July 2024 Issue 1

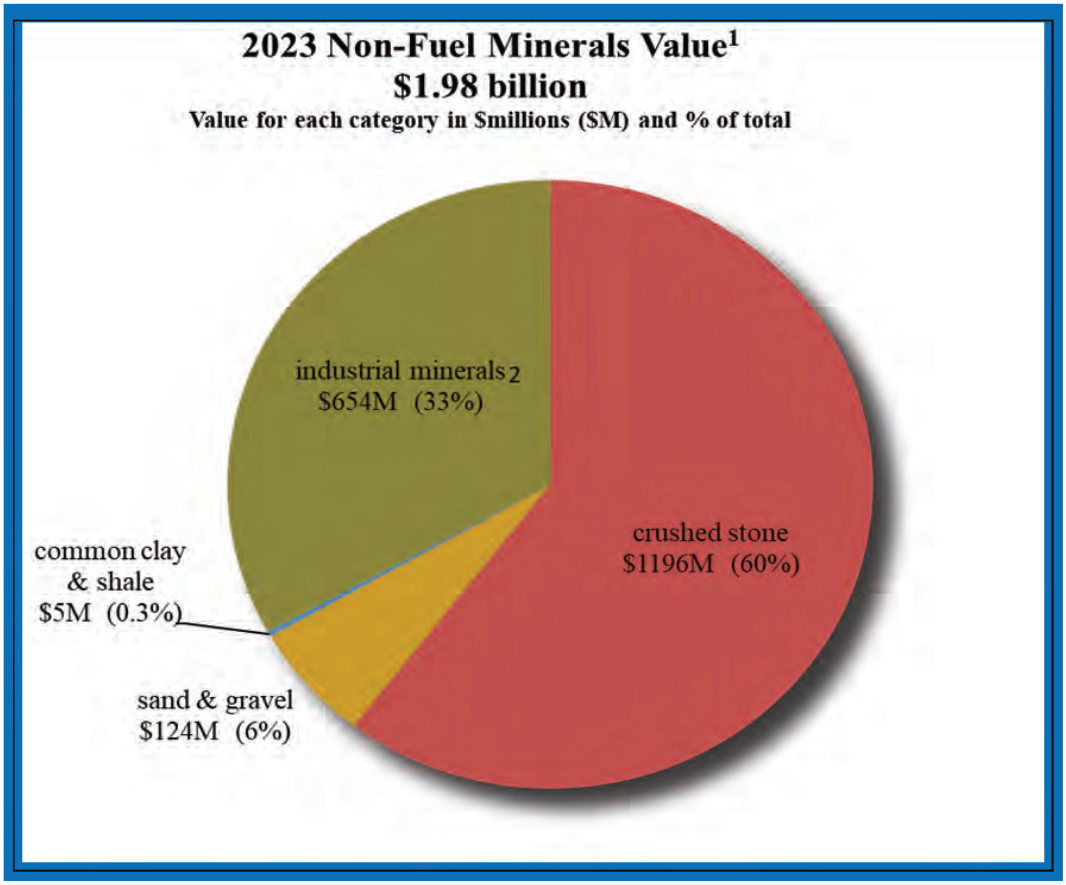
State of The Mines

Newsletter of Virginia Energy's Mineral Mining Program

Inside:

VIRGINIA Energy

The value of non-fuel minerals in 2023 was **$1.98 billion**. Crushed stone, used extensively in building and road construction, accounted for 80 percent of the total reported tonnage and 60 percent of the total estimated value of non-fuel minerals.



[1] *Estimated.*

Sand and gravel, also used primarily for construction, totaled twelve percent of the total tonnage and seven percent of the total value.

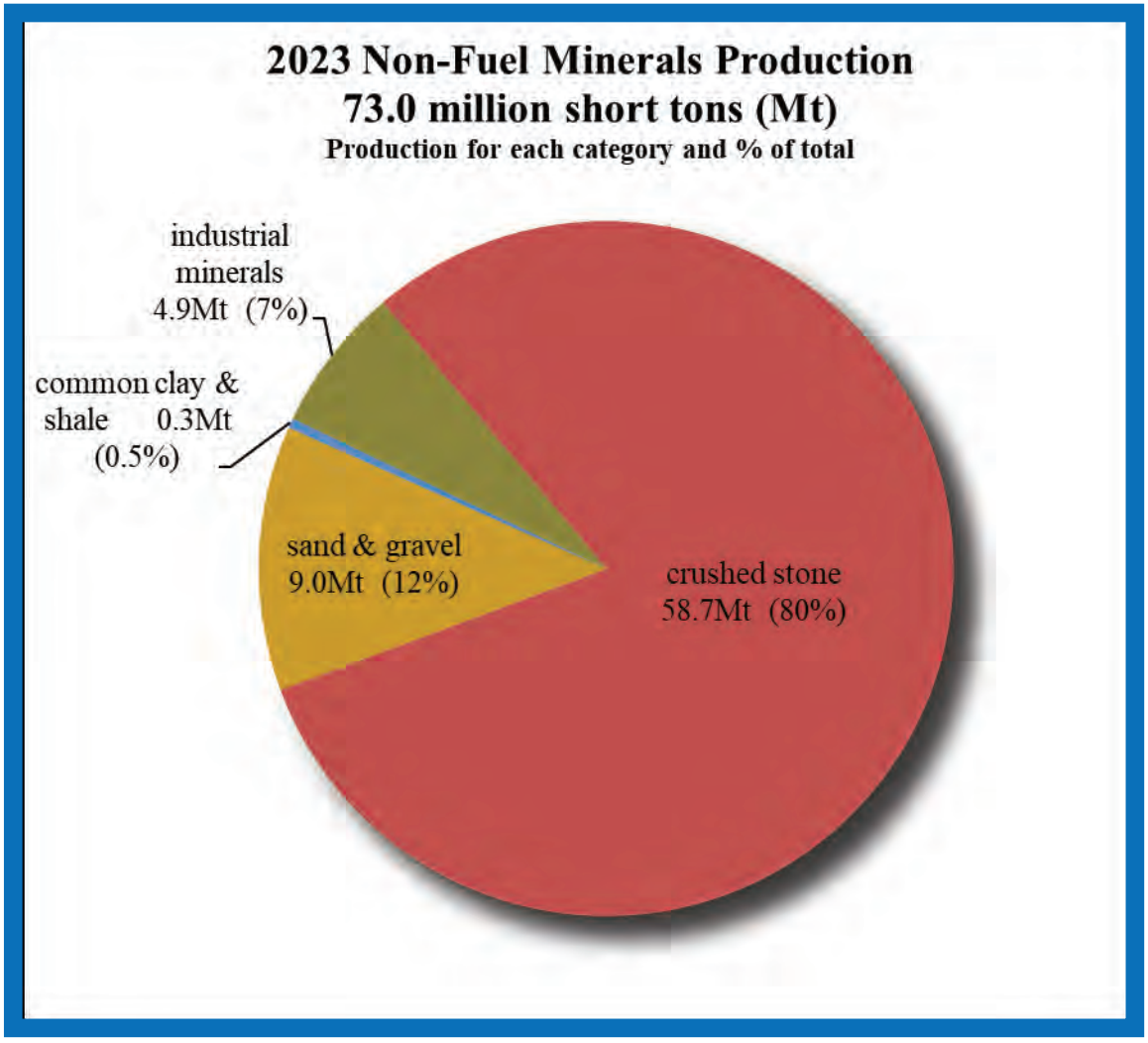
Clay and shale serve as construction materials as well as raw materials for manufacturing bricks, cement, roofing products, etc. and accounted for less than one percent of the total tonnage and estimated value.

