Functionally Abandoned "Active" Surface Mine Permits in Kentucky


Photo Credit: Appalachian Voices

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COVER PHOTO:

Photo taken December 2023 of a mine in Pike County that has not produced coal since 2019.

Introduction

Recent downward trends in the demand for coal have led to growing concerns about whether coal mines will be adequately and timely reclaimed, and who will bear the costs of that reclamation. The Surface Mining Control and Reclamation Act (SMCRA) of 1977 requires that coal operators reclaim mines contemporaneously with coal removal. However, there have always been concerns that operators will delay or avoid reclamation. Those concerns have intensified recently with the decline of the coal industry. Lawsuits have revealed that some coal operators are discontinuing coal production and failing to reclaim the land, even years after production has ceased.[1] Recent coal bankruptcies have also resulted in the forfeiture of numerous permits at which coal production had ceased and reclamation was far from complete.

These trends suggest that there may be an increasing number of coal mines at which production has ceased and reclamation is stalled. Mines that sit idle can become hazards for local communities. Reporting on Kentucky coal mines in 2022 revealed that violations for noncompliance with performance standards on Kentucky mines has been increasing since 2017.[2] The reporting found that a large portion of the violations were accruing at permits that had been involved in bankruptcy and been abandoned by operators. Violations resulted from a lack of maintenance on these unreclaimed sites.

In light of these trends, this report investigates whether Kentucky surface coal mines that are classified by the state as actively producing coal are actually producing coal. If a permit in active status is no longer producing coal nor classified by the state as in active reclamation status, we characterize the permit as being functionally abandoned.

Our results show that a large portion of Kentucky's surface coal mines have idled production. We find that nearly forty percent of surface mine permits that are classified by the state of Kentucky as being in active status are functionally abandoned. These permits comprise nearly 12,000 disturbed acres. We also find that this issue is not specific to a handful of companies, but that many companies have functionally abandoned permits. We recognize that just because a mine has stopped producing, that does not necessarily mean that all work on the site and progress towards reclamation has stalled. However, we found that disturbed acreage has remained static on the majority of functionally abandoned mines for several years and that total highwall also remained nearly static during the first six months of 2023, suggesting that reclamation is not occurring on those sites.

Based on our findings, we recommend that state regulators redetermine the required bond amounts for all functionally abandoned permits. Second, to ensure timely and adequate reclamation, we recommend that state regulators re-examine all permits that have not produced coal since 2020. We recommend that regulators move them

[1] Community groups and A&G Coal Corporation reach settlement on coal mine reclamation, Accessed via: https://appvoices.org/2023/01/19/ag-settlement/

[2] Sagging coal industry's 'zombie' mine violations swamp Kentucky agency (courier-journal.com)

into reclamation status and use the full reach of their enforcement authorities to spur immediate reclamation of these sites. If the permittee fails to comply with the state's enforcement actions, the state should move forward with forfeiture proceedings.

STATUS OF "ACTIVE" SURFACE MINE PERMITS IN KENTUCKY

- NEARLY FORTY PERCENT OF SURFACE MINE PERMITS CLASSIFIED AS ACTIVE (OR THOSE THAT WERE SUSPENDED WHILE IN ACTIVE STATUS) HAVE NOT PRODUCED COAL SINCE 2020.
- THESE FUNCTIONALLY ABANDONED PERMITS INCLUDE NEARLY 12,000 ACRES OF DISTURBED LAND.
- 27 OF THESE PERMITS HAVE NOT PRODUCED COAL FOR OVER FIVE YEARS AND SEVERAL HAVE NOT PRODUCED FOR MORE THAN A DECADE.
- NEARLY HALF OF THE FUNCTIONALLY ABANDONED SURFACE PERMITS ARE LOCATED IN PIKE COUNTY, KENTUCKY.

Results

Our analysis included 126 surface mine permits in active, A1 or AP, status.[3] Forty percent of the surface mine permits in Kentucky with an A1 or AP status produced no coal after 2020—a total of 48 permits. Those permits include nearly 12,000 acres of disturbed land (Table 1). Several mine permits have not produced coal for longer than 10 years, and 27 surface permits have not produced coal for over five years (Figures 1, 2). The majority of the functionally abandoned mine permits (43) have not produced coal since 2019 (Figure 1).

