Permitting Life of a Deep Mine

- PHC, HRP, SCP, CHIA
- Deep Mine Issued
- Renewed every 5 years
- Mineral Removal Complete & Closing
MINERAL REMOVAL COMPLETE & CLOSING

ARTICLE 3 ABANDONMENT REVISION

Submitted after mining, prior to Phase release application

PUMA Determination

No

Yes

PUMA
Clarification of November 15, 2012 policy issued on June 13, 2016

All underground mine permits must be evaluated to determine the need for a PUMA, with such determination documented in the permit record

DEEP MINE ABANDONMENT PLAN
WHAT ARE DEEP MINE ABANDONMENT REVISIONS?

- PUMA determination revisions
- PHC/HRP/SCP conclusions upheld
- Put on MR-6 deep mine abandonment revision is required
- Insignificant
- Provide mine pool information
- Geologist IV makes written determination
PUMA DETERMINATIONS AND BOND RELEASE

• Must have for deep mine phase release application
  • Phase I
  • Phase II
  • Phase III

• PUMA determinations are reviewed by OSMRE
OSMRE & PUMAS

OSMRE reviews the PUMA determination narrative

Review the narrative after field visit

14 days to submit concerns
PUMA DETERMINATIONS AND BOND RELEASE

PUMA Determination based on condition of the mine pool

Water Quality

Water Quantity
WHO DOES NOT NEED A PUMA?

Above drainage

No blowout potential

No water quality issues
WHO NEEDS A PUMA?

Below drainage

Treating water
PUMA DETERMINATIONS

Seems easy enough...

...Not everything is what it seems

How does the Geologist review for a PUMA?
PUMA DETERMINATION AND RELEASE OF MINE POOL WITH MORE THAN ONE ARTICLE 3 PERMIT NUMBER

Due to past permitting practices

Pools become hydrologically connected during/after mining

Mine Pools must be considered together
PUMA DETERMINATION AND RELEASE OF MINE POOL WITH MORE THAN ONE ARTICLE 3 PERMIT NUMBER

Due to past permitting practices

Permit “A” issued

WVDEP required Permit “B” issued for same SCP

Permit “A” and “B” have same mine pool

If “A” has treatment, “B” has treatment
PUMA DETERMINATION AND RELEASE OF MINE POOL WITH MORE THAN ONE ARTICLE 3 PERMIT NUMBER

*Pools become hydrologically connected during/after mining*

Permit “A” mine pool and Permit “B” mine pools combine

Permit “A” and Permit “B” are the same mine pool

PUMA determination is for the mine pool; applies to “A” and “B”

*It does not matter if “A” and “B” belong to the same company*
PUMA DETERMINATION AND RELEASE OF MINE POOL WITH MORE THAN ONE ARTICLE 3 PERMIT NUMBER

*Pools become hydrologically connected during/after mining*

Permit “A” mine pool overlies Permit “B” mine pool

Permit “A” gets UIC permit into “B”

Permits “A” and “B” must be evaluated together

*Because UIC is treatment neither “A” or “B” will qualify for release*
UIC IS TREATMENT

If a mine pool is permitted to receive UIC injectate, the permit associated with that mine pool cannot be released.

If a mine is permitted to perform injection with a UIC permit, the permit associated with that injection is not eligible for full release.

Does not matter if UIC injection holes are not constructed.
PUMPING IS TREATMENT
PUMA DETERMINATION AND BOND RELEASE OF MULTIPLE MINE POOLS AND ONE ARTICLE 3 NUMBER

Deep Mine Permit “A” is issued in coal seam “A”

Deep Mine Permit “A” adds coal seam “B”

Seams “A” and “B” have to be evaluated

If either has treatment, neither seam is eligible for release
PUMA DETERMINATION AND BOND RELEASE OF FOR OVERBONDED MINE POOLS

Deep Mine Permit “A” overbonds Deep Mine Permit “B”

The mine pool for “A” and “B” must be considered together

Surface Mine “A” overbonds Deep Mine Permit “B”

5 years water history
Deep Mine Permit “A” had a PUMA determination

Deep Mine Permit “A” then overbonds “B”

The PUMA determination must be reperformed

The PUMA determination originally made for Permit “A” is invalid
PUMA “WAIVERS”

Issued in emails and without a revision submitted

Now are invalid
PUMAS AND BOND RELEASE

STOP MAKING ME LAUGH
YOU'LL MAKE ME PUMA PANTS