

## **Module 9: Operations Map**

[§77.454]

Provide a map or plan that includes the permit area and the area within 1,000 feet of the permit area. The map or plan shall be clear, accurate, easily read and on a scale of no smaller than 1 inch = 400 feet. Maps on the scale of 1 inch = 200 feet for permit areas of 100 acres or less and 1 inch = 400 feet for permit areas larger than 100 acres are preferred. Use the same scale as used for Exhibits 6.2 and 18. Identify the map or plan as Exhibit 9 Operations Map. Each map or plan must bear the seal or facsimile imprint of a registered professional engineer; or the seal or facsimile imprint of a registered professional land surveyor. Show all the following information within the permit area and for a distance of 1000 feet from the permit area, unless specified otherwise. Include an appropriate legend on the map. Indicate which items are present by placing a check mark in the box before the item. Please provide the permit number (if is has been assigned) or a space for it in the title block. Please also include the acreage of the total permit area.

## Refer to attached Exhibit 9.

⊠ a)	topographic contours (contour intervals of 20 feet or less);
⊠ b)	proposed surface mine permit area, and initial bond increment;
⊠ c)	surface water bodies such as streams, lakes, ponds, springs, wetlands, mine discharges and constructed or natural drains (include restricted or variance areas, and names of streams and lakes/use a unique label for each unnamed tributary);
⊠ d)	property lines (key ownership to Module 5);
⊠ e)	buildings (include current use and restricted or variance areas);
⊠ f)	man-made features such as public highways, railroads, utility lines including right-of-ways or easements, and other man-made features (include the name of the highway, railroad and utility and the restricted or variance areas);
□ g)	oil and gas wells in and within 125 feet of the permit area (include restricted or variance areas);
□ h)	public or private cemeteries or Indian burial grounds (include restricted areas);
⊠ i)	existing or previously surface-mined areas, preact highwalls, existing structures and existing areas of refuse, spoil, waste, and processing waste disposal;
☐ j)	areal extent of active and abandoned underground mines if mining above or through;
□ k)	solid waste disposal areas;
⊠ I)	final working face limit for mineral to be mined (i.e., maximum lateral extent of mineral extraction prior to final postmining slope development);
⊠ m)	phases of mining (indicate initial phase, sequence, and direction of mining);
⊠ n)	water treatment facilities;
⊠ o)	surface water diversions;
⊠ p)	erosion and sedimentation control facilities, including location and size of existing structures, road culverts and drainage ways;
(p 🖾	dams and impoundments;
☐ r)	berms and spoil storage areas;
□ s)	topsoil storage areas;
⊠ t)	haul roads (outside of area being mined);
☐ u)	refuse disposal areas (indicate any material in the refuse which may be acid forming);
□ v)	processing facilities and stockpile areas;
□ w)	air pollution control facilities;
□ x)	explosives storage areas;
□ y)	formation contacts and coal croplines (where applicable);
⊠ z)	test hole locations (key to 7.1 b data).
☐ aa)	incidental coal extraction areas