Industrial minerals encompass a wide variety of mineral commodities used in construction, refractory and ceramic products, chemical and filtration processes, among other specialized applications and accounted for less than one percent of the total tonnage and estimated value.

Mineral Mine Statistics

At the end of 2023, there were **431** active mineral mining permits in Virginia. These mines produced **73,002,814** tons of sand, gravel, crushed stone and other aggregates and industrial minerals. Our **6,706** miners worked **7,276,853** hours!

2023 tonnage was up 2% from 2022 figures. While there was a 5% increase in the operator hours reported, there was a 28% decrease in contractor hours netting an overall decrease of 1%. Contractors continue to represent a significant portion of the mineral mining workforce in the Commonwealth at 45%.



The Mineral Mining Program uses annual production and hours data to tailor our resources to best serve our mining operators in Virginia, ensuring we have the safest workers in the industry.

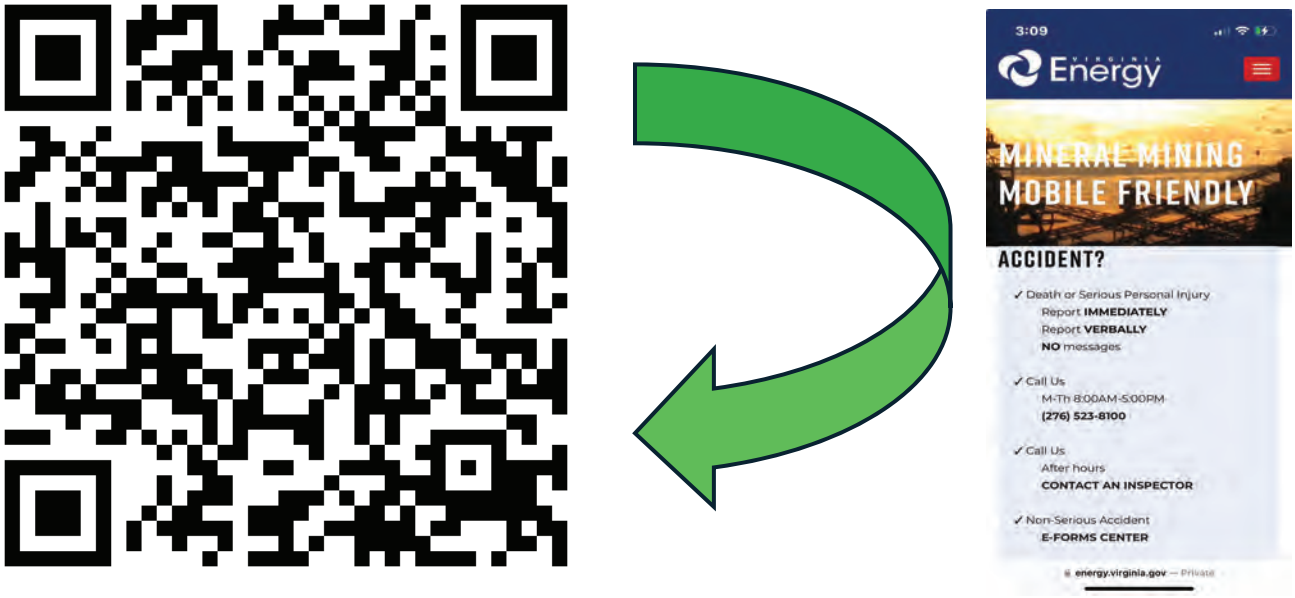
Learn more about Aggregates in Virginia on our Story Map.

Mobile Friendly App

In an effort to make it easier for our operators and customers to reach us and provide access to information and resources, we have created a mobile friendly webpage.

You can bookmark this page and add it to the home screen of any IOS or Android device for a quick and easy way to report an accident, reach your inspector and more.

Click on this link or scan the QR code below to add it to your device now.



Rebranding

In October 2021, the Department of Mines, Minerals and Energy was rebranded by the General Assembly to Virginia Department of Energy (Virginia Energy).

Be sure to update your links.

Contact Us

The Mineral Mining Program has new phone numbers!

