

# Upper Armstrong Creek Preliminary Assessment/ Site Inspection (PA/SI)

## 1. INTRODUCTION

By adoption of Fayette County Code Enforcement Agency (“FCCEA”) **Resolution 2019-02** (effective March 7, 2019) as clarified by **FCCEA Resolution 2021-\_\_\_** (effective February 1, 2021) the **FCCEA** directed the **FCCEA** Site Project Manager for the “Upper Armstrong Creek Watershed Pollution Abatement Project” to conduct a Preliminary Assessment (“PA”) of the past and on-going acts, omissions and conditions that have, or may have, caused or contributed to, or that are, or maybe causing or contributing to, the known and any reasonably suspected conditions of **Public Nuisance**, as that term is defined in the Fayette County Comprehensive Public Nuisance Abatement Ordinance, Fayette County Ordinance No. 2018-01 (“**FCoWV Ordinance 2018-01**”) in the Upper Armstrong Creek Watershed located in the Valley District of northwestern Fayette County in order to determine the need for additional investigation or Abatement Action by the **FCCEA** under **FCoWV Ordinance 2018-01**.

The Site PA was conducted in accordance with United States Environmental Protection Agency (“USEPA”) *Guidance for Performing Preliminary Assessments Under CERCLA*<sup>1</sup>. The scope of the Site PA for the Upper Armstrong Creek Watershed Pollution Abatement Site included a review of available site information, a compilation and evaluation of potential Responsible Parties, a site reconnaissance, and an environmental engineering evaluation of reconnaissance information.

## 2. SITE BACKGROUND

### 2.1 The Upper Armstrong Creek Location:

The Upper Armstrong Creek Watershed is a part of greater Armstrong Creek, of the Kanawha River. Armstrong Creek is in the central portion of the Upper Kanawha watershed, as shown in Figure and drains approximately 22.85 square miles (14,626 acres). The dominant land use is forest, which covers 93.98 percent of the watershed. Other important land use types include

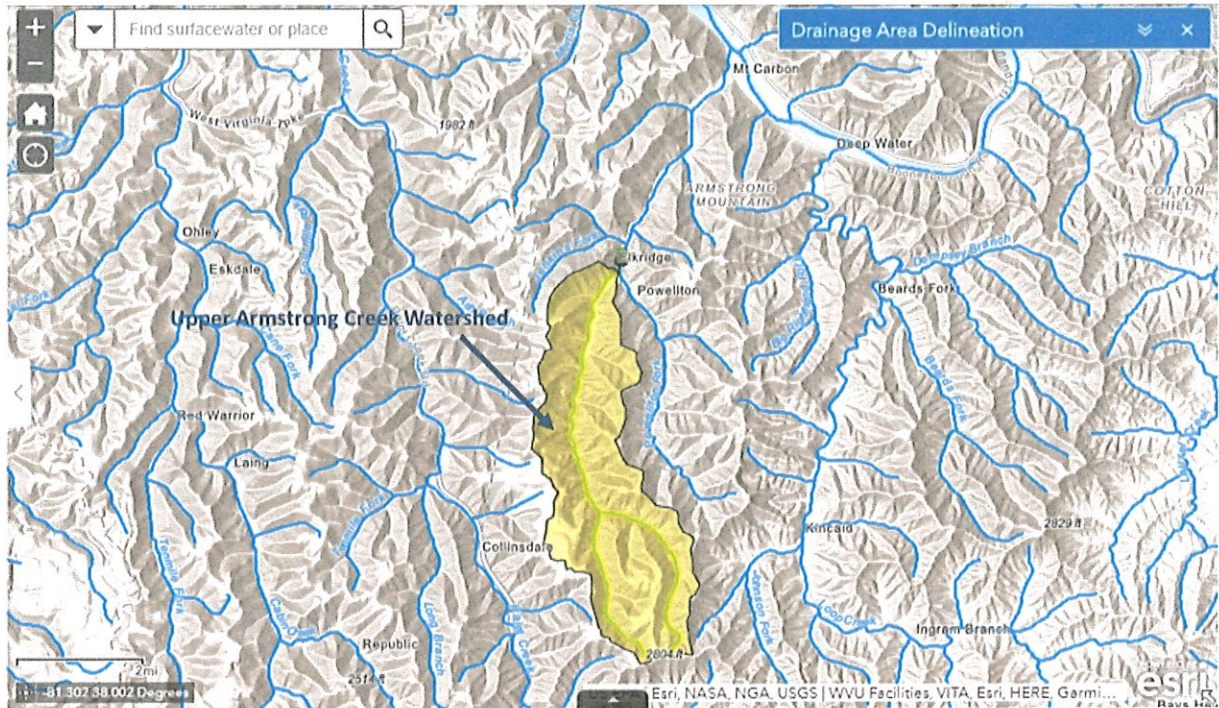
---

<sup>1</sup> The term “**CERCLA**” refers to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601 – 9675 (commonly known as “**CERCLA**” or the “federal Superfund Act.”)

