MON VALLEY WORKS

2024 Environmental & Operations Report

CLAIRTON

EDGAR THOMSON

FAIRLESS

IRVIN

United States Steel

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MESSAGE FROM MON VALLEY LEADERSHIP

Kurt Barshick

Vice President, Mon Valley Works

Forged in 1875, Edgar Thomson was Andrew Carnegie's first steel mill, marking the birth of modern American steelmaking. Today—150 years later—it remains a critical part of steelmaking in the Commonwealth and is shaping the future of our industry thanks to the transformative partnership between U. S. Steel and Nippon Steel. Together, we're investing in our facilities, our people, and the community, ensuring the plant continues to deliver for generations to come.

I started my career with U. S. Steel 32 years ago at the Edgar Thomson facility where I was a Shift Manager at the blast furnace. For the last 9 years I have been the Vice President of the Mon Valley Works. Throughout my time with U. S. Steel, my commitment to safety and environmental excellence has only grown. Mon Valley Works employees produce high quality steel while prioritizing safety and environmental excellence.

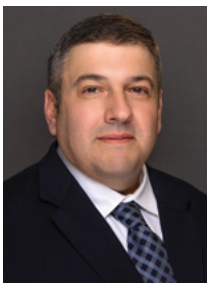
I am proud of the environmental progress and achievements described in this report. The future of the Mon Valley is on track as made evident by continuous environmental progress and commitment to stewardship through the plant's Environmental Policies as well as our Corporate Environmental Policy:

- Clairton – Continuous Improvement to the Environment (CITE)
- Edgar Thomson, Irvin, and Fairless – Comply, Lead, Educate, Allocate, and Never Stop Improving (CLEAN)
- Corporate Environmental – Environmental Excellence – Everyone, Everywhere, Every Day

In 2024, the Mon Valley Works achieved many environmental successes as detailed throughout this report. Our successes are a result of our resolve to always follow our S.T.E.E.L. principles – Safety First, Trust and Respect, Environmental Stewardship, Excellence and Accountability, and Lawful and Ethical Conduct, which will be discussed in more detail in this report.

Mark Jeffrey

Plant Manager, Clairton Plant



U. S. Steel has been a part of the Mon Valley for over 120 years, providing the steel to build America made by generations of proud United Steelworkers and U. S. Steel management employees. We know that to be a good neighbor, we must also continuously improve our environmental performance.

The future is on track for the Clairton Plant as evidenced by the environmental progress and achievements described in this report. U. S. Steel continues our commitment to stewardship through our Continuous Improvement to the Environment (CITE) program. Not only do we employ a formal CITE program in our training, but we have also embedded our CITE program in our day-to-day operations.

2024 presented several opportunities to further improve our performance at the Clairton Plant, and the Clairton team maximized those opportunities, while delivering high quality metallurgical coke to our blast furnace customers.

The Clairton Plant continued its excellent environmental performance in 2024. The Clairton Plant achieved excellent stack performance with a 99.8% compliance rate with Allegheny County Health Department's limits. I am extremely proud of this, and the pages ahead summarize some of our major successes during the year. With hard work and dedicated effort, the team at Clairton is doing our part to improve the region's air quality. These efforts have contributed to demonstrated attainment at Allegheny County's air monitors with all federal, health-based air quality standards!

We are building the future of the Clairton Plant, a future focused on trust, ownership, a motivated and committed workforce, and a SAFE work environment for all. At this site, we are all seen for our unique contributions, respected for who we are as individuals, feel supported in our decisions and actions, and ultimately, proud of the work we do, the plant we represent, and the impact we can make in our community and the steel industry for generations to come. I have no doubt that the Clairton Plant will continue to achieve greatness and reach new milestones. The future is on track for the Clairton Plant to exceed its goals of Safety, Environmental, Reliability, and Operational Excellence!

Jon Olszewski

Plant Manager, Edgar Thomson Plant

U. S. Steel – Edgar Thomson Plant has been an important part of the Mon Valley Works for 150 years, providing the steel made by generations of proud United Steelworkers and U. S. Steel management employees to build the foundation of America.

I am proud of the environmental progress and achievements described in this report. We will never waver in our efforts to improve: each day keeping in mind our commitment to Comply, Lead, Educate, Allocate, and Never Stop Improving (CLEAN). This and our other environmental programs are embedded into our day-to-day operations, as a commitment to environmental stewardship.

The pages ahead summarize some of our major successes during the year, including many environmental milestones. Furthermore, several community projects are described in this report.

I am especially proud of our continued environmental engagement and compliance rates. Over the years we have increased engagement with employees across the plant through routine training conducted by the plant's environmental team. In 2024, Edgar Thomson Plant's compliance with all Title V Air Operating Permit requirements was more than 99.9%. This includes numerical mass emission limits and continuous monitoring requirements. The Edgar Thomson Plant has also achieved greater than 99.9% compliance since 2016 with the NPDES water discharge permit limits.

These achievements, as well as other environmental progress, are in no small part a result of U. S. Steel's continued commitment to environmental stewardship. U. S. Steel values our shared environment, our employees, and the communities in which we operate. Safety and environmental performance remain our top priorities, now and into the future.

Don German

Plant Manager, Irvin and Fairless Plants

I started my career with U. S. Steel 35 years ago at the Edgar Thomson facility where I was a Quality Assurance Engineer. For the last seven years, I have been the Plant Manager of the Irvin and Fairless Plants. Our relentless focus on our key business drivers, including safety, environmental, quality, delivery, and cost, remains our top priorities.

In 2024, we were presented with opportunities to improve our performance at the Irvin Plant, and we look at these through the "5 R's."

- Recordable Injuries – Many of the injuries in 2024 were a result of not following basic practices and procedures. We are learning from these mistakes and ensuring that procedures are being followed so that everyone can go home to their families the way that they came in.
- River – We discharge over 20 million gallons of water per day out of our plant, and it must meet all government regulations. We must do everything in our power to protect our environment, including minimizing oil loss at all units. If you see something, say something!
- Reliability – Similarly to safety, following practices and procedures are the key to our success. We are learning from our delays in 2024 to determine root cause and implement permanent corrective actions. On-time start ups and major delay elimination are the focuses coming out of 2024.
- Rally – I know we have the BEST people and that is how we rally moving into the future. We engage our teams, communicate the goals, and work together to achieve greatness.
- Resolve – The merger between U. S. Steel and Nippon has brought us closer together than ever before. As I walk the floor and talk to the crew, I hear the resolve in their voices. We are all in this together and I thank you for fighting for our jobs, our families, our communities, and our future. You are making a difference, and we continue to fight this fight together!

We continue to invest in our people, our equipment, and our environment. This report details the projects that were completed and contribute to our ongoing success.


United States Steel

MON VALLEY WORKS OVERVIEW

U. S. Steel's Mon Valley Works, with an annual raw steel production capability of approximately 3.5 million net tons, is located just outside of Pittsburgh along the shores of the Monongahela River.

The Mon Valley Works consists of:

1. **Clairton Plant** – produces coke and coke byproducts;
2. **Edgar Thomson (ET) Plant** – produces hot iron in blast furnaces, which is then converted into steel at the Basic Oxygen Shop; and turned into slabs at our continuous caster;
3. **Irvin Plant** – finishes and processes steel slabs;
4. **Fairless Plant** – includes a finishing mill, located outside of Philadelphia, Pennsylvania.

The four facilities of the Mon Valley Works are intertwined. The Edgar Thomson Plant and Irvin Plant rely on the Clairton Plant for its metallurgical coke, used in ET's blast furnaces, and coke oven gas, which is used throughout the facilities as a clean fuel. The Irvin Plant relies on the Edgar Thomson Plant for steel slabs, and the Fairless Plant relies on the Irvin Plant for steel coils.

The coke oven gas (COG) distribution pipeline distributes extra COG produced at the Clairton facility to the Irvin and Edgar Thomson facilities to be used as a fuel source. As of 2024, our average extra COG production is between 80 and 90 million cubic feet per day (MMCFD) — enough to heat approximately 44,000 homes. Additionally, the Edgar Thomson plant utilizes two generators that produce electricity that is fed to the plant as well as the Mon Valley power grid that supplies energy to the Clairton and Irvin facilities. Operating our own power grid means purchasing less electricity, reducing Scope 2 emissions (indirect greenhouse gas emissions), and increasing efficiency and reliability.

The economic impacts of the Mon Valley Works are significant on both the local and national levels. Steel is a critical foundation for our nation's economy, security, infrastructure, energy independence, and manufacturing capabilities. The United States must maintain the ability to mine, melt, and make the steel needed to defend, build, and power our country. In 2018, the federal government determined that domestic steelmaking is necessary for our nation's security production requirements. The government also determined that without domestic steel production, we run the risk of not being able to adequately respond to a national emergency. Furthermore, the U.S. Department of Homeland Security has designated steelmakers like U. S. Steel to serve as a vital component of our nation's critical manufacturing sector, which is necessary for the economic prosperity, security, and continuity of the United States. The COVID-19 pandemic highlighted the importance of maintaining robust domestic manufacturing capabilities to supply important products that are essential to national, economic, and health security.

Based on an American Iron and Steel Institute (AISI) study in 2012, each of the nearly 3,000 direct manufacturing jobs at the Mon Valley Works would support the need for approximately seven additional jobs. The Mon Valley workforce consists of highly skilled United Steelworker union-represented and non-represented employees. Plant operations have a multiplier effect in supporting thousands of additional steel processor, chemical, energy, transportation, and supplier jobs, not only in the Southwestern Pennsylvania region, but also across the United States.

Clairton

The Clairton Plant of the Mon Valley Works is located 20 miles south of Pittsburgh on 392 acres along 3.3 miles of the west bank of the Monongahela River.

With the capacity to produce approximately 3.3 million tons of high-grade metallurgical coke per year in six coke batteries comprised of 455 ovens, the Clairton Plant is the largest coke facility in the United States. It is the only remaining U. S. Steel coke-producing plant in the United States. This plant supplies coke needed for iron and steel production at Mon Valley Works' Edgar Thomson Plant and other steel-producing locations.

The significance of the Clairton Plant, including its products and byproducts, goes well beyond its geographical footprint. Clairton Plant's products are used as the raw material feed to other steel plants throughout the United States. In addition, its byproducts are used in the chemical and manufacturing operations of many corporations.

While the Clairton Plant has been producing coke for over 100 years, it has evolved, and continues to evolve, into a state-of-the-art manufacturing facility with a proven track record of environmental performance like no other coke plant in the world. The plant has experienced significant milestones over the last century, including many that are environmentally focused, as highlighted below:

History of Clairton Plant – Significant Milestones

YEAR	TIMELINE OF EVENTS
1901	Built by St. Clair Steel Company
1904	Purchased by U. S. Steel
1918	Construction of 12 Koppers batteries with total of 768 ovens
1948	Maximum capacity of coke making achieved (approximately 8 million tons/year with 22 batteries and 1,482 ovens)
1973	Coke Oven Gas Desulfurization Plant Installed
1977	Coke capacity reduced to approximately 5 million tons/year
1982	B battery Commissioned
1988–1990	Pushing Emissions Controls Installed
1991	Byproducts Plant Upgrades
2001	Pushing Emissions Control Baghouse Improvements
2005–2008	B battery Through Walls Replaced
2008	Plant status: 12 batteries with 816 ovens in operation
2009	3 batteries permanently shut down – 624 operating ovens
2010–2020	Batteries 13–15 Major Refractory Upgrades
2010–2020	Batteries 19–20 Through Walls Replaced
2011–2020	Batteries 1–3 End flues Replaced
2012	C battery Start-up: 10 Batteries with 708 ovens with capacity of approximately 4.3 million tons of coke/year
2013	Two additional Low Emission Quench Towers constructed
2018	Coke Oven Gas Desulfurization Vacuum Carbonate Upgrades
2020	New High Efficiency Bags installed on Pushing Emissions Control Baghouses – completed May 2020
2021	Electrical system to #1 Control Room 5kV switchgear upgraded
2022	Byproducts switching valve project (SO2 reduction project) completed
2023	Shutdown of 1–3 batteries
2024	Commissioned the area's first of its kind lithium-ion battery powered locomotive

Edgar Thomson

Edgar Thomson Plant, located about 10 miles southeast of Pittsburgh in Braddock, Pennsylvania, is where basic steel production takes place at Mon Valley Works. The 176-acre plant sits on the banks of the Monongahela River and includes approximately 635 employees. Raw materials are combined in blast furnaces to produce liquid iron, which is then refined to create steel. Steel slabs from the facility are sent by rail to the nearby Irvin Plant, where they are rolled into several different sheet products.