Main office:	(276) 523-8100
Permitting:	(434) 996-5910
Training and certification:	(540) 910-5422

Mineral Mine Safety Awards

Virginia Energy and the Virginia Transportation Construction Alliance (VTCA) sponsor the annual Virginia Mineral Mine Safety Awards, a very successful program that recognizes companies and mineral miners for working safely in Virginia's mineral mining industry. Mineral mining operators nominate miners who reach milestones of 15, 20, 25, 30, 35+, 40+, or 45+years without a lost time injury. Virginia's Mineral Mining Program selects the mineral mining operation with the highest employee production hours with no occupational injuries (or lowest accident frequency rate) for the previous calendar year in eight different production hour ranges (four in the quarry category and four in the open pit category).

Since 2007, Virginia Energy and VTCA have recognized 120 companies and 525 mineral miners for outstanding safety achievements in Virginia's mineral mining industry. The 525 mineral miners recognized represent a cumulative total of 12,820 years working without a lost time injury.

For this year's award program, Virginia Energy and VTCA proudly recognize the quarries and open pit mines listed below for having the highest production hour totals with no injuries in CY2023. Read Press Release.

Quarries:

- Boxley Materials Company, Piney River Plant – 16 employees - 24,807 hours
- Luck Stone Corporation, Powhatan Plant. – 23 employees - 49,273 hours
- Cedar Mountain Stone Corporation, Rapidan Quarry – 27 employees – 67,469 hours
- O-N Minerals Company- Winchester Plant, 77 employees – 158,201 hours

Open Pit:

- Vico Construction Company, SPPIT- 21 employees – 4,975 hours
- D.M. Conner, Inc, #2 Mine- seven employees- 9,805 hours
- Holcim-Mar, Inc, Rappahannock Farm – 15 employees – 25,834 hours
- Bonney Bright Sand Company, #1 Mine - 46 employees – 58,301 hours

Mineral Mine Safety Awards

In 2023, Virginia's mines employed **6,706** workers. They worked **7,276,853** hours while producing **73,002,814** tons of sand, gravel, crushed stone, other construction aggregates and industrial minerals contributing approximately **1.98** billion dollars to Virginia's economy.

A total of **97** individuals are also being recognized this year for exemplary safety throughout their mining careers for reaching a milestone in 2023. Those individuals represent **2,872** years without lost time accidents. The companies were awarded at the VTCA's annual meeting on July 13, 2024 in Virginia Beach.

"There is no better evidence of an exemplary mining operation than each worker returning home to their family each day," said Virginia Energy Mineral Mining Program Director Phil Skorupa. "Safety is more than a practice, it's a culture for this industry and I applaud the companies that instill this work ethic to show how much they value this very important workforce."

Mineral Mine Safety Awards

Last year, **49** miners were recognized with a cumulative total of **1,318** years working in the mineral mining industry without a lost time injury who reached an award milestone in calendar year 2022.

These miners represented **nine** mineral mine companies including Blue Water Industries, Virginia Vermiculite, The Frazier Quarry, Rockydale Quarries, Salem Stone Corporation, Luck Stone Corporation, Vulcan Construction Materials and Roanoke Cement (Titan America).

Included among those recognized were **seven** miners with an amazing 40 or more years working without a lost time injury. These included **Luck Stone's Petey Herndon (40 years), Vulcan's Ralph Scott (45 years),** and **Roanoke Cement's Andy Welch (45 years), Calvin Rice (46 years), Ronald Jones (46 years), Earnest Chambers (47 years)** and **Barry St. Clair (48 years).**

Earnest Chambers, 47 years without a lost time injury

Barry St. Clair, 48 years without a lost time injury

Ralph Scott, 45 years without a lost time injury

Reclamation Award Winners

Reclamation of areas disturbed by mining is a critical part of the mining process. In recognition of this, the Virginia Mineral Mining Mined Land Reclamation Awards are given out to deserving mines who have exhibited exemplary work in the area of mined land reclamation. This annual awards program is co-sponsored by the Mineral Mining Program and the Virginia Transportation Construction Alliance (VTCA).

Nominations for reclamation awards are submitted by the Mineral Mining Mine Inspectors and the nominations are evaluated and voted on by the Orphaned Land Advisory Committee each year in June. Winners are announced in two categories: Best Quarry and Best Non-Quarry sites. An overall winner is announced between the winners of the quarry sites and non-quarry sites. The overall winner is then nominated for the national reclamation awards program sponsored by the Interstate Mining Compact Commission (IMCC).

In 2024, four mineral mines were nominated for exemplary reclamation. These included:

Overall Winner and Best Quarry: Luck Stone Corporation, Rockville Plant
Best Non-Quarry: Nestle Purina Petcare
Honorable Mention – Quarry: Vulcan Construction Materials, Puddledock S&G
Honorable Mention – Non-Quarry: J.S.G Corporation, MRA

Click here for additional information on our Reclamation Award Program.

Congratulations to all nominees and thanks for setting the bar so high for Virginia Mineral Mining Mined Land Reclamation!

IMCC National Awards

The Interstate Mining Compact Commission (IMCC) awarded **C.S. Mundy – Star Tannery Sand** the 2024 winner of the small mines division in its annual national reclamation awards! Congratulations to C.S. Mundy - Star Tannery Sand on this prestigious award!

The C.S. Mundy Star Tannery Sand reclamation project, our **2023 Overall Reclamation Award Winner,** included reclaiming approximately six acres of very unstable material. A semi-consolidated highwall consisting of a sandy quartzite material made this reclamation project especially challenging. However, proper grading, adequate control of drainage and application of the right seed mix and soil supplements, made this reclamation project a national award-winning success! Check out the before and after photographs below.

