



Kayenta Mine  
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DEC 23 2019

**Kayenta Mine**

December 20, 2019

Ms. Amy McGregor  
Office of Surface Mining  
Reclamation and Enforcement  
1999 Broadway, Suite 3320  
Denver, CO 80202-3050

**RE: Peabody Western Coal Company / Kayenta Mine Permanent Program Permit AZ-0001F / Chapter 20 – Reclamation Schedule**

Dear Ms. McGregor:

Peabody Western Coal Company (PWCC) submits the enclosed revision update to Chapter 20 – Reclamation Schedule at Kayenta Mine.

Enclosed are insertion instructions and seven (7) copies of the following: Chapter 20 – Reclamation Schedule. This chapters is to be replaced in its entirety.

Respectfully,

Randolph S. Lehn  
Director, Operations Support

Cc: G. Altsisi (PWCC)  
M. Shepherd (PWCC)

**INSERTION INSTRUCTIONS**

**Kayenta Complex**

**Permanent Program Permit AZ-0001F**

**Chapter 20 – Reclamation Schedule**

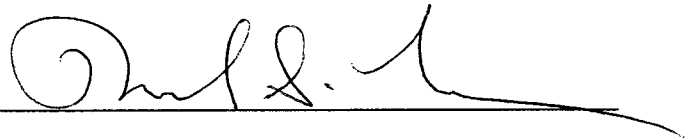
**Submitted December 20, 2019**

<b><u>Volume</u></b>	<b><u>Chapter</u></b>	<b><u>Description</u></b>
11	20	Replace Chapter 20 – Reclamation Schedule

**VERIFICATION**

I verify under oath that the information contained in this application for a permit; revision; termination of jurisdiction; renewal; administrative update; bond release; or transfer, sales or assignments of permit rights is true and correct to the best of my information and belief.

Signature of Responsible Official



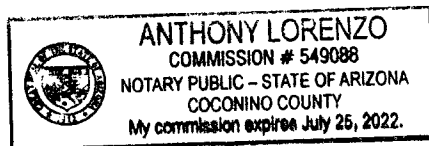
Title Director, Operation Support

SUBSCRIBED AND SWORN TO BEFORE ME BY     Randolph S. Lehn    

This     20th     Day of     December 2019    

NOTARY PUBLIC 

MY COMMISSION EXPIRES     July 25 2022    



CHAPTER 20

RECLAMATION SCHEDULE

CHAPTER 20

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CHAPTER 20  
RECLAMATION SCHEDULE

Introduction

Chapter 20 presents a projected 5-year timetable based on the location of the final pits when mining was permanently discontinued in August of 2019. Phases of the reclamation plan and projected reclamation schedules for 2020-2024 in the N-9, J-19, J-21 coal resources areas and support facilities associated with these areas are presented in Tables 1 through 3. Supporting information regarding the timing of reclamation activities may be found in the chapters that discuss the components of the reclamation plan. For example, revegetation best practice application periods are discussed in Chapter 23, Revegetation Plan. The reclamation schedule covers the next planned five year permit term. Drawing 85360 identifies the lands that are pre-SMCRA (December 16, 1977) and those lands under interim and permanent regulatory programs.

Timing of Reclamation Activities

A generalized timetable of reclamation activities within a year is shown in Figure 1. The timetable outlines the sequence and timing of each major phase of reclamation normally conducted within the year. Precise specification of the timing or area for each reclamation phase in each mining area is not possible for the following reasons: (1) operational considerations and consequent manpower and equipment availability can affect the rate of progress of reclamation activities; and (2) weather conditions, the availability of materials, laboratory analytical delays and the rate of final pit grading advance affect the progress of grading, topsoiling and seeding in each mining area. The reclamation process is affected by the rate of the amount of acres graded, topsoiled, and revegetated each year and which can vary somewhat. Once spoils are graded, the reclamation sequence will follow that presented in Figure 1 and as described in Chapters 22, 23 and 26.

Figure 1  
Reclamation Timetable

Sequence of Activities	Month											
	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Backfilling and Grading	—————											
Topographic Manipulation	-----											
Measures Used in Conjunction w/Drainage Features & Overland Conveyances	-----											
Topsoil Redistribution, Graded Spoil Sampling, First Order Terrace and Drainage Construction Spoil or Soil Surface Mechanical Manipulation Measures	-----											
Seeding/Vegetation Measures	-----											
Mulching	-----											
Cultural Plant and Habitat Area Planting	-----											
Fencing	—————											
Maintenance & Management	—————											

Notes: ——— Operations performed during periods indicated. Primary revegetation season.  
----- Operations performed, weather permitting. Secondary revegetation season.

Sedimentation pond construction or diversion structures are completed prior to any other surface disturbances. These activities insure sediment control and protection of the hydrologic system (Chapters 6 and 26).

Clearing of woody or other site materials to facilitate topsoil removal is performed immediately prior to topsoil removal and ahead of mining or associated activities. Site clearing and topsoil salvage operations (Chapter 22) are typically conducted from March to November. These activities may be conducted in other months if mining conditions warrant and site conditions are not adversely affected by weather.