The Edgar Thomson Plant is the last integrated steel producer in Pennsylvania with blast furnaces and basic oxygen furnaces. While the Edgar Thomson Plant has been producing steel for 150 years, the plant has evolved into a state-of-the-art manufacturing facility. The plant has experienced significant milestones over the last century, including many recent environmental-related achievements, as highlighted below:

History of Edgar Thomson – Significant Milestones

YEAR	TIMELINE OF EVENTS
1872	Andrew Carnegie purchases 107 acres of Braddock's Field
1873	Ground was broken for the mill
August 22, 1875	First heat of liquid steel
1901	Edgar Thomson becomes part of U. S. Steel, the first billion-dollar corporation
1913	First Open-Hearth heat tapped
1938	44-inch slab mill began operating to supply the new Irvin hot strip mill
1945	Andrew Carnegie's original rail mill shuts down
1964	Startup of Forging Mold Foundry
1972	Two Basic Oxygen Furnaces (BOP) vessels begin operation
1974	Installation of Mixer Baghouse
1980	Installation of Blast Furnace Baghouse
1992	Startup of Continuous Caster
1995	Edgar Thomson Plant is designated a historic landmark by ASM International
2007	Upgrades to BOP Secondary Baghouse, reduce emissions of particulate matter from the BOP Shop
2009	Upgrade to LMF Baghouse, reduces emissions of particulate matter from LMF operations
2012	Installation of new blowdown water treatment plant at BOP
2013	Upgrade to BOP Gas Cleaning system, improved environmental performance
2016	Utilized Clairton coke oven gas
2018	Installation of Boiler Stack and related utility infrastructure for improved dispersion

Irvin

The Irvin Plant, located in West Mifflin, rolls and treats the steel slabs produced at Edgar Thomson Plant. The site consists of 650 acres (51 acres under roof) on a hilltop 250 feet above the Monongahela River. When ground was broken to construct the facility in 1937, it was nicknamed "The Mill on the Hill." The 19-month construction required more cubic yards of earth (4.4 million cubic yards) than any project at the time, other than the Panama Canal. Irvin Plant could whisk steel from slab to sheet at a speed of 20 mph, a marvel in 1938.

Major sheet products manufactured at the Irvin Plant include hot-rolled, cold-rolled, and coated sheet in addition to products for special applications, such as embossed sheet, Vitrenamel™ sheet, and commercial bright sheet. Sheet products from Mon Valley Works serve customers in the appliance, automotive, metal building, and home construction industries.

History of Irvin Plant – Significant Milestones

YEAR	TIMELINE OF EVENTS
1937	Ground was broken for the "Mill on the Hill"
1938	Rolling Mill, Tin Plating, & Hot Strip Mill begin operation
1942	Electrolytic Tinning begins operation
1990s	84-inch pickle line
1990s	Peachtree Flare begins operation

Fairless

The fourth facility of the Mon Valley is the Fairless Plant, located in Fairless Hills, Pennsylvania, just outside of Philadelphia. Fairless began production in 1952 as a fully integrated facility with two blast furnaces, two coke batteries, nine open hearth furnaces, an 80-inch hot strip mill, rolling mills, a sheet and tin department, a pipe mill, and a vessel slip, all located on nearly 4,000 acres along the Delaware River.

Today, Fairless, operating under the Irvin umbrella, produces cold-rolled galvanized steel for use in the appliance, automotive, and home construction industries on a single galvanizing line. With the significantly smaller footprint, a majority of the original acreage was sold in 2020 to North Point Development, which announced in 2025 the development of massive data centers at the site.

History of Fairless Plant – Significant Milestones

YEAR	TIMELINE OF EVENTS
1952	Production began at Fairless Works
1991	Coke, iron, and steel-making facilities were closed, as well as the pipe mill. The Galvanize Line has remained running.
2020	The majority of the 4,000-acre property was sold

United States Steel Corporation – S.T.E.E.L. Principles

Our S.T.E.E.L. Principles are the foundation of a strong ethical culture at U. S. Steel. These five principles set forth clear ethical expectations for our Board of Directors, our leadership team and U. S. Steel employees worldwide. Conduct aligned with the S.T.E.E.L. Principles is essential to sustaining ethically and lawfully sound corporate citizenship, responsible environmental stewardship, and the principled management and leadership that are necessary for our continued success.

S **Safety First**
U. S. Steel operates under the guiding principle that all safety-related incidents can be prevented and vests personal responsibility for operating under that principle in all its employees and contractors. Our company maintained an industry-leading safety program for many decades before the passage and implementation of government regulations, such as the Occupational Safety and Health Act and the Mine Safety and Health Act.

T **Trust and Respect**
The success of our company depends on all of us working together to achieve our common goals. We must build strong relationships with one another that are rooted in trust and respect while driving our culture of caring. By embracing the strengths and unique differences each of us brings to our work, we respect and learn from one another, foster a high-performance environment and encourage every employee to reach his or her full potential. We want all employees to trust that our diverse backgrounds are valued and celebrated. Our Employee Resource Groups, several of which focus on inclusion and allyship of historically underrepresented groups in the workforce, support our increasingly diverse workforce and strengthen employee engagement and connection. In addition, our Inclusion and Diversity Council, led by our CEO, drives our enterprise-level inclusion and diversity strategy across our company. Ultimately, our company is stronger — and we can serve our customers better — when we bring together our diverse experiences, backgrounds and perspectives to create inclusive, well-rounded and high-performing teams.

E **Environmental Stewardship**
Environmental stewardship and “Safety First” are inextricably linked. Just like safety, environmental stewardship is a core value of our company that is incorporated into our day-to-day operations as well as our strategic corporate decisions. We must operate our facilities in an environmentally responsible manner and take steps to protect and preserve our shared natural resources. Doing what’s right for the environment is also doing right for our business. Our commitment to environmental performance begins at the top with regular oversight by our senior leadership, and we continue to increase environmental awareness through regular training of our employees. Additionally, we are committed to establishing and maintaining documented environmental management programs that adhere to environmental laws and regulations, and many of our major facilities are ISO 14001-certified.

E **Excellence and Accountability**
Excellence and accountability are critical to sustaining our high-performance culture. Through our pursuit of excellence, we continue to challenge ourselves to build a better, more sustainable future for our employees, customers and communities. Accountability is critical to the success of our company. Accountability means taking initiative by proactively identifying what needs to be done, developing an action plan, and executing that plan. It also means aligning our actions to our goals, taking responsibility for our decisions, and executing on our commitments to our stakeholders in a timely manner.

L **Lawful and Ethical Conduct**
Each of us has a duty to conduct business ethically and in compliance with all applicable laws and regulations, including when interacting with our customers, suppliers, competitors and other external parties. We must never take advantage of or provide special benefits to anyone — or even appear to do so — through manipulation, concealment, misuse of information, misrepresentation of material facts or any other unfair or improper practices. Fraud, theft, embezzlement, inflated billings, falsified expense reports and payment of kickbacks are all examples of illegal and unacceptable conduct.

These S.T.E.E.L. principles are the foundation on which we operate.

SAFETY

Safety Policy

"Safety First" is our primary core value. To support this, U. S. Steel is committed to:

- Providing safe and healthy working conditions for the prevention of work-related injury and illnesses in the workplace.
- Continual improvement of the occupational health & safety management system.
- Consultation and participation of workers through engagement.

- Complying with legal requirements and other requirements.
- Eliminating hazards and reducing occupational health & safety risks.

In simple terms, our safety policy and primary core value is "Safety First."

Safety Program Framework

Shared Responsibility – U. S. Steel promotes safety and industrial hygiene management as a core value by conducting operations in a safe manner and recognizing that the accountability and responsibility for safety and industrial hygiene management extends from each individual employee to the top executive of each business unit.

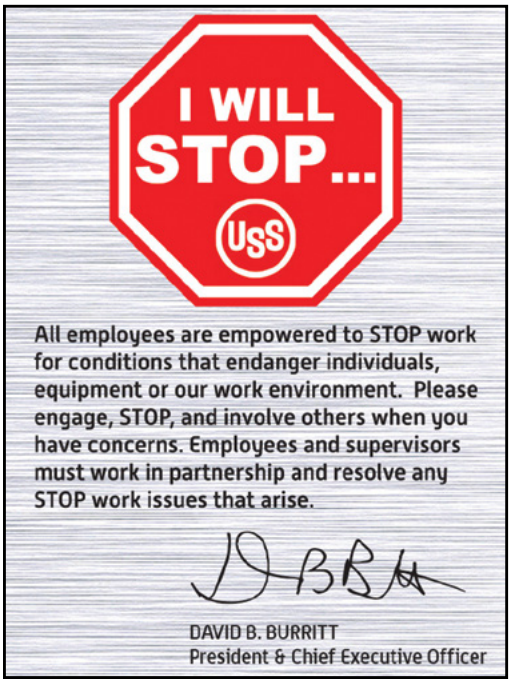
Empowered Leadership – U. S. Steel vests managers and supervisors with safety and industrial hygiene responsibilities and provides leadership and support to them from safety and industrial hygiene personnel.

Intentional Design – U. S. Steel integrates safety and industrial hygiene management systems and processes as essential elements in all functions by establishing and maintaining plans, objectives, and programs and by providing resources from implementation and program maintenance.

Third Party Requirements – U. S. Steel requires contractors and suppliers to conduct their activities consistent with this policy and in accordance with the U. S. Steel Contractor Safety Standard Specification.

Some of the in-plant safety engagement initiatives we've encouraged over the last year include:

- STOP & ACT – Every U. S. Steel employee is empowered to STOP work for conditions that endanger individuals, equipment, or our work environment.
- Annual Safety Commitment – At the beginning of every year, all U. S. Steel employees are invited to give their commitment to safety by signing the plant safety banner.
- Safety Conversations – We have established a process in which all members of the organization can engage with one another about work practices, conditions, and/or safety concerns about a job in a non-threatening and collaborative way.
- Safety Focus & Engagement Teams – We establish teams comprised of management and represented employees that meet regularly to address plant issues and concerns. These teams identify injury trends and plant issues and then implement initiatives to minimize and eliminate risk.