Since its inception in the late 1980's, Virginia Mineral Mines have won nine National Interstate Mining Compact Commision (IMCC) Awards for Reclamation and received two Honorable Mentions. Virginia mineral mine sites that are nominated each year compete against entries from the 25 states that are members of the IMCC. The Virginia IMCC reclamation award winners include:

2024 C.S. Mundy, Star Tannery Sand (*Small Mines*)

2022 Walker Sand & Stone, #1 (*Small Mines*)

2018 Gillies Creek Ind Recycling, Bottoms Bridge (*Small Mines*)

2015 Luck Stone Corporation, Charlottesville (*Non-coal*)

2012 Virginia Vermiculite,R.E. Sansom Mine (*Non-coal*)

2009 Iluka Resources Inc, Old Hickory Mine (*Non-coal)*

2006 Vulcan Construction Materials,Curles Neck (*Non-coal*)

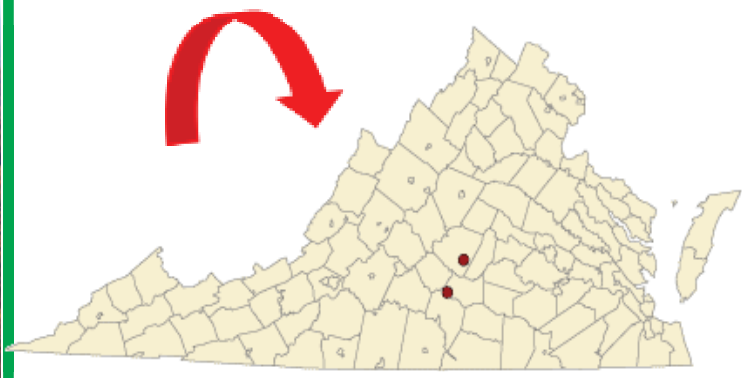
2003 Kyanite Mining Corporation (*Non-coal)*

1993 Kyanite Mining Corporation (*Non-coal)*

Focus on: Kyanite Mining

By Chrissi Wood-Smith, Technical Services Manager, with help from Kyanite Mining Corporation

Kyanite Mining Corporation (KMC) is a privately owned company in Dillwyn, Virginia, and is the world's largest producer of the industrial minerals kyanite and calcined kyanite (also known as Virginia Mullite). KMC is the largest employer in Buckingham County. Kyanite has been mined in Virginia since the 1920's. Learn more about kyanite in Virginia.



Locations of Kyanite Mining Corporation

eMediaVa, in partnership with PBS LearningMedia, has recently featured an educational video on kyanite and the KMC for high school students. This amazing video describes the unique properties of kyanite and uses for this mineral, as well as the effort KMC takes to reclaim the environment after mining is completed. Watch the video.

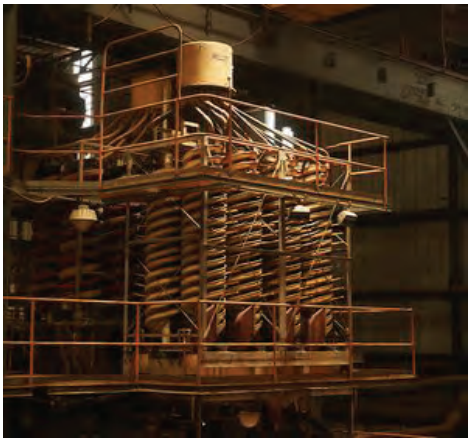
KMC operates two quarries over a 2700-acre permit area in Dillwyn, Virginia. The Willis Mountain quarry mines the ridge of kyanite on the western side of the property, while the East Ridge area consists of more traditional quarry benches adjacent to a processing facility. Once the ore body is exposed from the surface, holes are drilled and the ore is blasted to allow for efficient excavation.

Willis Mountain

Focus on: Kyanite Mining

1 The excavated ore is hauled from both quarries to the East Ridge Plant for primary, secondary and tertiary crushing. KMC blends mined material from both quarries to reduce mineralogical variation in the downstream processes.

2 The next step is wet separation. Using gravity separation and froth flotation, KMC separates the kyanite mineral from its host rock. Other minerals present in the ore body, including pyrite and quartz, are recovered and sold as byproducts. The concentrated kyanite material is then conveyed to a wet storage bin where it's dewatered via gravity drains.



3 The next step in the process involves a fluid bed dryer, a cooling kiln as well as both high and low intensity magnets. After being dried and cooled, the material is elevated into the magnetic separation building where magnets remove iron impurities.

4 The resulting product is transported to KMC's Gieseke Plant for milling, packaging and worldwide shipment. The kyanite product can also be diverted to one of KMC's calcining kilns for transformation into Virginia Mullite.

Focus on: Kyanite Mining

In the last several decades, KMC has won multiple reclamation awards for their work around the mine site. Most recently, in 2022 Virginia Energy recognized KMC with both the **Best Quarry and Overall Winner awards** for KMC's reclamation work at its East Ridge Plant.

As a result of their hard work, PBS's Virginia Homegrown filmed an episode showcasing Kyanite Mining's environmental stewardship. Host Peggy Singlemann and her crew from PBS built a mobile studio on KMC's reclamation site in Buckingham County. The episode focused on the 55-acre reclamation project, its benefits to the environment and KMC's positive impacts within their community.

Guy Dixon, President of Kyanite Mining Corporation, spoke with Peggy Singlemann about his family's mining operations, first in Prince Edward County and now in Buckingham. John Snoddy, KMC's Environmental and Safety Director, joined Guy and Peggy to discuss the details of seed mixes, soil sampling and more. Damien Fehrer, a former Virginia Energy Mineral Mining Inspector, was instrumental in assisting KMC during project construction and he nominated KMC for the environmental award. Damien, along with Tarah Kesterson of Virginia Energy, assisted KMC in preparing for the television shoot.

The show aired on April 28, 2023. Watch the full episode.

Citations:
WHRO Education (2024, May 5) Special Spotlight: Kyanite Mining. eMediaVA.

There are many unique minerals that are, or have been, mined in Virginia. Virginia Energy will highlight different mine sites each year in our newsletter. If you are interested in having your operation considered, please contact chrissi.wood-smith@energy.virginia.com.

History: Soapstone in Virginia

By Chrissi Wood-Smith, Technical Services Manager

Virginia Energy's Geology and Mineral Resources Program visited the Alberene Soapstone Company in Schuyler, Virginia. During the visit, we learned about the products they make, toured the quarry and visited their warehouse to view cores, slabs and some very historical equipment.

Soapstone is a beautiful material used for countertops, sinks, stoves, fountains, flooring, statues and more. In addition to the color and smooth texture of the soapstone, it has amazing heat retentive properties and is resistant to acids and alkalis.