urban/residential (3.41 percent) and barren/mining land (2.14 percent). All other individual land cover types account for less than 2 percent (2%) of the total watershed area (*Final Upper Kanawha Watershed TMDL Report, Appendix I*).

The Upper Armstrong Creek Watershed, as used in this Preliminary Assessment, is the entire geographical area from the confluence of Armstrong Creek and Powellton Branch, at the

community of Powellton (Latitude: N38°05'55.68"), up-stream on Armstrong Creek in a southerly direction to the headwaters of Armstrong Creek which includes the Right Fork of Armstrong Creek and Left Fork of Armstrong Creek and the start of the watershed at an approximate northerly ridge named Payne Knob (Latitude: N38°00'36") with an elevation of approximately 2805 and is approximately 6.01 miles north of the Town of Powellton ("Upper Armstrong Receiving Watershed"). See below:



## 2.2 Description and Ownership History:

Since the 1950's (perhaps earlier) and continuing into the present, various companies have conducted surface mining and underground mining (with associated surface operations) within the Upper Armstrong Receiving Watershed.

Riverton Coal Company operated underground coal mines and associated surface operations and a preparation plant, including the Riverton Numbers 18 and 35 Mines, on Right Fork Armstrong Creek in the Peerless seam of coal in the late 1970's. Kanawha River Mining Company operated surface mines, including the Sycamore South Mine, on Right Fork of Armstrong Creek at least in the early 2000's in the Stockton and Coalburg seams of coal.

Eastern Gas and Fuel Company (and its corporate successor, specifically including Eastern Associated Coal Corporation) operated underground mines, including the Powellton Number 3 Mine, on Upper Armstrong Creek from the 1880's until at least the late 1950's in the Powellton seam of coal. After January 1, 1966 until early this century, Eastern Associated Coal Corporation



was the principal owner of most of the coal minerals and fee ownership of many properties within the watershed used by various coal mining companies for various mining activities and facilities within the watershed.

Hawks Nest Mining Company (and its corporate predecessors) operated mines, refuse disposal areas, and the Katie Prep Plant on Upper Armstrong Creek beginning in the mid-1980s, to about 1990.

Seminole West Virginia Mining Complex, LLC and its now-bankrupt parent company, Maple Coal Company, operated surface mines, underground mines (and associated surface operations), a preparation plant, and coal refuse disposal areas in the Upper Armstrong Receiving Watershed from late 2015 until late April 2019. These operations include mining in the Eagle, Powellton, Lower Winifrede, Fire Clay, Stockton, Coalburg, Little Coalburg, Upper Winifrede, and Winifrede seams of coal.

Pardee Minerals, LLC (Pardee Resources Group, Inc; Pardee and Curtin Realty LLC) owns/controls most of the coal mineral in the watershed. On June 27, 2003, Pardee and Curtin Realty LLC acquired the mineral and surface ownership from Eastern Associated Coal Corporation. On June 27, 2013, Pardee and Curtin Realty LLC sold most of the surface interest of this real property to Quercus WV LLC in 2014. Pardee maintains mineral ownership in the Upper Armstrong Creek Watershed.

## 2.3 Previous Investigations and Regulatory History:

The Armstrong Creek and Right Fork of Armstrong Creek are listed on the WV 303d list<sup>2</sup> of