Table 1: *Breakdown of the 126 "active" mine permits in Kentucky as to those that have produced coal since the end of 2020 and those that have not, and the disturbed acreage represented by each*

Coal Production Status	Number of Active Permits	Percentage of Permits	Total Disturbed Acreage
Actively Produced Between 2021 - 2023	78	62%	20,758
Functionally Abandoned	48	38%	11,917

[3] For more information on methods and permit selection, see Appendix.

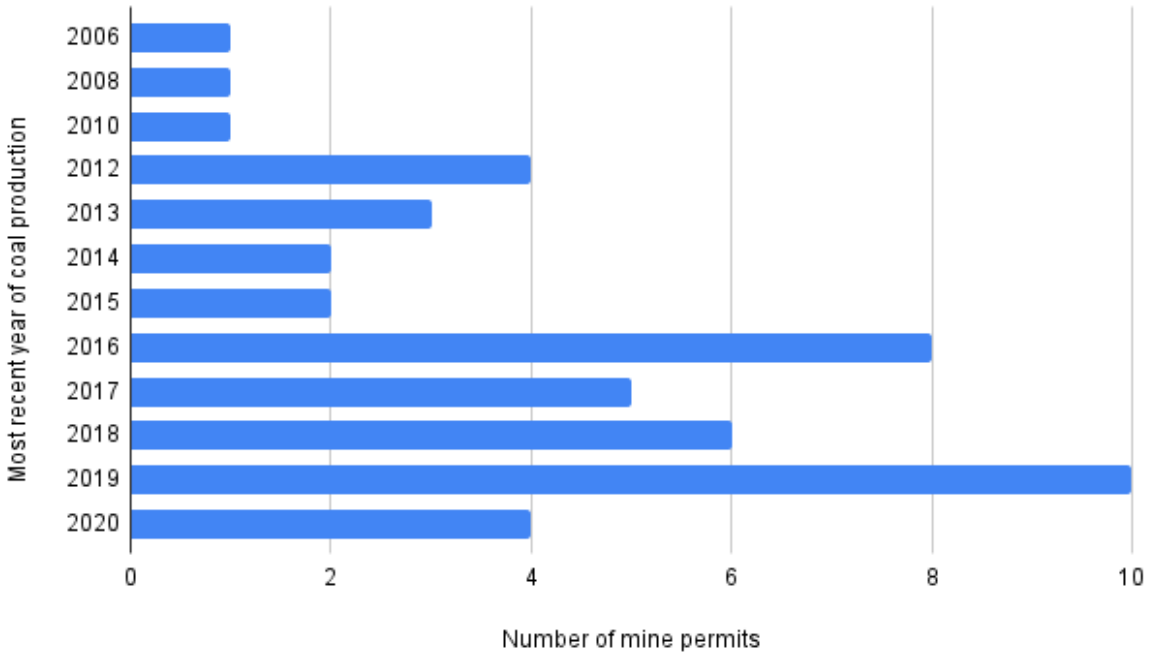

Figure 1: *Most recent year of production for functionally abandoned mine permits*

Figure 2: *Photo taken in December 2023 of a functionally abandoned surface mine in Magoffin County, KY. This mine has not produced coal since 2017. Photo Credit: Appalachian Voices*