The material is quarried with diamond wire and water into large blocks that are then cut down according to the needs of the customer.

In 1883, Alberene Soapstone Company was born. By the 1900s Schuyler, located in Nelson County, was the soapstone capital of the world: the soapstone industry was booming and Alberene Stone employed thousands of workers. Hurricane Camille, a rare category 5 storm event that took the lives of over 100 people in Albemarle and Nelson counties in the fall of 1969, severely flooded the site, which never fully recovered and eventually closed operations.

History: Soapstone in Virginia

In 2010, the Canadian company Polycor Inc. restarted quarry operations, thus providing accessibility and an expanded opportunity for those interested in soapstone.. Now, Alberene Soapstone Company, one of the oldest quarries in the country, is the only location in the United States that mines soapstone!

Thank you to Alberene Soapstone Company's employees for educating us on soapstone and sharing this important part of Virginia's history.

Citation:
Fiore, H. (2014, April 1). Canadian stone producer revives American Soapstone Quarry. Stone World RSS.

Where in the Commonwealth?

Ever wonder what is mined in Virginia? Here is a new Virginia Mineral Mining Commodity map created by Paul Saunders that you can interact with to learn more about what is mined in your neck of the woods.

See Map.

Collaboration for Data Preservation

The Mineral Mining (MM) and Geology and Mineral Resources (GMR) Programs have collaborated on the USGS National Geological and Geophysical Data Preservation (NGGDPP) grant for 15 years. Virginia Energy has been the recipient of this grant since the inception of the NGGDPP in 2007 and has been awarded nearly $1 million.

Currently, we have 28 collections with over 150,000 physical and digital specimens housed in the Virginia Geologic Information Catalog (VGIC). GMR has gathered and maintained valuable collections of geologic materials since the early 1900s and through this opportunity we are able to share these collections and make them accessible and discoverable to the public through the USGS Registry of Scientific Collections (ReSciCol).

In 2018, a massive rescue operation was made to preserve boxes and cabinets full of documents covered in lime dust containing maps, hand-written field notebooks, aerial photographs and other documents dating back to the early 1900s related to hundreds of years of mining operations from The New Jersey Zinc Company. Currently owned and operated by the Austinville Limestone Company, this site is the oldest continuously operating mine in the United States. As our scientists and technicians began the process of carefully cleaning, inventorying, cataloging, scanning and creating metadata for these records, the story of the New Jersey Zinc Company unfurled. The history of Wythe county's mineral wealth stretches back to the 1750's, making this collection a treasure trove of historic mining data.

Learn More about The New Jersey Zinc Company.

Chrissi Wood-Smith and Grady Stewart at Austinville Limestone, Wythe County

This past year we concluded another effort for the Morefield Gem Mine in Amelia County. Owned by Sam and Sharon Dunaway, this historic site was initially opened in 1910. Currently permitted through Virginia Energy, but not actively mined, the site is a unique source for Amazonite as well as hundreds of other minerals. Our data preservation effort included photographing the personal collection of specimens from the Dunaways, as well as historic documents and letters from their personal collections. In addition, a webpage will be dedicated to this historic mine for people to visit for years to come. See the Story Map.

Sam and Sharon Dunaway, Chrissi Wood-Smith, Billy Lassetter at Morefield Gem Mine, Amelia County

This year Virginia Energy was awarded $115,285 for preservation efforts including improvements to our digital infrastructure and digitizing more historic collections, inlcuding materials from Alberene Soapstone in Nelson County and the Rutherford pegmatite mine in Amelia County.

Take a moment to visit our collections and learn more about the amazing work Virginia Energy does to serve the citizens of the Commonwealth, the scientific community, historians and educators!

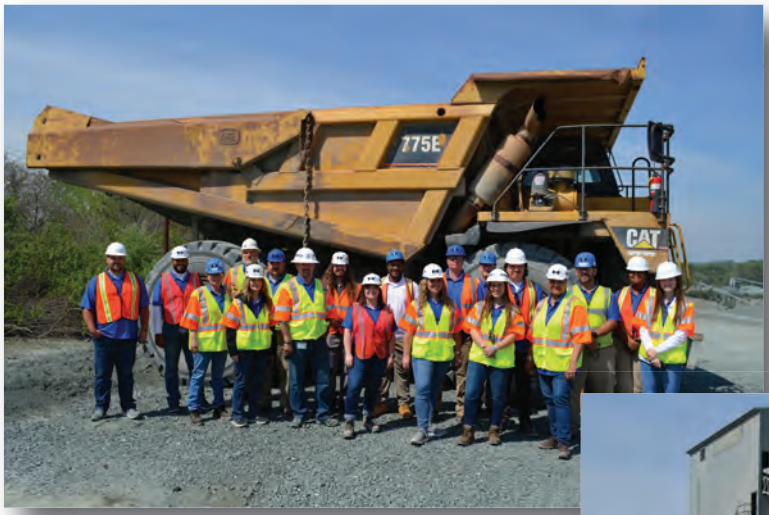
If you want to learn more about our efforts or if you have a collection Virginia Energy to consider for preservation, please contact chrissi.wood-smith@energy.virginia.gov