---

<sup>2</sup> Under Section 303(d) of the federal Clean Water Act, 33 U.S.C. § 1313(d), states are required to evaluate all available water quality related data and information to develop a list of waters (*i.e.*, stream segments) that do not meet established Water Quality Standards (*i.e.*, impaired waters) and those that currently meet WQS, but may exceed the applicable WQS's for any given pollutant or contaminant in the next reporting cycle (*i.e.*, threatened waters). States then must develop a Total Maximum Daily Load ("TMDL") for every pollutant/waterbody combination on the list. An essential component of a TMDL is the calculation of the maximum amount of a pollutant or contaminant that can occur in waterbody and still meet WQS. Within the TMDL the state allocates this loading capacity among the various point sources and non-point sources discharging into that stream segment. The required permits for discharges of pollutants and contaminants from point sources are then issued or modified through the federal and state administered National Pollutant Discharge Elimination System ("NPDES") mandated by Congress in CWA §§ 301 and 402, 33 U.S.C. § 1311 and 1342. Listing a waterbody-pollutant combination as "impaired" has significant legal and environmental and public health protection consequences. It is interpreted by the public to put into serious question: (1) whether any dermal contact with, swimming in, or ingestion of the impaired waters is safe; and (2) whether the adversely impacting fish, macroinvertebrates, and vegetation that depend on the waters of the



“Impaired Waters” and have in place Total Maximum Daily Load (TDML’s) limits governing future “point source” discharges to surface waters within the Armstrong Creek and Right Fork of Armstrong Creek. Coal mining activities have caused and continue to cause known impairments to these streams from both permitted and unpermitted discharges, and from contaminated groundwater. The **Pollutants and Contaminants**<sup>3</sup> in the Upper Armstrong Watershed have contributed to and continue to contribute to the impairments of Armstrong Creek, also a WV 303d listed impaired stream. Documented impairments from mining activities are related to numeric water quality criteria for aluminum, manganese and pH. The watershed is also biologically impaired based on the narrative water quality criterion of 47 CSR 2–3.2.i, which prohibits the presence of wastes in state waters that cause or contribute to significant adverse impacts on the chemical, physical, hydrologic, and biological components of aquatic ecosystems (*WVDEP Final Upper Kanawha Watershed TMDL Report, Appendix 1* ).

WVDEP Records of the West Virginia Department of Environmental Protection (“WVDEP”) indicate an area of coal mining waste dumping within the watershed, containing gob pile(s). Records indicate that WVDEP has assigned a Problem Area Description (“PAD”)

---

impaired stream segment. In addition, such a listing as "impaired waters" may significantly hinder efforts to attract people or businesses to an area. Businesses may also be faced with more stringent NPDES permit limits that have the practical effect of either encouraging relocation of existing businesses with NPDES permits or discouraging new business that will require an NPDES permit from locating within an impaired watershed.

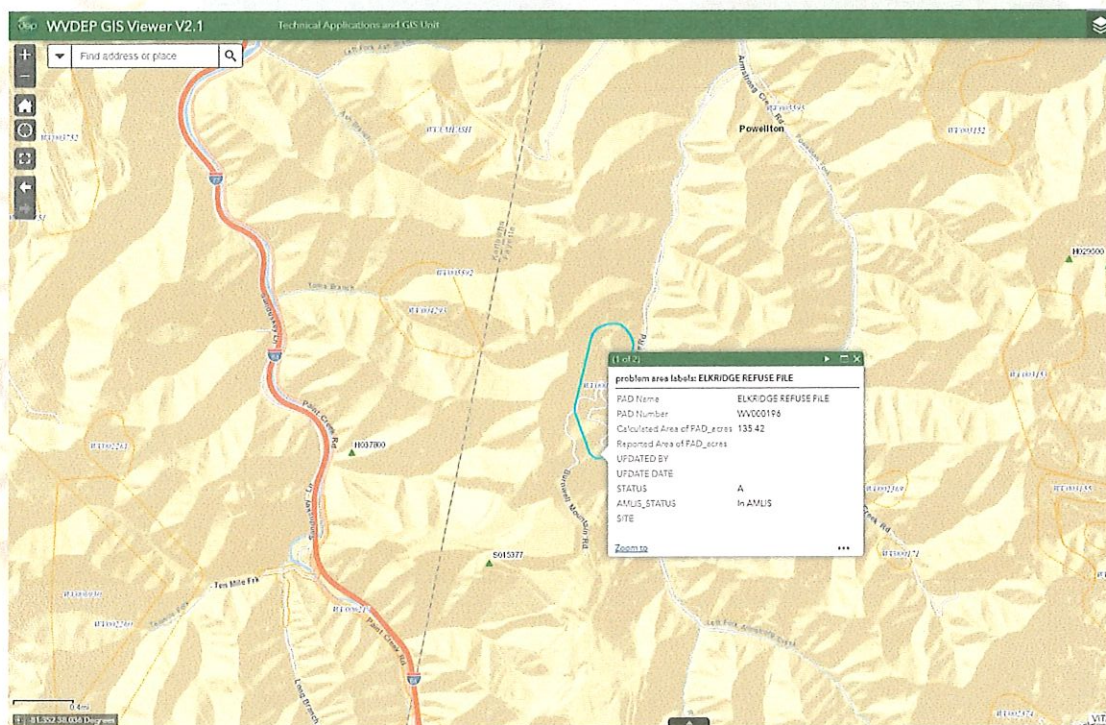
<sup>3</sup> Consistent with its definition in Section III(ee) of **FCoWV Ordinance 2018-01**, the term "**Pollutant or Contaminant**" as used herein means dredged spoil, solid waste, incinerator residue, sewage, garbage, sewage sludge, munitions, chemical wastes, biological materials, radioactive materials, heat, wrecked or discarded equipment, rock, sand, cellar dirt and industrial, municipal, and agricultural waste discharged into any water, including groundwater. This term does not mean:

