MODULE 23

Module 23: Revegetation

[§77.456(5)]

23.1 Soil Test Plan

Provide a soil test plan for determining plant nutrients and soil amendments required to establish vegetation and achieve the approved postmining land use.

Example: Soil samples will be collected using a soil auger. A composite sample will be obtained from individual core samples from each type of existing land use. These samples will be analyzed by Blank Laboratory using "Soil Mailing Kits", or another accredited laboratory.

Overburden soil will be utilized for final reclamation and for establishing a growing medium for establishment of vegetative cover. Prior to redistribution of overburden soil or other material, the regraded land will be prepared to eliminate slippage surfaces and to promote root penetration. Overburden soils and other materials will be redistributed in a manner that achieves an approximate uniform, stable thickness consistent with the approved postmining land uses, contours and surface water drainage system, prevents excess compaction of the soil and other materials and protects the soil and other materials from wind and water erosion.

Overburden soils will be applied to the reclamation surface so that it supports the approved postmining land use and meets the revegetation requirements of 25 PA Code Chapter 77.611-77.618 (relating to revegetation). Results of a soil test will be submitted to the Department.

23.2 Temporary Cover. Provide the following information for each seed mixture to be used for temporary cover:

Example: Standard Seed Mixture

Seed Mixture No.	Seed Mixture (Species)	Rate of Appl. 100% PLS* (lbs./acre)	Seeding Dates (Months)
B	*Annual Ryegrass*	*40*	*Early spring till Late fall*
	If storage areas are to be left longer than one growing season the following will be used:		
	Perennial Ryegrass	*10*	

a)

Seed Mixture No.	Seed Mixture (Species)	Rate of Appl. 100% PLS* (lbs./acre)	Seeding Dates (Months)
1TC	**Annual Ryegrass**	**20**	**March 1**
	Small Grain	**50**	**June 15**

* PLS means pure live seed. PLS is the product of the percentage of pure seed times percentage germination divided by 100.

b) Use.

Temporary stabilization of disturbed areas such as constructed embankments or stockpiles.

c) Method(s) of seeding.

Hydroseeding or other standard accepted method

d) How seedbed will be prepared for planting.

When practical and based on field conditions, soil will be loosened by disking, harrowing, or other standard accepted method.

e) Type(s) of mulch to be used and rate(s) of application.
Example: Hay or straw at a rate of 2 ½ tons per acre.

Hydro mulch - 2,000lb/acre

23.3 Permanent Cover. [Insert standard seed mixture option(s)] Provide the following information for each seed mixture to be used for permanent cover: (Note: Key to Exhibit 18)

a)

Seed Mixture No.	Seed Mixture (Species)	Rate of Appl. 100% PLS* (lbs./acre)	Seeding Dates (Months)
A	Birdsfoot Trefoil	6	March, April, May
	Johnstone Fescue	30	Aug 10 to Sep 15
	Red Top	3	
	Clover (red, white, or alsike)	5	
	Nurse Crop:		
	Oats (spring)	3 bu/ac	spring
or	Wheat (fall)	3 bu/ac	fall
or	Rye (fall)	3 bu/ac	fall
D	Johnstone Fescue	15	March, April, May
	Birdsfoot Trefoil (low growing variety)	6	Aug 10 to Sep 15
	Red Top	3	
	Annual Ryegrass	4	
1PC	**Perenniaal ryegrass**	**10**	**Feb-April**
	Annual ryegrass	**5**	**Feb-April**
	Timothy	**5**	**Feb-April**
	White Clover	**3**	**Feb-April**
2PC	**Orchardgrass (steep slopes only)**	**5**	**Feb-April**
	Birdsfoot trefoil (steep slopes only)	**5**	**Feb-April**

* PLS means pure live seed. PLS is the product of the percentage of pure seed times percentage germination divided by 100.

b) Use.

c) Method(s) of seeding.

Hydroseeding or other standard accepted methods.

d) How seedbed will be prepared for planting.

When practical and based on field conditions, soil will be loosened by disking, harrowing, or other standard accepted methods.

e) Type(s) of mulch to be used and rate(s) of application.
Hay or straw at a rate of 2 ½ tons per acre.
Any prime farmland soil areas will be mulched with 3 tons/acre of straw or hay.

Hydro mulch - 2,000lb/acre

23.4 Woody Plants. [Insert standard stocking species option(s)] For areas that will also be planted with woody plants, provide the following: (**Note**: Key to Exhibit 18)

a) Woody Plant Mixture No.	Woody Plant Species	No./ac.
C	Oak species Maple species Ash species Red bud Crab apple	680 per acre
1WP	**Eastern White Pine (10%)** **Northern Red Oak(10%)** **Norway Spruce (10%)** **Yellow Poplar (10%)** **White Ash (10%)** **European Alder (10%)** **Black Cherry (8%)** **Sugar Maple (8%)**	**600 plants/acre (8'x9' grid)**
2WP	**Red Bud (6%)** **Crab Apple (3%)**	**100/acre**
3WP	**Black Locust (hydroseed) (15%)**	**0.5lb/acre**

See 23.3 Permanent Cover – seed mixture D for grasses to be used with these woody plants.

b) Method of planting.

Black locust to be hydroseeded. Barefoot evergreens, hardwoods, and flowering trees will be planted by hand.

c) If the area is to be planted for wildlife habitat, identify the grouping and distribution of the plants.

Flowering trees will be interplanted with the timber species.

23.5 Cropland. For areas that will be planted to crops (agronomic or horticultural), identify the crops to be grown and the management plans to achieve the crop yield standards. (**Note**: Key to Exhibit 18: Land Use and Reclamation Map)

Not Applicable