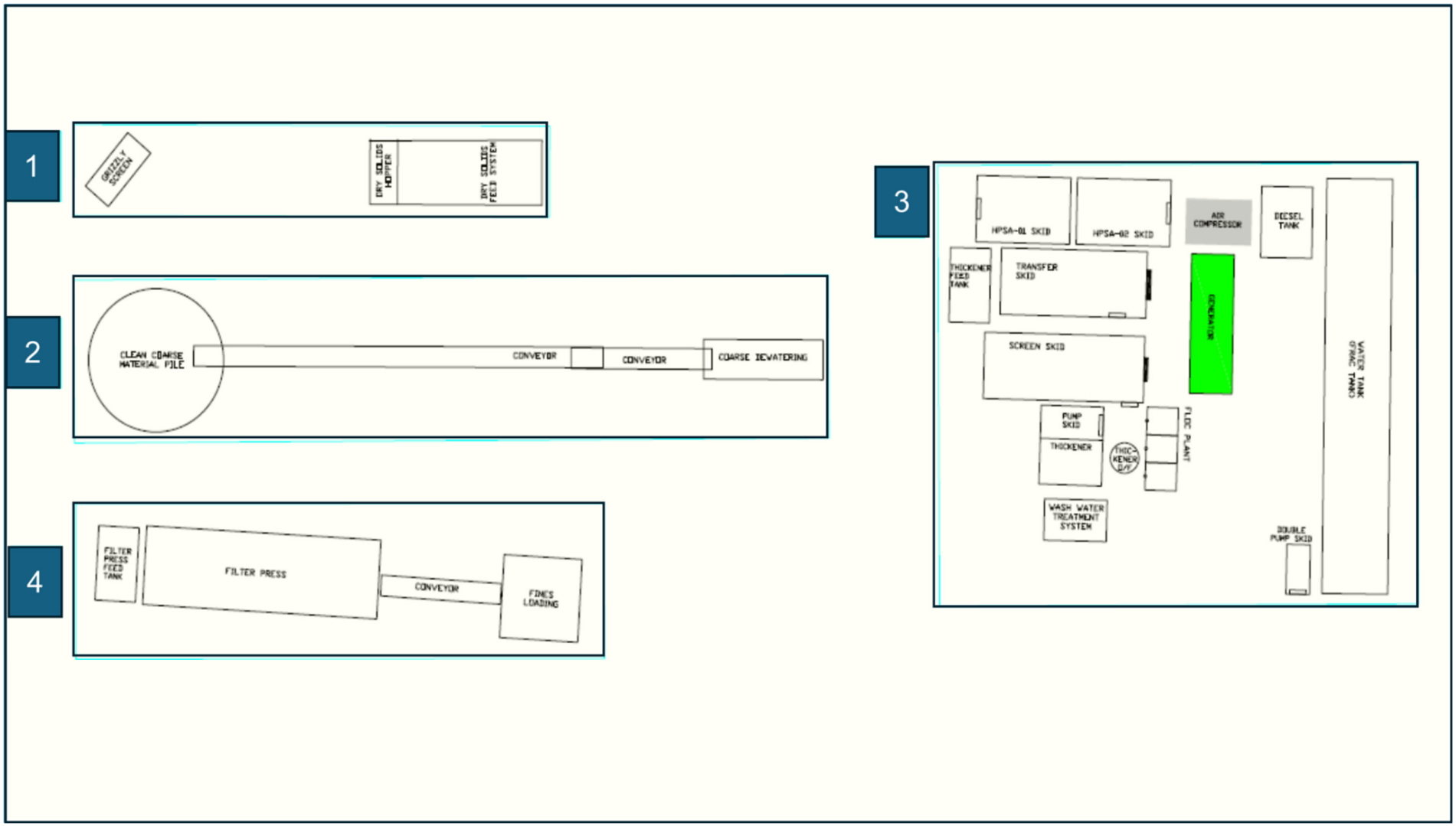


Table 3-2: Anticipated Land Disturbances

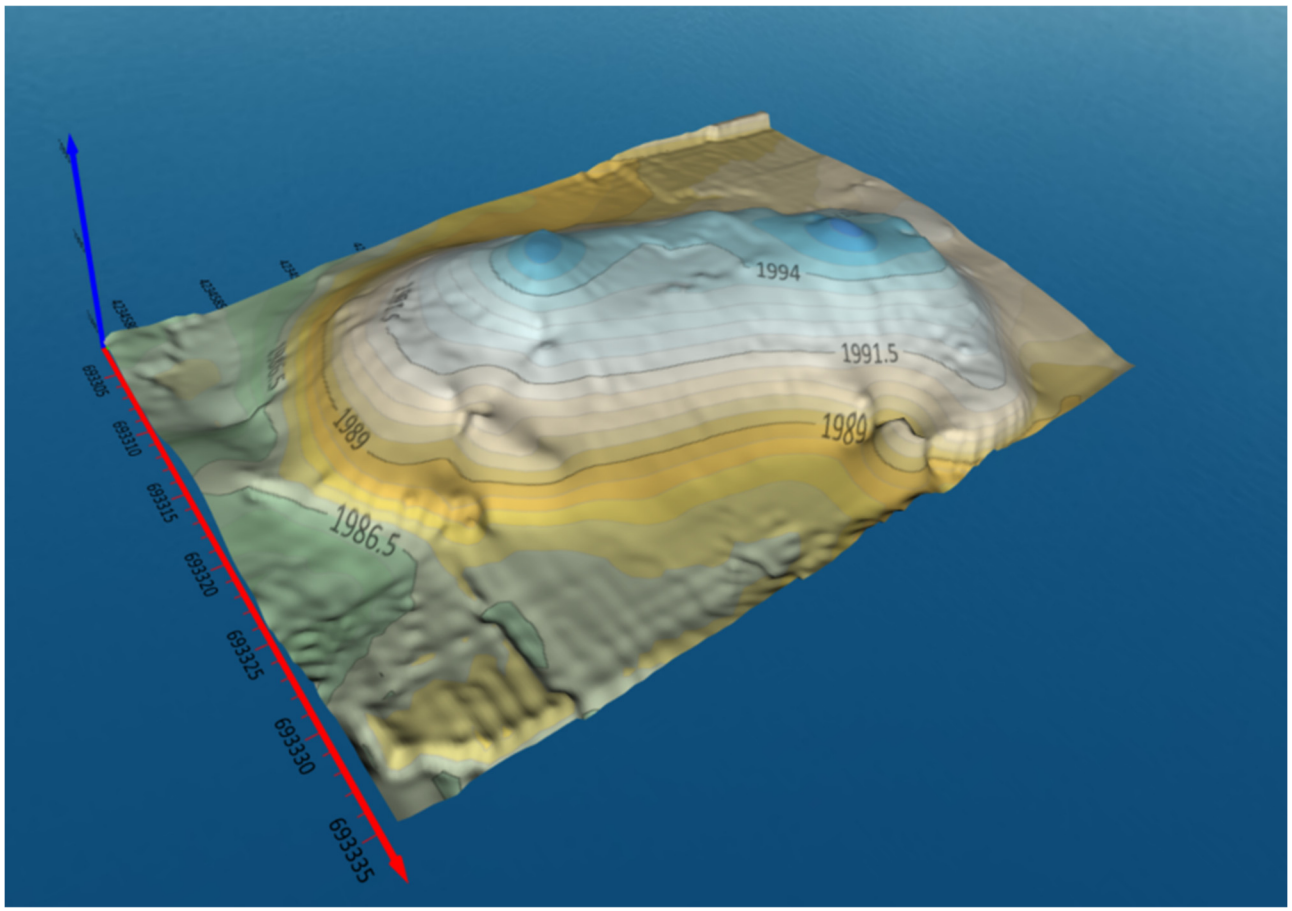
Site Feature	Disturbance (sq ft)	Disturbance (acres)
Mary Ann Pile	5,227	0.12
Topsoil Stockpile	2,178	0.05
Restricted Area – HPSA Treatment and Fines Storage	12,197	0.28
Crushed Rock Stockpile	3,920	0.09
Truck Turnaround	5,663	0.13
Miscellaneous Disturbances	8,276	0.19
Total	37,461	0.86

3.2.3 Volume of Waste Rock

DISA estimated the volume of the uranium mine waste using elevation data input into a geostatistics model called Surfer by Golden Software. Elevation data was obtained during the walkover GPS-gamma surveys conducted by DISA using a RadScout® system by Environmental Restoration Group, Inc. This system consists of a Ludlum Model 3000/44-10 sodium iodide probe synchronized with a global positioning system (GPS) receiver that are both connected to a Mesa Juniper data logger.

Output from the logger includes geographic coordinates, gamma counts, and elevation of each point logged during the survey. DISA calculated the volume of the waste rock by kriging the elevation data points on and off of the pile. In this manner, Surfer can calculate the volume in between models of elevations off the pile and those of the pile itself providing an estimate of the volume. Figure 3-4 shows a 3-D image of the model.

Figure 3-4: 3D Model of Mary Ann Pile



Because the original data was collected in UTM metric geographic coordinates, the volume of the pile was calculated in cubic meters, then converted to cubic yards. Based on multiple model runs, DISA estimates the Mary Ann Pile volume to be 1,656 cubic meters or 2,169.4 cubic yards. Assuming a density of 144 lbs. per cubic foot, the total weight of the Mary Ann Pile is approximately 4,217 tons. During the crushing and grinding operation, the entire waste pile will be relocated to the crushed rock staging area, as shown in Figure 3-3.

3.2.4 Boundaries

The surficial boundaries of this treatment project are found in Figure 3-3. DISA will not excavate deeper than 1 foot into the native soil below the Mary Ann Pile.

SECTION 4.0 PRELIMINARY DATA

4.1 MASS OF URANIUM AND THORIUM IN WASTE PILE (LC 19.8)

To estimate the mass of source material that may be generated by the HPSA process, DISA collected five samples for HPSA testing and three surface samples from the pile. Because the Mary Ann Pile is a small pile to be treated for the pilot study, the full characterization, as discussed in DISA's license application was not feasible. Total uranium and thorium estimates were based on analysis of particle size distributions of bulk feed samples as an average uranium concentration weighted by the total %mass retained for each particle size. Table 4-1 shows the parameters and the total weighted average of uranium.

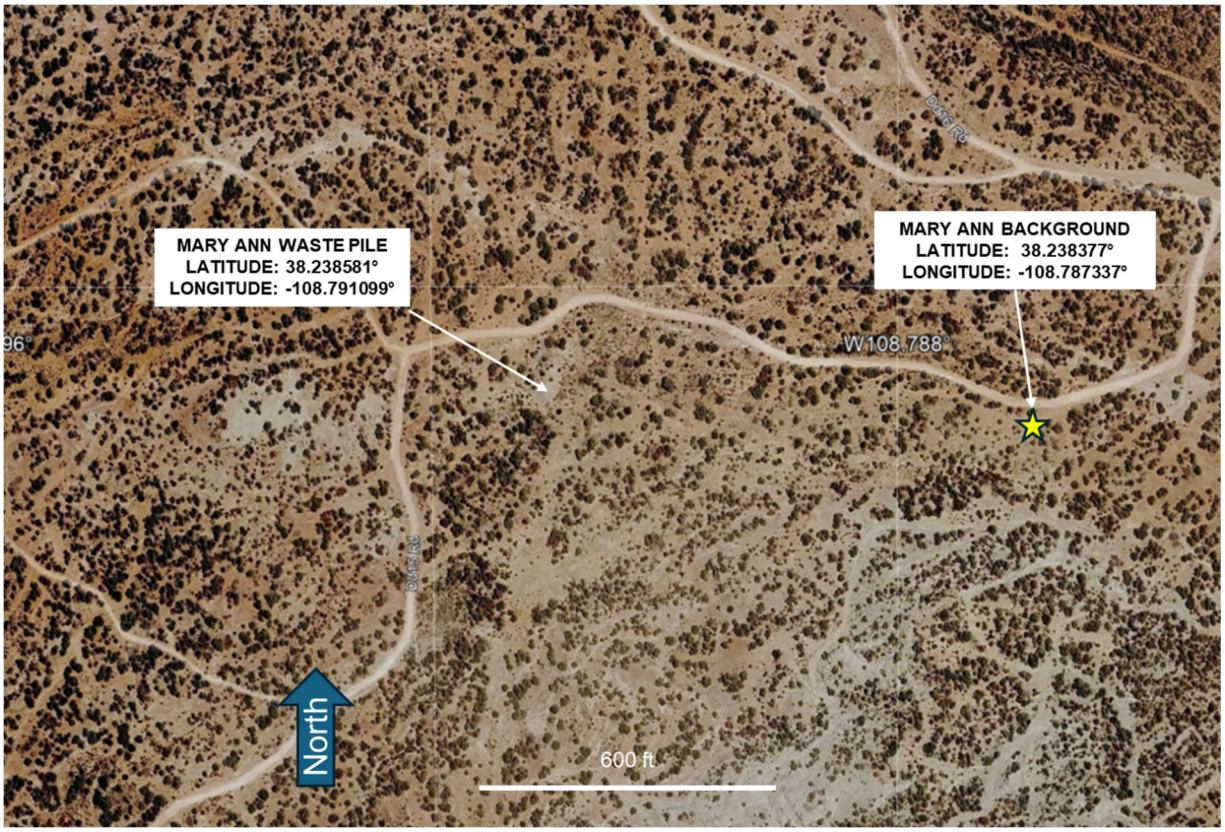
Table 4-1: Initial HPSA Test Results

US Mesh	Particle Size (micron)	Uranium [mg/kg]	% Mass Retained	U x %Mass Retained
+8	2380	34	9%	2.98
+20	841	400	10%	41.6
+50	297	276	11%	29.68
+70	210	227	6%	12.52
+140	105	126	16%	20.54
+200	74	124	8%	10.47
+270	53	161	6%	10.17
-270	5	322	34%	107.91
	Sum	1670	1	235.87
	Weighted Average			235.87

A review of Table 4-1 indicates that the total weighted average uranium concentration of the Mary Ann Pile is 235.87 mg/kg uranium. Analytical results from the bulk feed indicate that the radium-226 concentration is 69.8 pCi/g. Thorium-230 results are not available currently, but will be included in a revised report once the analysis is received. Based on secular equilibrium, the thorium-230 activity concentration is 69.8 pCi/g. Using the thorium-230 specific activity of 2.06 E+10 pCi/g, DISA estimates the thorium-230 concentration of the Mary Ann Pile to be 0.003 mg/kg. Considering previously calculated weight of the Mary Ann Pile (4,217 tons), DISA estimates that the uranium and thorium mass in the Mary Ann Pile to be 1,989 lbs. and 0.03 lbs., respectively

Radiological background was developed by locating a 5m x 5m sample plot in an unimpacted area of near the site upgradient and upwind to the extent possible (Figure 3-3). Gamma scans were performed over the entire sample plot, and a 9-point composite sample was collected. Based on the analysis of the background soil composite, background uranium and vanadium concentrations are 8 and 35 mg/kg, respectively. Background radium-226 and thorium-230 are 2.4 pCi/g and 5.9 pCi/g, respectively (Table 4-1). Average background gamma count was 14,516 cpm, which is within the range of background counts that DISA typically observes. This compares to the mean counts on the Mary Ann Pile, which is 93,534 cpm.

Figure 4-1: Mary Ann Background Location



4.2 JUSTIFICATION FOR PROPOSED FUTURE LAND USE (LC 19.9)

This information is found in Sections 2.1.5 and 2.1.6. The future land use will be recreational, mining, and grazing. First, BLM owns the land exclusively. Second, BLM has identified the site and the area around as open to leasing. Third, BLM leases the Mary Ann Pile area for grazing. Therefore, the site and surrounding area will not be subject to development that would indicate any other future land use than recreation, mining, and grazing.

4.3 CHARACTERISTICS OF THE CLEAN COARSE MATERIAL

DISA collected 5 samples of clean coarse material, as it was generated during laboratory HPSA testing, for toxicity and leachability testing. Results of this testing are presented in Table 4-1. A review of Table 4-1 indicates that the clean coarse material will not pose any toxicity risk to human health and the environment (see notes in Table 4-1). Furthermore, the radionuclide concentrations will meet the screening criteria for the RECREATIONAL scenario and the source material exemption limit in 10 CFR 40.13.

Table 4-1: Analytical Results

Parameter	Units	CCM-1	CCM-2	CCM-3	CCM-4	CCM-5	Background
Natural Uranium	mg/kg	29	42	27	26	54	10
Radium-226a	pCi/g	11.7	14.4	13.5	13.3	13.3	5.4
Thorium-230	pCi/g	9.4	16.0	10.5	15.1	11.1	5.0
Gamma	cpm	--	--	--	--	--	14,516
Toxic Characteristic Leaching Procedure							
Arsenic	mg/L	ND	ND	ND	ND	ND	NA
Barium	mg/L	ND	ND	ND	ND	ND	
Cadmium	mg/L	0.06	0.06	0.06	0.06	0.06	
Chromium	mg/L	ND	ND	ND	ND	ND	
Lead	mg/L	ND	ND	ND	ND	ND	
Mercury	mg/L	ND	ND	ND	ND	ND	
Selenium	mg/L	ND	ND	ND	ND	ND	
Silver	mg/L	ND	ND	ND	ND	ND	
Synthetic Precipitation Leaching Procedure							
Natural Uranium	mg/L	0.031	0.0339	0.0370	0.0372	0.0342	NA
Radium-226	pCi/L						
Thorium-230	pCi/L						
Note: Data presented for the radionuclides, SPLP, and TCLP are preliminary. Preliminary radionuclide data are usually higher than the final data. PMN will be updated once the final analytical data is received.							

4.4 ANTICIPATED MASS OF SOURCE MATERIAL EXPECTED TO POSSESS (LC 19.10)

As previously stated, the expected mass concentrations of uranium and thorium-230 in the Mary Ann Pile are 1,989 lbs. and 0.03 lbs., respectively. Considering the estimated mass of uranium mine waste in tons (4,217 tons) and the expected recovery (71% of the uranium in 43.6% of the original mass), DISA estimates that it will possess 1,839 tons of fines concentrates containing 1,765 lbs. of uranium. DISA expects the uranium concentration to be approximately 480 mg/kg or 331 pCi/g. Considering secular equilibrium, DISA would expect the radium content of the fines concentrates to be 331 pCi/g, and the thorium-230 mass to be approximately 60 lbs. of thorium-230 using 331 pCi/g and a specific activity of 0.0206 Ci/g.

4.5 ANTICIPATED DATES OF MOBILIZATION AND STARTUP (LC 19.11)

See Section 1.2

SECTION 5.0 METHODS AND OTHER PROJECT INFORMATION

5.1 METHOD FOR DETERMINING COMPLIANCE WITH RELEASE CRITERIA (LC 19.12)

5.1.1 Numerical Criteria

DISA will analyze the clean coarse material for total radionuclides (natural uranium, radium-226, and thorium-230), TCLP for the RCRA metals, and SPLP for the aforementioned radionuclides. If the UCLs of the analytical results meet the RECREATIONAL screening criteria, the 500 mg/kg exemption limit, and the limits presented below, then the project will be considered in compliance and eligible for unrestricted release.

- 10 CFR 20, Appendix B, Table 2 Effluent Concentrations
  - Ra-226 = 60 pCi/L
  - Th-230 = 100 pCi/L
  - Natural uranium = 0.43 mg/L based on 300 pCi/L limit
- TCLP Metals Limits
  - Arsenic = 5 mg/L
  - Barium = 100 mg/L
  - Cadmium = 1 mg/L
  - Chromium = 5 mg/L
  - Lead = 5 mg/L
  - Mercury = 0.2 mg/L
  - Selenium = 1 mg/L
  - Silver = 5 mg/L

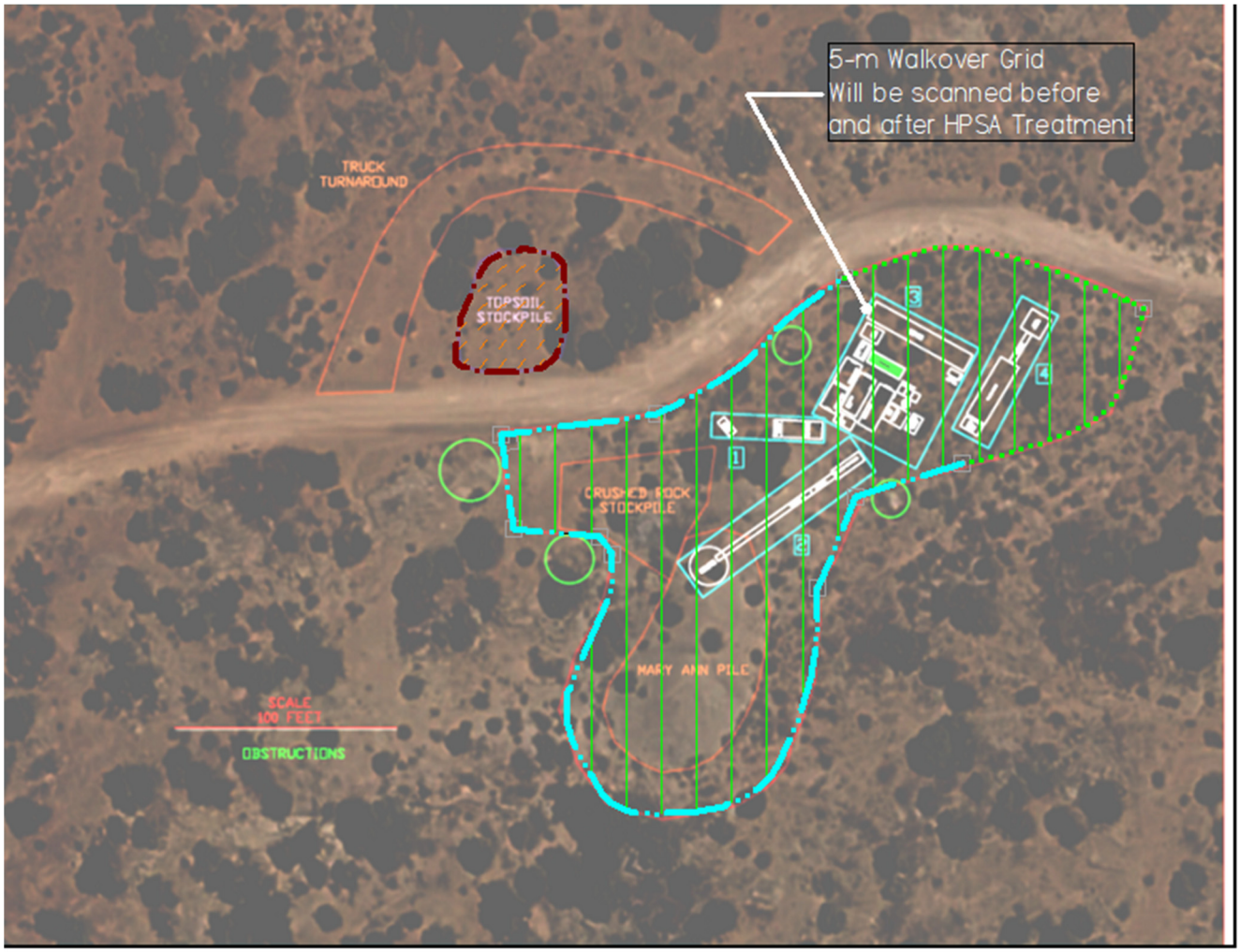
Table 2-1 presents the screening criteria for this project which are 63 pCi/g radium-226, 8,000 mg/kg uranium-238, 16,562 mg/kg natural uranium, and 295 pCi/g thorium-230. These limits will be adjusted after DISA receives the background analytical data.

DISA will collect samples of the clean coarse material, as it is generated from the HPSA treatment process and transport the samples to a commercial laboratory, for analysis. Only commercial laboratory results will be used to determine compliance with the numerical criteria.

5.1.2 Gamma Surveys

DISA will perform walkover gamma surveys on 5-m transects at the crushed rock storage area and the restricted area prior to any crushing or equipment mobilization work. After the HPSA treatment is completed and before reclamation, DISA will perform the same walkover gamma surveys to determine whether contamination from the waste rock treatment process contaminated the ground surface. If the average post-treatment gamma results are within 20% of the pre-treatment gamma results, then DISA will conclude that it did not contaminate the ground surface. Figure 5-1 shows the layout of the 5-m transects at the site.

Figure 5-1: Walkover Gamma Survey Transects



5.2 CULTURAL RESOURCES INFORMATION

DISA's consultants, Cannon Heritage and Woods Canyon Archaeological Consultants, performed a Class III survey of the Mary Ann Pile and surrounding area. The final report was submitted to BLM and cannot be released to DISA due to confidential information. Therefore, the NRC staff must coordinate with BLM to view the survey report.

5.3 ECOLOGICAL INFORMATION

Cedar Creek Associates performed desktop research and a site visit of the Mary Ann Pile to assess the potential for critical habitat and the presence of rare, threatened, and endangered species. The full report is found in Appendix D. Cedar Creek found no critical wildlife habitats or active nests of protected species within the project area or its buffer zones. Additionally, no water features were identified. The project site itself has sparse vegetation. Therefore, the project is not expected to have significant adverse impacts

on wildlife, water, or listed species. Based on their findings, the Mary Ann Project Site is suitable for project initiation in 2026. If project initiation occurs during the migratory bird nesting season, necessary precautions should be implemented to prevent negative impacts by ensuring site disturbance occurs outside the migration season, which begins in late March for migratory birds.