- (1) sewage from vessels or a discharge incidental to the normal operation of a vessel of the Armed Forces of the United States (within the meaning of 33 U.S.C. § 1322) or of the State of West Virginia;
- (2) water, gas, or other material which is injected into a well to facilitate production of oil or gas, or water derived in association with oil or gas production and disposed of in a well, if the well is used either to facilitate production or for disposal purposes and is lawfully approved by authority of the State of West Virginia, and if the State of West Virginia has determined that such injection or disposal will not, when operated in compliance with applicable regulations and permit terms and conditions, result in the degradation of ground or surface water resources within Fayette County; provided, however, that such well is maintained and operated in compliance with all such applicable regulations and permit terms and conditions;
- (3) petroleum, including crude oil or any fraction thereof which is not otherwise specifically listed or designated as a **Hazardous Substance** under subparagraphs (A) through (F) of CERCLA § 101(14), 42 U.S.C. § 9601(14); or
- (4) natural gas, liquefied natural gas, or synthetic gas of pipeline quality ( or mixtures of natural gas and such synthetic gas).



numbers to the area: PAD WV000196 ELKRIDGE REFUSE PILE. See attached map, Figure 1. A purpose of the PAD is to score the sites for potential reclamation under the Abandoned Mined Lands (“AML”) program, operated by WVDEP, consistent with applicable funding restrictions from the U.S. Department of the Interior.

The Elkridge Refuse Pile was evaluated in 1984. The site is described as follows: “Coal refuse has been deposited in a hollow above the community of Elkridge. The site has unstable slopes, eroding surfaces, and dangerous cliffs; Surface runoff from the site is depositing refuse onto area residents property and clogging the receiving stream with sedimentation. A small area of less than one (1) acre is burning. Foul gases are being discharged in this area. The refuse covers approximately 10 acres. The general welfare of the Elkridge community is being jeopardized by this coal refuse site.” See location map below:



In 1983, the WV Division of Reclamation stated about this mining waste disposal site: “The property where the mining operations were conducted has been owned by Eastern Coal Company since January 1, 1966. Eastern Star (now Eastern Coal) conducted the mining operations which created the above described conditions. The mining operation ceased in the early 1960's.”



It clearly appears from this WV Division of Reclamation record that the waste disposed at this surface disposal site was coal mining waste, not overburden<sup>4</sup> material, and this is also evidenced by the fact that the pile was then burning.

In 1983, this coal mining waste disposal site was considered a high priority (Priority 1) site, and it was recommended that:

The coal refuse pile should be regraded so as to establish moderate, stable slopes with benches. All burning material should be extinguished. Surface water runoff should be controlled by sloping all benches toward the rear and toward the sides. A temporary sedimentation pond should be constructed prior to regrading and permanent drainage control ditching should be installed during construction. The regraded pile should be covered with soil. Soil appears to be available adjacent to the site. All disturbed areas should then be revegetated.

An alternate recommendation included in that same WV Division of Reclamation ("WVDofR") report was:

The coal refuse could be removed by hauling it to nearby existing strip benches. The refuse would then be covered with soil and all disturbed areas revegetated. Transporting the refuse to the strip benches would add greatly to the estimated construction cost; however, it would serve to reclaim them.