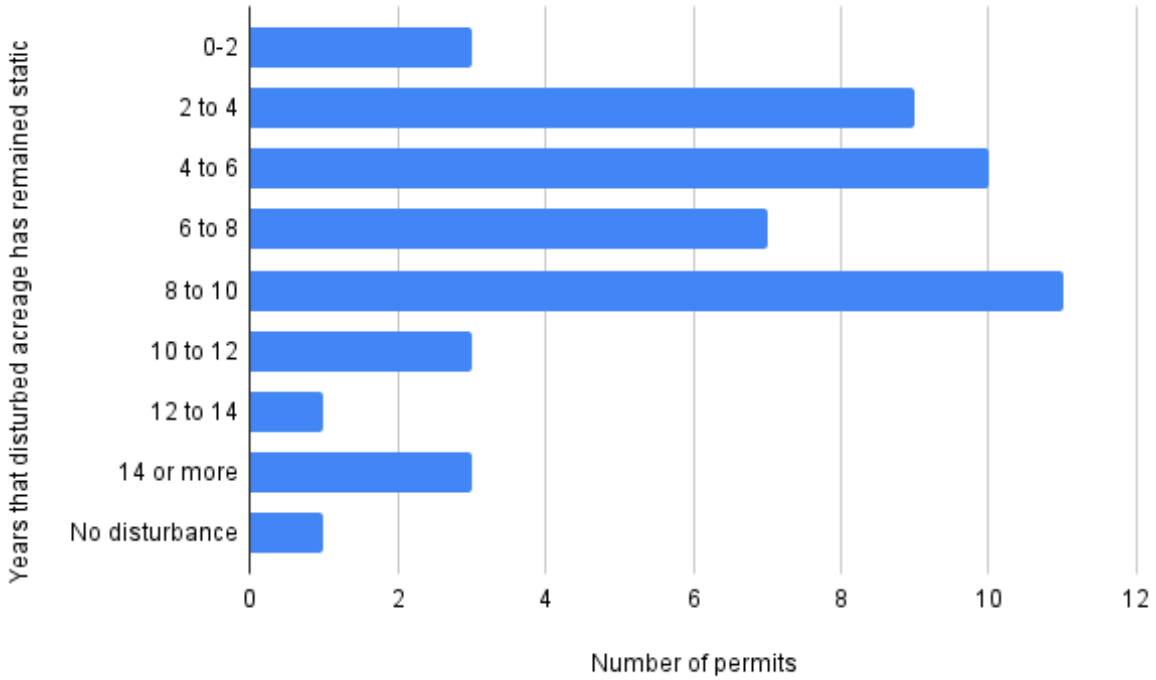

Figure 3: *Years that disturbed acreage has remained unchanged on functionally abandoned permits, suggesting that reclamation has stalled*

We realize that even though a permit is not producing coal, it could be undergoing reclamation while in active status. However, we reviewed the disturbed acreage on each of the functionally abandoned permits and the number of years that that acreage has remained unchanged. We found that disturbed acreage on the majority of permits has remained unchanged for more than four years. It has remained unchanged for more than six years on half of the functionally abandoned permits (Figure 3). While we recognize that some reclamation may have been undertaken on those permits that is not reflected in the state's disturbed acreage data, the fact that disturbed acreage has largely remained static while coal production has ceased indicates that those active permits are not completing reclamation.

We also reviewed the amount of highwall on functionally abandoned and actively producing permits over a six month period. A highwall is the cliff of overburden on the mountain above the coal that is exposed to facilitate coal production in certain types of surface mining (Figure 4). To mitigate the significant hazards that highwalls pose,[4] Kentucky's mining regulations limit the lengths of linear feet of highwall that can be left open during coal removal.[5] Further, after the coal is removed, the highwall must be reclaimed, typically within 60 days. 31 of the 48 functionally abandoned permits in our dataset had open highwall, and we found very

[4] For more information on the threats that highwalls pose see: https://www.msha.gov/highwall-safety-alert and https://www.blm.gov/programs/aml-environmental-cleanup/aml/dangers

[5] Highwalls are one of the most significant hazards of coal mining especially in steep slope areas. Yet, not all lengths of open highwall are violations of SMCRA. A certain amount of highwall is required during the coal removal process for many mining operations. Kentucky's regulations allow up to 1,500 linear feet of highwall during active operations for certain types of mines. 405 KAR 16:020 §3. But that length of highwall must be reclaimed within 60 days of coal removal. However, as part of its bonding program, in certain conditions, Kentucky allows open highwall to remain so long as the company posts a separate "supplemental assurance" bond specifically for that highwall. Kentucky's supplemental assurance bond rate is currently $150,000 per 1,500 feet of open highwall. 405 KAR 10:015 §11.

little change in total highwall on these permits over a six month period (Table 2). Only one of the functionally abandoned permits had a reduction in highwall during this six month period, and one of the functionally abandoned permits increased its highwall during this period even though it was not actively producing coal. This indicates that there is progress towards reclaiming highwalls on only one of the functionally abandoned permits.

Our analysis indicates that the issue of functionally abandoned mine permits is not specific to a single company, but is an industry-wide trend. There are 58 companies associated with the full set of 126 permits that we analyzed, and 25 of those companies (43%) are associated with the 48 functionally abandoned permits. There are three permittees – Clintwood JOD LLC, Premier Elkhorn Coal, and Kentucky Land

Figure 4: *Photos taken in November 2023 of a highwall on a functionally abandoned permit in Pike County, KY*

Table 2: *Highwall data as of January and July 2023**

Month	Permit Type	Total Highwall (linear feet)
January 2023	Actively Producing Coal	118,115
	Functionally Abandoned	78,911
July 2023	Actively Producing Coal	105,649
	Functionally Abandoned	78,961

**This table compiles the highwall datasets provided by the state for January and July 2023. Out of the 126 active permits in our dataset, these tables contain highwall data for 96 permits (31 functionally abandoned, 65 actively producing) that had open highwall during the period.*

Resources – that have more than three functionally abandoned permits (Table 3, Figure 5). We also find that the abandoned permits are spread across the state, affecting both the eastern and western coal regions (Table 4). However, at the county level there is a particularly high concentration of abandoned permits in Pike County, Kentucky (Figure 6). The county contains 46% of the state's functionally abandoned surface mine permits.