SECTION 6.0 FINANCIAL ASSURANCE

6.1 UPDATED DECOMMISSIONING COST ESTIMATE (LC 19.13 AND 19.14)

According to DISA's license application Table 8-1, the standard decommissioning cost for sites of 1 to 20 acres is $48,931.41. This amount is more than enough to address the financial assurance requirements for the Mary Ann site. DISA actually estimates site decommissioning cost to be $12,167.37 due to the small size of the Mary Ann Pile (Table 6-1). As part of the mine permitting process, DRMS will be reviewing DISA's decommissioning costs for this project. BLM will also review DISA's decommissioning costs as part of its Plan of Operations. To address decommissioning, DISA requests that the NRC staff accept the standard approved decommission cost of $48,931.41, which exceeds the expected estimate. This amount will be proposed to BLM and DRMS.

Table 6-1: Current Mary Ann Decommissioning Cost Estimate

Activity	QTY	Units	Unit Cost	Cost
Equipment				
Skid Steer - Rental	1	4 days	N/A	$2,104.53
Skid Steer - Delivery & Return	1	2 trips	N/A	$1,342.20
Skid Steer - Fuel	96	Gallons	$3.53	$338.69
Support Vehicle	1	4 days	$350	$1,400
Labor – Earthwork				
Operator	20	hours	$45.00	$900.00
General Laborer	20	hours	$38.00	$760.00
Revegetation				
Seed & Misc.	18.4	lb	$23.72	$436.45
General Laborer	4	hours	$38.00	$152.00
Erosion Control BMP's				
Silt Fence	100	ft	$2.50	$250.00
Hay Waddles	1,000	ft	$1.75	$1,750.00
Labor – BMP Installation	10	hours	$38.00	$380.00
Subtotal				$9,012.87
Contingency (20%)				$1,802.57
Administration (15%)				$1,351.93
TOTAL				$12,167.37

6.2 FINANCIAL ASSURANCE (LC 19.14)

As part of the mine permitting process, DRMS will be reviewing DISA's financial assurance instrument and will manage the financial assurance instrument once it is procured. Therefore, DISA requests that the NRC staff defer its review of the Mary Ann financial assurance instrument to DRMS.

6.3 POST-TREATMENT STABILIZATION METHODS (19.16)

Based on conversations with BLM, DISA will use the clean coarse material to reclaim the Mary Ann Pile. DISA will fill and grade areas excavated for grading the restricted/HPSA treatment area, crushing and stockpiling the Mary Ann uranium mine waste, creating the truck turnaround, and the footprint of the current waste pile. Figure 6-1 shows the proposed Mary Ann treatment site reclamation. Final grades will be similar to the existing grades (approximately 7%). Topsoil that is reclaimed from below the existing waste rock pile, crushed waste rock stockpile, and the restricted area, will be incorporated into the top layer of the reclaimed area and seeded with the seed mix identified in Table 6-1. Such a seed mix would include the some or all of the following species as provided in the DRMS permit (Table 6-1).

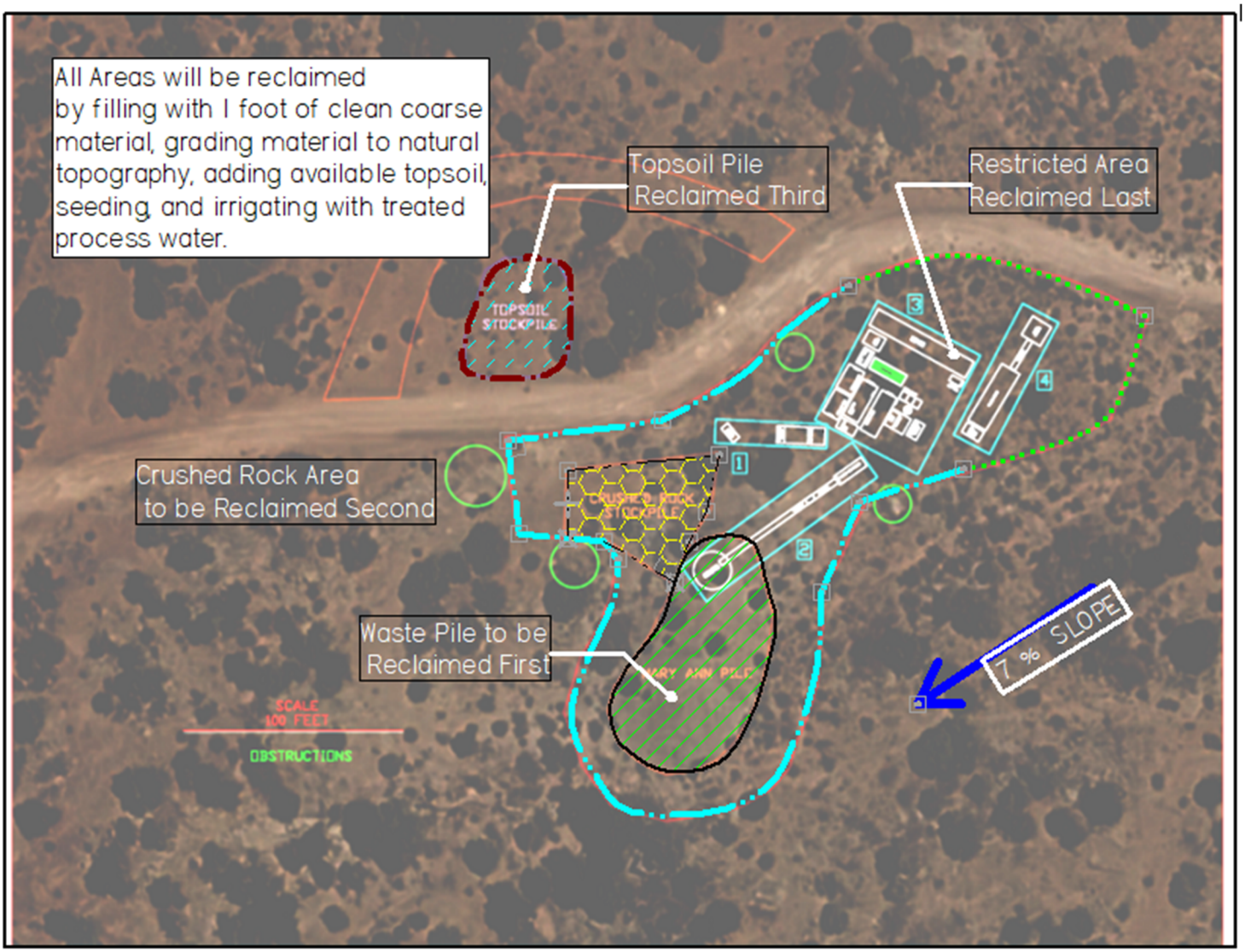
DISA expects to excavate 2,169.4 cubic yards or 58,574 cubic feet of waste rock. Considering that 56.4% of the original material will remain onsite, DISA expects to use 1,224 cubic yards or 33,036 cubic feet of clean coarse material for site reclamation. The total disturbed area will encompass 0.86 ac or 37,462 sq ft. Therefore, DISA will possess sufficient material to cover the disturbed area with approximately 0.9 foot of clean coarse material.

Table 6-1: Seed Mix

Species	Application Rate (lbs./acre)
Arriba Western wheat grass	2.7
Primar Slender wheat grass	2.0
Luna Pubescent wheat grass	3.0
Nordan Crested wheat grass	1.5
Paloma Indian rice grass	2.1
Needle and Thread grass	2.4
Hachita Blue Grama	0.4
Lewis Flax	0.8
Cedar Palmer Penstemon	0.2
Lutana Cicer Milk Vetch	0.3
Rincon or Native Four Wing Salt Brush	3.0
TOTAL APPLICATION RATE	18.4

DISA will irrigate the clean coarse material with water that has been treated to meet the license effluent standards. DISA may excavate a thin layer of topsoil located beneath the current pile (if any) and use that soil in clean coarse material reclamation.

Figure 6-1: Reclamation Plan



SECTION 7.0 ENVIRONMENTAL REPORT APPENDIX A.1 (LC 19.5)

7.1 A.1-1 OPERATING TIER

The Mary Ann Pile is an Operating Tier 1 site based on its total mass of 4,217 tons.

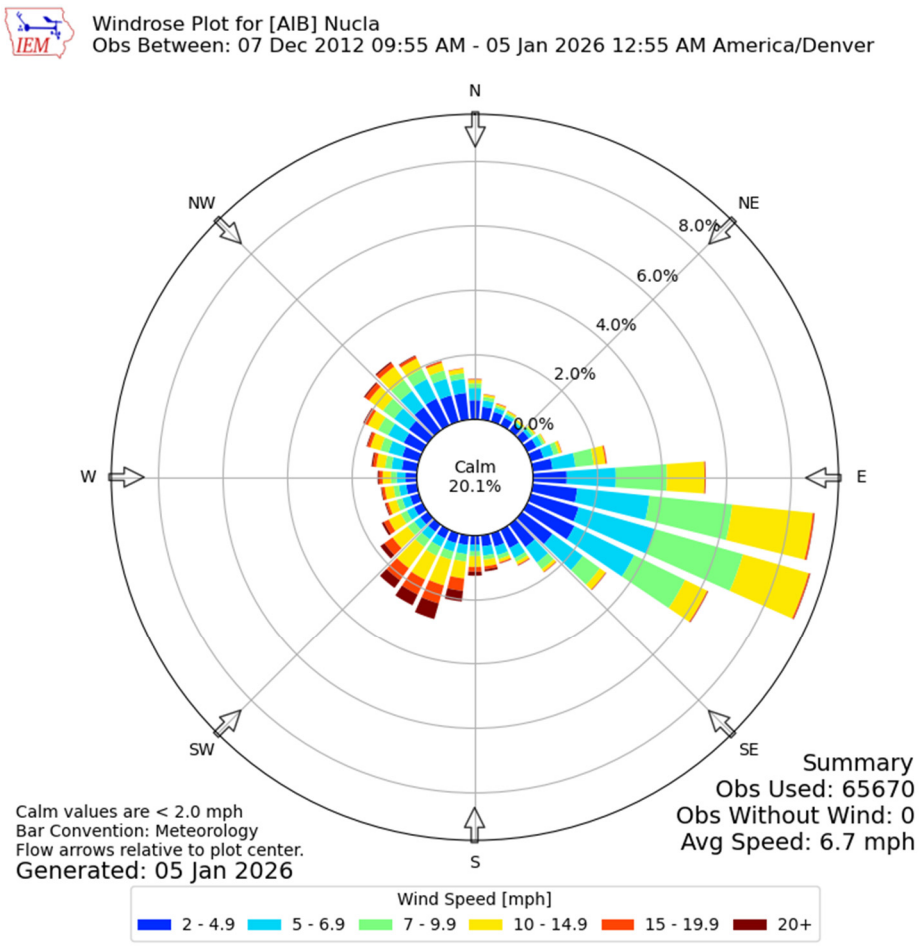
7.2 A.1-2 CLUSTER STATUS

The Mary Ann Pile will not be part of any treatment cluster.

7.3 A.1-3 SENSITIVE RECEPTORS

The nearest wind rose to the Mary Ann Pile is Nucla airport, shown below.

Figure 7-1: Nucla Wind Rose



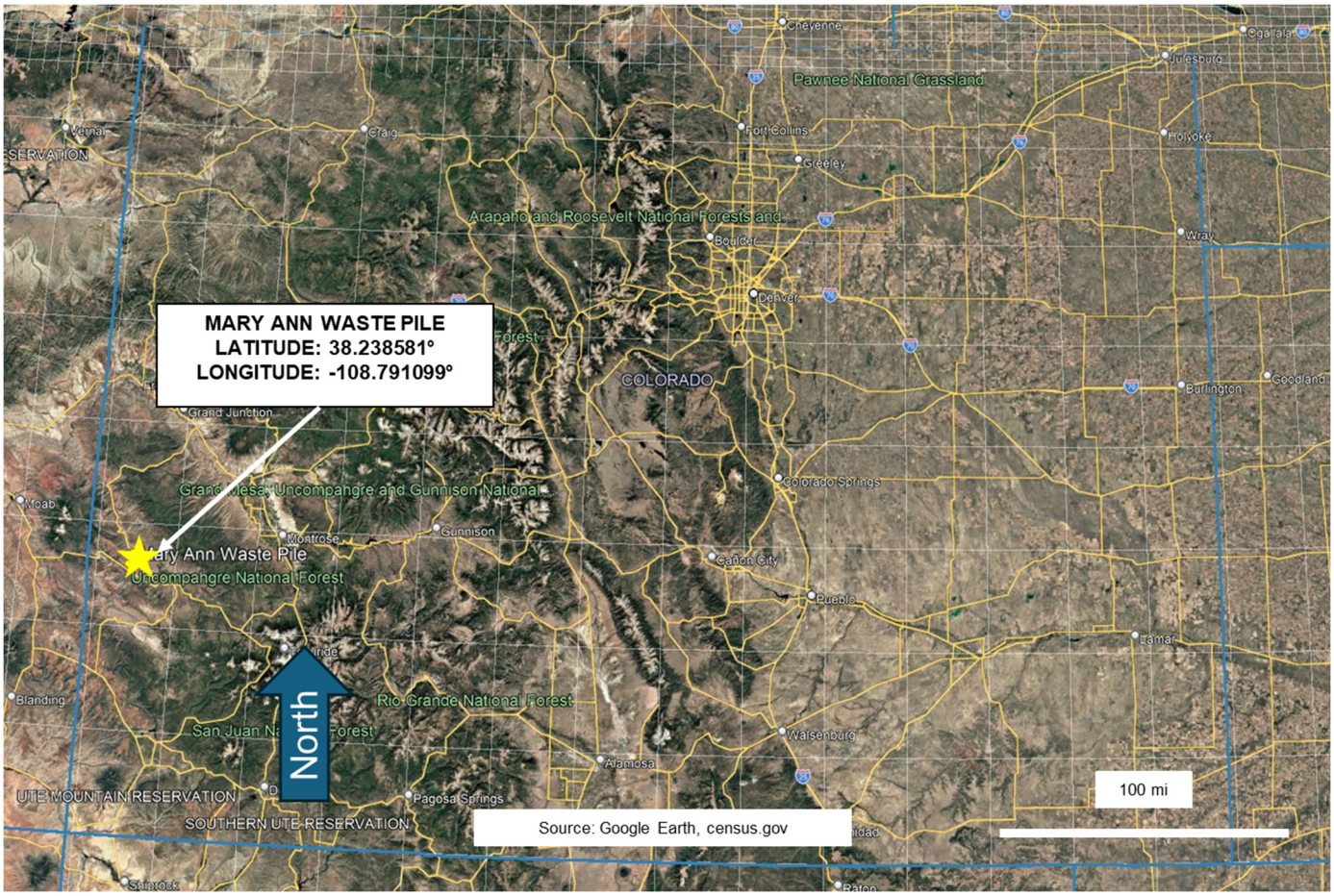
Source: https://mesonet.agron.iastate.edu/sites/windrose.phtml?station=AIB&network=CO_ASOS

A review of Figure 7-1 indicates that the prominent wind direction is from the southeast and east southeast. DISA has not identified any sensitive receptors at the site.

7.4 A.1-4 OVERVIEW MAP

Figure 7-2 is the requested overview map.

Figure 7-2: Overview Map



7.5 A.1-5 SITE ACREAGE:

Total site to be permitted by BLM is acres. The uranium mine waste pile is approximately 0.18 acres. Total land disturbance is 0.85 acre.

7.6 A.1-6 SCALED TOPOGRAPHIC MAP

See Figures 3-2 and 3-3.

7.7 A.1-7 AERIAL PHOTOGRAPHY

See Figure 3-3.

7.8 A.1-8 GROUND PHOTOGRAPHS

7.9 A.1-9 LAND USE MAP

Sections 2.1.5 and 2.1.6 discuss land use. Current BLM land use shows that the area around the Mary Ann Pile is designated for mineral leases and grazing.

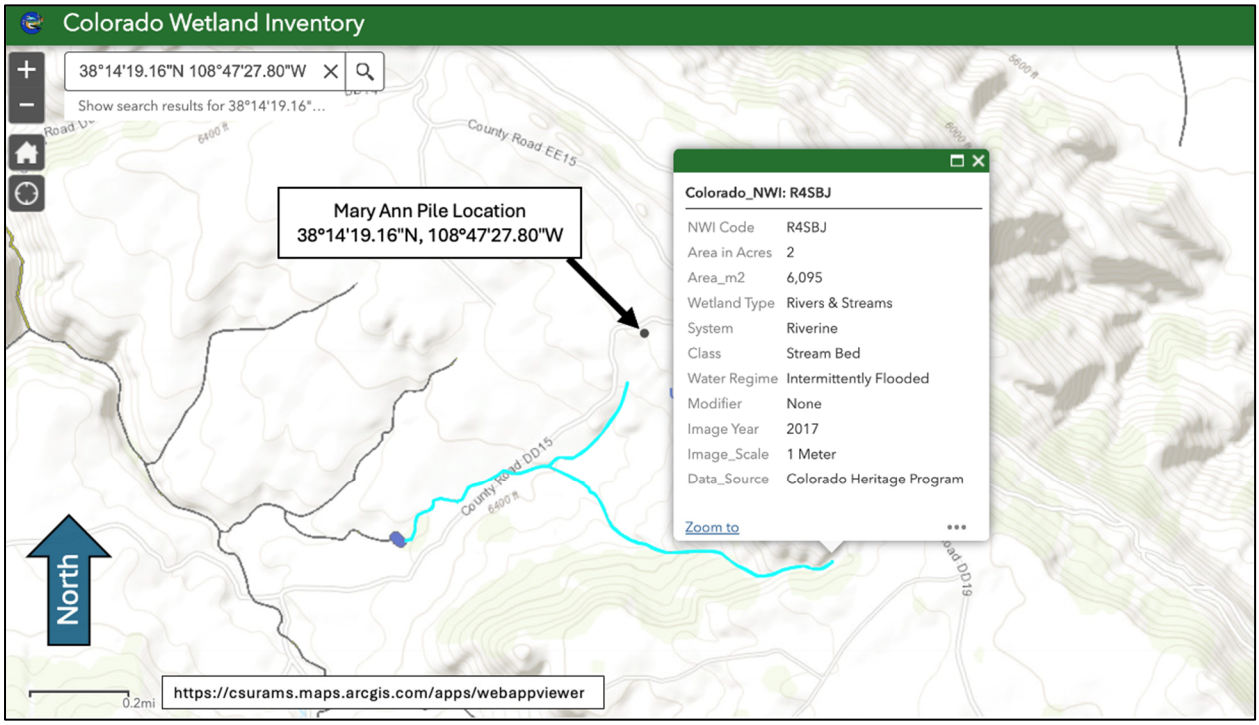
7.10 A.1-10 ZONING

Section 2.1.5 discusses zoning.

7.11 A.1-11 WETLANDS

No wetlands occur on or near the Mary Ann Pile. Figure 7-3 shows wetlands information from the USFWS National Wetlands Inventory (NWI) program and external partners, including Colorado Natural Heritage Program (CNHP). The nearest feature is an stream bed connecting to the Upper Dolores Basin located 600 feet to the southwest. As shown in Figure 7-3, it is only intermittently flooded.

Figure 7-3: Wetland Map



7.12 A.1-12 WATER TABLE AND SOILS

Soils information is presented in Section 2.1.3. Water table information is not available, and no appreciable water table is expected to exist at this site. Furthermore, DISA at most will excavate to a maximum of 1 foot into soil. Therefore, no impacts to any potential water table are expected.

7.13 A.1-13 ROAD IMPROVEMENTS

Road improvements are discussed in Section 1.4.

7.14 A.1-14 WATER INTAKE WELLS/WITHDRAWALS

Nearest water well are located 2.6 miles to the east and directly adjacent to the JD-7 Mine Montrose County, Colorado (Brown/Root, Inc.) This well is highlighted in yellow in Table 7-1, which contains the commercial, industrial, irrigation, municipal, and other well permits relatively close to the site. The Brown/Root, Inc. well is classified as an industrial well.

Table 7-1: List of Wells

Permit Number	Contact Name	County	Latitude	Longitude	Aquifer(s)
149815-	MONTROSE CITY OF	Montrose	38.378628	-108.938591	all unnamed aquifers
305727-	AALBUE, KELLY D.	Montrose	38.450912	-107.910378	all unnamed aquifers
305727-	HALE, DEBORAH L.	Montrose	38.450912	-107.910378	all unnamed aquifers
49831-F	PATTERSON, NATALIE B.	Montrose	38.47086	-107.841433	all unnamed aquifers
49831-F	PATTERSON, MAX W.	Montrose	38.47086	-107.841433	all unnamed aquifers
25277-F	BROWN/ROOT INC	Montrose	38.238646	-108.742502	all unnamed aquifers
119323-	ANDREWS, G N	Montrose	38.269168	-108.547525	all unnamed aquifers
119324-	ANDREWS, D K	Montrose	38.267335	-108.548841	all unnamed aquifers
119347-	WARREN, TOM C.	Montrose	38.503153	-107.913478	all unnamed aquifers
225530-	ABEYTA, ALICE	Montrose	38.472094	-107.938838	all unnamed aquifers
226245-	HICKS JOHN R & RUTH ANN	Montrose	38.442076	-107.871979	all unnamed aquifers
310986-	OSSOLA, JAMES	Montrose	38.453938	-107.928499	all unnamed aquifers
315451-	WALZ, FRED	Montrose	38.466182	-107.916241	all unnamed aquifers
90667-F	SUMMERS, CRAIG	Montrose	38.531198	-108.012802	all unnamed aquifers
23224-F	SEIP, N	Montrose	38.491003	-107.984508	all unnamed aquifers
115102-	COLORADO PARKS AND WILDLIFE	Montrose	38.341864	-107.51475	all unnamed aquifers
119672-	DEPT, INTERIOR	Montrose	38.433796	-107.54228	all unnamed aquifers
110191-	WALLEN, C H	Montrose	38.444415	-108.24454	all unnamed aquifers
256-G	BONY, PAUL	Montrose	38.46147	-107.841133	all unnamed aquifers
Source: dwr.state.co.us/Tools/WellPermits					

DISA will obtain water for its HPSA process from the Town of Nucla, Colorado. DISA will use approximately 5,000 gallons per day of water to make up for water losses from the moisture content of the fines concentrates and the clean coarse material (10 to 15%).

SECTION 8.0 ENVIRONMENTAL REPORT APPENDIX A.2 (LC 19.5)

8.1 A.2-1 PERMITS AND APPROVALS

As previously stated, the Mary Ann Pile is currently owned by NUV2C, LLC. Due to the requirements of mining law, AURA GRIT must submit applications for a Plan of Operations to BLM and a mine permit application to the Colorado Division of Reclamation, Mining, and Safety (DRMS). DISA will submit these applications under separate cover to the NRC when they are submitted.

DISA notes that DRMS and BLM will be conducting environmental reviews, as appropriate for the actions, and will approving any final reclamation performed by DISA. Furthermore, DISA and the NRC have agreed upon a surety for each site, which is discussed in Section 6.1.

DISA, through AURA GRIT, will not need a special use permit from Montrose County, Colorado, for use of county roads for this project. DISA will also not need to utilize the Colorado Department of Public Health and Environment General Discharge Permit because the site disturbance is less than 1 acre. However, DISA will use best management practices for the prevention of erosion from the Mary Ann site.

8.2 A.2-2 WATER SOURCES

DISA will be obtaining water from the City of Nucla. A formal agreement is being developed at this time.

8.3 A.2-3 SOIL EXCAVATION

As previously stated, DISA expects to excavate a maximum of 1 foot below the pile. According to the Soil Survey of Montrose County Area, Colorado, soil units that occur at and in the vicinity of the Mary Ann Pile are not known to have water tables that occur less than 6 feet deep (USDA, 1978).

8.4 A.2-4 AIR EMISSIONS

The Mary Ann Pile fits into the Tier 1 category, and will emit approximately 4 percent of the Tier 1 emissions due to the small size of the Mary Ann Pile and the use of a 10 tph unit instead of the assumed 50 tph unit. After a review of 40 CFR 1036, 1037, and 1039 it is clear that greenhouse gas emissions standards do not exist; however, they are to be reported under certain circumstances. DISA used EPA's Greenhouse Gas Calculator to estimate the GHG emissions from this project.

(https://www.epa.gov/climateleadership/simplified-ghg-emissions-calculator)

Based on truck and generator emissions the total greenhouse gas emissions will be 128 metric tons (141 US tons) based on the following assumptions.

1. Generator will use 200 gallons/day of diesel for 55 days. Total 11,000 gallons of diesel.
2. Two pickup trucks will drive 5,000 miles total and use 1,000 gallons of diesel total, and equipment will use 500 gallons of diesel.

SECTION 9.0 CHECKLIST (LC 19.5)

The following checklist addresses information required by LC 19 of License No. SUA-1605. This checklist was produced during the NRC staff's development of the document entitled, "Environmental Assessment for Proposed Issuance of Multi-Site License to DISA Technologies for Abandoned Uranium Mine Waste Remediation" (NRC, 2025).

