

VB#17

GUIDELINES AND INSTRUCTIONS FOR STATE OF UTAH AMR SITE FORM AND FEATURE ATTACHMENTS

INTRODUCTION

Site inventory forms for the Bureau of Land Management (BLM) and the state of Utah require very similar information associated with abandoned mineral lands (AML). Specific information is unique to each inventory and it is the purpose of this guideline to define entries required in the state abandoned mine reclamation (AMR) checklists.

State numbering systems will be explained as well as protocol for tagging and numbering individual openings within a site.

STATE OF UTAH AMR FORMS

State inventories consist of an inventory site form and up to three different feature description forms. The following abandoned mine reclamation forms exist for the state:

1. INVENTORY SITE FORM (may include one feature or many)
2. ADIT OPENING (one form per opening)
3. SHAFT OPENING (one form per opening)
4. DUMP DESCRIPTION (one per opening or for hazardous dump)

An inventory site form will be filled out for any unreclaimed, inactive, or abandoned mine site that poses a hazard if left untouched. Openings (shafts, adits, inclines) are the primary concern of the state, prospects are usually dismissed. A single site form may include many opening features or simply a single feature description.

A site form will be completed for open pits and trenches if unusually tall or hazardous highwalls are associated. The feature may be sketched and described on the back of the site form in the comments section. Dump descriptions need not accompany site forms completed for trenches or open pits.

Adit feature forms are completed for individual adits and inclines (one completed form per opening). Usually, each adit feature form will have an associated dump description unless all of the material was removed for processing.

Shaft feature forms will be completed for individual shafts (one form per opening). A dump description will usually accompany each individual shaft feature form.

Dump description forms are usually linked to an opening description. If a dump itself is deemed a hazard (severe erosion, undermining by drainage or extreme angle of repose), then a dump description need not be associated with an opening.

STATE OF UTAH AMR NUMBERING CONVENTION

Site Identification Numbers (on site forms)

Site identification numbers for the state are of the following form: AMR/000/000. AMR, is of course, abandoned mine reclamation, the second three digits are the county code, and the third three digits are the site number.

Site inventory numbers are assigned by counties. The first three numbers in a state site identification form are the county code. County codes for Utah are listed in the BLM-AML Attachments Directions on page 7-19 (049 for Utah county and 045 for Toole county etc.).

The last three digits of the site identification are the site number. The appropriate site numbers will be assigned by the state AMR authorities.

Example: Site number 23 in Utah county would be correctly identified on the site form as: AMR/049/023.

Tag Numbers for Openings (on feature forms)

The tagging convention for openings is:

Township/Range/Section/Opening Type/Opening Number

Township, range, and section are two digit numbers and the cardinal directions (N, S, E, & W) will be omitted from township and range. Opening type is one of six, explained below. Opening number will be assigned by the state AMR authorities, by section number.

Six different types of openings (features) may be tagged within an AMR inventory site. These features are horizontal openings (HO, 0-10 degrees), inclined openings (IO, 11-65 degrees), and vertical openings (VO, 66-90 degrees), as well as closed features or HC, IC, and VC.

The state database keeps track of the total number of HO, IO, VO, HC, IC, and VC features individually per section. Therefore, it is possible to use feature number one, six times in a particular section which has all six opening types.

Example: The first site (AMR/049/023) in a new section is inventoried. There is one shaft, two adits, and one closed shaft. So, the tag would consist of: VO01, HO01 & HO02, and VC01 instead of features one through four.

Continuing from the examples above, if the site is in township seven south, range three west, section three, the appropriate tag numbers associated with inventory AMR/049/023 would be: 070303VO01, 070303HO01, 070303HO02, and 070303VC01.

INVENTORY SITE FORM

FRONT PAGE

The following is a list of headings on the state AMR inventory site form. Explanations of each entry follow the heading.

Refer to the attached inventory site form.

Indicate location of site in section: Write section number in center of section box, use map legend symbols for feature(s) associated with site form, show major roads if crossing section in vicinity of feature, and show correct orientation of adits and inclines.

Site ID: Explained above in **Site Identification Numbers**.

