

CHAPTER 25

SIGNS, MARKERS, MAPS, PLANS AND CROSS SECTIONS

Signs and Markers

Introduction. The signs and markers discussed below will be posted and maintained by Peabody throughout the conduct of the activities to which they pertain. A uniform design is utilized throughout the permit area for each type of sign or marker. The signs are lettered and colored so that they may be easily seen and read. Signs are constructed of aluminum and affixed to steel or wooden supports or the larger signs may be constructed of exterior grade plywood. No local ordinances or codes apply to the signs discussed below.

Mine and Permit Identification Sign. Signs which identify, at a minimum, the name, business address and telephone number of the operator, current permit numbers and other relevant information are located adjacent to the main access road at the entrance to each mine. An example sign is shown in Figure 1. These signs will be retained and maintained until the release of all lands for the adjacent permit area.

Topsoil Markers. Locations where topsoil or other vegetation-supporting material is segregated and stockpiled are marked with topsoil signs affixed to steel or wood posts such as the one shown in Figure 3.

Perimeter Markers. The permit perimeter will be marked with a post. Approximately the top one-foot of the post will be painted a fluorescent color. This will be easy to install, durable, and readily seen. The markers will be placed along the permit boundary before surface mining and reclamation activities occur.

Buffer Area Markers. Buffer areas will be established adjacent to surface mining activities areas and posted with markers such as the one shown in Figure 5. The markers will be placed so as to mark that area not to be disturbed unless the regulatory authority authorizes surface mining activities in this area within 100 feet of a protected stream. See Drawing No. 85642 for locations of the stream buffer zone areas within the Kayenta Complex approved permit area.

Blasting Signs. Three types of blasting warning signs are displayed at the Kayenta

Complex. These signs are shown in Figures 6, 7, and 8. The sign which displays the blasting warning and all clear signals (Figure 6) is posted on all roads entering the permit area which may reasonably be expected to be used by members of the general public. The blasting warning and all clear signals are also displayed on the mine and permit identification signs (Figure 1). The blasting area signs (Figure 7) are posted along roads which access areas in which blasting is being conducted. The blasting area and marker identification signs (Figure 8) will be posted near the Permit sign.

Maps, Plans and Cross Sections

The maps, plans and cross sections required by 30 CFR Chapter VII have been included in this mining and reclamation plan at the locations indicated in Table 1. Where applicable, the maps, plans and cross sections have been prepared by, or under the supervision of, and certified by qualified registered professional engineers or land surveyors pursuant to 30CFR780.14 (also see Attachment 2).

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PEABODY WESTERN COAL COMPANY

P.O. BOX 650
KAYENTA, AZ 86033

NAVAJO ROUTE 41
(928)-677-3201

KAYENTA MINE

KAYENTA, ARIZONA 86033

LEASE NOS. 14-20-0603-8580
14-20-0603-9910
14-20-0450-5743

MSHA ID. NO. 02-01195

PERMIT NUMBER

AZ 0001E

BLASTING AREA

WARNING SIGNAL
SERIES SHORT WHISTLES

ALL CLEAR SIGNAL
ONE LONG CONTINUOUS WHISTLE

MARKER IDENTIFICATION

GREEN

BUFFER ZONE

RED

BLASTING AREA

ORANGE

TOPSOIL

BLASTING AREAS ARE POSTED
CHARGED HOLES AWAITING FIRING ARE
GUARDED, BARRICADED, FLAGGED,
CONED, OR BERMED

RED BACKGROUND
WHITE LETTERS

GREEN BACKGROUND
WHITE LETTERS

FIGURE 1

SAMPLE MINE AND PERMIT IDENTIFICATION SIGN

(12'W x 8'H x 3/4")

FIGURE 2
(Intentionally Left Blank)

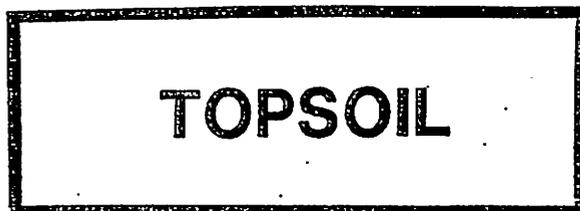


FIGURE 3
TOPSOIL STOCKPILE MARKER
(8" x 24" reflective orange)

Sign that will be near the Permit sign
(Freestanding sign, Mounted on two poles)