Table 9-1: Environmental Assessment Checklist

Statement Number	Resource Areas Potentially Impacted	Applicability Statement	True Statement for Site? (Yes, Deviation, or No)
1	Land Use, Socioeconomics, Public and Occupational Health, Ecology	The site and adjacent (abutting) land is currently not used for any purpose other than agriculture, grazing, recreation, or forestry.	Yes
2	Land Use, Water Resources, Geology and Soils	For any area or element of the site (e.g., mineral rights, water rights, or easements) that is privately owned, use of HPSA has the approval of all affected property interest owners. Further, HPSA would not conflict with applicable land use planning at Federal, State, Tribal, or local level.	NA
3	Transportation, Socioeconomics, Visual, Noise	HPSA trucks and heavy equipment would not use neighborhood roads or roads in and around community features such as schools, parks, and commercial shopping areas.	Yes. Highway 90 goes through the unincorporated community of Bedrock. However, trucks do not leave the highway.
4	Geology and Soils, Transportation, Land Use, Ecology	HPSA operation would only use existing site roads, with no new road construction required; trails, tracks, or paths created solely for use by hikers, off-road vehicles, or farm equipment are not considered existing roads.	Yes
5	Geology and Soils, Water Resources, Ecology, Historic and Cultural Resources	Ground-disturbing activities would be limited to graveling pre-existing roads, establishing fencing, and processing soils directly under the waste rock piles.	No. Grading is required for the Restricted Area, and we will be clearing an area for the crushed waste rock stockpile, which will be crushed prior to mobilizing the HPSA equipment. These impacts will be addressed by BLM through the Plan of Operations and the Colorado DRMS through the mining permit. All impacted areas

Statement Number	Resource Areas Potentially Impacted	Applicability Statement	True Statement for Site? (Yes, Deviation, or No)
			will be reclaimed, and all impacts will be temporary.
6	Geology and Soils, Water Resources	Any ground disturbance to process native soils underneath the waste rock pile would not impact previously undisturbed bedrock.	Yes
7	Water Resources, Transportation, Geology and Soils, Ecology	Water used during HPSA system operation would be brought to the site by DISA and would not be taken from the local surface water or groundwater. Additionally, DISA would not dig any new water wells for monitoring or discharge.	Yes
8	Water Resources, Geology and Soils	The appropriate permits or licenses from the municipality or any other Federal, State, Tribal, or local authority would be obtained for the off- site source of water.	NA. DISA does not need any permits. The source of the water is would be a municipal water source from the City of Nucla, CO.
9	Water Resources	When required, a site-specific stormwater management plan, approved by applicable regulatory agencies, or a generic stormwater management plan approved by applicable regulatory agencies would be implemented. Best management practices would be used as needed in accordance with any stormwater management plan for each site.	Yes. DISA does not need a permit based on information presented in Section 1.3; however, DISA proposes sediment and erosion control measures.
10	Water Resources, Geology and Soils, Public and Occupational Health	Process water would not be discharged at the site during operation. DISA might, at the cessation of operation, discharge up to twice the total system volume on the site, provided the water is demonstrated to meet any applicable Federal, State, and local regulations for disposal prior to discharge.	Yes

Statement Number	Resource Areas Potentially Impacted	Applicability Statement	True Statement for Site? (Yes, Deviation, or No)
11	Water Resources, Geology and Soils, Ecology	The water discharged onto the site at the end of operations would be discharged to avoid or minimize erosion and protect surface soils and vegetation, and in accordance with applicable Federal, State, or Tribal requirements.	Yes
12	Water Resources, Ecology	DISA would obtain a National Pollutant Discharge Elimination System permit from the EPA or State, if required. Additionally, and if required, DISA would obtain Clean Water Act (CWA) Section 401 Water Quality Certification from the State certifying authority, a CWA Section 404 approval from USACE, and any needed State-issued permits for non-jurisdictional waters.	NA. No NPDES permit is required because DISA is not discharging any water to a surface water body.
13	Water Resources, Geology and Soils	For any site where DISA treats native soils beneath the waste pile, DISA would not excavate down to the water table, resulting in the need to dewater, nor would DISA impact an aquifer's confining layer such that a new pathway for water recharge of that aquifer is created.	Yes
14	Water Resources, Geology and Soils, Public and Occupational Health	No coarse material would contain metal contaminants above the Resource Conservation and Recovery Act (RCRA) thresholds, or the coarse material is separated such that any material containing metal contaminants above the RCRA thresholds would not be disposed of onsite.	Yes
15	Ecology, Geology and Soils	Ground disturbance would avoid climax or old- growth vegetation or other vegetation typical of undisturbed natural lands in the surrounding landscape.	Deviation. The area around the Mary Ann Pile is disturbed. However, it has remained undisturbed long enough for vegetation to regrow. Some of this vegetation will be

Statement Number	Resource Areas Potentially Impacted	Applicability Statement	True Statement for Site? (Yes, Deviation, or No)
			disturbed, but DISA will be reclaiming the site and stabilizing it with grasses
16	Ecology, Water Resources, Geology and Soils	Ground disturbance would not disturb any wetlands or perennial streams and no more than 300 feet of ephemeral or intermittent streams.	Yes.
17	Ecology and Section 7 consultation	For sites with Federally listed threated and endangered species or critical habitats in the action area, additional field surveys do not appear to be necessary based on DISA's informal consultations with the applicable Ecological Services Field Office of the FWS.	Yes. Cedar Creek Associates has completed a site-specific ecological review that is attached to this PMN. See Appendix B.
18	Air and Atmospheric, Public and Occupational Health	Emissions of criteria pollutants during construction, operation, and demobilization would not exceed *de minimis* levels established by the EPA under the General Conformity Rule (Title 40 of the *Code of Federal Regulations* (40 CFR) part 93).	Yes
19	Air and Atmospheric	Greenhouse gases emitted by equipment and vehicles during construction, operation, and demobilization would be less than the quantity of CO_2 equivalents determined to be significant by the State or the EPA, whichever applies in the State of proposed HPSA operations.	Yes. See results of GHG calculations using EPA's calculator.
20	Noise	Noise levels from trucks and earthmoving equipment at the nearest sensitive receptor will be less than 50 dBA.	Yes. We are using generators that are designed for low noise output. DISA's noise measurements indicate that noise levels next to the generators are approximately 85 dB.

Statement Number	Resource Areas Potentially Impacted	Applicability Statement	True Statement for Site? (Yes, Deviation, or No)
			Noise levels approximately 10 feet away are 70 dB. Therefore, DISA's operations will be protective of sensitive receptors.
21	Historic and Cultural	In accordance with the results of consultation under Section 106, DISA implements avoidance, minimization, and/or mitigation measures that are necessary to address potential effects on historic and cultural resources.	Yes. DISA is used Cannon Heritage/Woods Canyon Archaeological Consultants to perform a Class III survey of the permit area with a 100-ft buffer. Consultation and mitigation will be coordinated through the BLM. BLM informed Cannon Heritage that it cannot release the report to DISA due to the confidential nature of the cultural resources. NRC staff will need to obtain the report from BLM directly.
22	Socioeconomics	Clustered HPSA operations at two or more tier 5 sites could be accommodated by a nearby community (within a 1.5-hour drive) that can easily accommodate 30 or more employees for several years. Very small nearby communities would not experience noticeable negative socioeconomic impacts from HPSA operations.	NA. This is not a clustered operation, and the Mary Ann pile is not a Tier 5 site.
23	Socioeconomics	No local residents would be displaced by any HPSA operation.	Yes
24	Socioeconomics, Transportation	The increase in local traffic as a result of HPSA operations would not require changes to traffic patterns.	Yes. DISA is expecting 1 truck per day of fine concentrates to leave the site.
25	Public and Occupational Health	DISA would establish a restricted area around any operational machinery or radiological storage areas of at least 50 feet to	No. Because of site logistics, DISA can only maintain a buffer of 20 feet between the restricted area and the fines concentrates.

Statement Number	Resource Areas Potentially Impacted	Applicability Statement	True Statement for Site? (Yes, Deviation, or No)
		prevent public access to the site and minimize dose to the public.	Dose calculations (https://radmaths.com/) indicate that assuming 60 tons of fines concentrates, 67.1 pCi/g Ra-226 (0.003 curies calculated), at 20 feet results in a dose of 0.001 mSv/hr (0.1 mrem/hr). A member of the public would need to stand at the restricted area near the fines concentrates for 1,000 hours to obtain a dose of 100 mrem. This is not physically possible. This dose also doesn't account for the shielding provided by the container.
26	Public and Occupational Health	HPSA units are deployed to a site that fits the description provided in NUREG-1556, Volume 18, appendix I, table I-2 for occupancy factors of 1/20 or 1/40 (e.g., outdoor areas with seating, recreational areas, storage areas, or outdoor areas with only transient pedestrian or vehicular traffic).	Yes
27	Waste Management, Public and Occupational Health	DISA would not generate greater-than-class-C LLRW during mobilization, operation, or demobilization at the site.	Yes
28	Waste Management, Transportation, Public and Occupational Health	The routine quantities of non-radioactive, non- hazardous and hazardous waste would be small and would not noticeably affect the capacities of receiving facilities. The fines concentrate would not be subject to RCRA hazardous waste regulations.	Yes

Statement Number	Resource Areas Potentially Impacted	Applicability Statement	True Statement for Site? (Yes, Deviation, or No)
29	Waste Management, Transportation, Public and Occupational Health	DISA would not send coarse material to an LLRW facility.	Yes

APPENDIX A – DUST SUPPRESSANT/FLOCCULANT SDS

VEOLIA

SAFETY DATA SHEET
DUSTREAT* DC6109

1. Identification

Product identifier **DUSTREAT DC6109**

Other means of identification None.

Recommended use Dust control agent.

Recommended restrictions None known.

Company/undertaking identification

Veolia WTS USA, Inc.
3600 Horizon Blvd.
Trevose, PA 19053
T 215 355 3300, F 215 953 5524

Emergency telephone

(800) 877 1940

2. Hazard(s) identification

Physical hazards	Not classified.	
Health hazards	Skin corrosion/irritation	Category 2
	Serious eye damage/eye irritation	Category 1
OSHA defined hazards	Not classified.	

Label elements

Signal word Danger

Hazard statement Causes skin irritation. Causes serious eye damage.

Precautionary statement

Prevention Wash thoroughly after handling. Wear eye protection/face protection. Wear protective gloves.

Response If on skin: Wash with plenty of water. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a poison center/doctor. If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash before reuse.

Storage Store away from incompatible materials.

Disposal Dispose of waste and residues in accordance with local authority requirements.

Hazard(s) not otherwise classified (HNOC) None known.

Supplemental information None.

3. Composition/information on ingredients

Mixtures

Components	CAS #	Percent
Sodium (C14-16) olefin sulfonate	68439-57-6	20 - 40

Composition comments Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this SDS for our assessment of the potential hazards of this formulation.

4. First-aid measures

Inhalation If breathing stops, provide artificial respiration. For breathing difficulties, oxygen may be necessary. Call a physician if symptoms develop or persist.

Skin contact Wash with plenty of soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

Eye contact Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Ingestion Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Indication of immediate medical attention and special treatment needed Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing media Do not use water jet as an extinguisher, as this will spread the fire.

Specific hazards arising from the chemical During fire, gases hazardous to health may be formed.

Special protective equipment and precautions for firefighters Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask.

Fire fighting equipment/instructions In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials. Move containers from fire area if you can do so without risk. Cool containers / tanks with water spray.

Specific methods Use standard firefighting procedures and consider the hazards of other involved materials.

General fire hazards No unusual fire or explosion hazards noted.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up Stop the flow of material, if this is without risk. Following product recovery, flush area with water.

Never return spills to original containers for re-use.

Environmental precautions Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling Alkaline. Do not mix with acidic material. Avoid contact with eyes, skin, and clothing. Avoid prolonged exposure. Do not get this material in contact with eyes. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Warming and mixing required if stored below 50F. Store in cool, well ventilated area. Store containers closed when not in use. Store away from oxidizers. Protect from freezing. If frozen, thaw and mix completely prior to use.

8. Exposure controls/personal protection

Biological limit values No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls	Eye wash fountain and emergency showers are recommended. Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield.
Skin protection	
Hand protection	Wear appropriate chemical resistant gloves. The choice of an appropriate glove does not only depend on its material but also on other quality features and is different from one producer to the other. Glove selection must take into account any solvents and other hazards present.
Other	Wear appropriate chemical resistant clothing.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. A respiratory protection program that meets OSHA's 29 CFR 1910.34 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary. Not applicable.

9. Physical and chemical properties

Appearance	Liquid
Physical state	Liquid.
Form	Liquid.
Color	Light yellow to amber
Odor	Sweet
Odor threshold	Not available.
pH (concentrated product)	Not available.
Melting point/freezing point	19 °F (-7 °C)
Initial boiling point and boiling range	210 °F (99 °C)
Flash point	> 212 °F (> 100 °C) P-M(CC)
Evaporation rate	< 1 (Ether = 1)
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	18 mm Hg
Vapor pressure temp.	70 °F (21 °C)
Vapor density	< 1 (Air = 1)
Relative density	1.06
Relative density temperature	70 °F (21 °C)
Solubility(ies)	
Solubility (water)	100 %
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not available.
Decomposition temperature	Not available.
Viscosity	72 cps
Viscosity temperature	70 °F (21 °C)
Other information	
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
pH in aqueous solution	8.1 (5% SOL.)
Pour point	50 °F (10 °C)

VOC	0 % (ASTM 3960-93)

10. Stability and reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	Oxides of carbon and sulphur evolved in fire.

11. Toxicological information

Information on likely routes of exposure

Inhalation	No adverse effects due to inhalation are expected.
Skin contact	Causes skin irritation.
Eye contact	Causes serious eye damage.
Ingestion	Expected to be a low ingestion hazard.
Symptoms related to the physical, chemical and toxicological characteristics	Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. Skin irritation. May cause redness and pain.

Information on toxicological effects

Acute toxicity Not known.

Product	Species	Test Results
DUSTREAT DC6109		
Acute		
Dermal		
LD50	Rabbit	> 5000 mg/kg (Calculated according to GHS additivity formula)
Inhalation		
LC50	Rat	> 5 mg/l, 4 hours (Calculated according to GHS additivity formula)
Oral		
LD50	Rat	> 5000 mg/kg (Calculated according to GHS additivity formula)

Components	Species	Test Results
Sodium (C14-16) olefin sulfonate (CAS 68439-57-6)		
Acute		
Dermal		
LD50	Rabbit	> 6000 mg/kg
Inhalation		
LC50	Rat	> 52 mg/l/4h
Oral		
LD50	Rat	2079 mg/kg

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/eye irritation	Causes serious eye damage.

Respiratory or skin sensitization

Respiratory sensitization	Not a respiratory sensitizer. This product is not expected to cause respiratory sensitization.
Skin sensitization	This product is not expected to cause skin sensitization.
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

US. National Toxicology Program (NTP) Report on Carcinogens

Not listed.

Reproductive toxicity	This product is not expected to cause reproductive or developmental effects.
Specific target organ toxicity - single exposure	Not classified.
Specific target organ toxicity - repeated exposure	Not classified.
Aspiration hazard	Based on available data, the classification criteria are not met. Not an aspiration hazard.
Chronic effects	Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity

Product		Species	Test Results
Aquatic			
Crustacea	LC50	Daphnia magna	16 mg/L, 48 hour
	NOEL	Daphnia magna	6.3 mg/L, 48 hour
Fish	10% Mortality	Fathead Minnow	0.78 mg/L, 96 hour
	LC50	Fathead Minnow	4 mg/L, 96 hour
		Rainbow Trout	7.1 mg/L, 96 hour
	NOEL	Rainbow Trout	5 mg/L, 96 hour

Persistence and degradability

- COD (mgO2/g)	860
- BOD 5 (mgO2/g)	7
- BOD 28 (mgO2/g)	303
- Closed Bottle Test (% Degradation in 28 days)	37
- Zahn-Wellens Test (% Degradation in 28 days)	45
- TOC (mg C/g)	200

Bioaccumulative potential	
Mobility in soil	No data available.
Other adverse effects	Not available.

13. Disposal considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.
Local disposal regulations	Dispose in accordance with all applicable regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residues / unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions). Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner.
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

15. Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Toxic Substances Control Act (TSCA)

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical Yes

Classified hazard categories Skin corrosion or irritation
Serious eye damage or eye irritation

SARA 313 (TRI reporting)

Not regulated.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List

Formaldehyde (CAS 50-00-0)
Methanol (CAS 67-56-1)

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Formaldehyde (CAS 50-00-0)

Safe Drinking Water Act (SDWA) Not regulated.

Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

*A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)
A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

US state regulations

California Proposition 65

WARNING: WARNING: This product contains a chemical known to the State of California to cause cancer and birth defects or other reproductive harm.

US - California Proposition 65 - CRT: Listed date/Carcinogenic substance

Formaldehyde (CAS 50-00-0) Listed: January 1, 1988

US - California Proposition 65 - CRT: Listed date/Developmental toxin

Methanol (CAS 67-56-1) Listed: March 16, 2012

US - California Proposition 65 - CRT: Listed date/Female reproductive toxin

No ingredient listed.

US - California Proposition 65 - CRT: Listed date/Male reproductive toxin

No ingredient listed.

16. Other information, including date of preparation or last revision

Issue date	Oct-10-2014
Revision date	Feb-17-2023
Version #	5.1
NFPA ratings	Health: 3 Flammability: 0 Instability: 0
NFPA ratings	
List of abbreviations	CAS: Chemical Abstract Service Registration Number TWA: Time Weighted Average STEL: Short Term Exposure Limit LD50: Lethal Dose, 50% LC50: Lethal Concentration, 50% NOEL: No Observed Effect Level COD: Chemical Oxygen Demand BOD: Biochemical Oxygen Demand TOC: Total Organic Carbon IATA: International Air Transport Association IMDG: International Maritime Dangerous Goods Code ACGIH: American Conference of Governmental Industrial Hygienists
References:	No data available
Disclaimer	The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
Revision information	This document has undergone significant changes and should be reviewed in its entirety.
Prepared by	This SDS has been prepared by Veolia Water Technologies & Solutions' Regulatory Department (1-215-355-3300).

SAFETY DATA SHEET

SUPERFLOC A-100

Ref. /US/EN

Revision Date: 02/12/2015 Previous date: 00/00/0000 Print Date:11/05/2015

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Product information

Product name
SUPERFLOC A-100

Recommended use of the chemical and restrictions on use

Use of the Substance/Mixture

Water treatment chemical

Recommended restrictions on use

-

Supplier's details

Kemira Chemicals, Inc.
1000 Parkwood Circle, Suite 500
30339 Atlanta USA
Telephone+17704361542, Telefax. +17704363432
ProductSafety.US.Kennesaw@kemira.com

HEAD OFFICE
Kemira Oyj
P.O. Box 330
00101 HELSINKI
FINLAND
Telephone +358108611 Telefax +358108621124

Emergency telephone number

CHEMTREC: 1-800-424-9300

2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

The material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard's (29CFR 1910.1200) implementation of the Globally Harmonized System (GHS), i.e., material is not a dangerous substance or mixture requiring GHS classification according to the US GHS regulations.;

GHS-Labelling

Product is not hazardous under US GHS.

Other hazards which do not result in classification

Advice; Spills are very slippery when wet.
Skin; Repeated or prolonged exposure may cause: May cause skin irritation.
Eyes; Dust contact with the eyes can lead to mechanical irritation.
Ingestion; Essentially non-toxic.
Chronic exposure; No known carcinogenic or other chronic effects.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substances /Mixtures

Chemical nature	Anionic polyacrylamide.

Further information

This material is not hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

4. FIRST AID MEASURES

Description of first aid measures

Inhalation

No hazards which require special first aid measures. Remove to fresh air.

Skin contact

Wash off with soap and water.

Eye contact

Rinse thoroughly with plenty of water, also under the eyelids. If possible use lukewarm water.

Ingestion

Rinse mouth with water. Material is not expected to be harmful by ingestion. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Consult a physician if necessary.

Most important symptoms and effects, both acute and delayed

5. FIREFIGHTING MEASURES

Suitable extinguishing media

Water spray

Carbon dioxide (CO2)

Dry chemical

Water mist

Special hazards arising from the substance or mixture

Dust may be explosive if mixed with air in critical proportions and in the presence of a source of ignition.

Special protective actions for fire-fighters

Wear self-contained breathing apparatus and protective suit.

Use NIOSH/MSHA approved respiratory protection.

Further information

Avoid dust accumulation.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

For personal protection see section 8.

Environmental precautions

Should not be released into the environment.

Methods and materials for containment and cleaning up

Product becomes slippery when it is wet. Shovel into suitable container for disposal. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

For personal protection see section 8. Avoid dust formation during handling.

Conditions for safe storage, including any incompatibilities

Store in original container.

Materials to avoid:

Strong oxidizing agents

Storage stability:

Storage temperature	40 - 90 °F
Other data	Stable under recommended storage conditions. Reason: integrity

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Components with workplace control parameters

Components	CAS-No.	Value	Form of exposure	Control parameters	Update	Basis

Contains no substances with occupational exposure limit values.

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands and face before breaks and immediately after handling the product. Avoid contact with skin, eyes and clothing. Ensure that eyewash stations and safety showers are close to the workstation location. Ensure adequate ventilation.

Individual protection measures, such as personal protective equipment

Respiratory protection

When there is potential for airborne exposures in excess of applicable limits, wear NIOSH/MSHA approved respiratory protection.

Hand protection

Glove material: Impervious gloves, Avoid contact with skin.

Skin and body protection

Protective clothing.

Eye protection

Safety goggles

Environmental exposure controls

No data available

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	solid, powder
Colour	white
Odour	odourless
pH	6 - 8 (0.5 %) Aqueous solution
Melting point/range	not determined
Freezing point :	Not applicable.
Initial boiling point and boiling range	
Flash point	Not applicable
Explosive properties:	
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapour pressure	Not applicable
Bulk density	650 - 850 kg/m³
Solubility(ies):	
Water solubility	Limited by viscosity.
Partition coefficient: n-octanol/water	Not applicable
Decomposition temperature	392 °F
Oxidising potential	The substance or mixture is not classified as oxidizing.
Surface tension	Not applicable

10. STABILITY AND REACTIVITY

Reactivity

Chemical stability

Possibility of hazardous reactions

Hazardous reactions: Hazardous polymerisation does not occur.

Conditions to avoid

Conditions to avoid:	None known. Stable under normal conditions.

Incompatible materials

Materials to avoid:	Strong oxidizing agents

Hazardous decomposition products

Hazardous decomposition products:	Ammonia Carbon oxides (COx) Nitrogen oxides (NOx)
Thermal decomposition:	392 °F

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects

Acute oral toxicity	Conclusion: The acute toxicological results displayed may not be the results of actual testing of this material but based on a similar tested material. Remarks: estimated /Rat/> 5,000 mg/kg/LD50
Acute inhalation toxicity	LC50/Rat/4 h/> 20 mg/lRemarks: estimated
Acute dermal toxicity	LD50/Rabbit /> 10,000 mg/kg Remarks: estimated
Skin corrosion/irritation	Conclusion: No skin irritation
Serious eye damage/eye irritation	Conclusion: No eye irritation

Respiratory or skin sensitisation

Skin sensitisation

Conclusion: Not sensitizing.

Germ cell mutagenicity

Genotoxicity in vitro

AMES test
Remarks: No data available

Carcinogenicity

Carcinogenicity

Based on available data, the classification criteria are not met.

Reproductive toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity effects

Aquatic toxicity

Remarks: Ecotoxicological information provided is based on a structurally or compositionally similar product.
LC50/96 h/Lepomis macrochirus (Bluegill sunfish)/Acute toxicity/OECD Test Guideline 203: > 100 mg/l
Remarks: fresh water
LC50/96 h/Oncorhynchus mykiss (rainbow trout)/Acute toxicity/OECD Test Guideline 203: > 100 mg/l
Remarks: fresh water
EC50/48 h/Daphnia magna (Water flea)/Immobilization/OECD Test Guideline 202: > 100 mg/l
Remarks: Ecotoxicological information provided is based on a structurally or compositionally similar product.
IC50/72 h/Green algae (Selenastrum capricornutum)/Growth inhibition/OECD Test Guideline 201: > 100 mg/l
Remarks: Ecotoxicological information provided is based on a structurally or compositionally similar product.

Toxicity to other organisms

No data available

Persistence and degradability

Biological degradability:

Remarks: Ecotoxicological information provided is based on a structurally or compositionally similar product.

CO2 Evolution Test/OECD Test Guideline 301B/28 d: < 70 %

The polymeric ingredient is not readily biodegradable.

Bioaccumulative potential

Bioaccumulation is unlikely. Because of the high molecular weight of the polymer diffusion through biological membranes is very small.
Partition coefficient: n-octanol/water: Not applicable

Mobility in soil

Water solubility: Limited by viscosity.
Surface tension: Not applicable

Other adverse effects

No data available
Additional ecological information: Ecotoxicological information provided is based on a structurally or compositionally similar product. This material is not classified as dangerous for the environment. The effects on aquatic organisms are due to an external (non-systemic) mode of action and are significantly reduced (by a factor of 7-20) within 30 minutes due to the binding of the product to dissolved organic carbon and inorganic sorbents such as clays and silts.