Site Name: Any name if MILS, Crib, or name from 7.5 minute quadrangle is not available, generally use BLM-AMR number for easy correlation of forms.

USGS 7.5 Quad: Name of quadrangle in bottom right corner.

USGS 7.5 Quad Code: Use number below USGS quadrangle name.

Township/Range: Enter appropriate township and range numbers and circle appropriate cardinal direction.

Section: Enter section number and subsections: smallest subsection first, largest subsection last.

County: Enter county name.

Commodity: Enter commodity name or use elemental symbols.

Claim Name: Enter claim name if known from on site information or research done out of the field.

CRIB Number: Enter MILS or Crib number if a number exists.

Watershed: These are state assigned numbers, generally leave blank.

Location/Access Directions: Give a detailed description of how to get to a site from a major highway or county road including foot trails or direction and distance in which to hike to site on foot if necessary.

Site Description: Give a detailed description of what was visually observed on the site. This section should reflect everything noted in the following entry heading.

Features Present (count): Enter the number of features (not check marks) observed on the site. Note: Impoundment refers to manmade water impoundments either dammed ponds or perhaps open pits that have trapped water.

Site Access: Check the box by which the site was approached. If by 2-WD, then one could also hike or use 4-WD to get there but not in the opposite sense.

GPS file number: Use BLM-AML file number.

Start time: Local time that GPS data collection began.

Stop time: Local time that GPS data collection ended.

Number of readings: Cumulative number of points, perimeters, and roads as well as GPS site, taken at inventory area.

GPS date: Date on which GPS data was collected.

Overall Site Dimensions (in feet): Enter dimensions of site including access road if road was specifically created only to access mine site.

Area: Enter an area in acres based on **Overall Site Dimensions**.

Site Visitation: Check low if minimal visitation (a little trash).
Check medium if sporadic visitation (scattered fire ring).
Check high if much visitation (paths into mines).

Evidence: Give evidence to back up **Site Visitation** entry.

Inventoried by: Enter full name(s), do not initial.

Date: Enter date on which site was inventoried.

INVENTORY SITE FORM, BACK PAGE

Be sure to fill out Site ID on inventory sheets where ever needed. These forms may be copied so Site ID must be present on front and back! Refer to the attached inventory site form.

Land Ownership: Check the appropriate ownership according to Master Title Plats of site area.

Landowner information: Fill out information if found on claim forms or if research revealed named ownership.

The following three headings are used to determine possible site visitation frequency. If an abandoned \inactive mine working is in the vicinity of a population or near a recreation area, the site may have more visitors than a remote site.

Public Facilities: Recreation area, rest stops, gas station, etc.

Residences: List if homes were observed nearby.

Road distance to nearest town: List nearest town (residents may use abandoned mine land for recreation).

Vegetation Community Type: Check which type of vegetation was observed in the area (used to select correct species if revegetation is included in reclamation of site).

Vegetation Condition: Note revegetation evidence within site and state whether there is stressed vegetation and why.

Comments: Describe any specifics or oddities about the site. This area can be used for mitigation suggestions, pointing out specific hazards, continuation of **Site Description**, etc.

Attachments: Usually check only Site Sketch Map (from BLM-AMI, form) and feature description forms (openings). Enter the roll number and frame numbers associated with the site to help identify features back at the office. Copies of photo logs are unnecessary as long as all information is printed on the back of the photographs.

FEATURE DESCRIPTION FORMS

ADIT OPENING, FRONT PAGE

Use this form to describe inclined openings as well. Refer to the attached adit opening feature form. Fill out Site ID and Site Name using guidelines provided above.

ENTRANCE MEASUREMENTS: Use this field to describe the dimensions of the portal of the adit, some may be partially collapsed or backfilled.

Type of Cover: Indicate type and condition of rock above portal, indication of brow condition.

FEET INSIDE MEASUREMENTS: This field is for inside dimensions of adit or incline. Enter the number of feet inside the opening that the measurements were estimated from.

SITE SKETCH: Draw some representation of the opening. Use a side view, front view, or 3D representation, whatever is easiest to depict the feature. Include dimension lines if it helps to explain the sketch. A picture is worth one thousand words so make certain that a good picture accompanies the sketch.