Reclamation work on this coal mining waste disposal site began in 1985, with the goal being to establish drainage control and build a temporary sedimentation pond, extinguish burning material, regrade the pile, stabilize slopes, cover with soil and revegetate. Through various change orders in the record, it appears that some of the refuse was removed from the property of adjacent property owners, but it is unclear where this refuse was disposed. Otherwise it appears that all refuse remained on site. The reclamation work also included sealing 5 mine portals.

It appears from the response to the Freedom of Information Act ("FOIA") request submitted to WVDEP that this work was completed, with several change orders. The focus of the work at this coal mining waste disposal site was then slope stability and sedimentation prevention. Groundwater protection does not appear to have then been a project goal, and, in fact, nothing in the record indicates that the work provided any protection of groundwater or surface water at all through the groundwater interface.

---

<sup>4</sup> Consistent with its definition in the federal Surface Mining Control and Reclamation Act (MCRA) regulations, 30 C.F.R. § 701.5, the term "**Overburden**," as used herein, means material of any nature, consolidated or unconsolidated, that overlies a coal deposit, excluding topsoil and mining waste containing ore or minerals resulting from the extraction, beneficiation, or processing of coal.



In addition to the above statement by WVDoR regarding the owners and operators of this coal mining waste disposal site by WVDoR, WVGES mapping indicates that Eastern Gas and Fuel operated the Powellton No. 3 mine in the same location in the 1950s.

As the coal mining history in the Upper Armstrong Watershed is extensive, so is the regulatory history of these operations. In addition to many historical operations, there are currently 12 active mining permits in that Watershed:

Upper Armstrong Active Permits		
<u>Mining Permit</u>	<u>Mine</u>	<u>Associated NPDES Permit</u>
O602289	Haulroad	WV0057011
S300795	Sycamore North Surface	WV1009311
S304387	Chilton Contour/Haulroad	WV1009311
U301607	Maple Eagle East	WV1022334
S602089	Sycamore South Surface	WV1009311
S304191	Sycamore South Extension	WV1009311
O004885	Stover Hollow Refuse	WV0090131
S303188	Huffman Surface	WV1009311
S300412	Mt. McGuire Surface	WV1026674
O300390	Elkridge Stockpile	WV0090131
U301906	Maple Eagle No 1	WV1022164
O004785	Katie Prep Plant	WV0090131

Publicly available permit documents for each permit were reviewed and included by reference here. Multiple unlined ponds, ditches and waste disposal areas exist within the watershed on these active permits.



## 2.4 FCCEA RPM Site Inspection:

As directed by the FCCEA, Special Investigator D. Scott Simonton, PE, PhD inspected the area of the identified coal mining waste piles the surface of the real property in the Upper Armstrong Watershed on May 31, 2019. Dr. Simonton was accompanied by Bob Butcher, a forestry contractor for Quercus West Virginia LLC, the owner of the majority of the surface property in the watershed. The inspection was to include walking to the areas identified by WVDEP as coal mining waste gob piles, confirming that they were mine-waste dumps, and sampling surface water associated with the dumps. However the site is now a part of the real property leased in connection with an active mining operation, the Seminole West Virginia Mining Complex Sycamore North surface mine permit or a related haul road permit. Although within the property leased in connection with that active surface coal mining operations, this historic coal mining waste disposal site is not within the "Permitted Area" addressed by the current WV coal mining permit. Therefore, it was not possible to visit the site that day, so sampling was conducted in a stream that appears to be from the area and directly below the coal mining waste gob piles, at a road culvert prior to the stream discharging to Armstrong Creek. Sampling consisted of both basic water quality with field meters (pH, Conductivity, temperature and ORP) and collection of samples for laboratory analysis.

It should be noted that prior to sampling, including the previous night and the previous several days, the area had experienced considerable precipitation. While all samples would include both surface water and groundwater components, the majority of the water sampled would likely be surface water runoff, diluting any contaminants associated with groundwater.

Laboratory analysis (attached) indicates the presence of **Pollutants and Contaminants** associated with mine-waste in the waters influenced by these mine-waste dumps, however, likely due to aforementioned precipitation, concentrations of some contaminants such as iron and manganese were fairly low; however, conductivity, at 945 uS is very high and clearly indicates an anthropogenic impact. The most likely impact would be from the coal mining waste piles immediately upgradient. The presence of arsenic, beryllium, lead and selenium – especially toxic metals – in the sample are also troublesome and indicative of generally poor water quality associated with the mine-waste dumps.