Stop & Act Card Statement from David Burritt

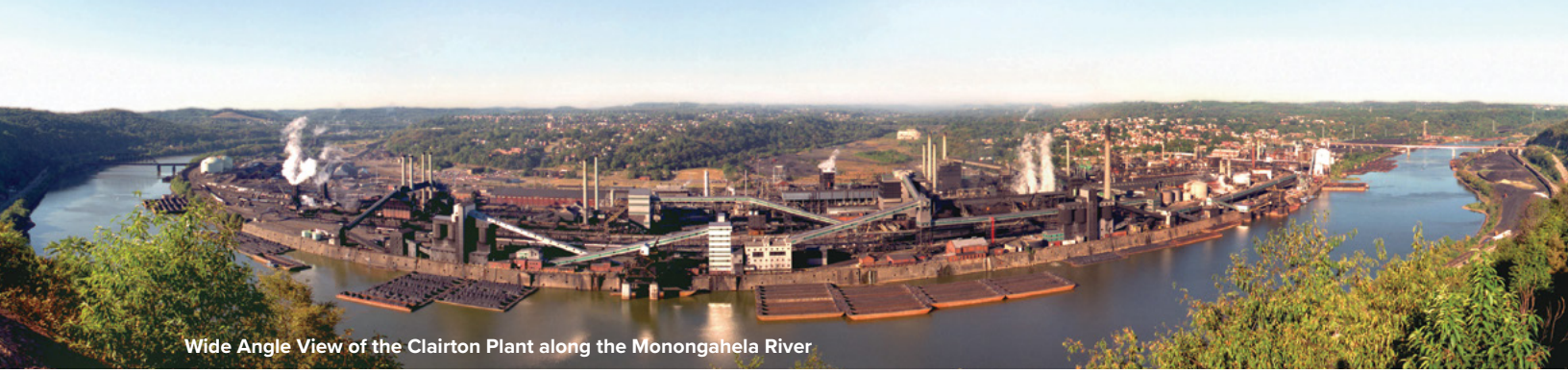
EDGAR THOMSON SPOTLIGHT

150 years Strong in the Community

In 1875, as the first steel ingot was formed at Andrew Carnegie's first steel mill in the United States, the mill launched steelmaking in the U.S. and became part of the community. On August 2, 2025, the community — U. S. Steel employees, steelworkers, contractors, community leaders, and their families — gathered to celebrate Edgar Thomson's 150th birthday. It was a beautiful day at the riverfront of the Monongahela River to learn about the plant and enjoy food, games, and tours of the BOP Shop and the Caster.

Family Safety Day

The 2025 Mon Valley Works Family Safety was incorporated into Edgar Thomson's 150th Celebration. All Mon Valley employees, on-site contractors, and their families were invited to attend to view safety equipment and personal protective equipment. Guests could also explore a fire truck, an ambulance, and even put out a simulated fire.



Wide Angle View of the Clairton Plant along the Monongahela River

STATE OF THE ART FACILITIES

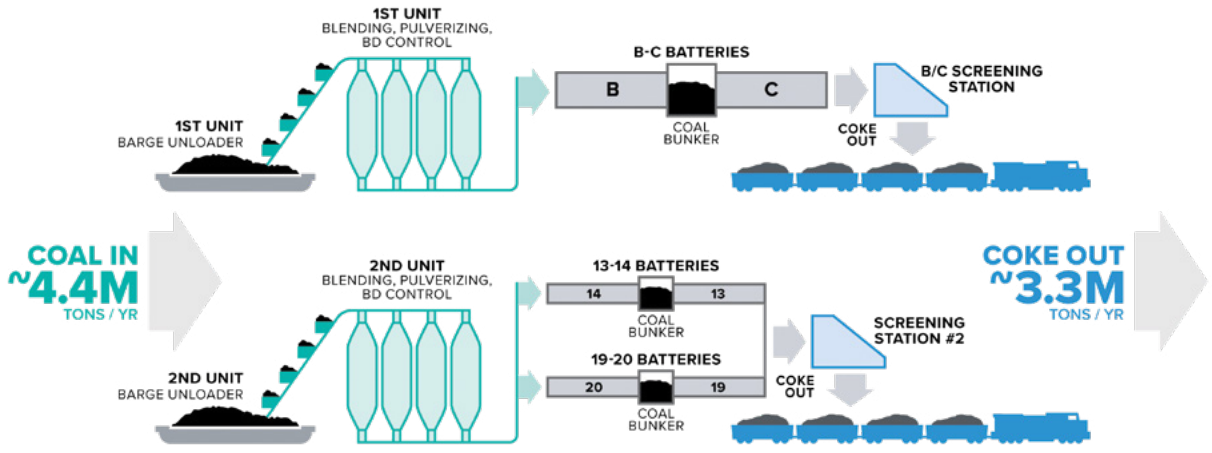
Clairton Plant

As explained above, the Clairton Plant has been a vital part of Allegheny County for over 120 years. While the fundamentals of coke-making have not changed, the ancillary operations and technologies used have significantly evolved to be more environmentally friendly and efficient. The diagram provided below provides a high-level summary of the Clairton Plant's coking operations.

Coke Batteries

Coal is a mineral consisting mainly of sedimentary fossilized carbon with smaller amounts of other elements, such as sulfur, hydrogen, oxygen, nitrogen, and more. Coal is found under the earth's crust as lignite, or brown coal (the lowest ranking coal), bituminous coal, and anthracite. It is extracted either from underground by shaft mining or at ground level by open-pit mining. The bituminous coals are used at the Clairton Plant to produce metallurgical products.

Coal is crushed and blended prior to being moved to the coal storage bunkers located on each battery unit. The coal is transferred from the coal storage bunker to each oven by a coal charging railcar called a larry car. A larry car is a specially designed railcar that transports the coal from the coal storage bunker to each oven and includes specially designed chutes to "charge" each oven with the blended coal. Coal is dropped into the ovens through four coal charging holes. The coal is heated, or baked, at approximately 1,900°F for 18 hours in the ovens. During that time, gases, including the volatiles of coal, are driven off by heat into the off-gas piping system to be further processed downstream. The pure carbon that remains in the oven is called coke.



Clairton Plant – 2024 General Plant Process Flow Diagram. Showing From left to right: the coal being brought by barge to the plant; coal blending & pulverizing operations; coal being charged to the batteries; and coke produced, screened and loaded into railcars for customer delivery.

Once the coke is produced, the pusher side and coke side doors of the oven are removed. When coke is pushed from the oven by the pusher machine into the quench car, it is quickly moved to the battery unit's quench towers to cool the coke and stop the burning process. The cooled coke is moved to a coke wharf where it is transported to be screened and sized prior to being charged into the blast furnace. The figures below show a typical layout of a coke plant and the current coke battery configuration at the Clairton Plant.

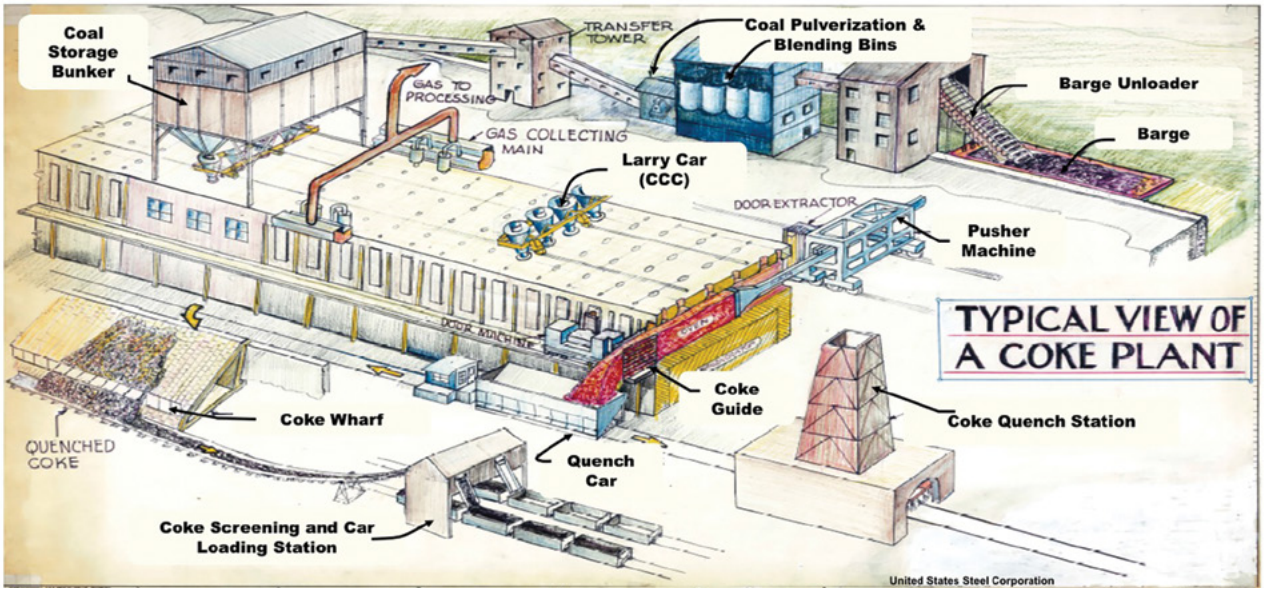
Environmental Controls – Highlights

The Clairton Plant coking facility consists of seven batteries ranging in height from 3.6 to 6 meters (9.8 to 19.7 feet), which have an annual coke capacity of approximately 3.84 million tons. There are several potential emission points throughout the coking process that U. S. Steel and regulating agencies monitor. Specifically, emissions are monitored during charging, pushing, travel to the quench tower, at the doors on each side of each oven, at the lids that cover the charging port, at the offtake piping, and at the combustion stacks from which byproducts of combustion exit. While each battery is unique, air emissions are minimized at each potential emission point either through the installation of control equipment, unique projects, or the implementation of advanced employee work practices.

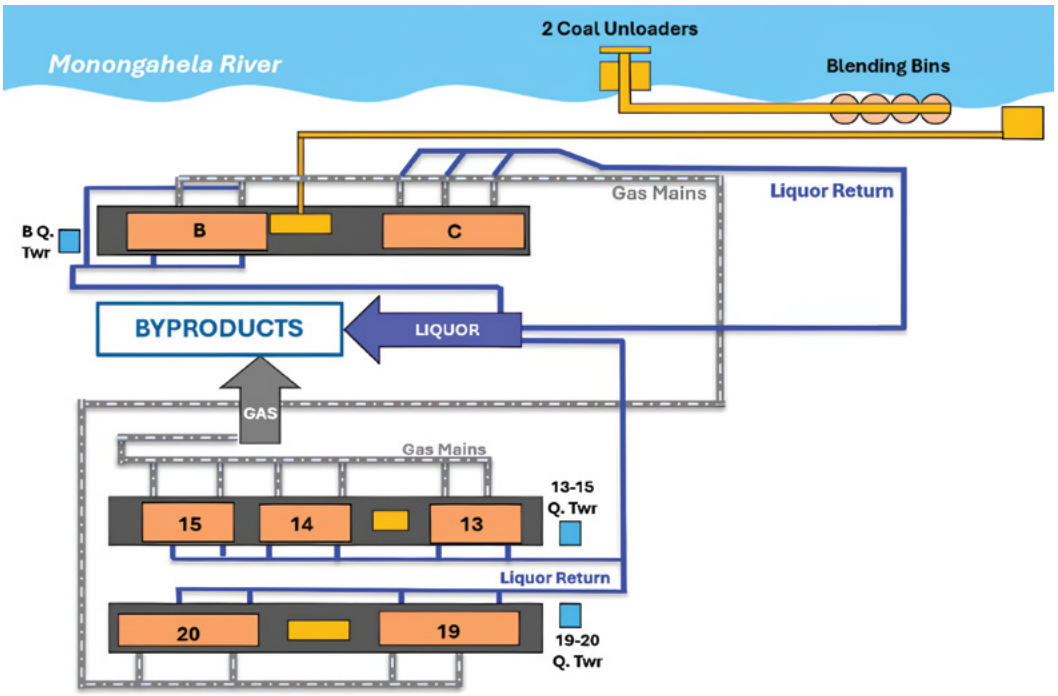
Pushing Emissions Control Systems

Once the coking cycle is complete, the coke is "pushed" out of the oven via a "pusher" machine. Emissions from the pushing process are captured by the Pushing Emission Control Systems (PECs). PECs are installed on each of the batteries. PECs on six of the batteries use a traveling canopy hood over the coke cars to capture pushing emissions and a baghouse to control emissions. The pushing emissions on B battery are captured and controlled by a fixed coke-side shed and baghouse as opposed to the traveling canopy hood. The Clairton Plant has four PEC baghouses to capture and control particulate matter emissions from pushing the coke out of the battery ovens after the coal-to-coke oven cycle is complete. These four baghouses capture and control the pushing emissions from all seven batteries.