TAG NO.: Fill in tag number placed at opening following guidelines discussed in **Tag Numbers for Openings** above.

DATE: Enter the date on which the site was tagged.

PAGE: If there are three feature forms associated with a site form, page numbers will consist of 1 of 3, 2 of 3, and 3 of 3. The inventory site form does not count as a page, only count the feature forms. This numbering flags missing feature forms.

PHOTOGRAPH NUMBERS: Use this field to keep track of frame numbers associated with the particular opening.

INVENTORIED BY: Enter full name, do not initial.

ADIT OPENING, BACK PAGE

The back page of the adit opening feature form is identical to the back page of the shaft opening feature form. Therefore, guidelines will only be discussed once. Some boxes are obviously only pertinent to shafts, or adits. Refer to the attached adit opening feature form.

Be sure to fill in Site ID and opening tag number!

Access to Feature: Check the box by which the feature was approached. If by 2-WD, then one could also hike or use 4-WD to get there but not in the opposite sense.

Condition of Entrance: Check the appropriate box(es) that describe the portal condition.

Stability of Opening: Check the appropriate box, this entry should reflect what was stated beside **Type of Cover** on the front page of the form.

Depth to Competent Rock: Usually for shafts only. Depth through collar or unconsolidated material, down to competent rock.

Water: Check appropriate description.

Wildlife Observations: Check and or circle appropriate description.

Apparent depth of workings: Enter depth if known, check box if applicable.

Roof or collar support present: Check box if any are observed.

Potential Mitigation Actions: Check boxes that would be pertinent mitigation procedures.

Onsite Construction Material Availability: Check appropriate box.

Backfill Material Source: Check if applicable.

Mine Dump Size: Check dump size associated with opening, this entry should agree with figure on Dump Description form.

SHAFT OPENING, FRONT PAGE

The shaft opening entries are nearly identical to those described above in the adit opening form. The only difference is the dimensions required for the shaft portal. Be sure to enter Site ID and Site Name on top of page. Refer to the attached shaft opening feature form.

Field number one is for collar or funnel dimension. Field number five is for shaft dimensions a certain depth within the workings. Enter the depth at which the dimensions were estimated from.

DUMP DESCRIPTION

Be sure to enter Site ID and Site Name at top of page. Refer to the attached dump description feature form for reference.

Pay close attention to dimension lines in diagram, not all dimensions may be applicable. All dimensions should be a measurement in feet.

Particle Size: Enter physical dimension range or some form of clastic grain size.

LOCATION: Indicate whether dump is upslope, downslope, or neither in relation to opening. Indicate whether dump is adjacent or distant with regard to opening.

Estimated Volume: Enter a volume estimate of the dump material present.

Volume Calculated: A rough approximation from the formula $V=(H \times W \times L)/2$ may be used to calculate volume of the dump pile. This value may be used in **Estimated Volume** above.

SITE SKETCH: Draw some representation of the dump. Use two diagrams similar to the example, especially when the dump is associated with and opening. Include dimension lines if it helps to explain the sketch. A picture is worth one thousand words so make certain that a good picture accompanies the sketch.

TAG NO.: Fill in tag number if dump is associated with a tagged opening.

DATE: Enter the date on which the site was tagged if dump is associated with an opening.

PAGE: If there are three feature forms associated with a site form, page numbers will consist of 1 of 3, 2 of 3, and 3 of 3. The inventory site form does not count as a page, only count the feature forms. This numbering flags missing feature forms.

PHOTOGRAPH NUMBERS: Use this field to keep track of frame numbers associated with the dump.

INVENTORIED BY: Enter full name, do not initial.

AMR FORMS (ATTACHMENTS)

The following four pages are partially completed AMR forms included to further illustrate how the forms are to be filled out. These attachments should be referred to as needed to help resolve any uncertainty.

Much of the data required in these forms depends on the inventory team's judgement. If a particular field does not completely describe an item, add to the description. Ample space is provided in the **Comments** section of inventory site form to address any further data that may need to be included.

Good photographs and documentation are a must for a good inventory. If site sketches are a weakness, then make up for it with good photography and careful documentation of photo numbers.