13. DISPOSAL CONSIDERATIONS

Product	If recycling is not practicable, dispose of in compliance with local regulations.Incineration is recommended. EPA Hazardous Waste - NO
Contaminated packaging	Packages must be disposed of according to local and national regulations.

14. TRANSPORT INFORMATION

Land transport

Not classified as dangerous in the meaning of transport regulations.

Sea transport

Not classified as dangerous in the meaning of transport regulations.

Air transport

Not classified as dangerous in the meaning of transport regulations.

Special precautions for user

None known.

15. REGULATORY INFORMATION

Safety, health and environmental regulations/legislation specific for the substance or mixture

SARA Title III Section 311 Categories

Immediate (Acute) Health Effects: No;
Delayed (Chronic) Health Effects: No;
Fire Hazard: No;
Sudden Release Of Pressure Hazard: No;
Reactivity Hazard: No;

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A)

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.
None Present ()

US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.
None Present ()

California Proposition 65

Acrylamide (79-06-1) < 0.05 %
Remarks: This product contains a chemical or chemicals known to the state of California to cause cancer, birth defects or other reproduction harm.

Notification status

:
: All components of this product are included in the United States TSCA Chemical Inventory or are not required to be listed on the United States TSCA Chemical Inventory.
: All components of this product are included in the European Inventory of Existing Chemical Substances (EINECS) or are not required to be listed on EINECS.
: All components of this product are included in the Canada

Domestic Substance List (DSL) or are not required to be listed on the Canada Domestic Substance List (DSL).

: All components of this product are included on the Japanese (ENCS) inventory or are not required to be listed on the Japanese (ENCS) inventory.

: All components of this product are included in the Australian Inventory of Chemical Substances (AICS) or are not required to be listed on the Australian Inventory of Chemical Substances (AICS).

: All components of this product are included in the Korean (ECL) inventory or are not required to be listed on the Korean (ECL) inventory.

: All components of this product are included on the Philippine (PICCS) inventory or are not required to be listed on the Philippine (PICCS) inventory.

: All components of this product are included on the Chinese inventory or are not required to be listed on the Chinese inventory.

: All components of this product are included on the Taiwan Toxic Chemical Substances Control Act Inventory.

: All components of this product are included in the New Zealand inventory (NZIoC) or are not required to be listed on the New Zealand inventory(NZIoC).

16. OTHER INFORMATION

HMIS Rating

Health: 0
Flammability: 1
Reactivity: 0

NFPA Rating

Health: 0
Fire: 1
Reactivity: 0

Training advice

Read the safety data sheet before using the product.

Further information

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as

a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
This MSDS is prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by Kemira.
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Sources of key data used to compile the Safety Data Sheet

Regulations, databases, literature, own tests.

Additions, Deletions, Revisions

Relevant changes have been marked with vertical lines.

PAM (anionic Polyacrylamide) for Runoff and Soil Erosion Control

PAM, or anionic Polyacrylamide, is a very long chain, high molecular weight organic polymer produced from natural gas, with characteristics which make it useful as a soil amendment to control runoff and soil loss. The chemical when applied as a liquid solution to a freshly-tilled soil surface will strongly bond to the soil aggregates, strengthening them and greatly reducing aggregate breakdown and slaking. PAM is also a flocculating agent, so it also helps to prevent dispersion of soil by rain water into fine clays and silts that can clog soil pores and cause sealing and crusting. Often PAM is applied along with an electrolyte source such as a gypsiferous material (gypsum or power plant byproducts), which enhances its performance.

Soil treated with PAM, before rainfall.

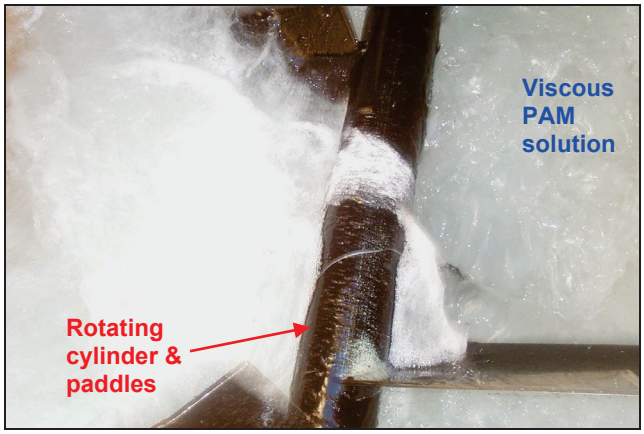
Soil without PAM, after rainfall.

Soil treated with PAM, after rainfall.

Rates of PAM application range from 10 to 100 pounds/Acre, depending upon the type of flow expected and the severity of the slope's erosion potential. For common agricultural fields, a rate of about 18 lbs/A is typically recommended. For a very steep highway or landfill embankment, rates over 100 lbs/A may be used. The dry powdered PAM material can be made into a water solution by using a hydroseeder to obtain sufficient mixing and agitation (usually a maximum 0.05% to 0.2% solution). If applied in conjunction with a separate dry gypsiferous material soil surface application, the rate for the gypsum can range from 0.5 to 3 tons/Acre. PAM can be effective up to several months if there is no subsequent soil disturbance.

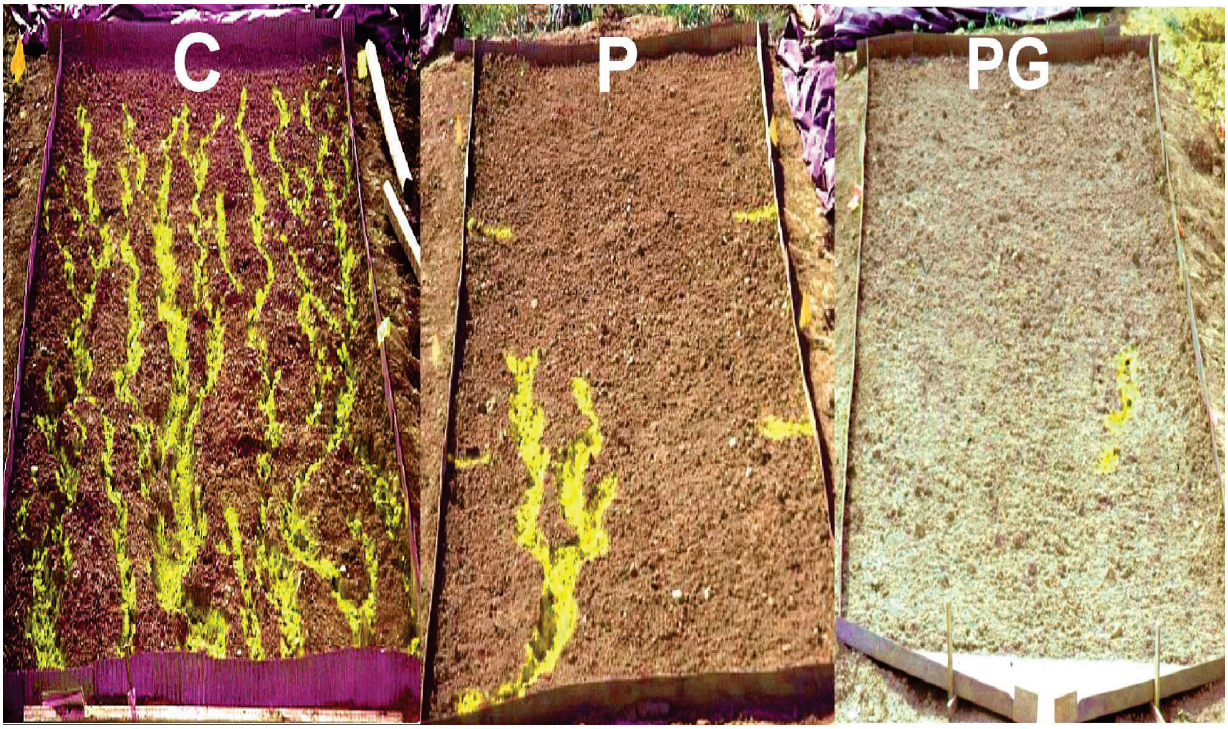
Anionic Polyacrylamide is produced by a number of manufacturers. These include Applied Polymer Systems (Woodstock, GA), Cytec Industries Inc. (West Paterson, NJ), Ciba Specialty Chemical Corp. (Suffolk, VA), Hercules Environmental (Doraville, GA), Stockhausen, Inc. (Greensboro, NC), and SNF Floerger (Riceboro, GA; Pearl River, LA; Bay St. Loius, MS). Current cost of PAM ranges from $1 to $5 per pound, and is sold under a variety of trade names (APS series, SoilFix, Percol, Soiloc-PAM, HydroPAM, etc.), as either a dry powder or emulsion. (Please note – mention of companies or trade names does not constitute endorsement by USDA-ARS).

Adding PAM dry powder to a hydroseeder tank.



PAM solution mixing in hydroseeder tank.

Applying PAM solution with a hydroseeder to a newly constructed grass waterway channel.



Rilling and erosion resulting from a total of about 7 inches of simulated rainfall applied to a 3:1 embankment with a silt loam soil cap. Rills highlighted with fluorescent paint to improve visibility. From left to right is an untreated control (C), PAM (P), and PAM plus Gypsum (PG). PAM rate used here was 72 lbs/Acre and gypsum rate was 2.6 tons/Acre. Research was conducted by the USDA-ARS National Soil Erosion Research Laboratory in West Lafayette, Indiana, just south of the Purdue University campus.

APPENDIX B – RESRAD MODELING FILES

Mary Ann Site Specific Model Results

Unat specific activity	U-238 activity ratio to total uranium
0.67 *uCi/g*	0.489 *unitless*

Radionuclide	At Concentration, pCi/g	Equates to Dose, mrem/y	Year Max Dose Rate occurs, y
Ra-226	5	1.9	0
	65.3	25	
U-238	100	0.88	0
	2,832	25	
Th-230	100	4.2	143
	596	25	

The total uranium in mg/kg that is equivalent to 2,832 pCi/g U-238 is depending on exact conv. factor values:

8,645

Conservative values between rancher and recreational scenario models used

*Uses 1 ft thickness
*Uses mass loading factor 0.001 (10x greater than default)
*Uses outdoor occupancy recreational scenario as there is no expectation of rancher human receptor. Grazing, yes. Ranching, no.
*No indoor occupancy considered (recreational has no indoor component)
*Uses recreational breathing rate of 14,000 (Rancher is 11,400)
*Uses recreational exposure duration of 30 years (Rancher is 25)
*Includes Livestock water = 0.001 and Meat = 0.001 pathway fractions to account for consumption of grazing animals, fractions calculated from site area size relative to the grazing/pasture size. These are 2 orders of magnitude more conservative that actual surface area ratio.
*Assumes the individual being exposed is both a recreationalist AND a receptor consuming grazing animals.

Baseline recreationalist scenario included here for comparison

	Concentration, pCi/g	Dose, mrem/y	Year at Max Dose, y
Ra-226	5	2.0	0
	62.9	25	
U-238	100	0.93	0
	2,688	25	
Th-230	100	8.5	1000
	295	25	

The total uranium in mg/kg that is equivalent to 2,688 pCi/g U-238 is approximately (depending on exact conv. factor values):

8,204

Scenario	Ra-226 (pCi/g)	U-238 (pCi/g)	Natural Uranium (mg/kg)	Th-230 (pCi/g)
Resident Farmer	1.7	556	1,697	12
Resident Gardener	4.1	866	2,643	30
Rural Resident	5.3	970	2,961	42
Rancher	12	2,360	7,203	86
Recreationalist (no meat ingestion)	63	2,688	8,204	295
Mary Ann (recreationlist + some ingestion)	65.3	2,832	8,644	596

Notes:

Exact U-nat values (in mg/kg) may vary depending on the values used for specific activity and activity ratio of U-238 to natural uranium.
Specific activity of U-nat used - 0.67 uCi/g
Activity ratio of U-238 to U-nat used - 0.489

Mary Ann Site Specific Parameter Values, *highlighted fields indicate adjusted parameters for site-specific model*

	Parameter	Unit	Value	Source	Pathways Considered	
Soil Concentrations	U-238 Soil Concentration	pCi/g	5	Assumed	External Gamma	
	U-234 Soil Concentration	pCi/g	5	Assumed	Inhalation	
	Th-230 Soil Concentration	pCi/g	5	Assumed	Meat Ingestion	
	Ra-226 Soil Concentration	pCi/g	5	Assumed	Soil Ingestion	
Conaminted Zone	Area of contaminated zone	m^2	**3,500**	**Site specific, conservative approximation of affected area (actual ~3481 m2)**		
	Thickness of contaminated zone	m	**0.3048**	**Assumed - 1 ft thickness**		
	Length parallel to aquifer flow	m	100	RESRAD Default		
	Cover depth	m	0	Assumed - no cover		
Cover /Hydrology	Density of contaminated zone	g/cm^3	1.5	RESRAD Default		
	Contaminted zone erosion rate	m/y	0.001	RESRAD Default		
	Contaminated zone total porosity	-	0.4	RESRAD Default		
	Contaminated zone field capacity	-	0.2	RESRAD Default		
	Contaminated zone hydraulic conductivity	m/y	10	RESRAD Default		
	Contaminated zone b parameter	-	5.3	RESRAD Default		
	Evapotranspiration coefficient	-	0.5	RESRAD Default		
	Windspeed	m/s	2	RESRAD Default		
	Precipitation	m/y	1	RESRAD Default		
	Irrigation	m/y	0.2	RESRAD Default		
	Irrigation mode	-	Overhead	RESRAD Default		
	Runoff coefficient	m/y	0.2	RESRAD Default		
	Watershed area for nearby stream or bondy	m2	1,000,000	RESRAD Default		
	Accuracy for water/soil computations	-	0.001	RESRAD Default		
Saturated Zone	Density of saturated zone	g/cm^3	1.4312	NUREG-5512, Table 6.87 (DandD Value)		
	Saturated Zone total porosity	-	0.4	RESRAD Default		
	Saturated Zone effective porosity	-	0.2	RESRAD Default		
	Saturated zone field capacity	-	0.2	RESRAD Default		
	Saturated zone hydraulic conductivity	m/y	100	RESRAD Default		
	Saturated zone hydraulic gradient	-	0.02	RESRAD Default		
	Saturated zone b parameter	-	5.3	RESRAD Default		
Unsaturated Zone	Thickness	m	4	RESRAD Default		
	Density	g/cm^3	1.4312	NUREG-5512, Table 6.87 (DandD Value)		
	Total porosity	-	0.4	RESRAD Default		
	Effective porosity	-	0.2	RESRAD Default		
	Field capacity	-	0.2	RESRAD Default		
	Hydraulic conductivity	m/y	10	RESRAD Default		
	b Parameter	-	5.3	RESRAD Default		
Occupancy	Inhalation rate	m^3/y	**14,000**	**RESRAD Manual Table 2.3 "Recreational" Scenario (Rancher is 11,400)**		
	Mass loading for inhalation	g/m^3	**0.001**	**10 times greater than RESRAD Default (Rancher is 0.0001)**		
	Exposure duration	y	**30**	**RESRAD Manual Table 2.3 "Recreational" Scenario (Rancher is 25)**		
	Indoor dust filtration factor	-	0.4	RESRAD Default		
	External gamma shielding factor	-	0.552	NUREG-5512, Table 6.87 (DandD Value)		
	Indoor time fraction	-	**0**	**RESRAD Manual Table 2.3 "Recreational" Scenario, Rancher scenario (3 week max) captured in outdoor exposure time**		
	Outdoor time fraction	-	**0.04**	**Assumed - 2 weeks (14 days) per year onsite (Recreational) - No significant human rancher exposure occupancy onsite. Grazing scenario (meat/livestock water pathway).**		
Ingestion:Dietary	Fruit, vegetable, and grain consumption	kg/y	111.8	NUREG-5512, Table 6.87 (DandD Value)		
	Leafy vegetable consumption	kg/y	21.4	NUREG-5512, Table 6.87 (DandD Value)		
	Milk consumption	L/y	233	NUREG-5512, Table 6.87 (DandD Value)		
	Meat and poultry consumption	kg/y	65.1	NUREG-5512, Table 6.87 (DandD Value)		
	Soil ingestion	g/y	18.3	NUREG-5512, Table 6.87 (DandD Value) - 0.05 g/d	*Actual fraction of area to grazing area*	
	Contaminted fraction - Livestock water	-	**0.0001**	**Conservative fraction - based on ratio of site area to grazing pasture area (2 orders of magnitude greater than a**	<--	9.1E-06
	Contaminted fraction - Irrigation water	-	0	Assumed		
	Contaminted fraction - Plant food	-	0	Assumed	*Actual fraction of area to grazing area*	
	Contaminted fraction - Meat	-	**0.0001**	**Conservative fraction - based on ratio of site area to grazing pasture area (2 orders of magnitude greater than a**	<--	9.1E-06
	Contaminted fraction - Milk	-	0	Assumed		
Ingestion:Non-dietary	Various - All assumed to be RESRAD Default values	-	-	RESRAD Default		

Ra-226 Output -->

```
RESRAD-ONSITE, Version 7.2      T½ Limit = 180 days        03/20/2026  09:56  Page   8
Summary : RESRAD Default Parameters Recreational Scenario RBD
File    : C:\USERS\BRYANERDMANN\ENVIRONMENTAL RESTORATION GROUP\PROJECT DATA - GENERAL\DISA\MARY ANN\DISA_MARY_RBD_RA226.RAD

     Contaminated Zone Dimensions             Initial Soil Concentrations, pCi/g
     ----------------------------             ----------------------------------
        Area:    3500.00 square meters                Ra-226      5.000E+00
   Thickness:       0.30 meters
Cover Depth:       0.00 meters


                                    Total Dose TDOSE(t), mrem/yr
                                Basic Radiation Dose Limit = 2.500E+01 mrem/yr
              Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
     ---------------------------------------------------------------------------------
   t (years):  0.000E+00  1.000E+00  3.000E+00  1.000E+01  3.000E+01  1.000E+02  3.000E+02  1.000E+03
     TDOSE(t):  1.915E+00  1.886E+00  1.825E+00  1.641E+00  1.198E+00  3.795E-01  1.321E-03  5.703E-09
        M(t):  7.659E-02  7.542E-02  7.314E-02  6.564E-02  4.792E-02  1.520E-02  5.282E-05  2.281E-10

Maximum TDOSE(t):  1.915E+00 mrem/yr   at t = 0.000E+00 years
```

U-238 Output -->

```
RESRAD-ONSITE, Version 7.2      T½ Limit = 180 days        03/20/2026  09:58  Page   9
Summary : RESRAD Default Parameters Recreational Scenario RBD
File    : C:\USERS\BRYANERDMANN\ENVIRONMENTAL RESTORATION GROUP\PROJECT DATA - GENERAL\DISA\MARY ANN\DISA_MARY_RBD_U238.RAD

     Contaminated Zone Dimensions             Initial Soil Concentrations, pCi/g
     ----------------------------             ----------------------------------
        Area:    3500.00 square meters                U-238       1.000E+02
   Thickness:       0.30 meters
Cover Depth:       0.00 meters


                                    Total Dose TDOSE(t), mrem/yr
                                Basic Radiation Dose Limit = 2.500E+01 mrem/yr
              Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)
     ---------------------------------------------------------------------------------
   t (years):  0.000E+00  1.000E+00  3.000E+00  1.000E+01  3.000E+01  1.000E+02  3.000E+02  1.000E+03
     TDOSE(t):  8.827E-01  8.636E-01  8.267E-01  7.096E-01  4.584E-01  9.832E-02  1.693E-04  2.531E-09
        M(t):  3.531E-02  3.454E-02  3.307E-02  2.838E-02  1.833E-02  3.933E-03  6.771E-06  1.012E-10

Maximum TDOSE(t):  8.827E-01 mrem/yr   at t = 0.000E+00 years
```

Rancher Baseline Scenario From HPSA License RAIs (included for informational purposes only)

	Parameter	Unit	Value	Source
Soil Concentrations	U-238 Soil Concentration	pCi/g	5	Assumed
	U-234 Soil Concentration	pCi/g	5	Assumed
	Th-230 Soil Concentration	pCi/g	5	Assumed
	Ra-226 Soil Concentration	pCi/g	5	Assumed
Conaminted Zone	Area of contaminated zone	m^2	10,000	RESRAD Default, Maximum area
	Thickness of contaminated zone	m	**0.61**	**Assumed - 2 ft thickness**
	Length parallel to aquifer flow	m	100	RESRAD Default
	Cover depth	m	0	Assumed - no cover
Cover /Hydrology	Density of contaminated zone	g/cm^3	1.5	RESRAD Default
	Contaminted zone erosion rate	m/y	0.001	RESRAD Default
	Contaminated zone total porosity	-	0.4	RESRAD Default
	Contaminated zone field capacity	-	0.2	RESRAD Default
	Contaminated zone hydraulic conductivity	m/y	10	RESRAD Default
	Contaminated zone b parameter	-	5.3	RESRAD Default
	Evapotranspiration coefficient	-	0.5	RESRAD Default
	Windspeed	m/s	2	RESRAD Default
	Precipitation	m/y	1	RESRAD Default
	Irrigation	m/y	0.2	RESRAD Default
	Irrigation mode	-	Overhead	RESRAD Default
	Runoff coefficient	m/y	0.2	RESRAD Default
	Watershed area for nearby stream or bondy	m2	1,000,000	RESRAD Default
	Accuracy for water/soil computations	-	0.001	RESRAD Default
Saturated Zone	Density of saturated zone	g/cm^3	1.4312	NUREG-5512, Table 6.87 (DandD Value)
	Saturated Zone total porosity	-	0.4	RESRAD Default
	Saturated Zone effective porosity	-	0.2	RESRAD Default
	Saturated zone field capacity	-	0.2	RESRAD Default
	Saturated zone hydraulic conductivity	m/y	100	RESRAD Default
	Saturated zone hydraulic gradient	-	0.02	RESRAD Default
	Saturated zone b parameter	-	5.3	RESRAD Default
	Thickness	m	4	RESRAD Default
Unsaturated Zone	Density	g/cm^3	1.4312	NUREG-5512, Table 6.87 (DandD Value)
	Total porosity	-	0.4	RESRAD Default
	Effective porosity	-	0.2	RESRAD Default
	Field capacity	-	0.2	RESRAD Default
	Hydraulic conductivity	m/y	10	RESRAD Default
	b Parameter	-	5.3	RESRAD Default
Occupancy	Inhalation rate	m^3/y	11,400	RESRAD Manual Table 2.3 "Industrial" Scenario
	Mass loading for inhalation	g/m^3	0.0001	RESRAD Default
	Exposure duration	y	25	RESRAD Manual Table 2.3 "Industrial" Scenario
	Indoor dust filtration factor	-	0.4	RESRAD Default
	External gamma shielding factor	-	0.552	NUREG-5512, Table 6.87 (DandD Value)
	Indoor time fraction	-	0.17	RESRAD Manual Table 2.3 "Industrial" Scenario
	Outdoor time fraction	-	0.06	RESRAD Manual Table 2.3 "Industrial" Scenario
Ingestion:Dietary	Fruit, vegetable, and grain consumption	kg/y	111.8	NUREG-5512, Table 6.87 (DandD Value)
	Leafy vegetable consumption	kg/y	21.4	NUREG-5512, Table 6.87 (DandD Value)
	Milk consumption	L/y	233	NUREG-5512, Table 6.87 (DandD Value)
	Meat and poultry consumption	kg/y	65.1	NUREG-5512, Table 6.87 (DandD Value)
	Soil ingestion	g/y	18.3	NUREG-5512, Table 6.87 (DandD Value) - 0.05 g/d
	Contaminted fraction - Livestock water	-	1	RESRAD Default
	Contaminted fraction - Irrigation water	-	0	Assumed
	Contaminted fraction - Plant food	-	0	Assumed
	Contaminted fraction - Meat	-	1	Assumed
	Contaminted fraction - Milk	-	0	Assumed
Ingestion:Non-dietary	Various - All assumed to be RESRAD Default values	-	-	RESRAD Default