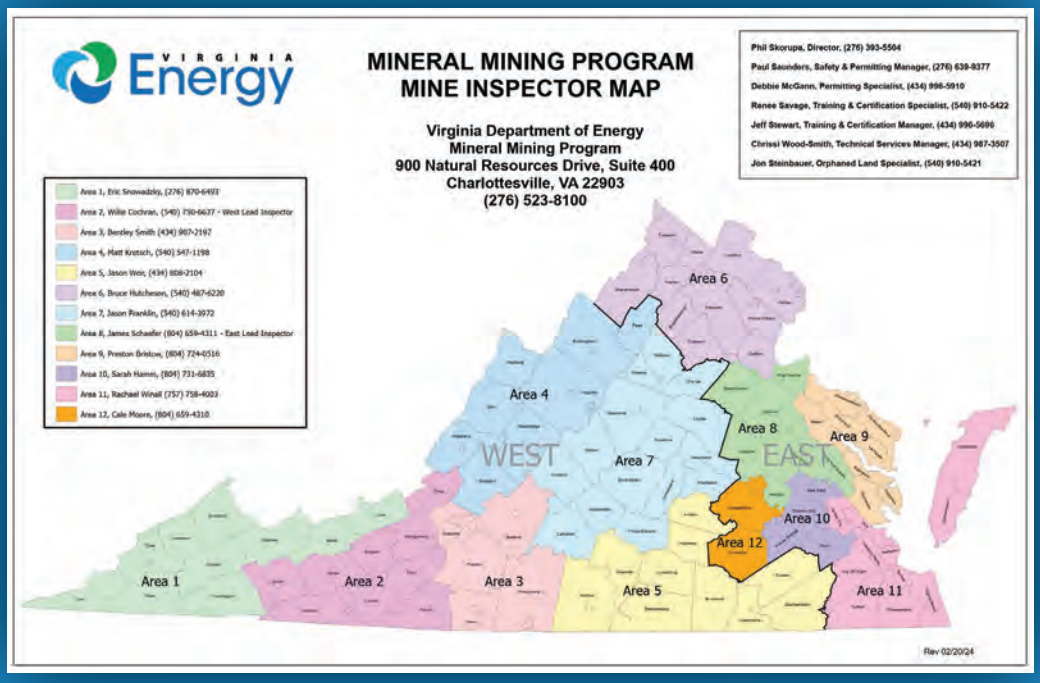
Holly Mangum at Alberene Soap Stone, Nelson County

Outreach

Virginia Energy 101 was created as an opportunity for new Virginia Energy employees to learn about all the work each of our agency's program areas does across the Commonwealth and educate them about the different industries we support. This also provides a first-hand opportunity to visit some of our active operations. The Mineral Mining Program took the 2023 Virginia Energy 101 group to Luck Stone's Shadwell Plant, a greenstone quarry east of Charlottesville, Virginia, for a behind the scenes look at how a quarry mining operation works.

A big **THANK YOU** to our friends at **Luck Stone Shadwell** for hosting the participants and to **Austin Powder** for providing learning opportunities on blasting and processing.





Communications Memoranda (*updated May 2024*)

Inspector Area Map (*updated July 2024*)

Mine Safety Violations Poster (*updated July 2024*)

Operator's Manual (*updated May 2024*)

Expanded Virtual Training and Certification Opportunities

By James Schaefer and Paul Saunders

In the Fall of 2023, the Mineral Mining Program made the commitment to make Surface Foreman Certification training more available to the Virginia Mineral Mining Industry by offering virtual classes. In the past, all Surface Foreman Certification training was done in person both at regularly scheduled classes across the Commonwealth and classes scheduled at the request of an operator. In-person training classes, while very effective, can result in expensive travel costs and additional time away from the workplace and family. The Mineral Mining Program recognized the need to update our methods by taking advantage of today's technologies. We decided that an online, live-streamed version of the training using live instructors would fit the bill. This remote classroom would enable the Mineral Mining Program to reach miners and contractors that may not have the time or resources to attend a multi-day event.

We researched the tools required for such an undertaking using all resources currently available to Virginia Energy. The largest hurdle was to ensure a reliable streaming platform for all attendees and instructors. Over the next several months, a comparison of the features needed to register attendees, distribute study materials and how to best enable multiple instructors to teach from multiple locations were analyzed. Several dry runs were attempted that identified areas that needed improvements. Two weeks prior to the live streamed class, a dress rehearsal identified several issues that had been overlooked and allowed for correction of these issues before the first class.

Another significant hurdle that had to be worked through was being able to administer the exam remotely. Our team devised a procedure to ensure that each student had access to the test and was positively identified, prior to receiving the test logon credentials. Mineral Mining Program staff then visually monitored the students while they took the exam and were available to answer questions and assist the students throughout the exam through chat.

The streaming class was taught over a two-day period on February 13 and 14, 2024. A total of 25 miners attended the live stream session. Thirteen miners took the exam remotely. The rest took the exam in person at various locations proctored by the Mineral Mining Program. It is interesting to note that this was one of the largest surface foreman classes taught by the Mineral Mining Program since the COVID pandemic. Feedback received from class participants and industry was very positive. Most liked the flexibility and expense of not having to travel. They also enjoyed having different instructors with knowledge and experience in the areas they were teaching.

Expanded Virtual Training and Certification Opportunities

Because of the success of this first class the Mineral Mining Program has scheduled a second streaming class for October 2024 and intends to continuously monitor the virtual participation of the Surface Foreman Certification classes and schedule virtual versus in-person classes accordingly. With the experience gained from the first class, the second class is going to be just that much better.

Looking towards the future in the training arena, the Mineral Mining Program plans to make available online self-paced Surface Foreman Certification training modules that will allow candidates to self-study and prepare for the Surface Foreman certification exam. This will provide the ultimate in accessibility to our customers in the mineral mining industry.

Program Director, Phil Skorupa

Program Director Phil Skorupa tells us, **“Being able to provide self-serve training modules and virtual live streaming of classes was much needed. It is a major accomplishment that will provide Virginia’s miners with more options for training and certification. Miners now have convenient access, attend classes remotely and take their examination online. I am looking for more to come in the future.”**