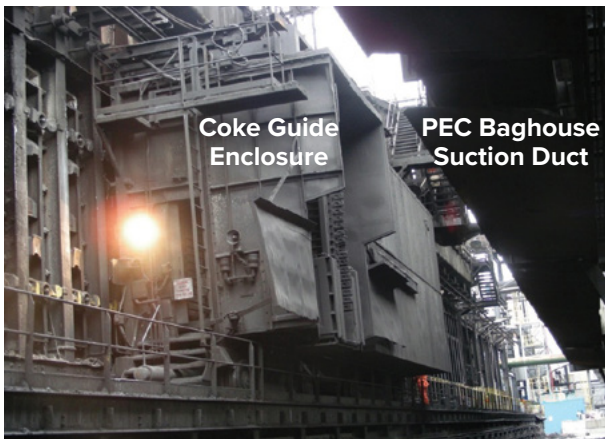
U. S. Steel's Clairton Plant has committed to improving the emissions control performance of all four PEC baghouses by installing new cages and upgrading the systems by using high control efficiency bags. The high control efficiency bags are 92% efficient at removing particulate matter 2.5 microns or less ($PM_{2.5}$). The previous baghouse bags were approximately 80% efficient at removing $PM_{2.5}$. This is a 15% increase in control efficiency at all four baghouses resulting in a significant reduction of $PM_{2.5}$.

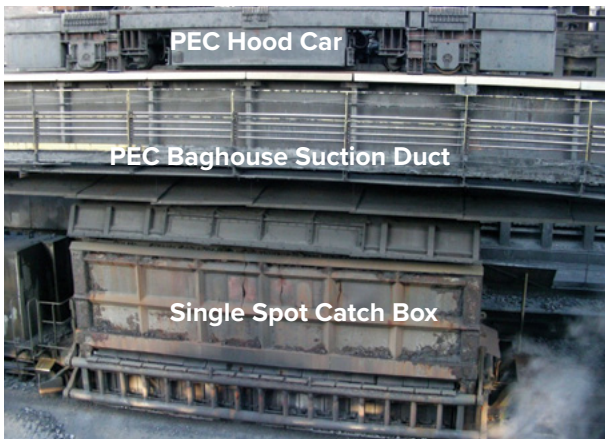


Overview of a typical coke plant with a side view of an oven cut-out.



Clairton Plant – Battery Configuration in 2024





PEC Baghouse Infrastructure and PEC Baghouse Batteries 13–15 showing the coke guide enclosure, PEC hood and 13–15 & 19–20 PEC, or second unit, baghouse.

B Battery Reliability Project Highlight

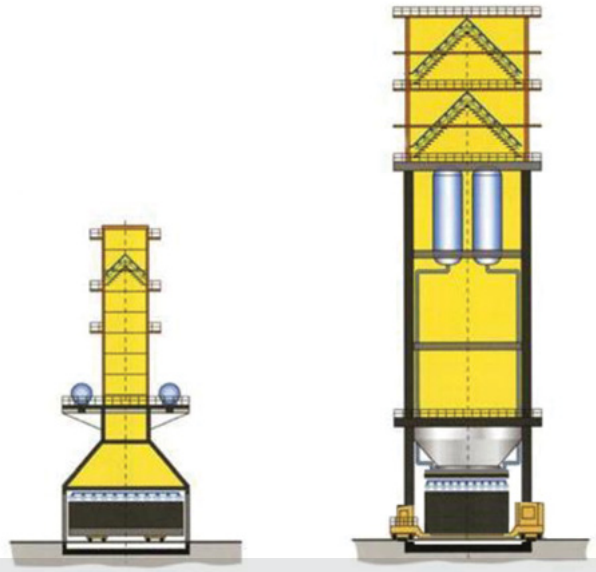
A major project to improve reliability, safety, and environmental performance is the development of the B battery door frame and jamb replacement machine. The door frames and jambs are subject to frequent temperature changes and thus, normal but potentially significant wear. When they wear, leaks may occur resulting in door and combustion stack emissions, and the operational efficiency of the battery decreases. The design of B battery and the shed can make repairs and replacements of the door frames and jambs challenging. This machine allows for safer and more efficient maintenance of the door frames and jambs.

Cryogenic Coke Oven Gas Process

To our knowledge, the Clairton Plant has the only cryogenic coke oven gas (COG) separation facility in the world. While many coke plants throughout the United States and the rest of the world do not employ any coke oven gas desulfurization, the Clairton Plant has enhanced the cryogenic process. Per the Association for Iron and Steel Technology (AIST), the desulfurization process at the Clairton Plant provides the lowest hydrogen sulfide, clean coke oven gas in North America. The hydrogen sulfide gas content of the cleaned coke oven gas is well under half the hydrogen sulfide content of those coke plants

B Battery Door Frame and Jamb Replacement Machine

that desulfurize coke oven gas through other processes and is approximately 90% lower than those that do not desulfurize coke oven gas. The cryogenic process produces much cleaner and more consistent coke oven gas, which is a benefit for the combustion users including the battery heating.



Conventional Quench Tower

Emission of more than 50 grams per ton of coke

New Low Emissions Quench Tower

Emission of less than 10 grams per ton of coke

Comparison of Conventional Quench Tower and Low Emissions Quench Tower

Low Emission Quench Towers

Once the coke is pushed out of the oven, the coke is quenched at quench towers to stop the coke from burning. Low Emissions Quench Towers (LEQTs) have been installed for C battery, batteries 13–15, and Batteries 19–20. LEQTs are much taller, have a much larger cross-sectional area, and have a state-of-the-art double baffle configuration that leads to significant reductions of particulate emissions during the coke quenching operation.

5A and 7A LEQT – installed in 2013

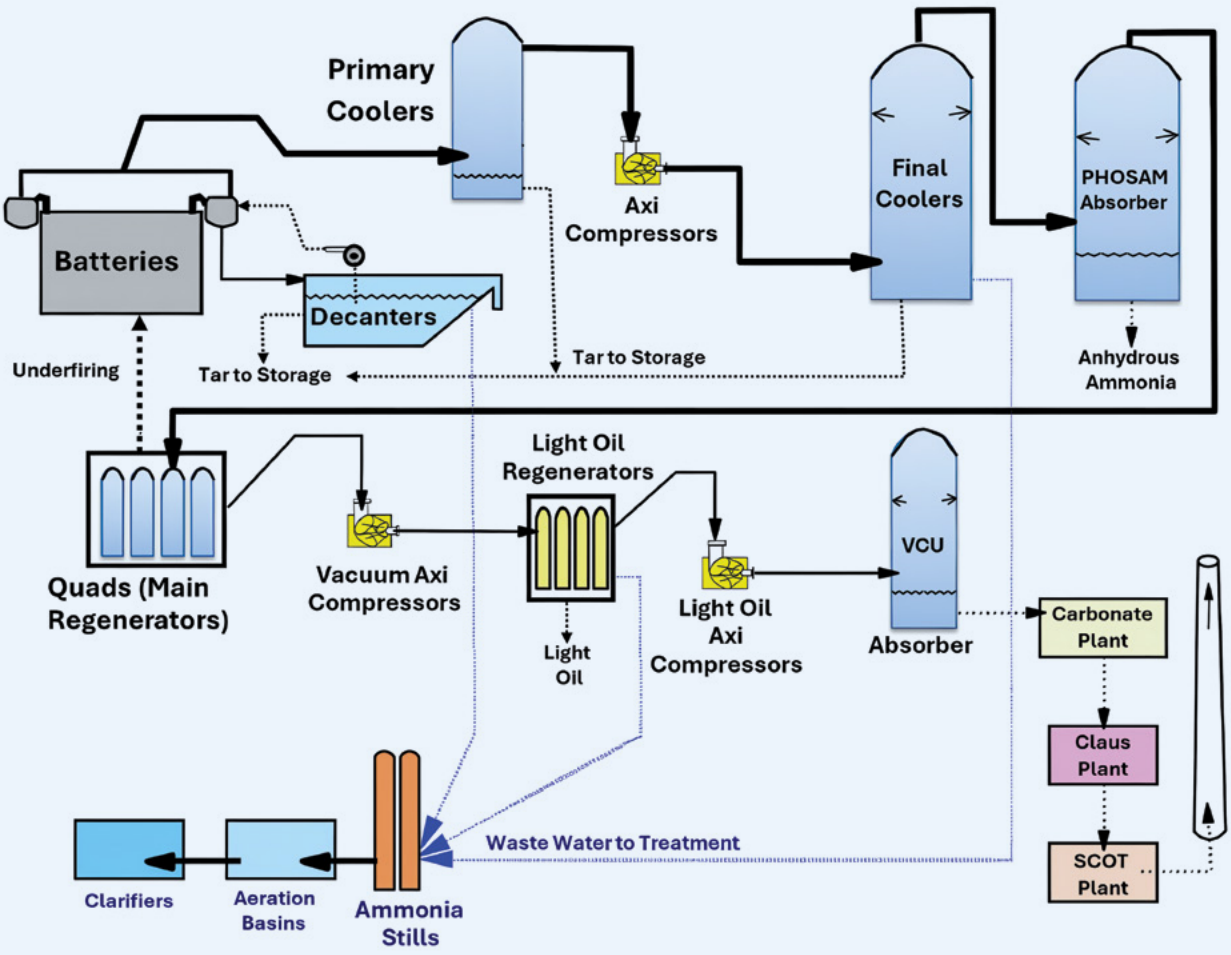
C Battery

C battery is the most technologically and environmentally advanced byproduct battery in the United States. It was installed and commenced operation in November 2012. It consists of 84 large ovens with dimensions of 6 meters (19.7 ft) in height, approximately 0.5 meters (18 inches) wide, and 16.7 meters (54.8 ft) in length. Each oven is made with specially designed refractory brick, designed to withstand temperatures as high as 2,650°F. C battery replaced three older batteries (Batteries 7–9 which were permanently idled) and resulted in reductions of hundreds of tons of particulate matter.

Charging emissions are reduced by using a screw feed larry car to allow for more controlled charging of coal into the ovens. C battery is the only battery in the United States equipped with the state-of-the-art Pressure Oven Regulated system or PROven® technology. PROven® is an electronic control system that individually controls the pressure in each oven depending on the stage of coking that oven is experiencing. The collector main is maintained at a negative pressure to draw in the off-gases released during charging and coking thus reducing emissions. In addition, a low NOx heating system reduces the amount of coke oven gas per ton of coal charged as compared to traditional batteries.

Byproducts Plant and Emission Controls

The Clairton Plant maintains and operates a state-of-the-art byproducts plant that recovers tar, ammonia, light oil, and elemental sulfur from the coke oven gas (COG). The general process flow diagram below provides a high-level summary of the byproducts plant.



Clairton Plant Byproducts Process Flow Diagram

The byproducts plant utilizes axial compressors to draw the raw coke oven gas into the battery topside collector mains and through the primary coolers where tar, naphthalene, and water are recovered.