Pathways
External Gamma
Inhalation
Meat Ingestion
Soil Ingestion

```
RESRAD-ONSITE, Version 7.2      T½ Limit = 180 days       07/23/2025  13:02  Page   9
Summary : RESRAD Default Parameters Resident Farmer Scenario
File    : C:\RESRAD_FAMILY\ONSITE\7.2\USERFILES\DISA_RANCHER.RAD

     Contaminated Zone Dimensions          Initial Soil Concentrations, pCi/g

       Area:  10000.00 square meters              Ra-226     5.000E+00
  Thickness:       0.61 meters                    Th-230     5.000E+00
Cover Depth:       0.00 meters                    U-234      5.000E+00
                                                  U-238      5.000E+00

                              Total Dose TDOSE(t), mrem/yr
                         Basic Radiation Dose Limit = 2.500E+01 mrem/yr
               Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

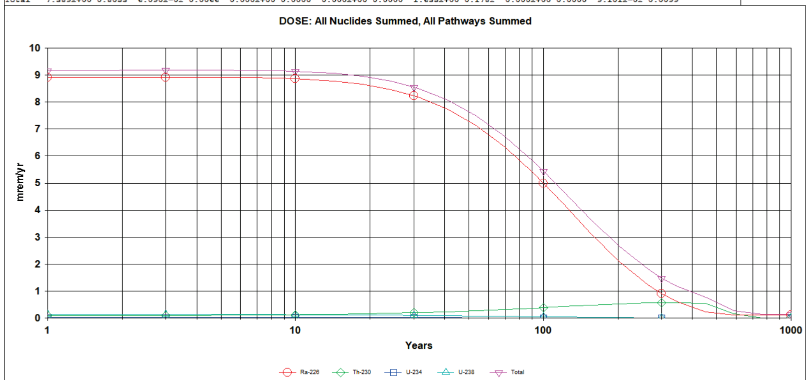
  t (years):  0.000E+00  1.000E+00  3.000E+00  1.000E+01  3.000E+01  1.000E+02  3.000E+02  1.000E+03
   TDOSE(t):  9.147E+00  9.161E+00  9.174E+00  9.135E+00  8.552E+00  5.436E+00  1.486E+00  1.321E-01
       M(t):  3.659E-01  3.665E-01  3.670E-01  3.654E-01  3.421E-01  2.174E-01  5.944E-02  5.284E-03

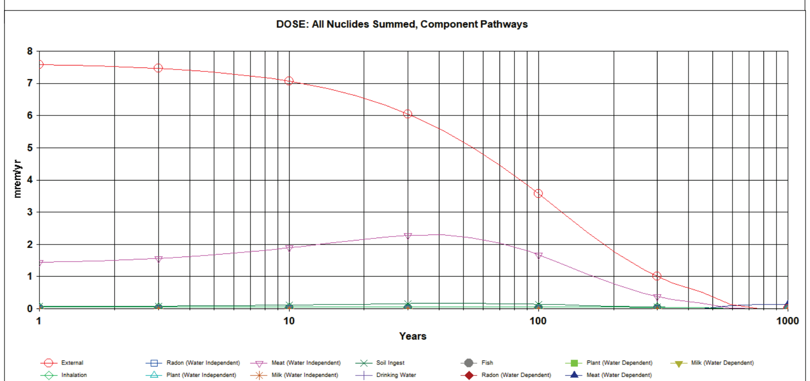
Maximum TDOSE(t):  9.176E+00 mrem/yr   at t =   4.242 ± 0.008 years

                 Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
                             As mrem/yr and Fraction of Total Dose At t = 4.242E+00 years

                               Water Independent Pathways (Inhalation excludes radon)
```

Radio-Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Ra-226	7.261E+00	0.7913	5.203E-03	0.0006	0.000E+00	0.0000	0.000E+00	0.0000	1.588E+00	0.1730	0.000E+00	0.0000	6.269E-02	0.0068
Th-230	1.603E-02	0.0017	4.754E-02	0.0052	0.000E+00	0.0000	0.000E+00	0.0000	1.953E-02	0.0021	0.000E+00	0.0000	1.980E-02	0.0022
U-234	2.525E-04	0.0000	4.386E-03	0.0005	0.000E+00	0.0000	0.000E+00	0.0000	1.390E-02	0.0015	0.000E+00	0.0000	4.297E-03	0.0005
U-238	1.117E-01	0.0122	3.771E-03	0.0004	0.000E+00	0.0000	0.000E+00	0.0000	1.366E-02	0.0015	0.000E+00	0.0000	4.221E-03	0.0005
Total	7.389E+00	0.8053	6.090E-02	0.0066	0.000E+00	0.0000	0.000E+00	0.0000	1.635E+00	0.1782	0.000E+00	0.0000	9.101E-02	0.0099





C:\RESRAD_FAMILY\ONSITE\7.2\USERFILES\DISA_RANCHER.RAD 07/23/2025 13:02 GRAPHICS.ASC

Recreational Baseline Scenario From HPSA License RAIs (included for informational purposes only)

	Parameter	Unit	Value	Source
Soil Concentrations	U-238 Soil Concentration	pCi/g	5	Assumed
	U-234 Soil Concentration	pCi/g	5	Assumed
	Th-230 Soil Concentration	pCi/g	5	Assumed
	Ra-226 Soil Concentration	pCi/g	5	Assumed
Conaminted Zone	Area of contaminated zone	m^2	10,000	RESRAD Default, Maximum area
	Thickness of contaminated zone	m	**0.61**	**Assumed - 2 ft thickness**
	Length parallel to aquifer flow	m	100	RESRAD Default
	Cover depth	m	0	Assumed - no cover
Cover /Hydrology	Density of contaminated zone	g/cm^3	1.5	RESRAD Default
	Contaminted zone erosion rate	m/y	0.001	RESRAD Default
	Contaminated zone total porosity	-	0.4	RESRAD Default
	Contaminated zone field capacity	-	0.2	RESRAD Default
	Contaminated zone hydraulic conductivity	m/y	10	RESRAD Default
	Contaminated zone b parameter	-	5.3	RESRAD Default
	Evapotranspiration coefficient	-	0.5	RESRAD Default
	Windspeed	m/s	2	RESRAD Default
	Precipitation	m/y	1	RESRAD Default
	Irrigation	m/y	0.2	RESRAD Default
	Irrigation mode	-	Overhead	RESRAD Default
	Runoff coefficient	m/y	0.2	RESRAD Default
	Watershed area for nearby stream or bondy	m2	1,000,000	RESRAD Default
	Accuracy for water/soil computations	-	0.001	RESRAD Default
Saturated Zone	Density of saturated zone	g/cm^3	1.4312	NUREG-5512, Table 6.87 (DandD Value)
	Saturated Zone total porosity	-	0.4	RESRAD Default
	Saturated Zone effective porosity	-	0.2	RESRAD Default
	Saturated zone field capacity	-	0.2	RESRAD Default
	Saturated zone hydraulic conductivity	m/y	100	RESRAD Default
	Saturated zone hydraulic gradient	-	0.02	RESRAD Default
	Saturated zone b parameter	-	5.3	RESRAD Default
	Thickness	m	4	RESRAD Default
Unsaturated Zone	Density	g/cm^3	1.4312	NUREG-5512, Table 6.87 (DandD Value)
	Total porosity	-	0.4	RESRAD Default
	Effective porosity	-	0.2	RESRAD Default
	Field capacity	-	0.2	RESRAD Default
	Hydraulic conductivity	m/y	10	RESRAD Default
	b Parameter	-	5.3	RESRAD Default
Occupancy	Inhalation rate	m^3/y	14,000	RESRAD Manual Table 2.3 "Recreational" Scenario
	Mass loading for inhalation	g/m^3	**0.001**	10 times greater than RESRAD Default
	Exposure duration	y	30	RESRAD Manual Table 2.3 "Recreational" Scenario
	Indoor dust filtration factor	-	0.4	RESRAD Default
	External gamma shielding factor	-	0.552	NUREG-5512, Table 6.87 (DandD Value)
	Indoor time fraction	-	0	RESRAD Manual Table 2.3 "Recreational" Scenario
	Outdoor time fraction	-	0.04	Assumed - 2 weeks (14 days) per year onsite
Ingestion:Dietary	Fruit, vegetable, and grain consumption	kg/y	111.8	NUREG-5512, Table 6.87 (DandD Value)
	Leafy vegetable consumption	kg/y	21.4	NUREG-5512, Table 6.87 (DandD Value)
	Milk consumption	L/y	233	NUREG-5512, Table 6.87 (DandD Value)
	Meat and poultry consumption	kg/y	65.1	NUREG-5512, Table 6.87 (DandD Value)
	Soil ingestion	g/y	18.3	NUREG-5512, Table 6.87 (DandD Value) - 0.05 g/d
	Contaminted fraction - Livestock water	-	0	Assumed
	Contaminted fraction - Irrigation water	-	0	Assumed
	Contaminted fraction - Plant food	-	0	RESRAD Manual Table 2.3 "Recreational" Scenario
	Contaminted fraction - Meat	-	0	RESRAD Manual Table 2.3 "Recreational" Scenario
	Contaminted fraction - Milk	-	0	RESRAD Manual Table 2.3 "Recreational" Scenario
Ingestion:Non-dietary	Various - All assumed to be RESRAD Default values	-	-	RESRAD Default

Pathways
External Gamma
Inhalation
Soil Ingestion

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RESRAD-ONSITE, Version 7.2      T½ Limit = 180 days        07/23/2025  13:09  Page   9
Summary : RESRAD Default Parameters Resident Farmer Scenario
File    : C:\RESRAD_FAMILY\ONSITE\7.2\USERFILES\DISA_RECREAT.RAD

     Contaminated Zone Dimensions           Initial Soil Concentrations, pCi/g

       Area:  10000.00 square meters                Ra-226     5.000E+00
  Thickness:       0.61 meters                      Th-230     5.000E+00
Cover Depth:       0.00 meters                      U-234      5.000E+00
                                                    U-238      5.000E+00

                              Total Dose TDOSE(t), mrem/yr
                        Basic Radiation Dose Limit = 2.500E+01 mrem/yr
             Total Mixture Sum M(t) = Fraction of Basic Dose Limit Received at Time (t)

  t (years):  0.000E+00  1.000E+00  3.000E+00  1.000E+01  3.000E+01  1.000E+02  3.000E+02  1.000E+03
   TDOSE(t):  2.021E+00  2.007E+00  1.978E+00  1.881E+00  1.624E+00  9.726E-01  2.882E-01  0.000E+00
       M(t):  8.084E-02  8.027E-02  7.913E-02  7.522E-02  6.497E-02  3.890E-02  1.153E-02  0.000E+00

Maximum TDOSE(t):  2.021E+00 mrem/yr   at t = 0.000E+00 years
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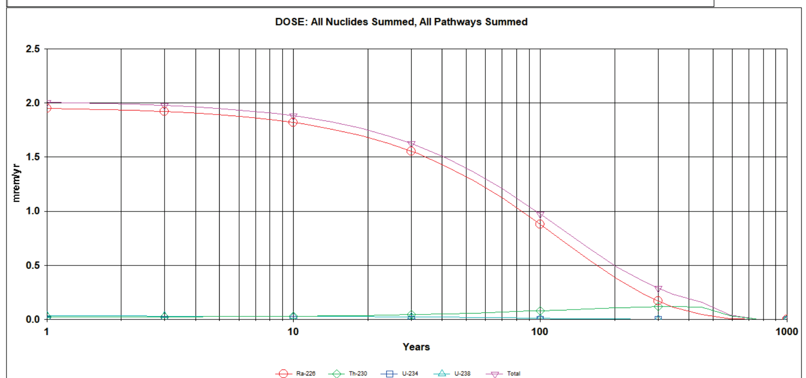
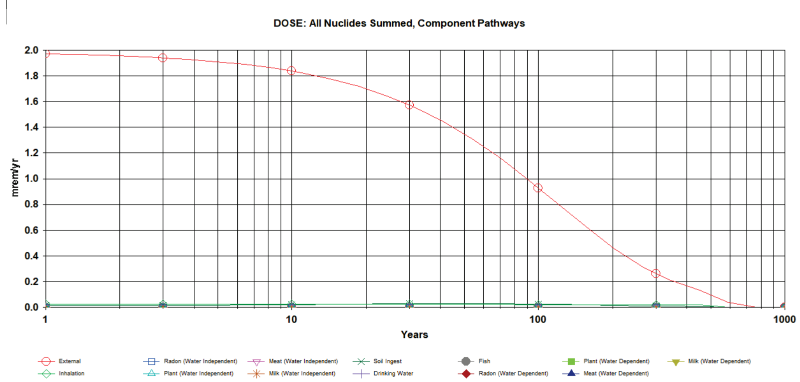
RESRAD-ONSITE, Version 7.2      T½ Limit = 180 days        07/23/2025  13:09  Page  10
Summary : RESRAD Default Parameters Resident Farmer Scenario
File    : C:\RESRAD_FAMILY\ONSITE\7.2\USERFILES\DISA_RECREAT.RAD

              Total Dose Contributions TDOSE(i,p,t) for Individual Radionuclides (i) and Pathways (p)
                           As mrem/yr and Fraction of Total Dose At t = 0.000E+00 years