As previously noted, all samples were significantly affected by "fresh" surface water runoff. While samples included some groundwater component, groundwater associated with the dumps is most certainly worse and should be carefully and completely evaluated. As these dumps were not constructed in a manner protective of the environment – for example lined with an impermeable barrier to prevent groundwater contamination and associated with some effective form of leachate collection and treatment system - groundwater beneath the dumps is certainly



contaminated and is directly hydraulically connected to surface waters and to the valley alluvial aquifer.

WVDEP satellite imagery and field observations indicate that operations continue on the site of the gob pile, including haulroads and conveyors from the prep plant immediately adjacent. It is unclear what – if anything – the conveyors are depositing onto or taking away from the site.

Generally, available records and sampling indicates that coal mining waste dumps in the Upper Armstrong Creek Watershed are likely to be adversely affecting surface water and groundwater. The stream sampled appears to be a direct conveyance from the coal mining waste gob piles, but heavy vegetation and lack of direct access at the time made visual confirmation difficult and unclear.

WVDEP records also indicate that the waste piles discussed here may be immediately adjacent to Armstrong Creek and therefore in the floodplain. Again, heavy vegetation and lack of direct access at the time made visual confirmation difficult and unclear.

### 3 Groundwater pathway:

#### 3.1 Geology and Hydrogeology:

General geological information for the area was obtained from the WV Mining Permit S300795 Sycamore North surface mine application.

Geologically, the area lies within the Kanawha Plateau Section of the Appalachian Plateau physiographic province in West Virginia, which is characterized by rolling upland areas and steep-sided, deeply incised drainage with local relief often exceeding 2000 feet.

The coal-bearing strata in this area are the Allegheny Series and the Pottsville Series specifically the Kanawha Group of the Pennsylvanian Rock of Carboniferous age. The Allegheny Series and the Kanawha Group of the Pottsville Series in the Appalachian region consists predominantly of alternating beds of sandstones, shales, coal, and a few impure and siliceous limestones.

The ground water model now generally accepted for steep terrain in the coal-bearing regions of the Appalachian Plateaus is one of a strong vertical flow component along both naturally occurring and mining-induced fractures for the higher portions of the ridges, with an accompanying component of water moving along the top of the soil/rock interface and in the near surface -especially hillside – fracture zone, and by overland flow. Groundwater flow is also heavily influenced by underground mining and mining voids. Ground water flow near drainage is generally in the alluvium which occupies in the first and second order stream valleys in the area –



such as Armstrong Creek and its tributaries - and in the shallow fracture system which underlies these valleys.

Ground water which does not enter deeper and/or interconnected fractures flows downward and laterally along shallow fractures and the soil/rock interface, laterally along bedding planes in stratified rocks and through coal cleats, and by overland flow, ultimately collecting in the first and second order drainages present in the area. Thus, contaminated groundwater higher in the drainage collects and commingles in the valley floor aquifer.

Contributing to this generally poor groundwater quality are surface water discharges into groundwater from unlined ponds, ditches and waste disposal areas within active mining permit areas within the watershed.

### 3.2 Groundwater Quality:

The underground environment in this mined region is complex in relation to geochemistry and hydrogeology. Groundwater flows will respond to pumping rates and the hydrologic cycle differently than that of undisturbed areas, generally more quickly. Changing oxidation conditions in the subsurface – also greatly influenced by mining – will cause significant fluctuations in contaminant chemistry, fate and transport.

Barring other influences, the flow of this contaminated water would be expected to follow natural gradients. As the above-drainage mines in this watershed are in the multiple seams of coal, the natural gradients for contaminated groundwater would be into the surface water and valley floor groundwater systems and stream beds. At the hillside/valley floor interface, contaminants from individual mines will commingle with contaminants introduced from upgradient mines, creating a single indivisible plume in the valley floor sediments, groundwater and surface water system.

In reviewing groundwater monitoring data in the Upper Armstrong Creek Watershed, the available data are consistent with adverse mining impacts. Seminole and subsequent owners monitor groundwater at four Article 3 wells within the area of its facilities in the watershed associated with permit number U301906 – data from 5 or 6 (varied by well) sampling events (Oct 2019 – Jan 2019) of this publicly available monitoring data were analyzed.