The raw coke oven gas is drawn through the #1 Control Room axial compressors and then pushed through the U. S. Steel patented PHOSAM process to recover ammonia before being processed at the #2 Control Room cryogenic gas separation plant.

The cryogenic gas separation plant utilizes vacuum compressors to pull and push the raw coke oven gas through the main regenerators, which removes and concentrates the hydrogen sulfide and light oil from the raw coke oven gas. The light oil is recovered in a separate heat transfer, separation, and cryogenic process at #2 Control Room.

The #5 Control Room takes the concentrated acid gas coming from #2 Control Room and further cleans the gas prior to being used as a source of fuel. This is done by absorbing the hydrogen sulfide (H2S) content from the gas stream passing through an absorption column, thus producing a clean gas stream that can be used as fuel. The #5 Control Room desulfurization plant's main objective is to take the absorbed H2S and strip it from the soda ash solution into which it was first absorbed. After stripping the H2S, the sulfur plant utilizes a Claus Plant operation to facilitate a chemical reaction that converts the concentrated hydrogen sulfide through catalytic technology into elemental sulfur in molten form.

The contaminated water treatment plant is responsible for processing all contaminated water generated by the coke oven gas cleaning process. Here it is treated to meet technological and water quality-based effluent limitation limits before discharging into the Monongahela River.

Facts about the Clairton byproducts facility:

The Clairton byproducts facility, especially the desulfurization facility, is capable of removing more hydrogen sulfide than traditional by-product desulfurization units. At the Clairton Plant's state-of-the-art desulfurization plant, the process removes the coke oven gas hydrogen sulfide content to a level that is well less than half of traditional desulfurization process and well over 90% less than the majority of coke plants which do not desulfurize coke oven gas.

In 2016, upgrades made to Clairton Plant's COG desulfurization process at the Vacuum Carbonate Unit (VCU) reduced the concentration of H2S in the coke oven gas. The COG processed through the desulfurization process is combusted across multiple units throughout the Mon Valley Works plants (Clairton, Edgar Thomson, and Irvin).

In addition to its superior efficiency and hydrogen sulfide removal, the desulfurization process includes redundancy, which allows maintenance to be performed without losing the ability to desulfurize COG. In contrast, traditional byproduct facilities require a two to three-week maintenance outage at which time such facilities are not desulfurizing coke oven gas.

SCOT Plant Quench Column and new heat exchangers.

Clairton Plant Recoveries			
(based on current capacities)	**Daily**	**Annual**	**Units**
Coal Charged	14,023	5,118,273	Tons
Coke Produced	10,517	3,838,705	Tons
Tar Recovered	97,458	35,572,000	Gallons
Light Oil Recovered	41,367	15,098,906	Gallons
Anhydrous Ammonia Recovered	37	13,589	Tons
Elemental Sulfur Recovered	39	14,203	Tons
Coke Oven Gas Recovered	173,881	63,466,589	MCF

In 2024, U. S. Steel executed several environmentally beneficial projects including the #5 Control Room desulfurization plant, a $2 million capital investment, to modernize Claus Plant operations. This included installation of a thermal reactor with complete refractory lining and three newly sized condensers that more accurately fit the gas flow demands of the plant. In performing this process upgrade, the Claus Plant can now run more efficiently and reliably in the desulfurization process.

Among the projects that were implemented in 2024 at the #5 Control Room desulfurization plant was the addition of an electrically driven VFD Axial Compressor, known as the 3rd Axi project. Prior to this, the plant was configured with two steam driven axial compressors running in operation to pull suction throughout the sulfur plant. The redundancy of compressors was to ensure process uptime in the case of one axial compressor tripping off for any given reason. Now, with an electrically driven axial compressor and a steam driven axial compressor running simultaneously, the plant is protected in case of losing either steam or electric power. This adds a significant amount of reliability to desulfurization operations.

Products from Coke Batteries and Byproducts Plant.

While the Byproducts Plant provides a significant environmental benefit by cleaning the coke oven gas (COG), which reduces emissions when the COG is combusted, the materials recovered in the Clairton byproducts facility are sold as product and not disposed of as solid waste, providing a benefit to the environment. The quantity of coal charged and each of the byproducts recovered is shown in the table above.

- **Metallurgical Coke** is a fuel and reducing agent in blast furnaces.
- **Coal Tar** is a feedstock for producing electrode binder pitch, roofing pitch, road tar, and numerous basic chemicals.
- **Light Oil** is an important source of aromatic chemicals, principally benzene, a chemical essential to the production of materials such as polystyrene and ABS plastics.
- **Anhydrous Ammonia** is a high-quality agricultural fertilizer and a chemical feedstock.
- **Sulfur** is a basic industrial chemical commodity, and
- **Coke Oven Gas** is a high-quality fuel similar to natural gas at half the heating (MMBtu/scf) value.

By producing these products, the advantages of employing a state-of-the-art byproducts facility are not only realized locally, but these benefits are also felt throughout the country.

Clairton Improvement and Reliability Projects

The Contaminated Water Treatment Plant (CWTP) utilizes free and fixed ammonia distillation stills to remove ammonia and acid gases and a biological oxidation system to further treat the water. The biological treatment occurs in two aeration basins. This type of treatment utilizes microbiological organisms to consume and eliminate toxic chemicals in wastewater. Microorganisms utilize these chemicals as sources of food and energy. Solids settle in the clarifiers, and the treated water is discharged to the Monongahela River.

Clairton's water treatment plant is adding a level of redundancy by installing a roof and equipment to the current three-million-gallon "T-1" process tank. T-1 tank currently spares the existing "T-2"

Biological Basin Feed Tank. By installing a roof and pumping equipment, T-1 will also be able to spare “T-3” Still Feed Tank.

The upper 3 courses of the three-million-gallon T-2 tank were replaced in 2024. T-2 is the feed tank to the aeration basins of the Contaminated Water Treatment Plant. In addition, various lower section portions were repaired, sandblasted, and painted inside and outside. Upgrades to the T-2 tank were completed in the second half of 2025.

The No. 2 Control Room is critical to the Byproducts Recovery Plant. Within the Byproducts Recovery Plant are the Light Oil Decanters, an integral part of No. 2 Control Room. Installation for the two new light oil decanters was completed in 2025. The No. 2 Control Room cannot operate as efficiently and reliably without the light oil decanters. Without the No. 2 Control Room, coke oven gas cannot be desulfurized in the Sulfur Plant (or No. 5 Control Room). The combustion of undesulfurized coke oven gas is an environmental concern throughout the Mon Valley.

Clairton’s T-2 Tank

#2 Control Room Light Oil Decanters

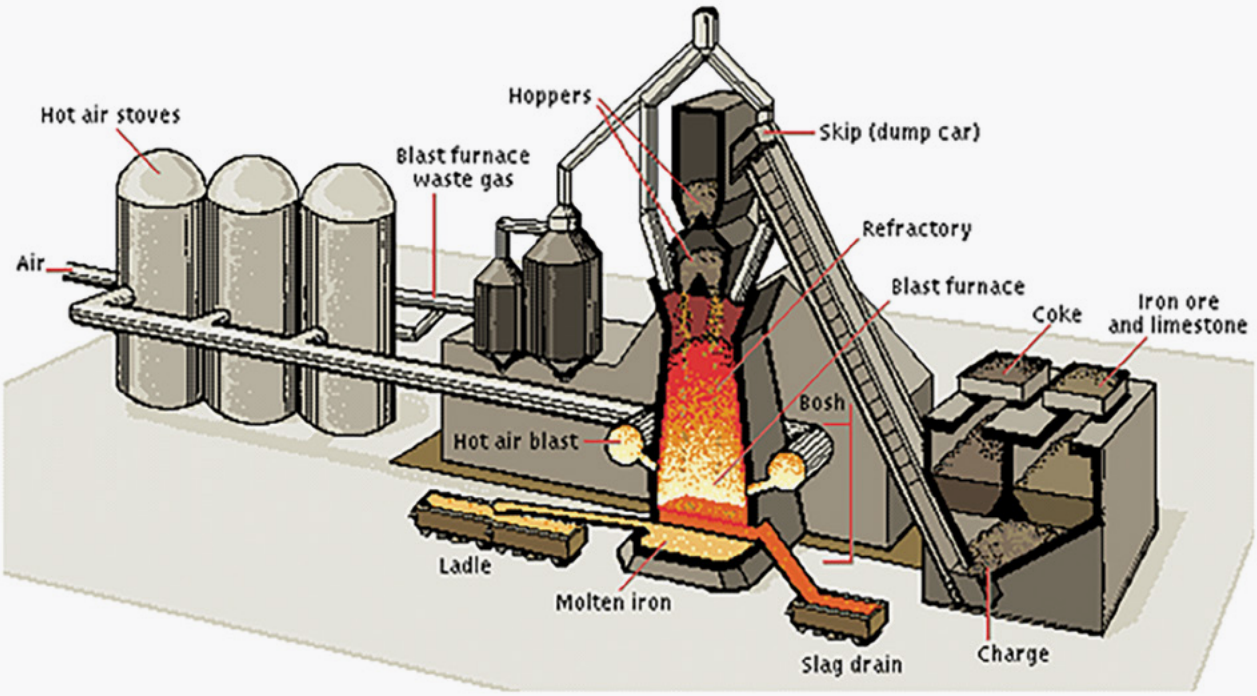
Edgar Thomson Facility

Edgar Thomson Plant

U. S. Steel Mon Valley Works Edgar Thomson Plant (ET) is an ironmaking and steelmaking facility that produces steel slabs. Raw materials such as coke, iron-bearing materials, and fluxes are charged to blast furnaces in the ironmaking process. Molten metal, specifically iron, is tapped from the blast furnace at the casthouse into transfer ladles. The Basic Oxygen Process (BOP) turns the hot metal into molten steel by introducing scrap, alloys, fluxes, and oxygen. The refined liquid steel is charged to the dual strand continuous caster mold. The steel slabs are formed in the continuous caster, cut to length, and shipped offsite. The three Riley Boilers at ET utilize blast furnace gas (BFG) and coke oven gas (COG), with the addition of natural gas (NG) to generate steam, heat, and electricity for the plant.

Equipment, especially environmental controls, has also been updated as new and more reliable technologies have become available, such as baghouse cleaning air systems and improved taphole material at the blast furnace.

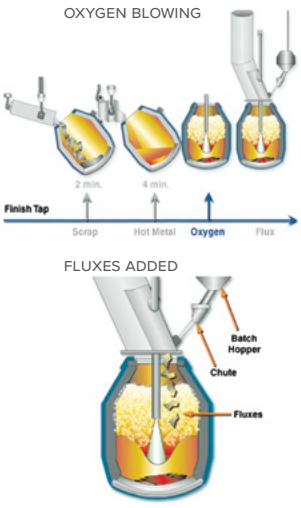
The Edgar Thomson Plant has two blast furnaces, Blast Furnace #1 (BF1) and Blast Furnace #3 (BF3). The blast furnaces are of the same basic design and operate in a similar manner but run independently of each other. Raw materials, including iron-bearing material, coke, and fluxes are charged from skip cars through the bells into the top of the furnace. A continuous blast of heated air from the stoves is injected through pipes called tuyeres, which are located just above the taphole near the base of the furnaces. Natural gas and coke oven gas are also injected through the tuyeres. The heated air burns the injected gases and coke to produce the heat required by the process to reduce the iron-bearing materials to molten iron. The raw materials, heated air, and gases are injected into the furnace during periods of casting and non-casting. The iron becomes molten just above the tuyeres and is drained from the furnaces by casting through the taphole, which is drilled open. The molten iron is gravity-fed to sub ladles via troughs located in the casthouse floor. A separate trough is utilized to direct slag, which floats on the molten iron out of the casthouse, into an open slag pit; this slag can be recycled as a base material for constructing roads.