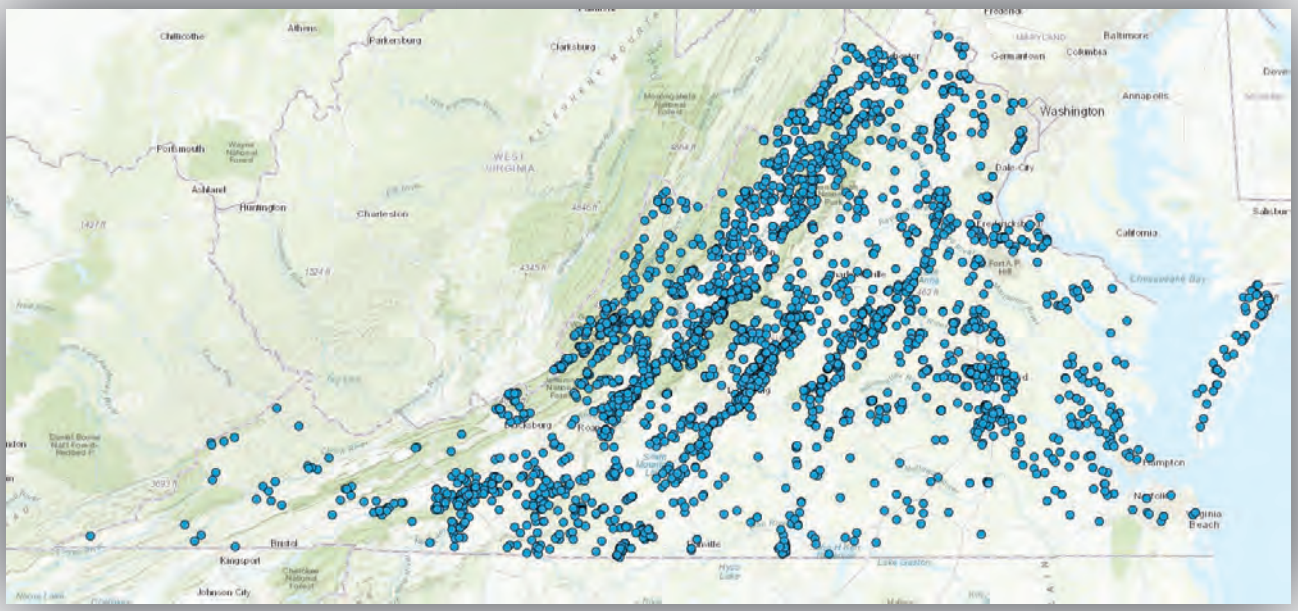
For more information contact jeff.stewart@energy.virginia.gov

Abandoned Mineral Mines

The Annual Orphaned Land Advisory Committee (OLAC) meeting was held in Charlottesville June 12, 2024. The committee is comprised of the following representatives from industry, government and the public:

- **Palmer Sweet**, *Citizen, chairperson*
- **Billy Lassetter**, *retired Geology and Mineral Resources Program*
- **Walter Beck,** *VTCA*
- **Chuck Stilson,** *Industry*
- **Lee Daniels,** *Virginia Tech*
- **Lorrie Skiffington,** *Abandoned Mined Land Program (AML)*
- **Stephanie Kreps,** *Virginia DEQ **
- **Chris Hamilton,** *USDA*

*Represented by Justin Williams



The OLAC reviews high risk Abandoned Mineral Mine Lands (AMML) inventoried in the prior year and prioritizes them according to the severity of the safety and environmental hazards identified. In June 2023, the committee ranked two sites as “A” and the remaining sites inventoried were categorized as “C”, which indicates they represent little risk to public safety or do not have environmental hazards associated with them.

Abandoned Mineral Mines

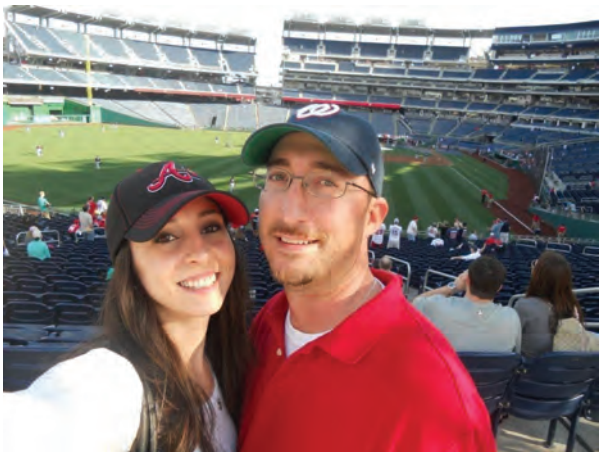
This year's OLAC meeting began with a field trip to the Goodwyn Mine at Lake Anna State Park in Spotsylvania County. This state park offers educational tours of the site to the public. Goodwyn Mine is a historic gold mine operated from 1880 through 1887. It had both placer and lode mining up to a depth of 61 meters. Originally inventoried in 1988, the OLAC had previously ranked this site a "B" due to features such as shafts, a water-filled pit, trenches, the foundation from processing mill, and mine waste piles. With our assistance we will help the state park open their trails to the public and ensure safety of their visitors.

Our Orphaned Land Program was established in 1978 and has reclaimed over 130 abandoned mineral mine lands in the Commonwealth. There are approximately 3,300 sites inventoried in Virginia.

Learn More about our Orphaned Land Program.

JASON WEIR

Virginia Energy's Mineral Mining Program welcomes Jason Weir. Jason hails from Amelia County where he attended school at Amelia County High School. He then went on to study Computer Technology and Education at ECPI Technical College and John Tyler Community College. He is on his way to a Bachelors of Science in Occupational Safety and Health at Columbia Southern University, as well!



Jason started his career in mining with Iluka Resources in 2010 as a field services operator. In 2017, he moved to Environment, Health and Safety and provided required training to employees and contractors. In 2021, he became the Site Supervisor at Iluka's Concord site overseeing reclamation.

Jason married Rebecca in 2016 and they have two beautiful children, Joshua David and Amelia Jeann. A true baseball fan, Jason coaches his son's team and takes the troops to events with their "Dads & Lads" (plus a few little lasses) like WWE Wrestling, Globetrotters basketball and Monster Trucks. Jason enjoys family trips to the beach, lake, river and mountains where they boat, hunt, fish and ride four four-wheelers. In his spare time, Jason is also into repairing and restoring old vehicles and tractors.

Jason is our western Area 5 Mine Inspector on our state's central southern border. He is located in Amelia County and inspects quarries and sand mines down through Southside Virginia. You can reach him at jason.weir@energy.virginia.gov.