                               Water Independent Pathways (Inhalation excludes radon)
```

Radio-Nuclide	Ground mrem/yr	Ground fract.	Inhalation mrem/yr	Inhalation fract.	Radon mrem/yr	Radon fract.	Plant mrem/yr	Plant fract.	Meat mrem/yr	Meat fract.	Milk mrem/yr	Milk fract.	Soil mrem/yr	Soil fract.
Ra-226	1.955E+00	0.9673	1.834E-03	0.0009	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	6.691E-03	0.0033
Th-230	6.368E-04	0.0003	1.824E-02	0.0090	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	3.428E-03	0.0017
U-234	6.865E-05	0.0000	1.762E-03	0.0009	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.825E-04	0.0004
U-238	3.042E-02	0.0151	1.516E-03	0.0007	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	7.688E-04	0.0004
Total	1.986E+00	0.9827	2.335E-02	0.0116	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	0.000E+00	0.0000	1.167E-02	0.0058





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APPENDIX C - MARY ANN ACCESS INFORMATION

EXHIBIT B

MEMORANDUM OF WASTE TREATMENT AND USE AGREEMENT

After recording, please return to:
AURA GRIT, LLC
1010 Falcon Ave.
Casper, Wyoming, 82644
greyson@disausa.com

THIS MEMORANDUM OF WASTE TREATMENT AND USE AGREEMENT ("Memorandum") is executed by and between GREAT NORTHERN ENERGY METALS INC., whose address is 1500-1055 West Georgia Street, Vancouver, British Columbia, V6E 4N7 ("Claim Owner") and AURA GRIT, LLC whose address is 6571 E 2nd St. Suite 2, Casper, WY 82609 ("AURA") (referred to singularly as "Party" and collectively as "Parties") and is placed of record for the purpose of placing all persons on notice of the existence of that certain unrecorded Waste Treatment and Use Agreement ("Agreement") dated effective June 23rd, 2025 ("Effective Date") by and between the Parties covering the following land ("Property"):

See Exhibit A attached hereto and incorporated herein by reference.

WHEREBY under said Agreement, Claim Owner granted to AURA the exclusive right to access and use the Property to treat and remove certain abandoned mine waste located on the Property. The Agreement shall remain in full force and effect for a primary term of ten (10) years and so long thereafter as operations continue on the abandoned mine waste. Provided that the Agreement grants AURA the right to extend the primary term for an additional ten (10) years under terms set forth therein.

In purpose hereof to give record notice of the Agreement and in consideration paid for the execution of the Agreement, the undersigned Claim Owner does hereby lease, let, and demise unto AURA the Property upon all terms and conditions set forth in the Agreement.

[Signatures on following page]

IN WITNESS WHEREOF, the Parties have caused this Agreement to be duly executed and delivered as of the date first written above.

GREAT NORTHERN ENERGY METALS INC

Signed by:
By David Mitchell
F3D6D7E561A3434...
Name: David Mitchell
Title: CEO

AURA GRIT, LLC

Signed by:
By: Greyson Buckingham
6A699E765936426...
Name: Greyson Buckingham

MEMORANDUM EXHIBIT A

PROPERTY

Claim Name	Serial Number	Lead File Number	County	Claim Type	Date Of Location	Meridian Township Range Section	Subdivision
AIR #1	CO101314610	CO101314610	MONTROSE	LODE CLAIM	2/17/2005	23 0460N 0180W 026	SW
AIR #2	CO101314611	CO101314611	MONTROSE	LODE CLAIM	2/17/2005	23 0460N 0180W 026	SW
AIR #3	CO101314612	CO101314612	MONTROSE	LODE CLAIM	2/17/2005	23 0460N 0180W 026	SW
BASE LINE	CO101498649	CO101498649	MONTROSE	LODE CLAIM	6/18/2005	23 0460N 0180W 033	SE
BLACK JACK	CO101498654	CO101498654	MONTROSE	LODE CLAIM	6/18/2005	23 0450N 0180W 002	Government Lot 3
							Government Lot 4
							NW
						23 0450N 0180W 003	Government Lot 1
							Government Lot 2
							NE
						23 0460N 0180W 034	SE
						23 0460N 0180W 035	SW
BLUE STREAK #1	CO101313342	CO101313342	MONTROSE	LODE CLAIM	2/9/2005	23 0460N 0180W 027	SE
							SW
BLUE STREAK #4	CO101313343	CO101313343	MONTROSE	LODE CLAIM	2/9/2005	23 0460N 0180W 027	SE
							SW
BLUE STREAK #5	CO101313344	CO101313344	MONTROSE	LODE CLAIM	2/9/2005	23 0460N 0180W 026	NE
BLUE STREAK #6	CO101313345	CO101313345	MONTROSE	LODE CLAIM	2/9/2005	23 0460N 0180W 027	SE
BLUE STREAK #7	CO102524841	CO102524841	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 027	SE
BLUE STREAK #8	CO102524842	CO102524842	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 027	SW
BLUE STREAK #9	CO101311422	CO101311422	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NE
BLUE STREAK #10	CO101311423	CO101311423	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NE
						23 0460N 0180W 035	NW
BLUE STREAK #11	CO101311424	CO101311424	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NE
							NW

BLUE STREAK #12	CO101311425	CO101311425	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NE
							NW
BLUE STREAK #13	CO101313346	CO101313346	MONTROSE	LODE CLAIM	2/9/2005	23 0460N 0180W 026	SW
						23 0460N 0180W 027	SE
BULL DURHAM	CO101311431	CO101311431	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 012	NW
							SE
							SW
COOKIE	CO101311048	CO101311048	MONTROSE	LODE CLAIM	4/29/2005	23 0460N 0180W 034	NE
							SE
						23 0460N 0180W 035	NW
							SW
EMPIRE FRACTION	CO102524839	CO102524839	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NE
							NW
FINI	CO101498651	CO101498651	MONTROSE	LODE CLAIM	6/18/2005	23 0460N 0180W 033	SE
GOTCHA #1	CO101319133	CO101319133	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	SW
GOTCHA #2	CO101319134	CO101319134	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	SW
GOTCHA #3	CO101319135	CO101319135	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	SW
GOTCHA #4	CO101319136	CO101319136	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	SW
GOTCHA #5	CO101320317	CO101320317	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	NW
							SW
GOTCHA #6	CO101320318	CO101320318	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	NW
							SW
GOTCHA #7	CO101320319	CO101320319	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	NW
							SW
GOTCHA #8	CO101320320	CO101320320	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	NW
							SW
GOTCHA #9	CO101320321	CO101320321	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	NW
GOTCHA #10	CO101320322	CO101320322	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	NW
GOTCHA #11	CO101320323	CO101320323	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	NW
GOTCHA #12	CO101320324	CO101320324	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 015	NW

GOTCHA #13	CO101320325	CO101320325	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 016	NE
GOTCHA #14	CO101320326	CO101320326	MONTROSE	LODE CLAIM	12/28/2005	23 0460N 0170W 016	NE
GOTCHA #15	CO101320327	CO101320327	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0170W 016	NE
HAMP #2	CO101314613	CO101314613	MONTROSE	LODE CLAIM	2/17/2005	23 0460N 0180W 027	SE
HAMP #3	CO101314614	CO101314614	MONTROSE	LODE CLAIM	2/17/2005	23 0460N 0180W 027	SE
							SW
HAMP #6	CO102524959	CO102524959	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0180W 013	NE
							SE
HAMP #8	CO102524960	CO102524960	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0180W 013	NE
							SE
HAMP #10	CO102524961	CO102524961	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0180W 013	NW
							SW
HAMP #12	CO102524962	CO102524962	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0180W 013	NW
							SW
HAMP #14	CO102524963	CO102524963	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0180W 013	NW
							SW
HAMP #16	CO102524964	CO102524964	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0180W 013	NW
							SW
HAMP #18	CO102524965	CO102524965	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0180W 013	NW
							SW
						23 0460N 0180W 014	NE
							SE
HAMP #44	CO102524966	CO102524966	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0180W 013	SW
						23 0460N 0180W 014	SE
HAMP #45	CO102524967	CO102524967	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0180W 013	SW
HAMP #46	CO102524968	CO102524968	MONTROSE	LODE CLAIM	1/30/2006	23 0460N 0180W 013	SW
HAMP #47	CO101314616	CO101314616	MONTROSE	LODE CLAIM	2/17/2005	23 0460N 0180W 034	NW
HAMP #48	CO101314617	CO101314617	MONTROSE	LODE CLAIM	2/17/2005	23 0460N 0180W 034	NW
HAMP #50	CO101314618	CO101314618	MONTROSE	LODE CLAIM	2/17/2005	23 0460N 0180W 034	NE
							NW

JOAN #2	CO101740060	CO101740060	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 026	SE
							SW
						23 0460N 0180W 035	NE
							NW
JOAN #3	CO101740061	CO101740061	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 035	NE
							NW
JOAN #5	CO101740062	CO101740062	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 035	NW
JOAN #7	CO101740063	CO101740063	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 035	NW
JOAN #8	CO101740064	CO101740064	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 035	NE
							NW
							SE
							SW
JOAN #9	CO101740065	CO101740065	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 035	NW
JOAN #10	CO101851244	CO101851244	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 026	SE
							SW
JOAN #11	CO101851245	CO101851245	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 026	SE
							SW
JOAN #12	CO101851246	CO101851246	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 026	SE
							SW
JOAN #14	CO101851248	CO101851248	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 035	NW
							SE
							SW
JOAN #15	CO101851249	CO101851249	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 035	NW
							SW
JOAN #16	CO101851250	CO101851250	MONTROSE	LODE CLAIM	12/26/2005	23 0460N 0180W 035	SW
JOKER	CO101498653	CO101498653	MONTROSE	LODE CLAIM	6/18/2005	23 0460N 0180W 034	SE
						23 0460N 0180W 035	SW
LAST CHANCE	CO101311432	CO101311432	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 012	NE
							SE
LAST CHANCE #2	CO101311433	CO101311433	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 012	NW

LAST CHANCE #3	CO101311434	CO101311434	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 012	NW
LAST CHANCE #4	CO101311435	CO101311435	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 012	NW
LAST CHANCE #5	CO101311436	CO101311436	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 012	NW
LAST CHANCE #6	CO101311437	CO101311437	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 011	NE
						23 0460N 0180W 012	NW
NARROW STRIP	CO101498650	CO101498650	MONTROSE	LODE CLAIM	6/18/2005	23 0450N 0180W 004	Government Lot 1
							Government Lot 2
							NE
						23 0460N 0180W 033	SE
NUV 104	CO101312538	CO101312538	MONTROSE	LODE CLAIM	4/10/2007	23 0460N 0180W 027	SW
						23 0460N 0180W 028	SE
NUV 158	CO101513559	CO101513559	MONTROSE	LODE CLAIM	4/21/2007	23 0460N 0170W 007	SW
						23 0460N 0170W 018	NW
NUV 159	CO101513560	CO101513560	MONTROSE	LODE CLAIM	4/21/2007	23 0460N 0170W 007	SW
						23 0460N 0170W 018	NW
						23 0460N 0180W 012	SE
						23 0460N 0180W 013	NE
NUV 160	CO101513561	CO101513561	MONTROSE	LODE CLAIM	6/7/2007	23 0460N 0170W 007	SW
						23 0460N 0180W 012	SE
NUV 161	CO101513562	CO101513562	MONTROSE	LODE CLAIM	5/12/2007	23 0460N 0180W 012	SE
NUV 162	CO101514725	CO101514725	MONTROSE	LODE CLAIM	5/12/2007	23 0460N 0180W 012	SE
NUV 163	CO101514726	CO101514726	MONTROSE	LODE CLAIM	5/12/2007	23 0460N 0180W 012	SE
NUV 165	CO101360722	CO101360722	MONTROSE	LODE CLAIM	7/24/2007	23 0460N 0180W 027	NE
							NW
NUV 167	CO101360723	CO101360723	MONTROSE	LODE CLAIM	7/24/2007	23 0460N 0180W 027	NE
							NW
NUV 169	CO101360724	CO101360724	MONTROSE	LODE CLAIM	7/24/2007	23 0460N 0180W 027	NE
							NW
NUV 170	CO101360725	CO101360725	MONTROSE	LODE CLAIM	7/25/2007	23 0460N 0180W 027	NW

NUV 171	CO101360726	CO101360726	MONTROSE	LODE CLAIM	7/25/2007	23 0460N 0180W 027	NE
							NW
NUV 172	CO101361505	CO101361505	MONTROSE	LODE CLAIM	7/25/2007	23 0460N 0180W 027	NW
							SW
NUV 173	CO101361506	CO101361506	MONTROSE	LODE CLAIM	7/25/2007	23 0460N 0180W 027	SW
NUV 174	CO101361507	CO101361507	MONTROSE	LODE CLAIM	7/25/2007	23 0460N 0180W 027	SW
NUV 175	CO101361508	CO101361508	MONTROSE	LODE CLAIM	7/25/2007	23 0460N 0180W 027	NE
NUV 176	CO101361509	CO101361509	MONTROSE	LODE CLAIM	7/25/2007	23 0460N 0180W 027	NE
NUV 177	CO101361510	CO101361510	MONTROSE	LODE CLAIM	7/25/2007	23 0460N 0180W 027	NE
NUV 193	CO101361511	CO101361511	MONTROSE	LODE CLAIM	9/14/2007	23 0460N 0180W 025	NE
NUV 194	CO101361512	CO101361512	MONTROSE	LODE CLAIM	9/14/2007	23 0460N 0180W 025	NE
							SE
NUV 195 A	CO101336633	CO101336633	MONTROSE	LODE CLAIM	12/18/2007	23 0460N 0180W 025	NE
NUV 196 A	CO101336634	CO101336634	MONTROSE	LODE CLAIM	12/18/2007	23 0460N 0180W 025	NE
							SE
NUV 197	CO101365983	CO101365983	MONTROSE	LODE CLAIM	9/27/2007	23 0460N 0180W 026	SE
NUV 198	CO101365984	CO101365984	MONTROSE	LODE CLAIM	9/27/2007	23 0460N 0180W 025	SW
						23 0460N 0180W 026	SE
NUV 207	CO101317527	CO101317527	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	NW
NUV 208	CO101317528	CO101317528	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	NW
NUV 209	CO101317529	CO101317529	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	NW
							SW
NUV 210	CO101317530	CO101317530	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	SW
NUV 211	CO101317531	CO101317531	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0180W 013	SW
NUV 213	CO101317532	CO101317532	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0180W 013	SW
NUV 215	CO101317533	CO101317533	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0180W 013	SW
NUV 217	CO101317534	CO101317534	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0180W 024	NW
NUV 219	CO101317535	CO101317535	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0180W 024	NW

NUV 220	CO101317536	CO101317536	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	NE
							NW
NUV 221	CO101318593	CO101318593	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	NE
NUV 222	CO101318594	CO101318594	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	NE
							NW
NUV 223	CO101318595	CO101318595	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	NE
NUV 224	CO101318596	CO101318596	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	NE
							NW
							SE
							SW
NUV 225	CO101318597	CO101318597	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	NE
							SE
NUV 226	CO101318598	CO101318598	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	SE
							SW
NUV 227	CO101318599	CO101318599	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	SE
NUV 228	CO101318600	CO101318600	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	SE
							SW
NUV 229	CO101318633	CO101318633	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	SE
NUV 230	CO101318634	CO101318634	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	SE
							SW
NUV 231	CO101318635	CO101318635	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 013	SE
NUV 232	CO101318636	CO101318636	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0170W 018	NW
						23 0460N 0180W 013	NE
NUV 233	CO101318637	CO101318637	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0170W 018	NW
NUV 234	CO101318638	CO101318638	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0170W 018	NW
NUV 235	CO101318639	CO101318639	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0170W 018	NW
NUV 236	CO101318640	CO101318640	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0170W 018	NW
							SW

NUV 237	CO101318641	CO101318641	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0170W 018	NE
							NW
							SE
							SW
NUV 238	CO101318708	CO101318708	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0170W 018	SW
NUV 239	CO101318709	CO101318709	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0170W 018	SE
							SW
NUV 240	CO101318710	CO101318710	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0170W 018	SW
NUV 241	CO101318711	CO101318711	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0170W 018	SW
NUV 242	CO101318712	CO101318712	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0170W 018	SE
NUV 243	CO101318713	CO101318713	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0170W 018	SE
NUV 247	CO101318714	CO101318714	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0180W 012	NE
							SE
NUV 268	CO101318715	CO101318715	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0170W 007	SE
						23 0460N 0170W 018	NE
NUV 269	CO101318716	CO101318716	MONTROSE	LODE CLAIM	4/29/2008	23 0460N 0170W 007	SE
							SW
						23 0460N 0170W 018	NE
							NW
NUV 272	CO101318717	CO101318717	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0170W 017	NW
						23 0460N 0170W 018	NE
NUV 291	CO101882852	CO101882852	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 013	NW
						23 0460N 0180W 014	NE
NUV 292	CO101882853	CO101882853	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 013	NW
						23 0460N 0180W 014	NE
NUV 293	CO101882854	CO101882854	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 013	NW
							SW
						23 0460N 0180W 014	NE
							SE

NUV 294	CO101882855	CO101882855	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 013	SW
						23 0460N 0180W 014	SE
NUV 295	CO101882856	CO101882856	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 013	SW
						23 0460N 0180W 014	SE
NUV 296	CO101882857	CO101882857	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 013	SW
						23 0460N 0180W 014	SE
NUV 297	CO101882858	CO101882858	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 011	SE
						23 0460N 0180W 012	SW
NUV 298	CO101882859	CO101882859	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 011	SE
						23 0460N 0180W 012	SW
NUV 299	CO101882860	CO101882860	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 012	SW
						23 0460N 0180W 013	NW
						23 0460N 0180W 014	NE
NUV 300	CO101882861	CO101882861	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 013	NW
						23 0460N 0180W 014	NE
NUV 301	CO101882862	CO101882862	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 012	SE
							SW
NUV 302	CO101882863	CO101882863	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 012	SE
							SW
NUV 303	CO101882864	CO101882864	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 012	SE
							SW
NUV 304	CO101882865	CO101882865	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 012	SE
NUV 305	CO101882866	CO101882866	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 012	SE
							SW
						23 0460N 0180W 013	NE
							NW
NUV 306	CO101882867	CO101882867	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 012	SE
						23 0460N 0180W 013	NE
NUV 307	CO101882868	CO101882868	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 013	NE
							NW

NUV 308	CO101882869	CO101882869	MONTROSE	LODE CLAIM	9/1/2010	23 0460N 0180W 013	NE
NUV 309	CO101511352	CO101511352	MONTROSE	LODE CLAIM	3/25/2008	23 0460N 0180W 026	SE
NUV 310	CO101511353	CO101511353	MONTROSE	LODE CLAIM	3/25/2008	23 0460N 0180W 026	SE
NUV 311	CO101511354	CO101511354	MONTROSE	LODE CLAIM	3/25/2008	23 0460N 0180W 025	SW
						23 0460N 0180W 026	SE
NUV 312	CO101511355	CO101511355	MONTROSE	LODE CLAIM	3/25/2008	23 0460N 0180W 025	SW
NUV 314	CO101511356	CO101511356	MONTROSE	LODE CLAIM	3/25/2008	23 0460N 0180W 025	SW
						23 0460N 0180W 036	NW
NUV 316	CO101511357	CO101511357	MONTROSE	LODE CLAIM	3/25/2008	23 0460N 0180W 025	SW
						23 0460N 0180W 036	NW
NUV 353	CO101511358	CO101511358	MONTROSE	LODE CLAIM	4/30/2008	23 0460N 0180W 034	NE
NUV 356	CO101529361	CO101529361	MONTROSE	LODE CLAIM	9/5/2011	23 0450N 0180W 002	NE
						23 0460N 0180W 035	SE
NUV 431	CO101547084	CO101547084	MONTROSE	LODE CLAIM	1/22/2012	23 0460N 0180W 033	NE
							SE
NUV 432	CO101547085	CO101547085	MONTROSE	LODE CLAIM	1/22/2012	23 0460N 0180W 033	NE
							SE
NUV 436	CO101548491	CO101548491	MONTROSE	LODE CLAIM	1/23/2012	23 0460N 0180W 033	SE
NUV 437	CO101346295	CO101346295	MONTROSE	LODE CLAIM	5/3/2012	23 0460N 0180W 035	SW
NUV 438	CO101346296	CO101346296	MONTROSE	LODE CLAIM	5/3/2012	23 0460N 0180W 035	SW
NUV 439	CO101346297	CO101346297	MONTROSE	LODE CLAIM	5/3/2012	23 0460N 0180W 034	SE
						23 0460N 0180W 035	SW
NUV 440	CO101346298	CO101346298	MONTROSE	LODE CLAIM	5/3/2012	23 0450N 0180W 002	NW
						23 0460N 0180W 035	SW
NUV 441	CO101346299	CO101346299	MONTROSE	LODE CLAIM	5/3/2012	23 0450N 0180W 002	NW
						23 0450N 0180W 003	NE
						23 0460N 0180W 034	SE
NUV 442	CO101831476	CO101831476	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 024	SW
						23 0460N 0180W 025	NW

NUV 443	CO101831477	CO101831477	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	NW
							SW
NUV 444	CO101831478	CO101831478	MONTROSE	LODE CLAIM	4/25/2018	23 0460N 0180W 024	SW
						23 0460N 0180W 025	NW
NUV 445	CO101831479	CO101831479	MONTROSE	LODE CLAIM	4/25/2018	23 0460N 0180W 024	SW
						23 0460N 0180W 025	NW
NUV 446	CO101831480	CO101831480	MONTROSE	LODE CLAIM	4/25/2018	23 0460N 0180W 024	SW
						23 0460N 0180W 025	NW
NUV 447	CO101831481	CO101831481	MONTROSE	LODE CLAIM	4/25/2018	23 0460N 0180W 025	NW
NUV 448	CO101831482	CO101831482	MONTROSE	LODE CLAIM	4/25/2018	23 0460N 0180W 024	SE
						23 0460N 0180W 025	NW
NUV 449	CO101831483	CO101831483	MONTROSE	LODE CLAIM	4/25/2018	23 0460N 0180W 025	NE
							SE
NUV 450	CO101831484	CO101831484	MONTROSE	LODE CLAIM	4/25/2018	23 0460N 0180W 024	SE
						23 0460N 0180W 025	NE
NUV 451	CO101831485	CO101831485	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	NE
NUV 452	CO101832062	CO101832062	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	SW
NUV 453	CO101832063	CO101832063	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	SW
NUV 454	CO101832064	CO101832064	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	SW
						23 0460N 0180W 036	NW
NUV 455	CO101832065	CO101832065	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	SW
NUV 456	CO101832066	CO101832066	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	SW
						23 0460N 0180W 036	NW
NUV 457	CO101832067	CO101832067	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	SE
NUV 458	CO101832068	CO101832068	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	SE
						23 0460N 0180W 036	NE
NUV 459	CO101832069	CO101832069	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	SE
NUV 460	CO101832070	CO101832070	MONTROSE	LODE CLAIM	4/26/2018	23 0460N 0180W 025	SE
						23 0460N 0180W 036	NE

NUV 461	CO101555692	CO101555692	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 025	NW
							SW
NUV 462	CO101555693	CO101555693	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 024	SW
NUV 463	CO101556819	CO101556819	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 025	NW
							SW
						23 0460N 0180W 026	NE
							SE
NUV 464	CO101556820	CO101556820	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 023	SE
						23 0460N 0180W 024	SW
						23 0460N 0180W 025	NW
						23 0460N 0180W 026	NE
NUV 465	CO101556821	CO101556821	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NE
							SE
NUV 466	CO101556822	CO101556822	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 023	SE
						23 0460N 0180W 026	NE
NUV 467	CO101556823	CO101556823	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NE
							SE
NUV 468	CO101556824	CO101556824	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 023	SE
						23 0460N 0180W 026	NE
NUV 469	CO101556825	CO101556825	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NE
							SE
NUV 470	CO101556826	CO101556826	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 023	SE
						23 0460N 0180W 026	NE
NUV 471	CO101556827	CO101556827	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NE
							SE
NUV 472	CO101556828	CO101556828	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NE
NUV 473	CO101556829	CO101556829	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NE
							NW
NUV 474	CO101556830	CO101556830	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NE
							NW

NUV 475	CO101556831	CO101556831	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NW
							SW
NUV 476	CO101556832	CO101556832	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NW
NUV 477	CO101556833	CO101556833	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NW
							SW
NUV 478	CO101556834	CO101556834	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NW
NUV 479	CO101556835	CO101556835	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NW
							SW
NUV 480	CO101556836	CO101556836	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NW
NUV 481	CO101556837	CO101556837	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NW
							SW
						23 0460N 0180W 027	NE
							SE
NUV 482	CO101556838	CO101556838	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	NW
						23 0460N 0180W 027	NE
NUV 483	CO101556839	CO101556839	MONTROSE	LODE CLAIM	9/4/2018	23 0460N 0180W 026	SE
OCTOBER NO. 11	CO101515271	CO101515271	MESA	LODE CLAIM	12/19/2004	23 0500N 0190W 008	NE
OCTOBER NO. 47	CO101515272	CO101515272	MESA	LODE CLAIM	12/19/2004	23 0500N 0190W 009	NW
OCTOBER NO. 52	CO101515273	CO101515273	MESA	LODE CLAIM	12/19/2004	23 0500N 0190W 009	NE
OCTOBER NO. 53	CO101515274	CO101515274	MESA	LODE CLAIM	12/19/2004	23 0500N 0190W 009	NE
OCTOBER 54	CO102523512	CO102523512	MESA	LODE CLAIM	4/24/2008	23 0500N 0190W 004	SE
						23 0500N 0190W 009	NE
OCTOBER 55	CO102523513	CO102523513	MESA	LODE CLAIM	4/24/2008	23 0500N 0190W 004	SE
OLD CROW	CO101511487	CO101511487		LODE CLAIM	12/29/2005	23 0450N 0180W 004	Government Lot 1
							Government Lot 2
							NE
						23 0460N 0180W 033	SE
OLD CROW #2	CO101511488	CO101511488	MONTROSE	LODE CLAIM	12/29/2005	23 0450N 0180W 004	NE
PALL MALL	CO101313341	CO101313341	MONTROSE	LODE CLAIM	2/1/2005	23 0460N 0180W 012	SE
							SW

PAM	CO101311430	CO101311430	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 012	NW
							SW
PATTY #1	CO101516452	CO101516452	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	SW
PATTY #2	CO102524829	CO102524829	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	SW
PATTY #3	CO101516453	CO101516453	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	SW
PATTY #4	CO101516454	CO101516454	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	SE
							SW
PATTY #5	CO101516455	CO101516455		LODE CLAIM	11/14/2004	23 0450N 0180W 003	Government Lot 1
							Government Lot 2
							Government Lot 3