Table 3: *Companies with more than three functionally abandoned permits*

Company	**Number of functionally abandoned permits**	**Number of actively producing permits**
Clintwood JOD LLC	12	3
Premier Elkhorn Coal, LLC	5	1
Kentucky Land Resources, Inc.	4	0

Figure 5: *Photos taken in December 2023 of two mines permitted to Clintwood JOD, LLC. Images show thousands of feet of unreclaimed highwall. These mines have not produced coal since 2017 and 2019. Photo Credit: Appalachian Voices*

Table 4. *Distribution of functionally abandoned permits across the jurisdictions of Kentucky Division of Mine Reclamation and Enforcement Branch Offices*

Division of Mine Reclamation and Enforcement Branch Office	Number of total surface permits in active status	Number of active permits that are functionally abandoned	Percentage of active permits that are functionally abandoned	Disturbed acreage associated with functionally abandoned permits
Hazard	36	6	17%	939
Madisonville	6	6	100%	2562
Middlesboro	38	11	29%	2829
Pikeville	46	25	54%	5587

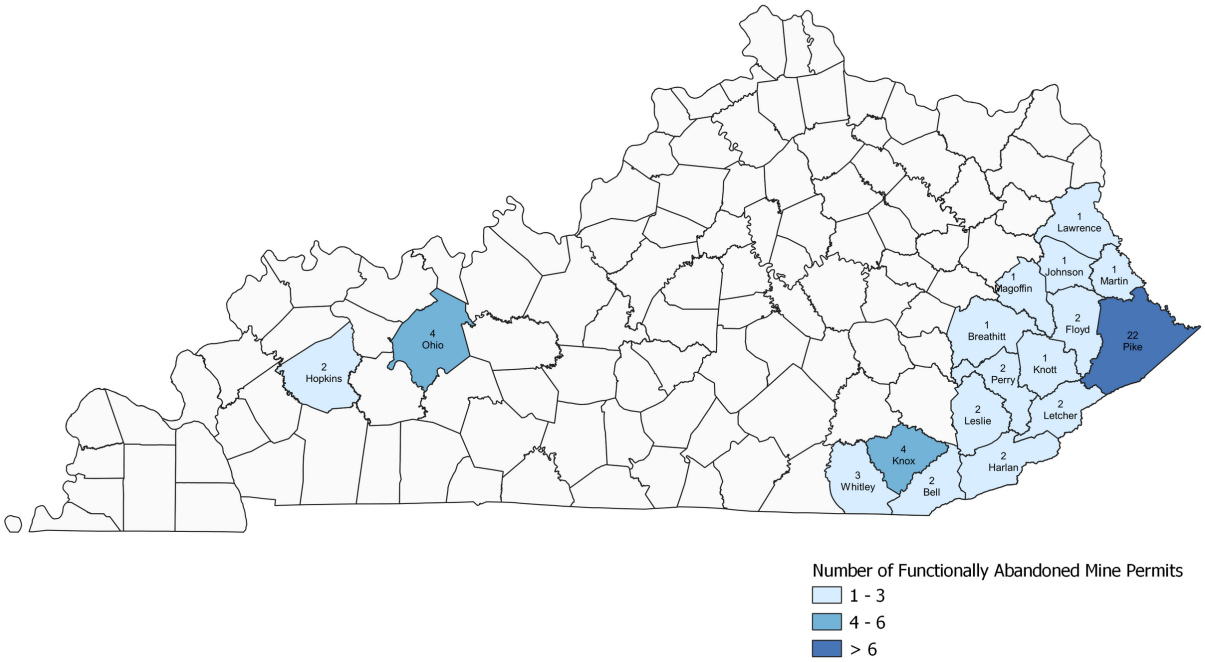

Figure 6: *Number of functionally abandoned mine permits per county (five permits span county boundaries and are counted twice, once per county).*