The results were compared to the United States Geological Survey (“USGS”) Report Ground-Water Quality in Unmined Areas and Near Reclaimed Surface Coal Mines in the Northern and Central Appalachian Coal Regions, Pennsylvania and West Virginia, Scientific Investigations Report 2006-5059. These data indicate that groundwater in these Seminole wells has very high concentrations of aluminum, with one well exhibiting mean aluminum concentrations 137x what USGS reports as an average in unmined areas and 31x what USGS reports in mined areas.



Groundwater is also monitored at other permits within the watershed and generally indicate poor groundwater quality adversely impacted by poor coal mining processes.

## 4.0 surface water pathway:

### 4.1 Hydrology:

Contaminated groundwater within the Upper Armstrong Creek watershed is discharged or flows into streams or infiltrates into rock formations that are in communication with perched aquifers, and these discharges will subsequently report to seeps and springs. Seeps and springs are affected by abandoned underground mines in the Upper Armstrong Creek Receiving Watershed and by past and current mining activities. The completely unsealed or poorly sealed underground voids left after removing the coal have resulted in a change in flow and quality of groundwater within the mine openings and the collection of water within these mines. Thus, increasing the interaction between the various contaminants, increasing the head (pressure) of the water, and the collective ability of these contaminants to adversely impact and flow or seep into groundwater and surface waters within the Upper Armstrong Creek Receiving Watershed. Water flowing through these voids continues to dissolve chemicals in the exposed surfaces of the void. This water contaminated by mining discharges to the surface in the form of a spring or seep, or as flow at the groundwater/surface water interface.

Additionally, multiple permitted and unpermitted discharges to surface water exist within the Upper Armstrong Creek watershed from current and past mining operations, including discharges from unlined impoundments of mining wastes that discharge to groundwater that is directly connected to surface water in the immediate vicinity of these unlined ponds.

### 4.2 Surface Water Quality:

Surface water impacts are described in part in WVDEPs *Final Upper Kanawha Watershed TMDL Report, Appendix 1*. These contaminants are the result of mining activities within the Upper Armstrong Creek Receiving Watershed, especially coal mining impacts to groundwater that is hydrologically connected to surface water.

This toxic contamination has comingled within the groundwater and caused degradation of surface waters and sediment to the point that they can no longer meet their designated uses under the Clean Water Act and appear on the WV 303(d) list of impaired waters. Documented impairments from coal mining activities within the Upper Armstrong Creek Watershed are related to numeric water quality criteria for manganese, aluminum, and pH. The watershed is also biologically impaired based on the narrative water quality criterion of 47 CSR 2-3.2.i, which



prohibits the presence of wastes in state waters that cause or contribute to significant adverse impacts on the chemical, physical, hydrologic, and biological components of aquatic ecosystems. The streams suffering these adverse impacts from mining operations are within the Upper Armstrong Creek Receiving Watershed.

## 5. summary and conclusions:

Past and ongoing coal mining operations within the Upper Armstrong Creek Watershed have negatively impacted groundwater and surface water within the Upper Armstrong Creek Watershed and increased the concentrations of various contaminants within these waters, to the point where the surface water no longer meets its designated uses under the federal and West Virginia Clean Water Acts.

Concentrations of toxic contaminants in groundwater are above expected background.

Coal mining activities within the Upper Armstrong Creek Watershed have resulted in co-mingled plumes of contaminants in the local groundwater system and in the surface waters and sediments within the Upper Armstrong Creek Receiving Watershed. Documents and information currently demonstrate that coal mining operations increased toxic contaminant concentrations in groundwater and surface water and sediments. It appears that at various times from no later than the 1950's to present, the mining operations caused or contributed to the past or present handling, storage, treatment, transportation, or disposal of **Hazardous Wastes**<sup>5</sup>, and **Solid Wastes**<sup>6</sup>, including iron, manganese, aluminum, sulfate, and selenium in the **Environment** at and emanating from these mining operations.

---

<sup>5</sup> Consistent with its definition in **FCoWV Ordinance 2018-001**, the term "Hazardous Waste," as used herein means:

- (1) a **Waste** or combination of **Wastes**, which because of its quantity, concentration or physical, chemical, or infectious characteristics:
- (2) may cause, or significantly contribute to, an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or (2) pose a substantial present or potential hazard to human health or the **Environment**

when improperly treated, stored, transported, disposed of or otherwise managed.