A blast furnace operations overview showing coke, iron ore, and limestone storage and charging into a blast furnace where molten iron is produced. The molten iron is transferred to a basic oxygen process to be converted from iron to steel.

Edgar Thomson BOP Shop Mixer.

The length of the cast can vary from one to three hours. At the end of the cast, when all the available molten iron has been drained from the furnaces, the taphole is closed. While the furnace taphole is plugged, additional molten iron is formed. The time between each cast is generally 30 to 45 minutes. The first ingredient for BOP steelmaking is iron, more commonly known as “hot metal.” The hot metal arrives at the BOP Shop Mixer in rail sub cars from the blast furnaces. Each car can hold approximately 180 tons of hot metal. After every cast at the blast furnace, two of these cars arrive at the mixer, where the mixer operator pours them into the mixer vessel. The mixer operator also pours approximately 200 tons of hot metal into the iron ladle, which will become the hot metal charge for the next heat at the BOP. The next operation is the desulfurization of hot metal. This is done by placing a desulfurization lance into the hot metal and blowing a magnesia material along with some inert gases into the iron. This creates slag, which is removed at the deslag area by the deslag operator.

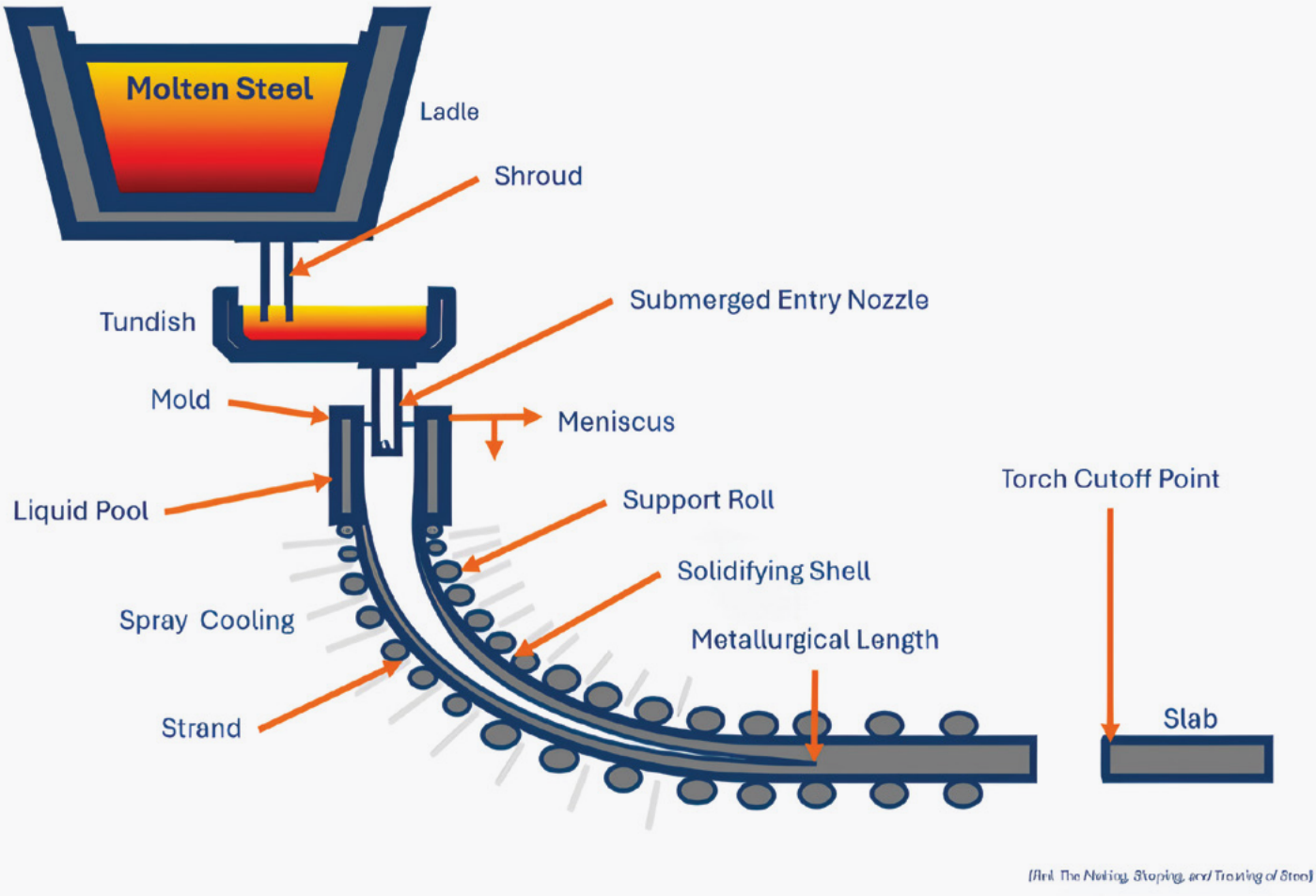


Edgar Thomson BOP shop and diagrams detailing the oxygen blow and added fluxes.

Edgar Thomson Environmental Control Highlights

U. S. Steel continuously monitors many of its sources and emission controls for environmental performance and compliance at the plant. Air emissions generated from the Blast Furnaces and BOP are controlled by multiple baghouses throughout the processes. The BOP Gas Cleaning System collects process gas generated during the steel production cycle. The process gas is then sprayed with a large volume of water to cool it and remove a sizable portion of the particulate matter. The water and particulate matter flow to the water treatment system.

The Edgar Thomson Plant withdraws water from the Monongahela River via two intake structures. This water is transported to various areas in the plant for consumption and cooling. Eight cooling towers cool and recycle more than 100 million gallons of water every day, reducing the amount of water withdrawn from the river. Noncontact, non-recycled cooling water is discharged back to the river through four outfalls permitted by the Pennsylvania Department of Environmental Protection (PA DEP). The Edgar Thompson Plant operates three water treatment facilities: Blast Furnace Gas Washer and Recycle System, BOP Gas Cleaning and Blowdown Treatment Facility, and Caster Water Quality.

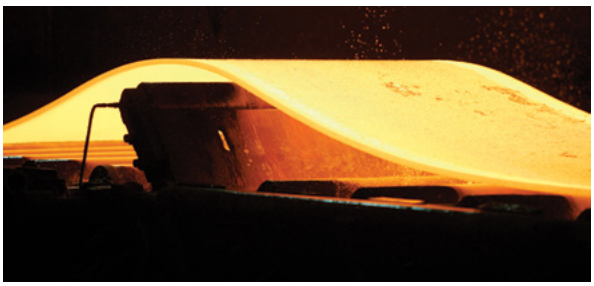


Schematic of the equipment at the caster.

Aerial Photo of the Irvin Plant

Irvin Plant

Steel slabs from Edgar Thomson are sent via rail to the Irvin Plant to be rolled into coils and finished.



Close-up of a slab through the Hot Strip Mill

80-inch Hot Strip Mill

The 80-inch Hot Strip Mill began operation in 1938. A hot strip mill process involves reheating the steel slabs to make the slab malleable in order to roll it. The steel enters the hot strip mill as an 8-inch-thick slab and exits as a 1.5 mm to 3 mm sheet, which will be rolled into a coil.

The Hot Strip Mill at the Irvin Plant uses five individual reheat furnaces to reheat steel slabs. The furnaces have the capability of being fired by either natural gas or coke oven gas and are equipped with recuperative burners. The flue gases created by the combustion of these fuels are the primary source of emissions from the reheat furnaces. Good operating and maintenance practices, such as annual tune-ups, minimize environmental impacts from combustion. Once withdrawn from the reheat furnace, the slabs are hot rolled. The rolling train consists of a scale breaker, roughing and finishing stands, run-out table, and coilers.

Pickle Line

Irvin operates two continuous pickle lines, the 64-inch and 84-inch. At the pickle lines, the coil is unrolled and passed through a series of four hydrochloric acid (HCl) or pickle liquor tanks to remove surface impurities such as oxides, stains, rust, or scale. HCl emissions associated with the pickling operation are captured and controlled by a scrubber. In a wet scrubber, a liquid is sprayed onto the air stream to remove soluble pollutants such as sulfur dioxide and HCl.

The main air emission control device at the 64-inch Pickle Line is a packed tower water scrubber. In addition, the process utilizes an acid mist capture system from the acid tanks, which exhausts to a water-wash packed tower fume scrubbing system. The slightly negative air flow into the capture system ensures HCl emissions

Irvin Reheat Furnace feed to Hot Strip Mill

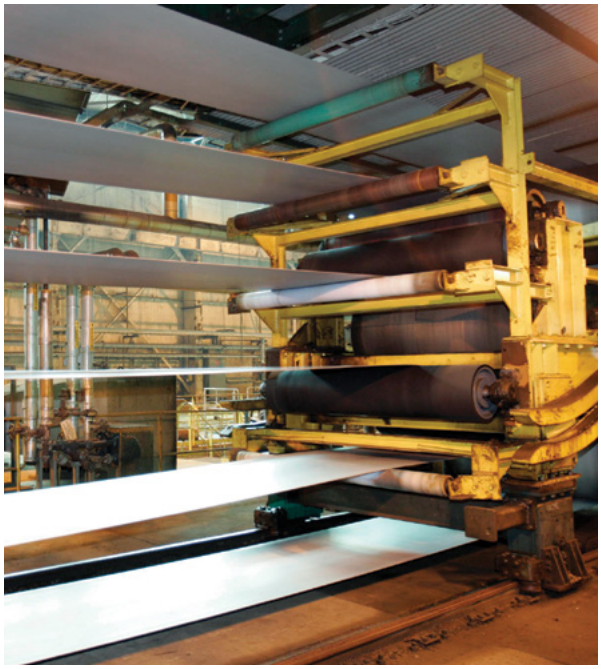
are well controlled. The 84-inch Pickle Line also utilizes a water wash scrubber to control air emissions from the process. The acid tanks, however, are equipped with continuous covers which are integral to the tanks.

After pickling, the coil is rinsed, neutralized, and dried. The steel is then recoiled for either shipment off site, shipment to Fairless for further processing, or moves on to the Cold Mill, Galvanize Line, or Annealing Lines at Irvin.

No. 3 Five-Stand Cold Reduction Mill

The Cold Reduction Mill is where unheated metal passes through a series of rolls to reduce the thickness of the steel coils. Pickled steel coils can be reduced in thickness by 25–90% by passing through the five cold-rolling mill stands in series. The Cold Mill also imparts a smoother surface finish and metallurgical properties to the sheet. The reduction in thickness of the steel strip at high speed generates heat, raising the temperature of both the steel strip and the rolls. The heat is dissipated by a system of flood lubrication (oils/water emulsion) that is directed in small streams or jets against the roll bodies and the surface of the steel.

The primary air emission control device at the Cold Mill is a cyclone mist eliminator. Cyclone mist eliminators use centrifugal force to separate the liquid droplets from the air stream. The liquid droplets are forced to the outer wall, from where they are drained to the bottom of the cyclone. The cleaned air stream is then discharged.



Irvin Plant Pickle Line

Annealing Processes

Cold reduction hardens the steel strip to the extent that it must be heat treated to affect changes in the ductility and formability of the sheet for further processing. Heat treating methods include both batch annealing and continuous annealing.