CONCLUSION & RECOMMENDATIONS

Our results show that a large portion of Kentucky's surface coal mines designated as "active" are actually sitting idle and unreclaimed, and have been for years. Specifically, we find that nearly forty percent of surface mine permits classified as active (or those that were suspended while in active status) have not produced coal since 2020. These permits include nearly 12,000 disturbed acres. The majority of these have not produced coal since 2019, and a small portion of these permits have not produced coal for over a decade. We also find that this issue is not specific to a handful of companies or a particular geographic region. We find that many companies (25) have functionally abandoned permits, and that there are functionally abandoned permits across Kentucky's four regulatory regions. However, all of the active surface permits in the Madisonville region, and over half of the permits in the Pikeville region are functionally abandoned. We recognize that just because a mine has idled production and is in active status, that does not necessarily mean that all work on the site and progress towards reclamation has stalled. However, we found that disturbed acreage has remained static on the majority of functionally abandoned mines for several years and that total highwall also remained nearly static during the first six months of 2023, suggesting the reclamation is not occurring on those sites.

Without the promise of future coal production on functionally abandoned mines and due to the environmental and public health and safety hazards these mines pose, these mines should be reclaimed expediently, transitioned into alternative uses, or reforested to benefit the region. In order to ensure sufficient funding for reclamation, we recommend that state regulators redetermine the required bond amounts for all functionally abandoned permits. Second, to ensure timely and adequate reclamation, we recommend that state regulators re-examine all permits that have not produced coal since 2020. We recommend that regulators move them into reclamation status and use the full reach of their enforcement authorities to spur immediate reclamation of these sites. If the permittee fails to comply with the state's enforcement actions, the state should move forward with forfeiture proceedings.

We understand that trends in coal removal and mine reclamation would benefit from an evaluation that follows these mines over time. Our report, however, is a snapshot of the status of these mines from mid-year of 2023. In December 2023, after completing our analysis, we gathered additional data to determine if the status of the functionally abandoned sites had changed. We found that approximately 10% of the functionally abandoned mines identified in our report (five permits) had been shifted out of active status and into some phase of reclamation. We also learned that Kentucky had begun the bond forfeiture process on seven of the permits, indicating that coal operators are not likely to be able to complete their reclamation obligations at these sites. While these changes indicate that some level of enforcement progress has occurred, they do not necessarily indicate that reclamation will occur expediently.

APPENDIX

Defining "functionally abandoned": We characterize permits that have not produced coal since 2020 – in years 2021, 2022, or 2023 – but remain in an active coal production permit status as functionally abandoned. We base our justification in coal market trends. The beginning of Q3 of 2020 (July) was the lowest point for coal spot prices after the COVID pandemic began. Prices spiked to their highest point in over a decade in December 2022. Therefore, we feel comfortable defining a coal permit as functionally abandoned and likely to be uneconomic for production if it did not go back into production in 2021 or 2022 following the price lows of 2020 (Figure A1).