							Government Lot 4
							NE
							NW
						23 0460N 0180W 034	SE
							SW
PATTY #6	CO101516456	CO101516456	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 033	SE
						23 0460N 0180W 034	SW
PATTY #7	CO101516457	CO101516457	MONTROSE	LODE CLAIM	11/14/2004	23 0450N 0180W 003	NE
						23 0460N 0180W 034	SE
PATTY #8	CO102524830	CO102524830	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	SE
PATTY #9	CO101516458	CO101516458	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NE
							NW
							SE
							SW
PATTY #10	CO102524831	CO102524831	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NW
							SW
PATTY #11	CO102524832	CO102524832	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NE
PATTY #12	CO101516459	CO101516459	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 033	SE
						23 0460N 0180W 034	SW

PATTY #13	CO102524833	CO102524833		LODE CLAIM	11/14/2004	23 0460N 0180W 034	NE
							SE
PAUL 1	CO101743052	CO101743052	MONTROSE	LODE CLAIM	11/3/2008	23 0460N 0180W 011	SE
						23 0460N 0180W 012	SW
PAUL 2	CO101743053	CO101743053	MONTROSE	LODE CLAIM	11/3/2008	23 0460N 0180W 012	SW
PAUL 3	CO101743054	CO101743054	MONTROSE	LODE CLAIM	11/3/2008	23 0460N 0180W 012	SW
PAUL 4	CO101743055	CO101743055	MONTROSE	LODE CLAIM	11/3/2008	23 0460N 0180W 012	SW
PAUL 5	CO101743056	CO101743056	MONTROSE	LODE CLAIM	11/4/2008	23 0460N 0180W 012	SE
							SW
PAUL 6	CO101743057	CO101743057	MONTROSE	LODE CLAIM	11/4/2008	23 0460N 0180W 012	SE
							SW
PAUL 7	CO101743058	CO101743058	MONTROSE	LODE CLAIM	11/4/2008	23 0460N 0180W 012	NE
							SE
							SW
PAUL 10	CO101743059	CO101743059	MONTROSE	LODE CLAIM	11/26/2008	23 0460N 0180W 011	NE
							SE
						23 0460N 0180W 012	NW
							SW
PAUL 11	CO101743060	CO101743060	MONTROSE	LODE CLAIM	11/26/2008	23 0460N 0180W 011	NE
						23 0460N 0180W 012	NW
PICKETT CORRAL	CO102524837	CO102524837	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NW
							SE
							SW
PICKETT CORRAL #2	CO102524838	CO102524838	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NE
							NW
							SE
							SW
PICKETT CORRAL #3	CO101311051	CO101311051	MONTROSE	LODE CLAIM	4/29/2005	23 0460N 0180W 034	NE
							NW

PICKETT CORRAL #5	CO101311052	CO101311052	MONTROSE	LODE CLAIM	4/29/2005	23 0460N 0180W 034	NE
							SE
PINION CONE #2	CO101314578	CO101314578	MONTROSE	LODE CLAIM	2/9/2005	23 0460N 0180W 033	NE
							SE
						23 0460N 0180W 034	NW
							SW
PINION CONE #3	CO101311049	CO101311049	MONTROSE	LODE CLAIM	4/29/2005	23 0460N 0180W 034	NW
							SW
PINION CONE #6	CO101311426	CO101311426	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NW
							SW
PINION CONE #7	CO101311427	CO101311427	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 034	NW
PINION CONE #8	CO101311428	CO101311428	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 033	SE
						23 0460N 0180W 034	NESE
							NWSE
							SESE
							SW
							SWSE
PINION CONE #10	CO101314579	CO101314579	MONTROSE	LODE CLAIM	2/9/2005	23 0460N 0180W 035	NW
RED FLAG #1	CO101511483	CO101511483	MONTROSE	LODE CLAIM	12/29/2005	23 0450N 0180W 004	Government Lot 1
							Government Lot 2
							Government Lot 3
							Government Lot 4
							NE
							NW
						23 0450N 0180W 012	NENW
							NWNW
							SENW
							SWNW
						23 0460N 0180W 033	SE
							SW

RED FLAG #2	CO101511484	CO101511484	MONTROSE	LODE CLAIM	12/29/2005	23 0450N 0180W 004	Government Lot 1
							Government Lot 2
							Government Lot 3
							Government Lot 4
							NE
							NESE
							NESW
							NW
							NWSE
							NWSW
							SESE
							SESW
							SWSE
							SWSW
RED FLAG #3	CO101511485	CO101511485		LODE CLAIM	12/29/2005	23 0450N 0180W 001	NESW
							NWSW
							SESW
							SWSW
						23 0450N 0180W 004	Government Lot 1
							Government Lot 2
							Government Lot 3
							Government Lot 4
							NE
							NESE
							NESW
							NW
							NWSE
							NWSW
							SESE
							SESW
							SWSE

RED FLAG #3 (cont.)	CO101511485	CO101511485		LODE CLAIM	12/29/2005	23 0450N 0180W 004	SWSW
						23 0460N 0180W 033	SW
RED FLAG #6	CO101511486	CO101511486	MONTROSE	LODE CLAIM	12/29/2005	23 0450N 0180W 004	Government Lot 1
							Government Lot 2
							Government Lot 3
							Government Lot 4
							NE
							NESE
							NESW
							NWSE
							NWSW
							SENW
							SESE
							SESW
							SWNW
							SWSE
							SWSW
STARLIGHT #2	CO101498647	CO101498647		LODE CLAIM	6/18/2005	23 0460N 0180W 033	NESW
							NWSW
							SE
							SESW
							SWSW
SUNRISE #1	CO101314619	CO101314619		LODE CLAIM	2/17/2005	23 0450N 0180W 003	Government Lot 3
							Government Lot 4
							NW
						23 0460N 0180W 034	SW
SUNRISE #2	CO101314620	CO101314620		LODE CLAIM	2/17/2005	23 0450N 0180W 003	Government Lot 3
							Government Lot 4
							NW
						23 0460N 0180W 034	SW

SUNRISE #3	CO101314621	CO101314621		LODE CLAIM	2/17/2005	23 0450N 0180W 003	Government Lot 3
							Government Lot 4
							NW
						23 0460N 0180W 034	SW
SUNRISE #4	CO101314622	CO101314622		LODE CLAIM	2/17/2005	23 0450N 0180W 003	Government Lot 3
							Government Lot 4
							NW
						23 0450N 0180W 004	Government Lot 1
							Government Lot 2
							NE
						23 0460N 0180W 033	SE
						23 0460N 0180W 034	SW
SUNRISE #5	CO101314623	CO101314623		LODE CLAIM	2/17/2005	23 0450N 0180W 004	Government Lot 1
							Government Lot 2
							NE
						23 0460N 0180W 033	SE
SWEETNESS	CO101311429	CO101311429	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 012	NW
							SE
TRIANGLE	CO101516462	CO101516462	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 035	NW
							SW
VERNITA #1	CO102524834	CO102524834	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 027	SE
VERNITA #2	CO102524835	CO102524835	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 027	SE
VERNITA #3	CO102524836	CO102524836	MONTROSE	LODE CLAIM	11/14/2004	23 0460N 0180W 027	SE
WEST	CO101498652	CO101498652		LODE CLAIM	6/18/2005	23 0450N 0180W 002	Government Lot 3
							Government Lot 4
							NW
						23 0460N 0180W 035	SW
WSC 197	CO101515379	CO101515379	MONTROSE	LODE CLAIM	3/2/2007	23 0460N 0180W 011	SE
						23 0460N 0180W 012	SW

WSC 198	CO101515380	CO101515380	MONTROSE	LODE CLAIM	3/2/2007	23 0460N 0180W 011	SE
						23 0460N 0180W 012	SW
WSC 212	CO101515381	CO101515381	MONTROSE	LODE CLAIM	3/2/2007	23 0460N 0180W 012	NE
							NW
							SE
							SW

That certain Mining Lease dated 16 March 2007, by and between Alice Fae Brown and William Burnett as Lessor and Nuvemco, LLC as Lessee, as recorded in Montrose County Clerk and Recorders Office under Document #770220, recorded 27 March 2007. The lands of which are further described below.

Mineral Survey No. 20232, inclusive of the Anna May No. I, Bat, Bill Bady, Buckhorn, Continental, Great Hespar, IT, Little Dot, Lucky Boy and Wilson lode mining claims;

Mineral Survey No. 20233, inclusive of the Bob Tail, Green Back, Happy Thought, Iola, Monogram, Occidental and Susquehanna lode mining claims;

Mineral Survey No. 20465, inclusive of the Uranus lode mining claim;

Mineral Survey No. 20133 "A", inclusive of the Jo Dandy lode mining claim;

Mineral Survey No. 20221, inclusive of the Yellow Bird I and Yellow Bird 3 lode mining claims;

Mineral Survey No. 20225, inclusive of the A No I Extension, Black Diamond and Last Dollar lode mining claims;

Mineral Survey No. 20226, inclusive of the Blackbum and Black Tom lode mining claims; and

Mineral Survey No. 20222, inclusive of the Hummer lode mining claim

EXHIBIT B

SPECIFIC LIMITATIONS

(*Agreed upon by Parties.*)

APPENDIX D – ECOLOGICAL REPORT

CEDAR CREEK ASSOCIATES, INC.

P.O. Box 272150
Fort Collins, CO 80527
(303) 818-1978

To: Stephen Cohen, DISA Technologies Inc.

From: Hunter Koperweis, Cedar Creek Associates Inc.

Date: February 27, 2026

Subject: **Mary Ann Survey**

Introduction

Disa Technologies Inc. (Disa) intends to initiate a High-Pressure Slurry Ablation (HPSA) technology at the "Mary Ann" Project Site, located in Montrose County, Colorado. Disa proposes to begin work at the Project Site in 2026. Based on GIS data provided by Disa, the approximate area of disturbance at the Project Site is 0.20 acres.

Desktop Information

There is no critical or important wildlife habitat or wildlife species that would be impacted by the reclamation of the Mary Ann Project Site. According to a desktop assessment of aerial imagery and National Hydrology Dataset information, there are no water features in or around the Project Site.

Wildlife data was mapped for the Project Site by visiting https://geodata.colorado.gov/apps/b3e1f4c17e98481c85f9683b02e91250/explore on February 14, 2026, and by reviewing all mapping data provided by Colorado Parks and Wildlife (CPW). In addition, data from the Colorado Natural Heritage Program's Colorado Conservation Data Explorer (CODEX) and the United States Fish and Wildlife Service's (USFWS) Information Planning and Conservation System (IPaC) were used to aid in the evaluation of potential natural and biological resources within the Project Site. Both reports are available as attachments. The following are the results of this mapping exercise:

- The Project Site is within the Bald Eagle winter range and within the Golden Eagle breeding range. There are no Bald or Golden eagle nests, roots, or communal roosts reported within 1 mile of the Project Site.
- The Project Site is within the Grace Warbler and Lazuli Bunting breeding ranges, but neither species was observed during the site visit
- The Project Site is within the range of most bats tracked by CPW, with the exception of tri-colored, red, and Allen's big-eared bat.
- The Project Site is within the burrowing owl breeding range. There are no reported burrowing owl nest sites within 1 mile of the Project Site.

- Gunnison's sage-grouse overall range and occupied habitat are mapped within 1.5 miles of the project site. There are no greater Sage-Grouse habitats mapped within 1 mile of the Project Site.
- The Project Site is within the overall wild turkey range and near the wild turkey winter range.
- The Project Site is outside of bighorn sheep ranges and watering sites.
- The Project Site is within the overall mountain lion range.
- The Project Site is outside of the black bear concentration range.
- The Project Site is within the Gunnison Prairie Dog and Botta pocket gopher overall ranges.
- The Project Site is within the elk overall range and winter range, and within the severe winter range area. Other seasonal ranges and corridors are mapped outside of the Project Site.
- The Project Site is within mule deer winter and overall ranges and overall mule deer ranges. Other ranges and corridors are mapped outside of the Project Site.
- The Project Site is within the overall bullsnake, side-blotched lizard, common sagebrush lizard, and milksnake ranges.
- The Project Site is outside of all other game species, sensitive, listed, and candidate species maps provided by CPW.

Site Visit

A pre-construction (also called a pre-clearance) survey for the following protected species was conducted on February 15, 2026, by two biologists from Cedar Creek Associates, Inc. During the Project Site visit, the biologists surveyed the 0.20-acre Mary Ann Project Site and surrounding areas, confirmed the vegetation community type and the activity status of nests, burrows, or dens, and recorded all incidental wildlife observations, including reptiles, in and around the Project Site. Buffer distances were also surveyed (shown below), which reflect raptor buffer recommendations from CPW and other guidelines published by the Bureau of Land Management (BLM) Southwest District:

- Migratory birds (within 100 feet of disturbances)
- Raptors/Raptor Nests (within a half mile of disturbances)
- Burrowing owls/dens (within 660 feet of disturbances)
- Bat roost (within a quarter mile of disturbances)
- Vegetation / Listed plant species (within 100 feet of disturbances, if they have the potential to occur).

The vegetation observed on the Mary Ann Project Site was sparse, and most of the pile's surface was bare ground, [redacted] The species on the pile included Colorado pinyon (*Pinus edulis*),

Indian ricegrass *(Eriocoma hymenoides),* Utah juniper (*Juniperus osteoperma*), and Rubber rabbitbrush *(Ericameria nauseosa).*

The area immediately surrounding the Project Site was dominated by a pinyon-juniper woodland vegetation community, with the understory consisting of sagebrush, annual forbs, and grasses.

Plant species observed immediately adjacent to the pile included Utah juniper, Colorado pinyon, Indian ricegrass, Rubber rabbitbrush (*Ericameria nauseosa*), Sagebrush (*Artemisia tridentata*), Broom snakeweed (*Gutierrezia sarothrae*), Plains prickly pear (*Opuntia polycantha*), Brittle prickly pear (*Opuntia fragilis*), Cheat grass (*Bromus tectorum*) Redstem storksbill *(Erodium cicutarium),* Bottlebrush squirreltail, *(Elymus elymoides),* Sporobolus species, Harsh false goldenaster *(Heterotheca hirutissima)*, Missouri foxtail cactus (Escobaria missouriensis) Alder-leaf mountain mahogany *(Cerocarpus montanus),* and Green Mormon tea *(Ephedra viridis).*

No animal burrows or bird nests were observed on the pile or within buffer distances. Birds and bird calls heard in and around the Project Site were those of the Common raven (*Corvus corax*), Canyon Wren *(Catherpes mexicanus),* Hairy woodpecker (*Leuconotopicus villosus*), and American bushtit (*Psaltriparis minimus*). Additionally, a Desert Cottontail rabbit (*Sylvilagus audubonii*) was observed foraging approximately 250 feet from the Project Site. A small herd of Mule deer was spotted approximately 500 feet from the project site during the site visit.

Bat species have the potential to occur around the Project site. Two wooden structures, located approximately 100 and 150 feet from the site, may serve as bat roost habitats (see photos below). The structures are shallow and, upon inspection during the site visit, did not appear to have any obvious underground openings or cavities. No bats were observed in the structures during the site visit. Additionally, mature tree cavities surrounding the site could be used by bats, although none were observed within the buffer zone.

No standing or ponding water was observed in the surrounding ecological environment during the site visit. A large cliff band was observed about 1.5 miles south of the Project Site, which could provide nesting substrate for raptors.

[redacted]

Based on the Project Site visit, the potential to occur of federal or state-listed species identified from the IPAC and CODEX queries are shown in Table 1.

Table 1: State and Federally Listed Species Screening of the Project Site

Species	Type of Species	Protection Status	Habitat	Potential to Occur
Gunnison Sage-Grouse	Bird	Threatened	The Gunnison Sage-grouse requires a variety of habitats, including large expanses of sage with diverse grasses and forbs, as well as healthy riparian ecosystems.	Low potential to occur. No suitable habitat was found within 250ft of the project site. Vegetation surrounding the site consists largely of pinyon-juniper woodlands.
Golden Eagle	Bird	Protected by the Bald and Golden Eagle Protection Act	Golden eagles inhabit open and semi-open areas such as prairies, sagebrush, tundra, savannahs, sparse woodlands, and barren regions, mainly in hilly or mountainous zones with ample prey and suitable nesting sites.	Low potential to occur. No nesting habitat occurs at the Project Site. Potentially suitable nesting habitat is associated with nearby cliffs.
Mexican Spotted Owl	Bird	Threatened	Mixed conifer forests, rocky canyons, and cliff ledges.	Low potential to occur. No nesting habitat occurs at the Project Site. Potentially suitable nesting habitat is associated with nearby cliffs.
Burrowing Owl	Bird	State Threatened	Sagebrush communities.	Low potential to occur. No burrows were observed at the Project site. Vegetation surrounding the site consists largely of pinyon-juniper woodlands.
Bonytail	Fish	Endangered	Free-flowing backwaters with rocky and muddy bottoms and flowing pools.	Low potential to occur. No potential habitat in the Project Site.
Colorado Pikeminnow	Fish	Endangered	Large, warm rivers with gravelly or sandy riverbeds.	Low potential to occur. No potential habitat in the Project Site.
Humpback Chub	Fish	Threatened	Deep, swift canyon reaches, turbid rivers with seasonally variable flows and temperatures.	Low potential to occur. No potential habitat in the Project Site.
Razorback Sucker	Fish	Endangered	Backwaters, floodplains, flat water river sections, and can tolerate a wide range of temperatures.	Low potential to occur. No potential habitat in the Project Site.
Monarch Butterfly	Insect	Candidate	No critical habitat has been designated for this species. Known to inhabit open fields and meadows with milkweed in the spring and summer months.	Low potential to occur. No Showy milkweed was observed on-site, and no monarch butterflies were observed.
Silverspot	Insect	Threatened	No critical habitat has been designated for this species. Prefers moist open meadows with vegetation for shelter and nectar.	Low potential to occur - No potential habitat in the Project Site.
Suckley's Cuckoo Bumble Bee	Insect	Proposed Engandered	No critical habitat has been designated for this species. Known to inhabit small rodent burrows in the ground in meadows, subalpine zones, and areas with an abundance of flowering plants.	Low potential to occur - Flowering forbs and small mammal burrows were minimal to none at the Project Site.
Gray Wolf	Mammal	Experimental Population, Non-Essential	Gray wolves iare highly adaptable and thrive in diverse habitats, including forests, mountains, tundra, taiga, grasslands, and deserts. In Colorado, gray wolves were rleased in Grand and Summit Counties.	Low potential to occur - Suitable habitat exists at the project site, but they are not known to occur in Montrose County.

Note: This screening is based on the IPAC and CODEX results for the Project Site.

Conclusion

Assessments, including desktop research and a pre-construction site visit, found no critical wildlife habitats or active nests of protected species within the project area or its buffer zones. Additionally, no water features were identified. [redacted]. Therefore, the project is not expected to have significant adverse impacts on wildlife, water, or listed species. Based on this report's findings, the Mary Ann Project Site is suitable for project initiation in 2026. If project initiation occurs during the migratory bird nesting season, necessary precautions should be implemented to prevent negative impacts by ensuring site disturbance occurs outside the migration season, which begins in late March for migratory birds.

Project Site Photos

This photo shows the Mary Ann Project Site.

This photo shows the view from the top of the Mary Ann Project Site looking north.

This photo shows the view from the top of the Mary Ann Project Site looking east.

This photo shows the view from the top of the Mary Ann Project Site looking south.

This photo shows the view from the top of the Mary Ann Project Site looking west.

This photo shows the large cliff band south of the Project Site.

[redacted]

This photo depicts the vegetation growing on the Project Site.

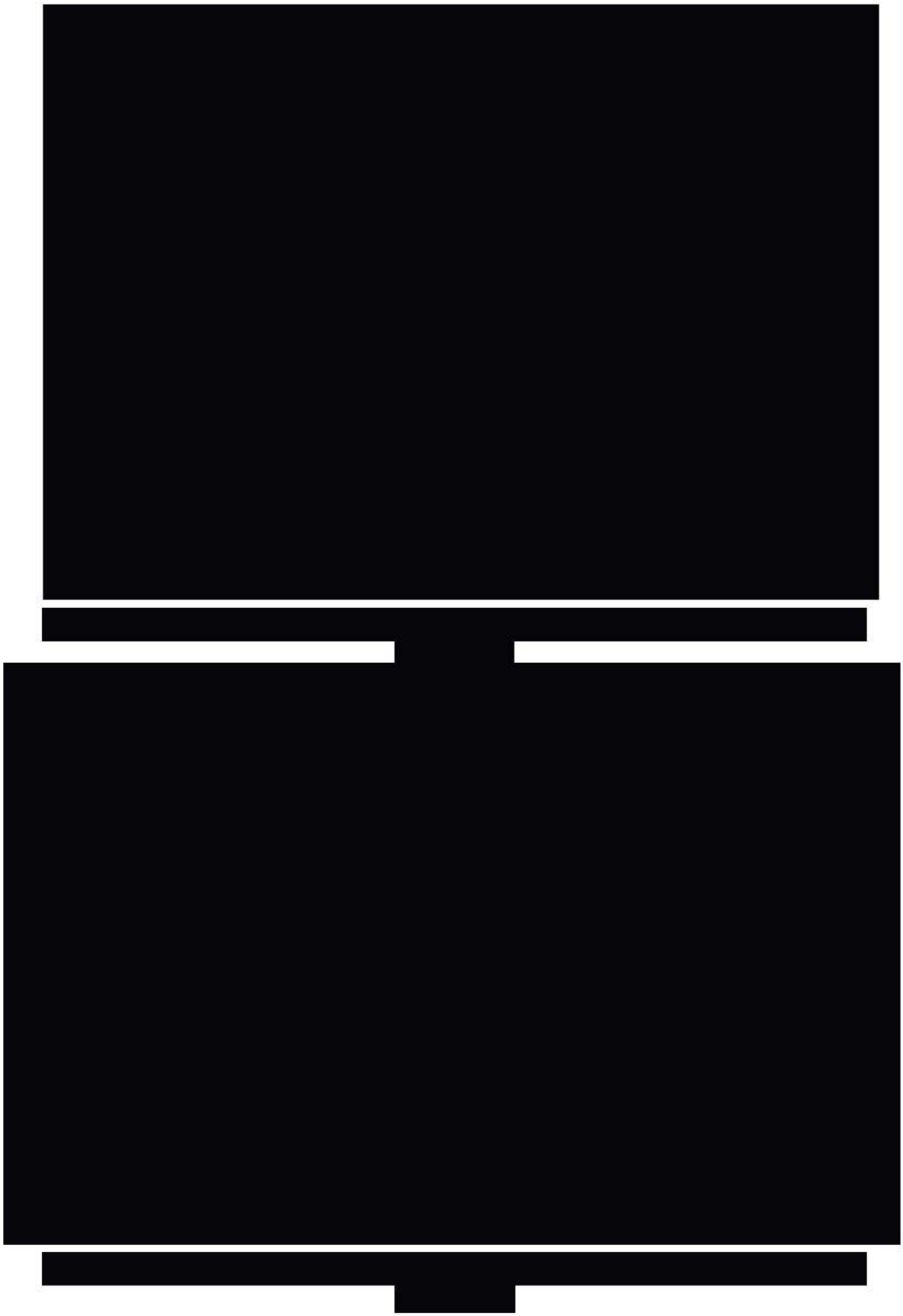
[redacted]

[redacted]

[redacted]

[redacted]

Site.



Report Attachments

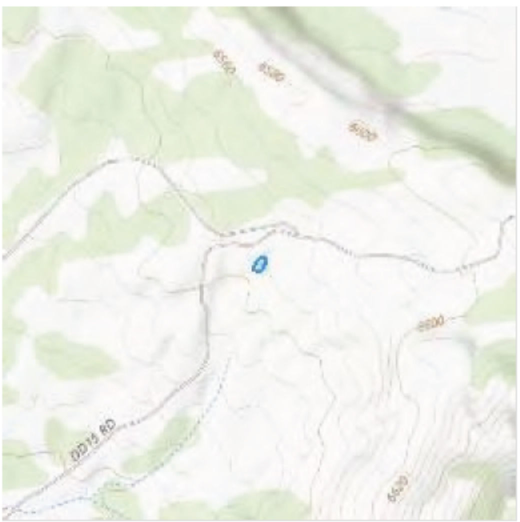
IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Montrose County, Colorado



Local office

Western Colorado Ecological Services Field Office

(970) 628-7180
(970) 245-6933

445 West Gunnison Avenue, Suite 240
Grand Junction, CO 81501-5711

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Gray Wolf Canis lupus No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/4488	EXPN

Birds

NAME	STATUS
Gunnison Sage-grouse Centrocercus minimus Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/6040	Threatened
Mexican Spotted Owl Strix occidentalis lucida Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8196	Threatened

Fishes

NAME	STATUS
Bonytail Gila elegans Wherever found This species only needs to be considered if the following condition applies: • Water depletions in the upper Colorado River basin adversely affect this species and its critical habitat. Effects of water depletions must be considered even outside of occupied range. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/1377	Endangered
Colorado Pikeminnow Ptychocheilus lucius This species only needs to be considered if the following condition applies: • Water depletions in the upper Colorado River basin adversely affect this species and its critical habitat. Effects of water depletions must be considered even outside of occupied range. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3531	Endangered
Humpback Chub Gila cypha Wherever found This species only needs to be considered if the following condition applies: • Water depletions in the upper Colorado River basin adversely affect this species and its critical habitat. Effects of water depletions must be considered even outside of occupied range. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/3930	Threatened
Razorback Sucker Xyrauchen texanus Wherever found This species only needs to be considered if the following condition applies: • Water depletions in the upper Colorado River basin adversely affect this species and its critical habitat. Effects of water depletions must be considered even outside of occupied range. There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/530	Endangered

Insects

NAME	STATUS
Monarch Butterfly Danaus plexippus Wherever found There is **proposed** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/9743	Proposed Threatened
Silverspot Speyeria nokomis nokomis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/2813	Threatened
Suckley's Cuckoo Bumble Bee Bombus suckleyi No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/10885	Proposed Endangered

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and Golden Eagles are protected under the Bald and Golden Eagle Protection Act [2] and the Migratory Bird Treaty Act (MBTA) [1]. Any person or organization who plans or conducts activities that may result in impacts to Bald or Golden Eagles, or their habitats, should follow appropriate regulations and consider implementing appropriate avoidance and minimization measures, as described in the various links on this page.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are Bald Eagles and/or Golden Eagles in your project area.

Measures for Proactively Minimizing Eagle Impacts
For information on how to best avoid and minimize disturbance to nesting bald eagles, please review the National Bald Eagle Management Guidelines. You may employ the timing and activity-specific distance recommendations in this document when designing your project/activity to avoid and minimize eagle impacts. For bald eagle information specific to Alaska, please refer to Bald Eagle Nesting and Sensitivity to Human Activity.

The FWS does not currently have guidelines for avoiding and minimizing disturbance to nesting Golden Eagles. For site-specific recommendations regarding nesting Golden Eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

If disturbance or take of eagles cannot be avoided, an incidental take permit may be available to authorize any take that results from, but is not the purpose of, an otherwise lawful activity. For assistance making this determination for Bald Eagles, visit the Do I Need A Permit Tool. For assistance making this determination for golden eagles, please consult with the appropriate Regional Migratory Bird Office or Ecological Services Field Office.

Ensure Your Eagle List is Accurate and Complete
If your project area is in a poorly surveyed area in IPaC, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to bald or golden eagles on your list, see the "Probability of Presence Summary" below to see when these bald or golden eagles are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

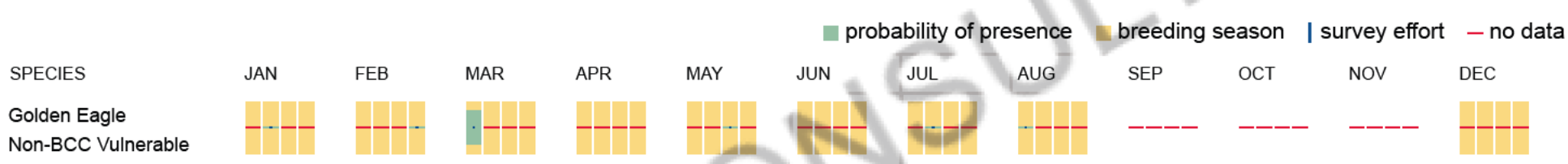
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Bald & Golden Eagles FAQs

What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are an eagle (Bald and Golden Eagle Protection Act requirements may apply).

Proper interpretation and use of your eagle report
On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort line or no data line (red horizontal) means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide you in knowing when to implement avoidance and minimization measures to eliminate or reduce potential impacts from your project activities or get the appropriate permits should presence be confirmed.

How do I know if eagles are breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If an eagle on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

Interpreting the Probability of Presence Graphs

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Migratory birds

The Migratory Bird Treaty Act (MBTA) [1] prohibits the take (including killing, capturing, selling, trading, and transport) of protected migratory bird species without prior authorization by the Department of Interior U.S. Fish and Wildlife Service (Service).

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide avoidance and minimization measures for birds
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

Measures for Proactively Minimizing Migratory Bird Impacts

Your IPaC Migratory Bird list showcases birds of concern, including Birds of Conservation Concern (BCC), in your project location. This is not a comprehensive list of all birds found in your project area. However, you can help proactively minimize significant impacts to all birds at your project location by implementing the measures in the Nationwide avoidance and minimization measures for birds document, and any other project-specific avoidance and minimization measures suggested at the link Measures for avoiding and minimizing impacts to birds for the birds of concern on your list below.