HPH Annealing Furnaces

The High-Pressure Hydrogen (HPH) annealing process at the Irvin Plant consists of 31 single-stack annealing furnaces. HPH annealing is a batch operation where each furnace operates independently. The coils to be annealed are stacked on a furnace base, and a thin steel inner cover is placed over the coils. The Kaowool-lined furnace is then positioned over the coil stack. The purpose of the inner cover is to hold annealing gases, typically a mixture of nitrogen and hydrogen, to prevent oxidation or scaling of the steel surface during the heating and cooling process. Once the heating and soaking cycles are completed, the portable furnace is removed for positioning on another base.

Open Coil Annealing Furnace Nos. 1 to 16

The Open Coil Annealing (OCA) process consists of 16 furnaces. The furnaces use either natural gas or coke oven gas as fuels. However, the furnaces are typically fired with coke oven gas enriched with natural gas. Like HPH annealing, OCA is also a batch process with each furnace operating independently. In the OCA process, a separator wire is wound into the coil prior to annealing to separate each wrap of the coil. This separation allows for shorter annealing times through increased heat transfer to the steel. An inner cover is placed over the coil stack to hold annealing gases.

Continuous Annealing

The Continuous Annealing (CA) line incorporates both the annealing furnace and an electrolytic cleaning process. The electrolytic cleaning process utilizes a caustic solution to clean the steel strip prior to annealing.

No. 1 Continuous Galvanizing Line

Galvanizing employs a zinc-based metal bath to impart a metal coating of controlled thickness to the steel strip. Prior to the zinc coating operation, the steel strip is heated to the desired temperature in the galvanizing line. This preheating of the strip improves the adherence of the zinc to the strip. If desired, the steel sheet can be heated in the galvanneal furnace and then annealed in a controlled atmosphere after the zinc coating pot to fuse the zinc with the base metal producing a zinc/iron intermetallic alloy coating. This improves paint adherence, formability, and weldability of the sheet.

Irvin Plant Galvanizing Line

No. 2 Continuous Galvanizing and Aluminum Coating Line

Like galvanizing, the galvalume process uses an aluminum/zinc-based metal bath to impart a metal coating in a continuous controlled thickness on the steel strip. Prior to entering the metal bath, the strip is heated in the preheat and annealing furnaces to the desired temperature for coating adherence.

Combustion Units

The combustion units at the facility include four package boilers used primarily to generate steam for operations at the facility. The boilers are fired primarily by desulfurized coke oven gas and natural gas.

Water Treatment

North Water Treatment Plant

The North Water Treatment Plant receives water from the Hot Strip Mill. The emulsified process water's first stop is one of two scale pits to separate out the heavy material. The heavy material (scale) is sent to Edgar Thomson for recycling. The water then travels to one of two clarifiers and through pressure filters to complete the cleaning process. The water is cooled before returning to the Hot Strip Mill.

South Water Treatment Plant

The South Water Treatment Plant receives all other wastewater for treatment. Water goes through neutralization and solids removal before being discharged to the Monongahela River.

Sewage Treatment Plant

Sanitary wastewater is treated onsite before being discharged to the Monongahela River.

IRVIN SPOTLIGHT

Eagle Cam Photo of Irvin and Stella

In 2013, eagles Irvin and Claire built a nest 100 feet from the ground in a sycamore tree below the Irvin Plant on the Monongahela River. With an average lifespan of 20 years, eagles generally mate for life, returning to the same nest year after year. If one mate dies, the surviving mate may find a new partner. Recently, Stella, whose partner may have died, "stole" Irvin and the nest from Claire and established herself as the new female at the Irvin Plant.

Cameras near the nest have provided a live video feed of the family's activities after the original eagle couple, Claire and Irvin, first took up residence there in 2013. In July 2024, a young bald eagle named Lucky launched itself from a tree branch into its first flight — thrilling the eaglet's more than 2 million online fans. Lucky is the most recent star of the eagle family. Lucky was the pair's seventh eaglet to be hatched there. Lucky — whose name had been picked in a fundraising contest cosponsored by U. S. Steel and the Tamarack Wildlife Center — was 77 days old at the time of that first flight. The event was marked by a spate of media coverage in the Pittsburgh area, calling attention to the plant's wildlife-protection efforts.

You can watch Irvin and Stella live at U. S. Steel's website (ussteel.com/eagles), by searching for U. S. Steel bald eagle cam 1 or cam 2 on YouTube, or by joining the Facebook group Steel City Eagles.

Fairless Plant

Fairless Plant

The Fairless Plant consists of a single galvanizing line similar to Irvin's. There are no air emission control devices at Fairless. Water is treated at the Fairless Plant's Finishing Mill Treatment Plant (FMTP). From FMTP the water is sent to a third-party treatment plant and then discharged.

ENVIRONMENTAL TRAINING

U. S. Steel invests significant resources to ensure that its employees are properly trained in all aspects of their responsibilities to ensure, among other things, that environmental compliance is achieved. This is conducted in many different ways, including one-on-one training as well as more comprehensive training programs, such as those related to ISO 14001.

Environmental Management System and ISO 14001:2015

The Mon Valley Plants are committed to environmental compliance, beginning with the incorporation of International Organization for Standardization (ISO) 14001 into our environmental management systems.

ISO 14001 standards seek to assist a company or organization in minimizing harmful effects on the environment caused by its activities and achieve continual improvement to its environmental performance.

The Clairton Plant has been certified in compliance with this standard since 1998, having become the first coke plant in the country to obtain certification. The Edgar Thomson, Irvin, and Fairless Plants have been certified in compliance with this standard since 2001.

There were two ISO 14001 surveillance audit events in 2024 at all Mon Valley Works facilities with no major nonconformances identified.

PRI Certification
PERFORMANCE REVIEW INSTITUTE

This Certificate of Registration acknowledges

United States Steel Corporation

Clairton Works
400 State Street
Clairton, Pennsylvania, 15025
United States

is registered as a Site environmental management system, demonstrated in conformance with

ISO 14001:2015

Scope of Registration:

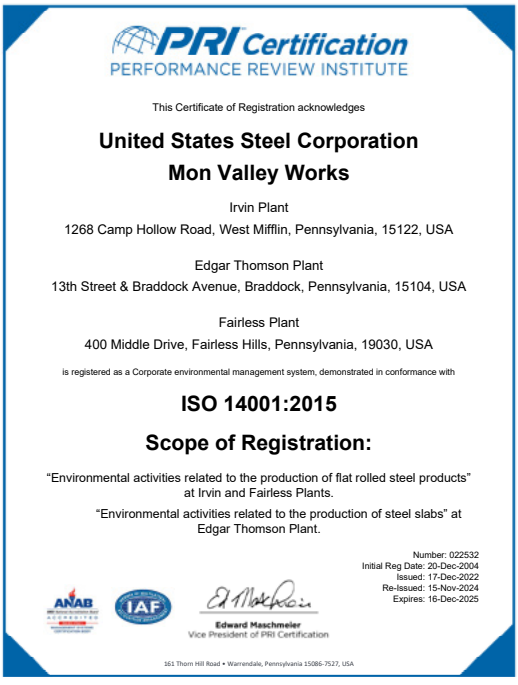
Environmental activities related to the production of metallurgical coke on the property boundaries of the plant site at Clairton, Pennsylvania, including the Peters Creek Lagoon area, but excluding the lagoon itself. All legacy sites are excluded, as well as the rights of way, the farm, and the property in Dravosburg.

Number: 024638
Initial Reg Date: 21-Apr-2004
Issued: 19-Apr-2025
Expires: 18-Apr-2028

Edward Maschmeier
Vice President of PRI Certification

161 Thorn Hill Road • Warrendale, Pennsylvania 15086-7527, USA

U. S. Steel Clairton plant's current ISO14001 Certificate of Registration.



PRI Certification
PERFORMANCE REVIEW INSTITUTE

This Certificate of Registration acknowledges

United States Steel Corporation
Mon Valley Works

Irvin Plant
1268 Camp Hollow Road, West Mifflin, Pennsylvania, 15122, USA

Edgar Thomson Plant
13th Street & Braddock Avenue, Braddock, Pennsylvania, 15104, USA

Fairless Plant
400 Middle Drive, Fairless Hills, Pennsylvania, 19030, USA

is registered as a Corporate environmental management system, demonstrated in conformance with

ISO 14001:2015

Scope of Registration:

"Environmental activities related to the production of flat rolled steel products" at Irvin and Fairless Plants.

"Environmental activities related to the production of steel slabs" at Edgar Thomson Plant.

Number: 022532
Initial Reg Date: 20-Dec-2004
Issued: 17-Dec-2022
Re-Issued: 15-Nov-2024
Expires: 16-Dec-2025

Edward Maschmeier
Vice President of PRI Certification

161 Thorn Hill Road • Warrendale, Pennsylvania 15086-7527, USA

U. S. Steel Edgar Thomson Plant's current ISO14001 Certificate of Registration.

Continuous Improvement to The Environment

Clairton's Environmental Policy

Continuous Improvement to the Environment (CITE)

The Clairton road to environmental responsibility and excellence begins by focusing on people and encouraging each employee to participate fully. This is achieved through a comprehensive training program referred to as CITE Training. The program's name stems from Clairton's environmental policy, Continuous Improvement to the Environment (CITE).

CITE Training is a combination of classroom training and practical field training focused on environmental practices and improvement at the Clairton Plant. The training program is an 11-part program that touches on all aspects of the coking process, their environmental impact, procedures, and best practices to mitigate environmental impacts from each potential emission point in the coke-making process. This program consists of environmental impact awareness training, learning relationships between processes and equipment, and the ways specific workers' actions and operating conditions affect upstream and downstream operations. Additionally, environmental regulations are reviewed along with the role of the employee in maintaining the plant in compliance with the regulations.

The CITE programs includes, but is not limited to the following:

- Environmental Awareness for Air, Water, and Waste regulations and permits.
- Coal Handling Operations and Procedures including coal crushing, screening, blending, and transport.
- Larry Car Operations and the charging of batteries.
- Lidman Procedures and other top-side battery operations.
- Pusher Machine Operations for pushing the coke out of the ovens into the quench cars.
- Door Machine Operations for removing doors, cleaning the door and door jambs, and replacing the doors.
- Heating Procedures to review proper battery heating techniques.
- Patching Procedures for minor oven wall repairs.
- Repair and Maintenance of the various process and ancillary coke-making equipment.
- And other miscellaneous equipment and procedure reviews.

This program reiterates to employees that the environment is everybody's responsibility and that procedures must be followed for U. S. Steel to meet its environmental requirements. U. S. Steel requires that all employees who work at the coking operations be trained in the CITE program. Implementation of this program has helped Clairton workers improve their environmental awareness and work practices, resulting in a culture of environmental awareness.

Comply, Lead, Educate, Allocate, and Never Stop Improving (CLEAN)

The Edgar Thomson, Irvin, and Fairless facilities utilize a different environmental policy from Clairton. The environmental policy, CLEAN, represents the facilities' commitment to the environment and highlights that environmental protection is a core responsibility for every employee.

At the Mon Valley Works, we are committed to continually improving our environmental performance by establishing objectives that will reduce our impact on the air, water, and land. To achieve the prevention of pollution and the protection of the environmental resources entrusted to us, we will:

Comply with environmental standards and regulations.

Lead the industry in environmental performance.

Educate the workforce on relevant environmental issues.

Allocate the resources needed to protect the environment.

Never stop improving.

Environmental Excellence

Beyond the plant specific environmental policies, U. S. Steel has a company-wide environmental policy that unites all the plants. The policy — Environmental Excellence — Everyone, Everywhere, Every Day — establishes the expectations that are set for each plant and its employees by referring back to the company's core values, the S.T.E.E.L. principles.