JASON FRANKLIN

Virginia Energy's Mineral Mining Program welcomes Jason Franklin, our newest mine inspector who started in December 2023. Jason comes to us from industry where he started as a miner in 2006. He has worked in hard rock in both Virginia and Florida, as well as surface and underground coal in West Virgina. He is well versed in excavating equipment and draglines. Jason is a native Virginian, attending High School in Amherst and Floyd Counties, and earning a BS degree in Mining & Minerals Engineering from Virginia Tech.

Jason currently lives in Louisa County with his spouse Brittany. In his spare time, Jason enjoys golfing and even builds custom golf clubs! He is into welding, fabricating and "MacGyvering". He tells us he once drove to Ensenada, Mexico for the Baja 1000, an annual off-road motorsport race, in an off-road BMW he built. For that event he was a spectator, but he used to race BMW Touring Cars in his twenties and was a high performance driving instructor before returning to golf.

Jason is our western Area 7 Mine Inspector, right smack dab in the middle of the state. He inspects a wide variety of mineral mines around the Charlottesville area including quarries and sand pits.

You can reach him at jason.franklin@energy.virginia.gov.

MIKE SMITH

Virginia Energy's Mineral Mining Program welcomes Mike Smith, our new hydrogeologist, who started in July 2024. Mike has a BS Degree in Marine Geology from the University of South Carolina as well as a MS Degree in Geology from the University of Florida.

You can reach him at
michael.smith@energy.virginia.gov

Mike worked as an exploration geologist for five years, exploring for mineral sands on the east and gulf coasts. He was also a project and senior level hydrogeologist for environmental firms for 12 years working at various industrial sites investigating chlorinated solvent and petroleum contamination in groundwater and soils. He has worked for the last 23 years as a hydrogeologist for Virginia Energy's Mined Land Repurposing Program addressing complaint investigations, NPDES permitting and TMDL issues.

Mike and his wife have three sons, Joshua, Noah and Daniel that graduated this spring from their respective ROTC programs and are now commissioned 2nd lieutenants in the Marines, Army and Airforce!

In his spare time, Mike and his son Daniel are restoring this 1962 Chevy C10 truck.

ELLE LINDGREN

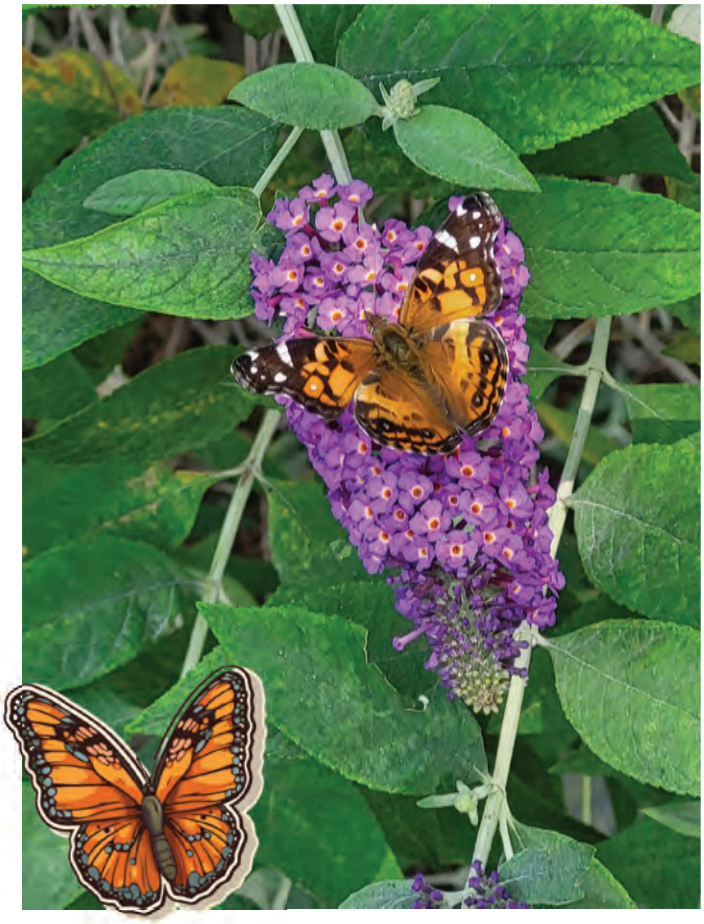
Elle Lindgren, Chrissi Wood-Smith's daughter, is a student intern working for the Orphaned Land Program. She will be working with Jon Steinbauer in the field inventorying Abandoned Mineral Mine Land sites. Elle will also create a project in ArcGIS that will use LiDAR to determine the impact of sea level rise on mineral mine sites.

Elle is a junior at University of North Carolina at Wilmington studying Environmental Science and Marine Biology.

PHILLIP MCGANN

Phillip McGann, Debbie McGann's son, is a student intern helping us scan closed-out permit documents, images and maps to complete our digital archive. These documents will eventually become part of the AMML database for access by the public for historical, safety and environmental concerns.

Phillip is currently a student at Piedmont Virginia Community College studying business. In his free time, Phillip likes to work on cars and play music.



Vulcan Puddledock,
Prince George County

James River Slate,
Buckingham County

Schreiber Mulch and Materials,
Charles City County

Lynn E. Broaddus,
Northumberland County

A PIECE OF HISTORY

Sarah Hamm and Paul Saunders found these bricks on an old rail line in **Chesterfield County** scouting for an AML site.

They are stamped “Southern No 1, Richmond, VA.” Richmond has been a hub for railroads since the 1830. In 1895, the Southern Railway System was formed which was one of the largest in the South. Perhaps these belonged to that rail system!

CAN YOU IDENTIFY THIS?

Found by Sarah Hamm at **Nestle Purina in King William County,** this Megalodon tooth belonged to a massive shark that swam the oceans 2.5 million years ago. Megalodons are said to have reached up to 60 feet in length and consumed as much as 2,500 pounds of food in a day.

If you have a treasure you would like featured in our newsletter please contact chrissi.wood-smith@energy.virginia.gov

Luck Stone, Rockville Plant, Goochland County

Photo courtesy of Bobby Kluczyk

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VIRGINIA Energy

July 2024