<sup>6</sup> Consistent with its definition in **RCRA** § 1004(27), 42 U.S.C. § 6903(27), in the applicable provisions of W. Va. Code § 22-15-2(31), and in the applicable provisions of Section III(ww) of **FCoWV Ordinance 2018-001**, the term "**Solid Waste**," as used herein, means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant or air pollution control facility, and other discarded material including solid, liquid, semisolid or contained gaseous material resulting from industrial, commercial, **mining**, agricultural operations, or from community activities, but does not include:

- (1) solid or dissolved material in domestic sewage;
- (2) any mixture of domestic sewage and other wastes that passes through a sewer system to a



These activities have resulted in harm that is substantial and ongoing. These harms can be addressed by well-understood remedial technologies, after a complete remedial investigation in the Upper Armstrong Receiving Watershed is completed to define the full nature and extent of the contamination.

## 6.0 SITE INVESTIGATION PLAN

Based on the results of this PA, the FCCEA determines that there exists contaminant releases and potential exposure pathways and risks to human health and the environment from these releases, and further determines that these releases have never been fully quantified. When this type of release of hazardous substances into the environment is not fully delineated and results in undefined environmental damage and unknown environmental risks, further action is necessary to investigate the site for potential impacts to human health and the environment from contaminants in soil, groundwater, surface water and sediment at and emanating from the site.

Accordingly, the FCCEA proposes designating the Elkridge gob pile as Operable Unit Number 1 (OU1) within the Upper Armstrong Creek Watershed Pollution Abatement Project, and further designates D. Scott Simonton, Ph.D., P.E., as its Remedial Project Manager (“RPM”) with regard to all work required by or in connection with this Operable Unit and this Watershed Pollution Abatement Project. Dr. Simonton will be directed to initiate efforts to complete the proposed further actions.

Further actions should initially focus on a Remedial Investigation performed in compliance with the applicable requirements of the National Oil & Hazardous Substances Pollution Contingency Plan, 40 C.F.R., Part 300 (“National Contingency Plan” or “NCP”). This Investigation is necessary and appropriate to delineate the nature and extent of contamination potentially impacting human health and the environment. This Investigation may lead necessarily to a Feasibility Study should removal or mitigation techniques, such as source removal and institutional controls, be determined as necessary.

FCCEA further recommends the designation of mine portals and seeps that contribute contaminants to the environment within the Upper Armstrong Creek Watershed as Operable Unit Number 2 (OU2) within the Upper Armstrong Creek Watershed Pollution Abatement Project. The FCCEA does not recommend further action on OU2 at this time.

- 
- publicly-owned treatment works for treatment;
  - (3) industrial discharges which are point sources subject to permits under Section 402 of the federal Water Pollution Control Act, as amended; and
  - (4) materials subjected to in-situ mining techniques which are not removed from the ground as part of the extraction process.

[Bolding emphasis added].



## 7.0 references

Department of the Interior, Office of Surface Mining, *Abandoned Mine Lands Inventory Update Form*, for Elkridge Refuse Pile, June 8, 1983, and accompanying reclamation file from WVDEP for PAD WV0196

Mine Map 902948A, *Eastern Gas and Fuel Powellton No. 3*, downloaded from West Virginia Geological and Economic Survey, <http://downloads.wvgs.wvnet.edu/minemaps/>

Active permit information obtained from WVDEP, [https://tagis.dep.wv.gov/wvdep\\_gis\\_viewer/](https://tagis.dep.wv.gov/wvdep_gis_viewer/) and <https://documents.dep.wv.gov/AppXtender/>

WVDEP, *Final Upper Kanawha Watershed TMDL Report, Appendix 1 Armstrong Creek*, January 2005,  
[https://dep.wv.gov/WWE/watershed/TMDL/grpa/Documents/Upper%20Kanawha/Armstrong%20Creek%20TMDL%20Rept\\_105.pdf](https://dep.wv.gov/WWE/watershed/TMDL/grpa/Documents/Upper%20Kanawha/Armstrong%20Creek%20TMDL%20Rept_105.pdf)

Letter Report, *Upper Armstrong Creek Gob Pile Field Investigation of 5/31/19, Fayette County, WV*, from D. Scott Simonton, Special Investigator, Fayette County Code Enforcement Agency, to Michael Callaghan, Chief Assistant Fayette County Prosecuting Attorney, July 9, 2019

Adopted by Fayette County Code  
Enforcement Agency

Fayette County W.V.

Michael L. Stolar 02/01/2021  
Fts Christopher

Attest:

Jonny Reddman  
Secret & Clerk