Ensure Your Migratory Bird List is Accurate and Complete

If your project area is in a poorly surveyed area, your list may not be complete and you may need to rely on other resources to determine what species may be present (e.g. your local FWS field office, state surveys, your own surveys). Please review the Supplemental Information on Migratory Birds and Eagles document, to help you properly interpret the report for your specified location, including determining if there is sufficient data to ensure your list is accurate.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the "Probability of Presence Summary" below to see when these birds are most likely to be present and breeding in your project area.

Review the FAQs
The FAQs below provide important additional information and resources.

NAME	BREEDING SEASON
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Pinyon Jay Gymnorhinus cyanocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read "Supplemental Information on Migratory Birds and Eagles", specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

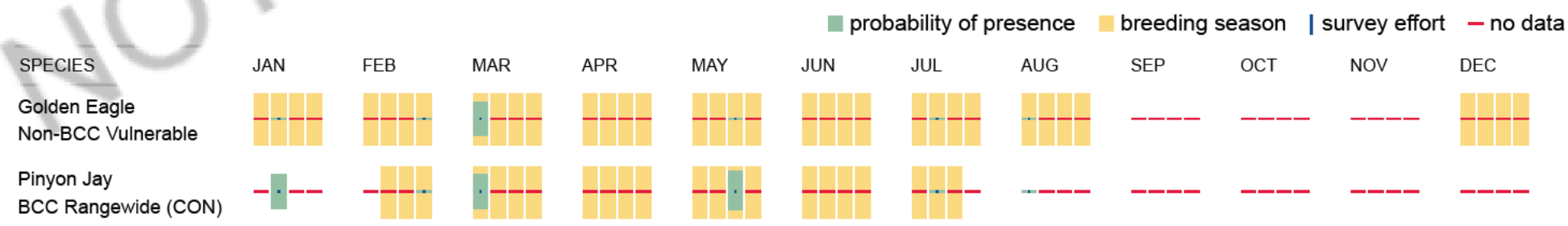
Breeding Season (■)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Migratory Bird FAQs

Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Avoidance & Minimization Measures for Birds describes measures that can help avoid and minimize impacts to all birds at any location year-round. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is one of the most effective ways to minimize impacts. To see when birds are most likely to occur and breed in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location, such as those listed under the Endangered Species Act or the Bald and Golden Eagle Protection Act and those species marked as “Vulnerable”. See the FAQ “What are the levels of concern for migratory birds?” for more information on the levels of concern covered in the IPaC migratory bird species list.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) with which your project intersects. These species have been identified as warranting special attention because they are BCC species in that

area, an eagle (Bald and Golden Eagle Protection Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, and to verify survey effort when no results present, please visit the Rapid Avian Information Locator (RAIL) Tool.

Why are subspecies showing up on my list?

Subspecies profiles are included on the list of species present in your project area because observations in the AKN for **the species** are being detected. If the species are present, that means that the subspecies may also be present. If a subspecies shows up on your list, you may need to rely on other resources to determine if that subspecies may be present (e.g. your local FWS field office, state surveys, your own surveys).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go to the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating, or resident), you may query your location using the RAIL Tool and view the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your IPaC migratory bird species list has a breeding season associated with it (indicated by yellow vertical bars on the phenology graph in your “IPaC PROBABILITY OF PRESENCE SUMMARY” at the top of your results list), there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Bald and Golden Eagle Protection Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially BCC species. For more information on avoidance and minimization measures you can implement to help avoid and minimize migratory bird impacts, please see the FAQ “Tell me more about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds”.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Proper interpretation and use of your migratory bird report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please look carefully at the survey effort (indicated by the black vertical line) and for the existence of the "no data" indicator (a red horizontal line). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list does not represent all birds present in your project area. It is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list and associated information help you know what to look for to confirm presence and helps guide implementation of avoidance and minimization measures to eliminate or reduce potential impacts from your project activities, should presence be confirmed. To learn more about avoidance and minimization measures, visit the FAQ "Tell me about avoidance and minimization measures I can implement to avoid or minimize impacts to migratory birds".

Interpreting the Probability of Presence Graphs
Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. A taller bar indicates a higher probability of species presence. The survey effort can be used to establish a level of confidence in the presence score.

How is the probability of presence score calculated? The calculation is done in three steps:
The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.

To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.

The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season ()
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort ()
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

No Data ()
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

CODEX

Colorado's Conservation Data Explorer

Project Review Report

Project Description

Reclamation

Project Information

Report Generation Date: 2/13/2026 09:06:21 AM

Project Title: Mary Ann

User Project Number(s):

System Generated ID: CODEX-7200

Project Type: Mining

Project Size: 0.09 (acres)

Latitude/Longitude: 38.238582 / -108.791098

County(s): MONTROSE

Watershed(s) HUC 8: Upper Dolores

Township/Range and/or Section(s): 046N017W - 18 - NM

Contact Information

Organization: Cedar Creek Associates

Contact Name: Huter Koperweis

Contact Phone: 7326688902

Contact Email: hkoperweis@cedarcreek.app

Contact Address: 9401 North County Road 19, Fort Collins, CO 80524

Submitted On Behalf Of: CONSULTING

Prepared By:

Project Report:

The information contained herein represents the results of a search of Colorado's Conservation Data Explorer (CODEX) and can be used as notice to anticipate possible impacts or identify areas of interest. This tool queries multiple conservation datasets and includes a synthesis of Colorado Natural Heritage Program (CNHP) and Colorado Parks and Wildlife (CPW) data for sensitive animal and plant species and natural communities. Care should be taken in interpreting these data.

Please note that the absence of data for a particular area, species, or habitat does not necessarily mean that these natural heritage resources do not occur on or adjacent to the project site, rather that our files do not currently contain information to document their presence. CODEX information should not replace field studies necessary for more localized planning efforts, especially if impacts to wildlife habitat are possible. Although every attempt is made to provide the most current and precise information possible, please be aware that some of our sources provide a higher level of accuracy than others, and some interpretation may be required. CODEX data is constantly updated and revised. Please contact CNHP, CPW and our partners for assistance with interpretation of this report or to obtain more information.

Disclaimer:

1. This is a preliminary environmental screening tool. It is not a substitute for the potential knowledge gained by having a biologist conduct a field survey of the project area. **This review does not constitute environmental consultation (including federal consultation under the Endangered Species Act), land use permitting, or the review of site-specific projects by CNHP and CPW and our partners.**
2. This Project Report is based on the project study area that was entered. The report must be updated if the project study area, location, or the type of project changes.
3. The Conservation Data Explorer (CODEX) data is constantly changing and being updated and is not intended to be the final word on the potential distribution of special status species. Colorado is large and diverse with plants, animals, and environmental conditions that are ever changing. Consequently, many areas may contain species that biologists do not know about or species previously noted in a particular area may no longer occur there. CODEX data contains information about species occurrences that have actually been reported to CNHP, CPW and our partners. Not all of Colorado has been surveyed for special status species, and surveys that have been conducted have varied greatly in scope and intensity. Such surveys may reveal previously undocumented population of species of special concern.

Location Accuracy Disclaimer:

Project locations are assumed to be both precise and accurate for the purposes of environmental review. The creator/owner of the Project Review Report is solely responsible for the project location and thus the correctness of the Project Review Report content.

Contact for CODEX Support:

Colorado Natural Heritage Program (CNHP)

CNHP
Colorado State University
1475 Campus Delivery
Fort Collins, CO 80523-1475

Tel: (970) 491-7331
Email: CNHP_codex_support@mail.colostate.edu
CNHP Website: cnhp.colostate.edu

Colorado Parks and Wildlife

For support regarding project review of land use impacts to wildlife, please contact the regional office in which your project resides and visit https://cpw.state.co.us/conservation/Pages/CON-Energy-Land.aspx

CPW Website : cpw.state.co.us

Northeast Region

Denver Office
6060 Broadway
Denver, CO 80216
Tel: (303) 291-7227

Southeast Region

Colorado Springs Office
4255 Sinton Road
Colorado Springs, CO 80907
Tel: (719) 227-5200

Northwest Region

Grand Junction Office
711 Independent Avenue
Grand Junction, CO 81505
Tel: (970) 255-6100

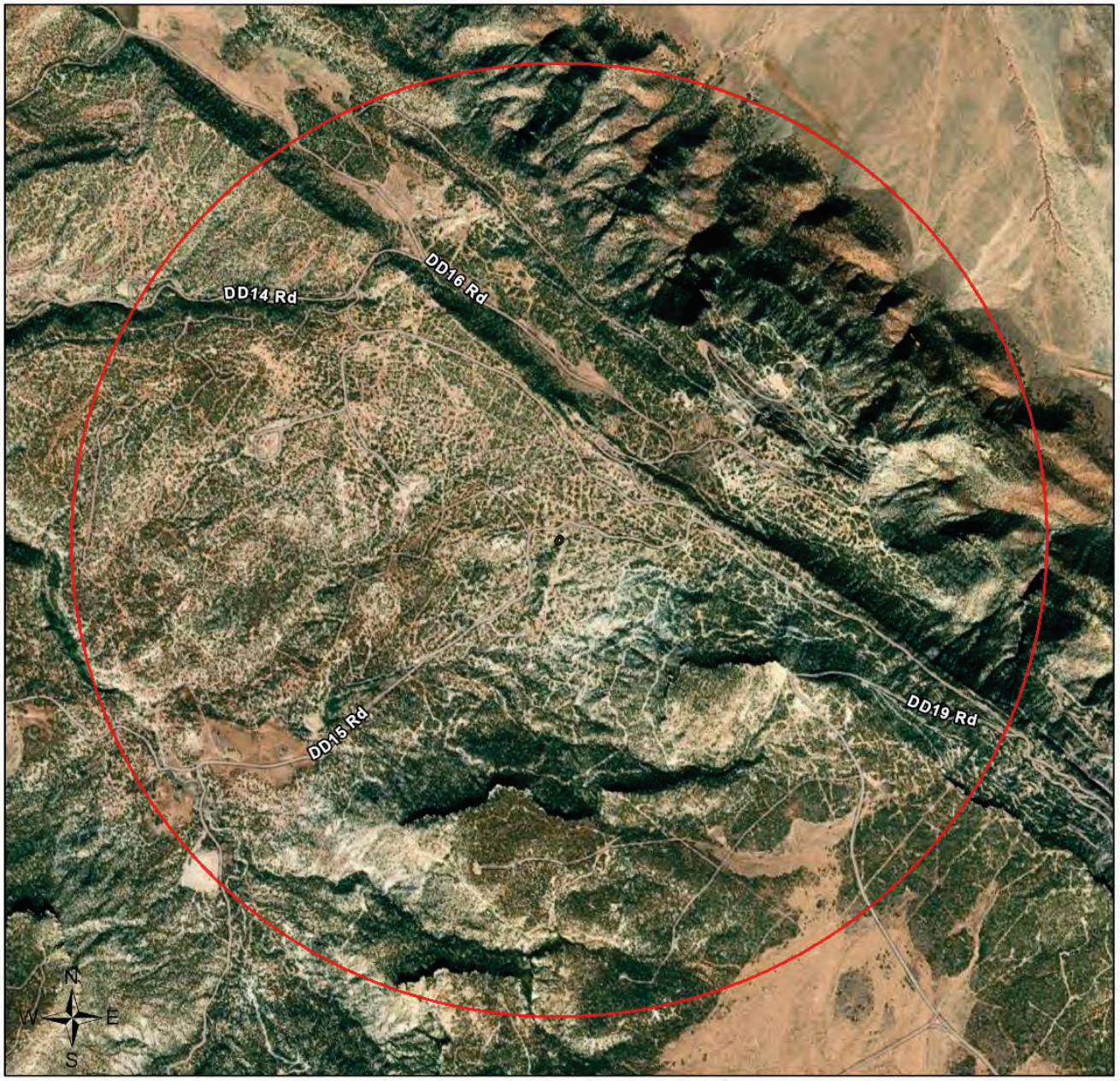
Southwest Region

Durango Office
151 East 16th Street
Durango, CO 81301
Tel: (970) 247-0855

For questions regarding CPW data in CODEX please contact 303-291-7152 or matt.schulz@state.co.us

Mary Ann

Aerial Image with Locator Map



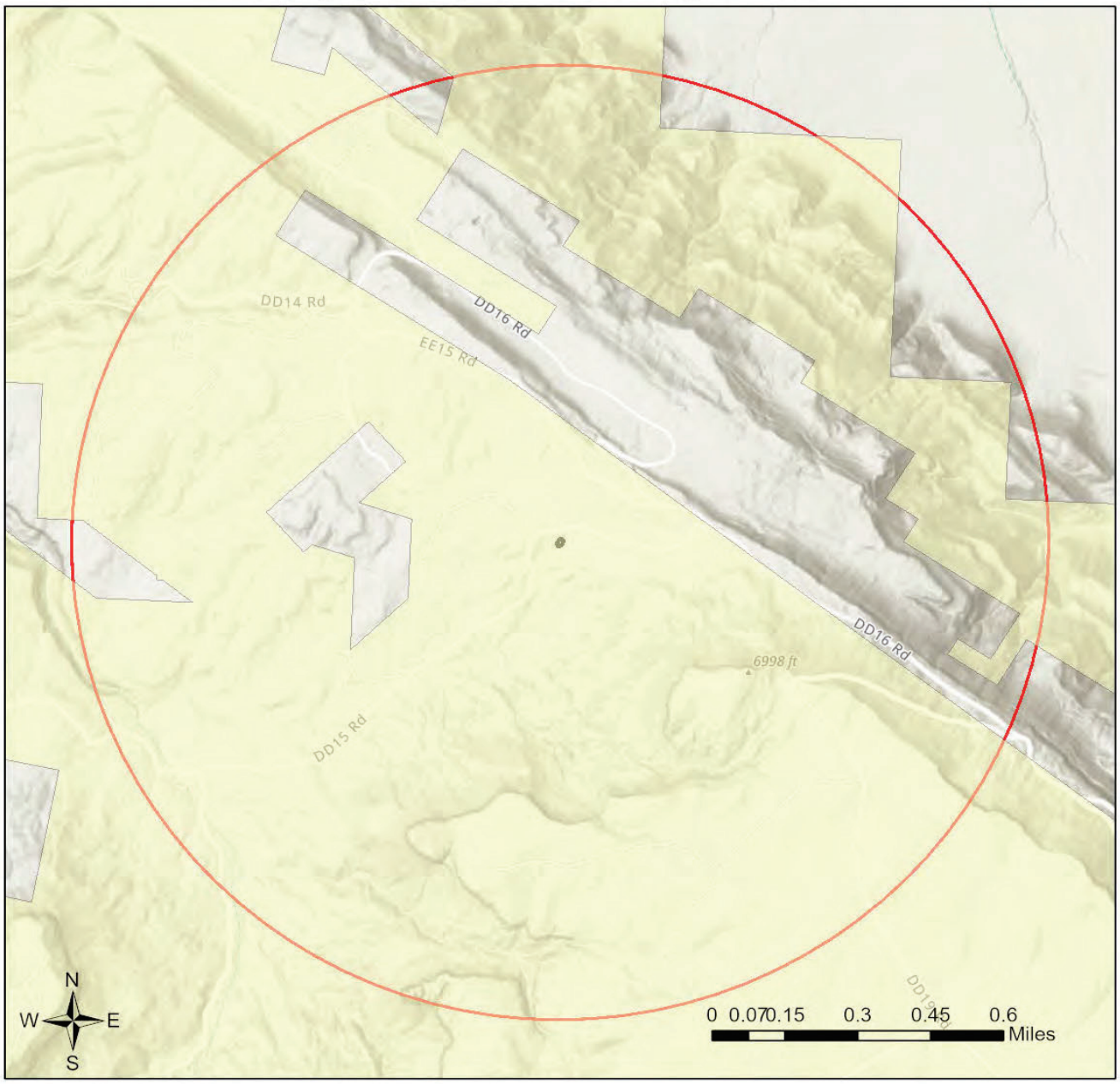
0 0.07 0.15 0.3 0.45 0.6
Miles

Buffered Search Area
Project Boundary

Esri, TomTom, Garmin, FAO, NOAA, USGS, EPA, USFWS
Montrose County, CO, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS

Mary Ann

Topographic Map with Land Management Status



- Buffered Search Area
- Project Boundary
- Misc Federal (BOR, DOD, Misc)
- BLM
- NPS
- USFS
- USFWS
- Tribal
- State
- Local
- NGO/Land Trust
- Private Conservation
- Private

Montrose County, CO, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, Bureau of Land Management, EPA, NPS, US Census Bureau, USDA, USFWS
Esri, NASA, NGA, USGS, FEMA

Regulatory Species

Table 1. Documented Occurrences Within 1 Miles Of Project Area

No results were found for this project area.

Table 2. Potential Regulatory Species within Project Area: Models, Range Maps, or Records with Low Precision

Major Group	Scientific Name	Common Name	Data Type	Global Rarity	State Rarity	ESA Status	CO Status	Other Status	Data Source
Birds	Aquila chrysaetos	Golden Eagle	CPW Breeding Range	G5	S3S4B,S4N			BGEPA/BLM/SWAP Tier 1	CPW 20250113

Table 3. Fish & Wildlife Service Critical Habitats within 1 Miles of Project Area

No results were found for this project area.

Other Species of Concern

Table 4. Documented Occurrences within 1 Miles of Project Area: Rare Species, Natural Communities, and Species of Economic, Recreational or Conservation Value

Major Group	Scientific Name	Common Name	Data Type	Global Rarity	State Rarity	Viability Rank	Last Observation	ESA Status	CO Status	Other Status	CNHP Identifier	Data Source
Mammals	Cervus canadensis	Elk	CPW Severe Winter Range	G4	S5							CPW 20250113
Mammals	Cervus canadensis	Elk	CPW Winter Concentration Area	G4	S5							CPW 20250113
Mammals	Odocoileus hemionus	Mule Deer	CPW Severe Winter Range	G5	S4							CPW 20250113

Table 5. Potential Occurrences within Project Area: Models, Range Maps, or Records with Low Precision

Major Group	Scientific Name	Common Name	Data Type	Global Rarity	State Rarity	ESA Status	CO Status	Other Status	Data Source
Birds	Artemisiospiza nevadensis	Sagebrush Sparrow	CPW Breeding Range	G5	S3B			BLM/USFS/USFS GMUG	CPW 20250113
Birds	Athene cunicularia	Burrowing Owl	CPW Breeding Range	G4	S4B		ST	BLM/SWAP Tier 2/USFS	CPW 20250113
Birds	Baeolophus ridgwayi	Juniper Titmouse	CPW Breeding Range	G5	S4			SWAP SGIN	CPW 20250113
Birds	Circus hudsonius	Northern Harrier	CPW Breeding Range	G5	S3B			SWAP Tier 2/USFS	CPW 20250113
Birds	Falco mexicanus	Prairie Falcon	CPW Breeding Range	G5	S4B,S4N			BLM/SWAP Tier 1	CPW 20250113
Birds	Gymnorhinus cyanocephalus	Pinyon Jay	CPW Breeding Range	G3	S3			BLM/SWAP Tier 1/USFS	CPW 20250113
Birds	Leiothlypis virginiae	Virginia's Warbler	CPW Breeding Range	G5	S5			SWAP Tier 2/USFS	CPW 20250113
Birds	Melanerpes lewis	Lewis's Woodpecker	CPW Breeding Range	G4	S4			BLM/SWAP SGIN/USFS	CPW 20250113
Birds	Passerina amoena	Lazuli Bunting	CPW Breeding Range	G5	S5B				CPW 20250113
Birds	Patagioenas fasciata	Band-tailed Pigeon	CPW Breeding Range	G4	S4B			SWAP SGIN	CPW 20250113
Birds	Setophaga graciae	Grace's Warbler	CPW Breeding Range	G5	S3B			SWAP Tier 2/USFS	CPW 20250113
Birds	Spizella breweri	Brewer's Sparrow	CPW Breeding Range	G5	S4B			BLM/USFS/USFS RGNF	CPW 20250113
Birds	Vireo vicinior	Gray Vireo	CPW Breeding Range	G5	S2B			BLM/SWAP SGIN	CPW 20250113
Insects	Ochlodes yuma	Yuma Skipper	Range Map - within range	G4	S2S3				CNHP 20210615
Mammals	Antrozous pallidus	Pallid Bat	CPW Overall Range	G4	S4				CPW 20250113
Mammals	Cervus canadensis	Elk	CPW Overall Range	G4	S5				CPW 20250113
Mammals	Cervus canadensis	Elk	CPW Winter Range	G4	S5				CPW 20250113
Mammals	Corynorhinus townsendii	Townsend's Big-eared Bat	CPW Overall Range	G4	S2			BLM/SWAP Tier 2/USFS/USFS RGNF	CPW 20250113
Mammals	Cynomys gunnisoni	Gunnison's Prairie Dog	CPW Overall Range	G3?	S3			BLM/SWAP Tier 1/USFS/USFS GMUG/USFS RGNF	CPW 20250113
Mammals	Eptesicus fuscus	Big Brown Bat	CPW Overall Range	G5	S5			SWAP Tier 2	CPW 20250113
Mammals	Euderma maculatum	Spotted Bat	CPW Overall Range	G4	S2			BLM/SWAP SGIN/USFS	CPW 20250113
Mammals	Lasionycteris noctivagans	Silver-haired Bat	CPW Overall Range	G4	S3S4			SWAP Tier 2	CPW 20250113
Mammals	Lasiurus cinereus	Northern Hoary Bat	CPW Overall Range	G3G4	S3S4B			BLM/SWAP Tier 1/USFS	CPW 20250113
Mammals	Myotis californicus	California Myotis	CPW Overall Range	G5	S3			BLM/SWAP Tier 1	CPW 20250113
Mammals	Myotis ciliolabrum	Western Small-footed Myotis	CPW Overall Range	G5	S4			BLM/SWAP Tier 1	CPW 20250113
Mammals	Myotis evotis	Long-eared Myotis	CPW Overall Range	G5	S4			BLM/SWAP Tier 1	CPW 20250113

Table 5. Potential Occurrences within Project Area: Models, Range Maps, or Records with Low Precision

Major Group	Scientific Name	Common Name	Data Type	Global Rarity	State Rarity	ESA Status	CO Status	Other Status	Data Source
Mammals	Myotis lucifugus	Little Brown Myotis	CPW Overall Range	G3G4	S4			BLM/SWAP Tier 1	CPW 20250113
Mammals	Myotis thysanodes	Fringed Myotis	CPW Overall Range	G4	S3			BLM/SWAP Tier 1/USFS/USFS RGNF	CPW 20250113
Mammals	Myotis volans	Long-legged Myotis	CPW Overall Range	G4G5	S5			SWAP Tier 1	CPW 20250113
Mammals	Myotis yumanensis	Yuma Myotis	CPW Overall Range	G5	S3			BLM/SWAP Tier 1	CPW 20250113
Mammals	Neotamias rufus	Hopi Chipmunk	Range Map - within range	G5	S5				CNHP 20210615
Mammals	Nyctinomops macrotis	Big Free-tailed Bat	CPW Overall Range	G5	S1			SWAP SGIN	CPW 20250113
Mammals	Odocoileus hemionus	Mule Deer	CPW Overall Range	G5	S4				CPW 20250113
Mammals	Odocoileus hemionus	Mule Deer	CPW Winter Range	G5	S4				CPW 20250113
Mammals	Parastrellus hesperus	Canyon Bat	CPW Overall Range	G5	S4			SWAP Tier 1	CPW 20250113
Mammals	Puma concolor	Mountain Lion	CPW Overall Range	G5	S4				CPW 20250113
Mammals	Tadarida brasiliensis	Brazilian Free-tailed Bat	CPW Overall Range	G5	S1				CPW 20250113
Mammals	Thomomys bottae	Botta's Pocket Gopher	CPW Overall Range	G5	S5				CPW 20250113
Mammals	Ursus americanus	Black Bear	CPW Overall Range	G5	S5				CPW 20250113
Reptiles	Aspidoscelis tigris	Western Whiptail	CPW Overall Range	G5	S4				CPW 20250113
Reptiles	Aspidoscelis velox	Plateau Striped Whiptail	CPW Overall Range	G5	S4				CPW 20250113
Reptiles	Crotalus oreganus	Western Rattlesnake	CPW Overall Range	G5	SNR			BLM/SWAP SGIN	CPW 20250113
Reptiles	Crotalus viridis	Western Rattlesnake	CPW Overall Range	G5	S5				CPW 20250113
Reptiles	Crotaphytus collaris	Collared Lizard	CPW Overall Range	G5	S5				CPW 20250113
Reptiles	Lampropeltis gentilis	Western Milksnake	CPW Overall Range	G5	S5			BLM	CPW 20250113
Reptiles	Masticophis taeniatus (Coluber taeniatus)	Striped Whipsnake	CPW Overall Range	G5	S4				CPW 20250113
Reptiles	Pantherophis emoryi	Great Plains Ratsnake	CPW Overall Range	G5	S3S4				CPW 20250113
Reptiles	Phrynosoma hernandesi	Hernandez's Short-horned Lizard	CPW Overall Range	G5	S5			SWAP Tier 2	CPW 20250113
Reptiles	Pituophis catenifer sayi	Bullsnake	CPW Overall Range	G5T5	S5				CPW 20250113
Reptiles	Sceloporus consobrinus	Prairie Lizard	CPW Overall Range	G5	S5				CPW 20250113
Reptiles	Sceloporus graciosus	Sagebrush Lizard	CPW Overall Range	G5	S5				CPW 20250113
Reptiles	Sceloporus tristichus	Southern Plateau Lizard	CPW Overall Range	G5	S3				CPW 20250113
Reptiles	Thamnophis elegans	Western Terrestrial Garter Snake	CPW Overall Range	G5	S5				CPW 20250113
Reptiles	Urosaurus ornatus	Ornate Tree Lizard	CPW Overall Range	G5	S4				CPW 20250113
Reptiles	Uta stansburiana	Side-blotched Lizard	CPW Overall Range	G5	S4				CPW 20250113

Special Areas and Land Status

Table 6. CNHP Potential Conservation Areas and Other Special Areas within 1 Miles of Project Area

Name	Data Type	CNHP Biodiversity Rank	CNHP Edit Date	CNHP Identifier	Data Source
Elk Severe Winter Range	CPW High Priority Habitat				CPW 20250522
Elk Winter Concentration Area	CPW High Priority Habitat				CPW 20250522
Mule Deer Severe Winter Range	CPW High Priority Habitat				CPW 20250522

Table 7. Managed Areas within Project Area

Name	Owner	Manager	Management Description	Public Access*	Protection Mechanism	Easement Holder	Data Source
	BLM	BLM	BLM - General	Yes	Fee		COMaP 20240702

*It is the responsibility of the user to verify public access on any site as access can change over time. Entering an area that is not open to the public subjects an individual to possible sanctions for trespass under Colorado law.

Water and Wetlands

Table 8. National Wetland Inventory (NWI) Features within Project Area

No results were found for this project area.

Project Report Appendix

Please visit the CNHP website for a more extensive collection of definitions for CODEX reports in addition to what is provided here below.

About CNHP Data

One of CNHP's core research activities is managing a statewide database that details the locations of rare and imperiled species and natural plant communities in Colorado. We gather data from CNHP surveys and monitoring projects, as well as from partners and other trusted sources like herbariums. All of our data are compiled and managed in the Biodiversity Information Management System (Biotics), a web-enabled database platform hosted by **NatureServe**. The species and natural plant communities we track are assigned global and state imperilment ranks based on rarity, threats, and trends, and their locations are mapped as element occurrences. Element occurrences include spatial data as well as details on condition, size, and landscape context. This information allows us to track both overall distribution and site-specific details describing how well elements are thriving at each location. We use element occurrences to delineate Potential Conservation Areas that represent the primary area needed to support the element occurrences, and often include additional suitable habitat or buffers from disturbance. **Please visit the** CNHP website **for more definitions and details related to CNHP data in CODEX.**

CODEX Report Definitions

CNHP Biodiversity Rank – The significance of a potential conservation area in terms of its biological diversity ranging from B1 (Outstanding Biodiversity significance meaning protection of this potential conservation area can prevent a species from going extinct) to B5 (General interest or open space for more globally secure species).

CNHP Edit Date– The date the CNHP potential conservation area record was last updated.

CNHP Identifier– A unique identifier for each CNHP data type, applicable only to CNHP data records.

CO Status – State status per Colorado Parks & Wildlife: Endangered (SE), Threatened (ST), or State Special Concern (SC).

Common Name – The common name of the species or plant community.

Managed Areas Name – Name of the managed area.

Manager – The general land Manager.

Management Description - The general category of how the feature is managed.

Other Species of Concern – Other globally rare species and plant communities, BLM or USFS sensitive species, state listed species, or Tier 1 and Tier 2 priority species from Colorado's State Wildlife Action Plan, and species of economic and recreational value.

Other Status – Other status such as BLM sensitive species (BLM), U.S Forest Service sensitive species (USFS), and Tier 1 and Tier 2 priority species from Colorado's State Wildlife Action Plan (SWAP Tier 1, SWAP Tier 2).

Critical Habitat Status – Critical habitat status for federally listed species under the Endangered Species Act.

Proposed – Proposed critical habitat
Final – Final critical habitat

Critical Habitat Federal Register- The volume number and first page of the federal register publication describing the critical habitat.

Critical Habitat Publication Date - Federal Register publication date.

Data Source – The agency and date of the data provided.

Data Type –

CNHP EO – A location in which an element is, or was, present.

CNHP General EO – An element occurrence with imprecise directions; broadly mapped and typically historical or extirpated.

CNHP Observation – Sightings of species on CNHP's watchlist or sightings of tracked elements that do not meet the minimum criteria necessary to make an occurrence.

CNHP PCA – Areas in the state contributing to Colorado's biological diversity.

CNHP Model – Modeled presumed presence or habitat for a particular species.

Owner – The general land owner.

Public Access – Level of public access to the feature.

Protection Mechanism – Any mechanism of protection assigned to the managed area.

Regulatory Species – Species with federal protection under the Endangered Species Act or Bald and Golden Eagle Protection Act along with FWS designated critical habitat.

Return on Investment Report - Provides maps and the estimated annual benefit in dollars of conserved ecosystem services by ecosystem type within the project area in PDF format. Ecosystem types are derived from the 2016 National Land Cover Database (NLCD).

Scientific Name – The scientific name of the species or plant community

Special Areas and Land Status – CNHP Potential Conservation Areas (PCA), State Designated Natural Areas, Important Bird Areas, and managed lands from the Colorado Ownership, Management and Protection database (COMaP), SB181 High Priority Habitat

Special Areas Name – The name of the special area.

State Rarity - The rarity rank used by CNHP and The Natural Heritage Network to track how rare a species or plant community is in Colorado, ranging from S1 (rarest) to S5 (most common).

CNHP PCA (Important Plant Area) – B1 or B2 CNHP potential conservation area supporting globally rare plants.

CNHP Range Map – Overall range for a particular species by HUC 10 and HUC 12 for aquatics.

Important Bird Area – The most important places for birds as identified by the National Audubon Society.

State Natural Area - Areas that contain at least one unique or high-quality natural feature of statewide significance as designated by the Colorado Natural Areas Program.

CPW <description> - CPW data with a long list of data types: observations, nest sites, leks, etc.

Easement Holder – Organization or agency holding an easement (if present).

ESA Status – Federal status under the Endangered Species Act: Endangered (E), Threatened (T), or Federal Candidate (C) with qualifiers for Partial Status (PS) and experimental populations (XN).

Global Rarity – The rarity rank used by CNHP and The Natural Heritage Network to track how rare a species or plant community is globally, ranging from G1 (rarest) to G5 (most common).

Last Observation – The most recent field observation.

Major group – The major group in which the element falls: Amphibians,

Viability Rank – The estimated viability of the species or ecological integrity of the natural community based on condition, size, and landscape context, ranging from A (excellent) to D (poor).

Water and Wetlands – Wetland types from the National Wetland Inventory database.

Class - The general appearance of the habitat in terms of either the dominant life form of the vegetation, or the physiography and composition of the substrate.

Modifier - Modifier assigned to further describe wetlands and deepwater habitats within the classification hierarchy based on water chemistry or ph, wetland or deepwater alteration, or soil type.

NWI Code – An alpha-numeric code corresponding to the classification nomenclature that best describes a particular wetland habitat. For more information on NWI data values, visit https://www.fws.gov/wetlands/data/wetland-codes.html

System – A complex of wetlands and deepwater habitats that share the influence of similar hydrologic, geomorphologic, chemical or biological factors.

Water Regime - Description of water duration within a wetland habitat.

Wetland Total Acres - Total acres of the wetland type in the project area.

Wetland Type – The generalized Cowardin wetland type.

Birds, Crayfish, Fish, Insects, Mammals, Mollusks, Natural Communities, Nonvascular Plants, Reptiles, and Vascular Plants.