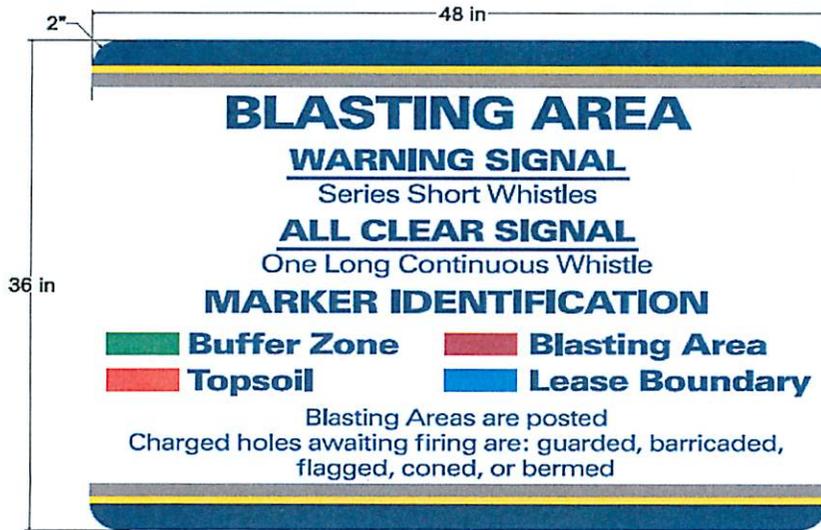


FIGURE 8
BLASTING AREA & MARKER IDENTIFICATION SIGN

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Drawing Number	Title	Volume
85100	Land Use Map	13
85110	Black Mesa Leases, Right-of-Ways, and Permit Area	13
85120	Anasazi Sites with Mining Areas	13
85121	Historic Sites with Mining Areas	13
85122	Anasazi Sites with Compliance Status, Mining Areas, and Excavated Sites	13
J-7 Area	Typical Geologic Cross Section	13
J-19 Area	Typical Geologic Cross Section	13
J-21 Area	Typical Geologic Cross Section	13
N-6 Area	Typical Geologic Cross Section	13
N-11 Area	Typical Geologic Cross Section	13
J-21W Area	Typical Geologic Cross Section	15
J-28 Area	Typical Geologic Cross Section	15
N-9 Area	Typical Geologic Cross Section	15
N-10 Area	Typical Geologic Cross Section	15
N-12 Area	Typical Geologic Cross Section	15
N-99 Area	Typical Geologic Cross Section	15
85210	Mine Plan Map	18
85300	Order 3 and 4 Soil Survey	18
85305A	Order 1 and 2 Soil Survey	19
85305B	Topsoil Salvage Map	19
85305C	Soil Type and Topsoil Salvage Map	19A
85310	Geobotanical Study Map	20
85320	Vegetation and Wildlife Habitat Map	20
85320A	Mixed Conifer Woodland Habitat Map	20
85320B	Great Horned Owl and Red-Tailed Hawk Breeding Sites	20
85322	Pre-Existing Livestock and Wildlife Watering Sources	20
85324	Postmining Livestock and Wildlife Watering Sources	20
85351	Drill Hole Collar Location Map	20

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85352	Estimated Postmining Topographic Map (1"=400')	29
85354	Generic Watershed	28
85360	Jurisdictional Permit and Affected Lands Map	20
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85402	MSHA Dam Location Map	22
85405	Sediment and Water Control Structures Map (1"=2000')	22
85406	Siltation & Impoundment Structure Data	22
85408	Impoundments Hazard Map	22
85410	J2-A Dam	22
85412	J-7 Dam	22
85414	J16-A Dam	22
85414A	J16-A Dam	22
85416	J16-L Dam	22
85416A	J16-L Dam Remedial Plan	22
85416B	J16-L Dam As-Built	22
85418	KM-FW Pond	22
85420	N14-D Dam	22
85422	N14-E Dam	22
85424	N14-F Dam	22
85426	N14-G Dam	22
85428	N14-H Dam	22
85430	Typical Road Sections	22
85432	Typical Intermittent or Perennial Stream Ancillary Road Crossing	22
85440	J-19 Haul Road	22
85442	J-19 Deadhead/Haul Road Spur	22
85445	Permanent Roads Map	22
85450	N7-D Sedimentation Structure Grading Plan	22

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85460 and 85460A	J2-A Dam, J-3 Airstrip	22A
85462	J-3 Airstrip (As-Built)	22A
85466	J-3/N-6 Access Road Design	22A
85466A	J-3/N-6 Access As-Built Road Plans	22A
85480	Black Mesa Mine Facilities (Sheet 1A)	22A
85480	Kayenta N7/8 Facilities (Sheet 2A)	22A
85480	Central Warehouse and Operations Facilities (Sheet 3A)	22A
85480	Reclamation and J-3/N-6 Facilities (Sheets 4A, 4B, 4C, & 4D)	22A
85480	Kayenta N-14 Facilities (Sheet 5A)	22A
85480	Kayenta Mine Facilities (Sheet 6A)	22A
85480	Kayenta Transfer 22/23 and Temporary Facilities (Sheet 7A)	22A
85482A	N-11 Truck Dump/Facilities Site Plan (As-Built)	22A
85484	N-11 Haul Road Spurs	22A
85486	J-19 R46-R60 Deadhead Road	22A
85488	J-19 West: South Primary Road Design	22A
85490 and 85490A	Concrete Ford of Yellow Water Canyon Wash	22A
85494	Proposed N-11 Extension North Primary Road Design	22A
85495	Proposed N-11 Extension South Primary Road Design	22A
85496	Proposed N-9 Primary Road Design Plan & Profile	22A
85600	Historical Environmental Monitoring Sites	23
85610	Wepo Aquifer Water Level Contours	23
85611	2003 Wepo Aquifer Water Level Contours	23
85613	Overburden and Impact Core Location Map	23
85613A	Overburden and Impact Core Location Map (2003 Core Data)	23
85620	Alluvial Aquifer Water Level Contours	23
85630	Regional and Local USGS Hydrological Monitoring Sites	23
85635	Local USGS Hydrological Monitoring Sites	23
85640	Periodic Wet Reaches Map	23
85642	Stream Buffer Zone Map	23
85642A	At-Grade Road Crossing/Stream Buffer Zone Map	23
85646	J-3 Landfill Proposed Grading Plan	23
85700	Moenkopi SEDIMOT II Subwatershed Boundaries	23
85710R	Coal Mine Wash SEDIMOT II Premining Watershed Boundaries	23

TABLE 1
Index of Maps, Plans and Cross Sections

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85720R	Coal Mine Wash SEDIMOT II Postmining	
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89800	Bonding Map	23
93500	Current Environmental Monitoring Sites	23
94700	Blasting Monitoring Map	23
94720	Pre-Blast Survey Site Map	23