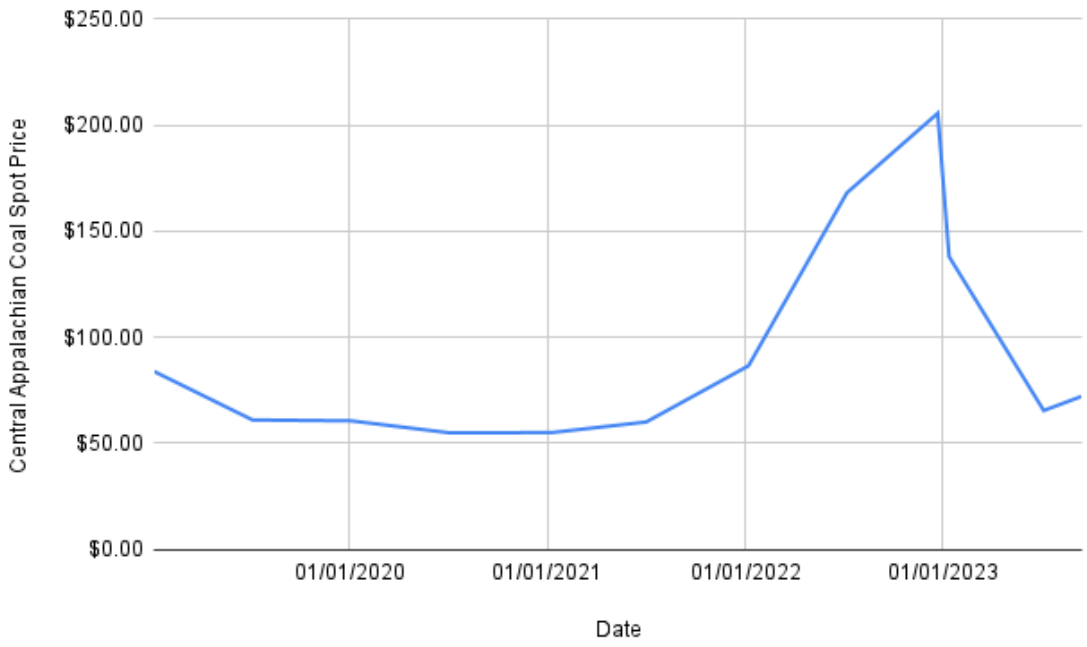

Figure A1: *Central Appalachian Coal Spot Prices 2019 - 2023*
(Graph data source: https://www.eia.gov/coal/markets/)

Identifying active surface mine permits: In order to identify surface mine permits in Kentucky, we requested a list of inspectable units from the state regulatory authority on August 1, 2023. The list contained 1271 inspectable units, or permits, and 222 were permitted with the primary mine type as "surface." We then further narrowed our selection process to include in our analysis only those surface permits that were in A1 or AP status, a status that indicates that the mine is or will imminently be producing coal. The Kentucky regulatory authority defines AP as "actively producing" and A1 as "actively moving coal or removal of coal a possibility." There were 149 surface permits that fell into these categories: 107 permits in A1 status and 42 permits in AP status.

Suspended permits: In identifying mine status, we noted that a number of permits were categorized as "suspended." Pursuant to KRS 350.518(9), a permit is suspended when fees due to the Kentucky Reclamation Guaranty Fund are in arrearage. For those suspended surface mine permits, we investigated the permit history using Kentucky Surface Mine Information System (SMIS). We included suspended surface mine permits that were in either A1 or AP status just prior to the suspension in our analysis as active surface mine permits. There were 18 such permits. This brought the total of surface mine permits under consideration to 167.

Coal Production data: We identified the most recent year of coal production on a permit-by-permit basis using Coal Reclamation Fee Reports received by OSMRE. 30 U.S.C. §1252(c) requires that each coal operator submit to OSMRE reports of the amount and type of coal produced and the method of coal removal for each quarter of production. We obtained production records from the first quarter of 1990 through the first quarter of 2023. Using R package software, we created a subset of the production record data that contained only the most recent year and quarter of production for each permit. Using permit numbers, we then joined this production data to the inspectable unit list provided by the state of Kentucky to identify the most recent year and quarter of production for each of the 167 surface permits.

We were able to associate a little over half (89/167) of the surface permits with OSMRE production records. For the portion of the 89 permits for which OSMRE had no production records since 2020, we used additional data sources (i.e., SMIS, OSMRE's Geomine, and MSHA production records) to further confirm OSMRE's records. We looked for evidence that would undermine the assumption that the OSMRE data were correct (e.g., lack of disturbance, number of bonded increments, other active uses of the site).

For the remaining 78 permits for which we were unable to associate OSMRE production data since 1Q 2020, we used a combination of OSMRE records for past permits from which the current permit had transferred, MSHA production records, sentinel imagery from Geomine, and data included in SMIS concerning bond amounts, disturbance histories, and violations to either 1) identify a last year of production and make a determination of whether or not the mine permit was functionally abandoned or 2) determine that we needed to exclude the permits from our analysis.

We excluded 37 permits either because they were underground mines with little surface area disturbance or because the permit covered ancillary non-producing facilities like conveyor corridors, haul roads, refuse disposal sites, or preparation plants. We excluded an additional 4 permits that were in suspended status that had produced coal within a year prior to their suspension as the regulatory action of suspension could have been primarily implicated in the mine's cessation of coal production rather than having stalled production for other reasons.

The remaining 37 permits we included in our analysis and classified as either actively producing or functionally abandoned. If the coal production years conflicted between OSMRE and MSHA datasets, we selected the most recent of the two. Our final dataset included 126 surface mine permits that should be or are likely to produce coal according to their state-designated status.

Disturbed acreage data: In addition to production data, we also collected data from SMIS for each permit on the number of disturbed acres as of the 2023 Q2/Q3 inspection.

Highwall data: The state of Kentucky maintains monthly records on highwall data. We obtained these data for the months of January and July 2023.