Backfilling and grading activities are described in Chapters 21 and 26 are conducted. These activities are performed throughout the year. They include grading of the landform to the approved PMT, the designs for the primary drainages, and the guidelines for drainages and landform characteristics presented in Chapter 26 and Attachment A to that chapter. The designs are installed during the course of the reclamation grading process. These activities are typically conducted from March through November or as site conditions allow.

Associated graded spoil suitability determinations (Chapter 22), topsoil or suitable plant growth media replacement, and the construction or installation of surface stabilization features follow the same timetable as topsoil salvage operations. If ground and weather conditions permit, topsoil material redistribution may be conducted in months other than those indicated in the reclamation timetable (Figure 1).

Mechanical manipulation of the plant growth media or topsoil, including seedbed preparation, is conducted following the redistribution of the media or topsoil material. These activities entail deep ripping and contour furrow disking and are described in detail in Chapters 21, 22, 23 and 26. These operations are performed from March through October, or at other times when weather and surface conditions permit.

Seeding and mulching of topsoiled areas is conducted during the primary seeding season (May to September) following topsoil redistribution and mechanical manipulation, weather permitting. Seeding and mulching may be conducted in the secondary seeding season if weather and ground conditions permit. Revegetation activities are discussed in Chapters 23 and 26. Fence construction is performed throughout the year. Fence construction is interrupted only by inclement weather.



Maintenance and management activities are conducted throughout the year. The timing of these activities is dependent upon the specific activity. Fence maintenance and removal of trespass livestock are conducted throughout the year as needed. Interseeding and reseeding is conducted either during the primary or secondary seeding seasons based on needed remedial work. Surface stability monitoring and remedial actions are conducted as required and as described in Chapter 26.

Projected Reclamation Schedules

Projected annual reclamation schedules are presented in Tables 1 through 3 for the coal resource areas in which reclamation will occur in the 5-year term at the Kayenta Complex. The projected acres disturbed, backfilled and graded, and topsoiled and seeded for the 2020-2024 year reclamation blocks are included. No additional disturbance is anticipated during the 5-year term.

TABLE 1

Projected Annual Reclamation Schedule, N-9 Coal Resource Area, Years 2020-2024

Year	Acres Disturbed	Acres Graded	Acres Topsoiled and Seeded
Status as of 12/31/18 <sup>1</sup>	1417	619	314
<b>2020 - 2024</b>			
2020	0	25	25
2021	0	200	100
2022	0	250	200
2023	0	125	150
2024	0	0	125

<sup>1</sup>Status for total acres currently disturbed, graded and topsoiled and seeded in the N-9 pit area as of 12/31/18. Disturbed acres include facilities, ponds, roads, and stockpiles that will remain operational beyond 2020.

TABLE 2

Projected Annual Reclamation Schedule, J-19 Coal Resource Area, Years 2020-2024

Year	Acres Disturbed	Acres Graded	Acres Topsoiled and Seeded
Status as of 12/31/18 <sup>1</sup>	3974	2809	2187
<b>2020 - 2024</b>			
2020	0	0	50
2021	0	50	0
2022	0	150	150
2023	0	400	400
2024	0	400	450

<sup>1</sup>Status for total acres currently disturbed, graded and topsoiled and seeded in the J-19 pit area as of 12/31/18. Disturbed acres include facilities, ponds, roads, and stockpiles that will remain operational beyond 2020.

TABLE 3

## Projected Annual Reclamation Schedule, J-21 Coal Resource Area, Years 2020-2024

Year	Acres Disturbed	Acres Graded	Acres Topsoiled and Seeded
Status as of 12/31/18 <sup>1</sup>	4327	3859	3637
<b>2020 - 2024</b>			
2020	0	150	25
2021	0	100	250
2022	0	0	0
2023	0	0	0
2024	0	0	0

<sup>1</sup>Status for total acres currently disturbed, graded and topsoiled and seeded in the J-21 pit area as of 12/31/18. Disturbed acres include facilities, ponds, roads, and stockpiles that will remain operational beyond 2020.

Completion of Mining Operations and Final Reclamation

Facility reclamation will be conducted in the 5-year term unless approved as an element of the postmining land use plan. After completion of any necessary regrading, the reclaimed facility areas will be topsoiled or covered with suitable plant growth media and revegetated. It is estimated that three to five years will be needed to completely reclaim all facilities and structures following the cessation of mining. Decommissioning of mine facilities will commence when the facilities are no longer required to support mining activities. The structures and equipment, including concrete foundations and sub-bases, will be removed unless approved by the regulatory authority to be reclaimed in-place (a minimum of four feet below the finished reclamation surface) or they have been approved as part of the post mine land use. Materials having economic value will be salvaged. Materials that are not salvageable will be buried in accordance with the non-coal mine waste disposal plan as required by 30 CFR 816.89 and in accordance with regulatory approval. All structure and facility sites will be contoured to conform with the natural landform. Cut and fill slopes which are compatible with the postmining land use and which are approved by the regulatory authority will be retained but with edges blended into the topography.