United States Steel Environmental Policy

Environmental Awareness Training

In addition to CLEAN training, ET conducts annual environmental awareness training for key operating and maintenance personnel. The training focuses on identifying and responding to potential emissive activities and situations. Led by ET's Environmental Department, participants discuss the tools and resources available to them to mitigate the environmental impact, including control equipment, procedures, and their own training.

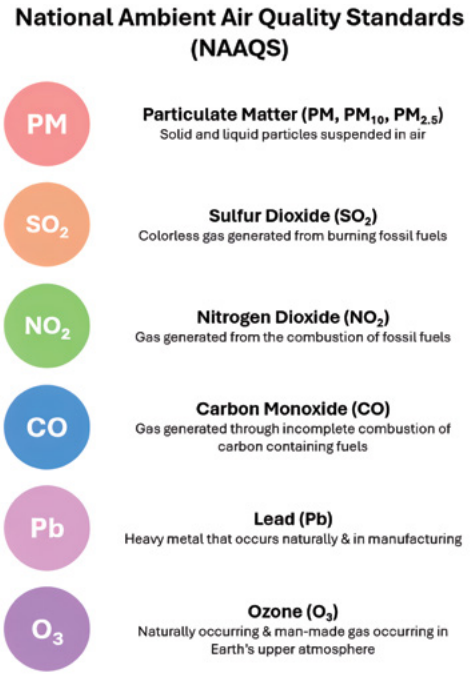
Throughout the entire Mon Valley Works, environmental awareness and targeted topics are included in Annual Safety Awareness training, weekly crew safety meetings, and the Summer Safety Campaign. The 2024 Summer Safety Campaign focused on fugitive dust and refrigeration equipment standards. Road dust is a challenge at the Mon Valley due to the high volume of trucks and heavy equipment traffic. These challenges are met in a variety of ways, such as paving, application of dust suppressant, and reduced speed limits.

ENVIRONMENTAL PERFORMANCE – AIR

The Mon Valley Works Plants are subject to federal, state, and local environmental regulations. Allegheny County Health Department (ACHD) regulates and monitors the environmental compliance of the Clairton, Edgar Thomson, and Irvin Plants while the PA DEP monitors the Fairless Plant.

National Ambient Air Quality Standards (NAAQS)

National Ambient Air Quality Standards (NAAQS) were developed for pollutants considered harmful to sensitive populations and the environment. The Environmental Protection Agency (EPA) set these standards for several pollutants, including particulate matter (including PM_{10} and $PM_{2.5}$), sulfur dioxide (SO_2), nitrogen dioxide (NO_2), ozone, carbon monoxide (CO), and lead. EPA air monitors operated by ACHD and located in the Liberty, Clairton, and North Braddock areas measure the ambient air quality. The monitors account for emissions attributable from a variety of background, mobile, and industrial sources.



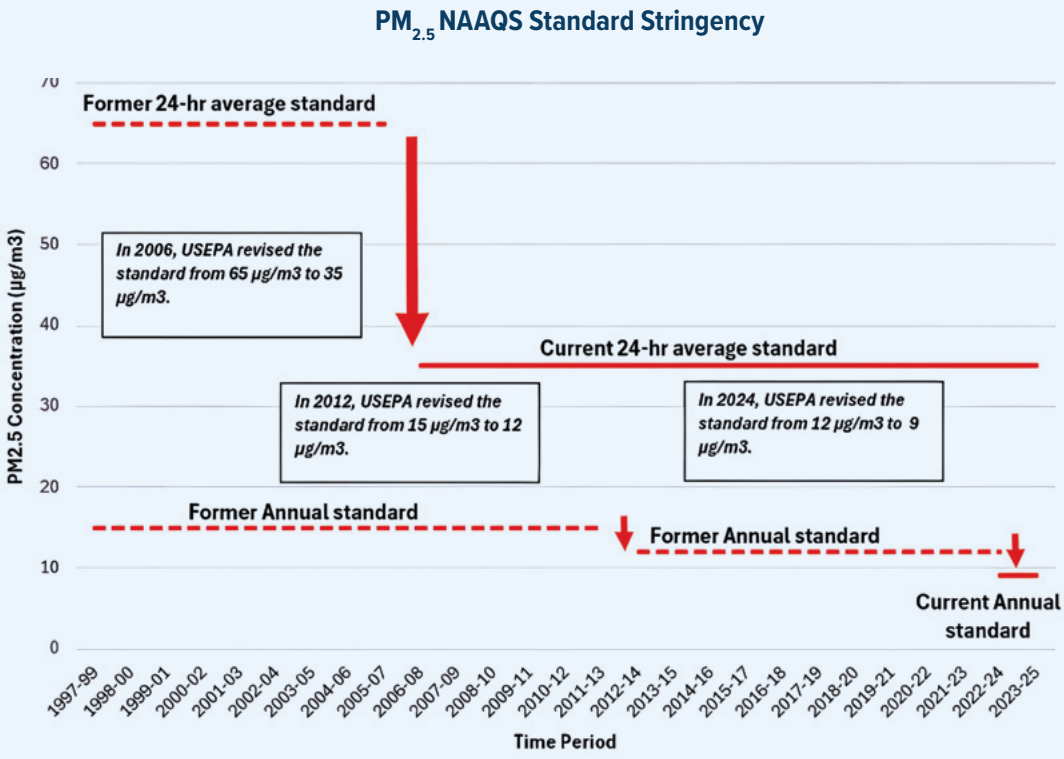
National Ambient Air Quality Standards (NAAQS) Summary

$PM_{2.5}$, PM_{10}, NO_2, Carbon Monoxide, Ozone and Lead NAAQS

Including 2024 monitor data, Allegheny County and the Liberty/Clairton area has now attained the PM_{10} NAAQS for 29 consecutive years, the NO_2 NAAQS for 40 years, the carbon monoxide (CO) standard for 36 consecutive years, the 2015 ozone (O_3) standard for 8 years, and the lead standard since 2008.

$PM_{2.5}$ refers to particulate matter that is smaller than 2.5 microns. To compare, the average human hair is 50–70 microns, and fine beach sand is approximately 90 microns in diameter.

The following figure depicts how the $PM_{2.5}$ NAAQS has become more stringent over time. In 2006, the 24-hour standard was reduced from 65 µg/m^3 to 35 µg/m^3. In 2012, the annual standard was reduced from 15 µg/m^3 to 12 µg/m^3. On February 7, 2024, the EPA revised the annual $PM_{2.5}$ NAAQS, lowering the limit to 9.0 ug/m^3. The CAA requires that EPA finalize attainment statuses within 2 years, followed by the submittal of a SIP within 3 years. EPA is currently reconsidering the lowered standard.



History of $PM_{2.5}$ 24-hour average and annual NAAQS

While the Liberty/Clairton monitor has met the 2012 $PM_{2.5}$ standards for the fifth consecutive year, Allegheny County is currently designated as nonattainment with the 2012 $PM_{2.5}$ annual NAAQS based upon older monitoring data, including periods of time before major investments. The nonattainment designation was made in 2015.

On September 11, 2019, the Allegheny County Health Department Board of Health unanimously approved the $PM_{2.5}$ State Implementation Plan (SIP) for Allegheny County. A SIP is a state plan created for non-attainment areas that contains new rules to reduce emissions in order to comply with the Federal Clean Air Act (CAA). In this case, ACHD created the $PM_{2.5}$ SIP, and then shared it with the PA DEP for approval and submitted it to the EPA. On May 14, 2021, EPA published a final rule in the Federal Register to fully approve most elements of the $PM_{2.5}$ SIP and conditionally approve others.

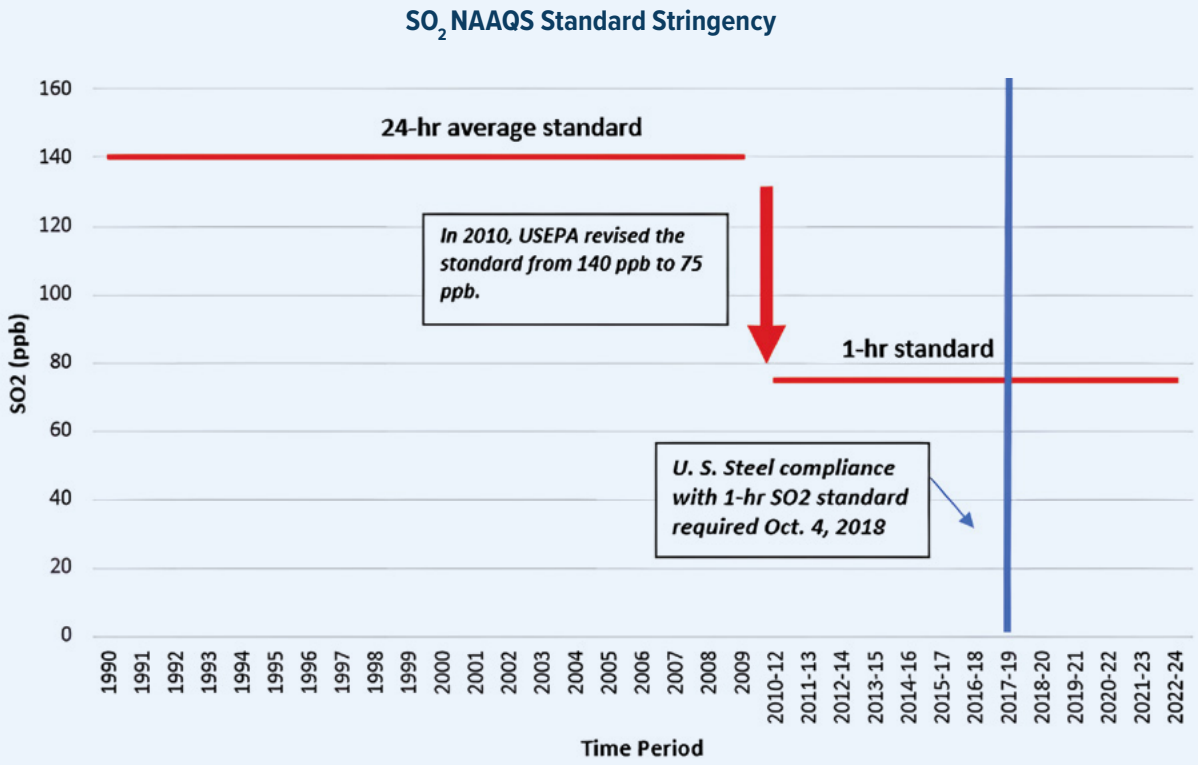
Because EPA has determined that Allegheny County has demonstrated attainment with the 2012 $PM_{2.5}$ standard for five consecutive years and previously approved ACHD's SIP demonstrating maintenance of the $PM_{2.5}$ NAAQS through 2035 in the county, on November 20, 2025, EPA proposed to redesignate Allegheny County from nonattainment to attainment of the 2012 $PM_{2.5}$ NAAQS. U. S. Steel is awaiting the publication of the final redesignation.

On February 7, 2024, the EPA revised the annual $PM_{2.5}$ NAAQS, lowering the limit to 9.0 ug/m^3. On March 12, 2025, EPA announced that it was reconsidering the 2024 $PM_{2.5}$ NAAQS. In addition, on November 24, 2025, EPA asked the Court of Appeals for the District of Columbia Circuit to vacate the 2024 $PM_{2.5}$ NAAQS because of errors it made when promulgating it. The matter remains before the Court.

SO_2 NAAQS

The following figure depicts how the SO_2 NAAQS has become more stringent over time. In 1971, the SO_2 standard was 140 ppb for 24 hours. In 2010, a new 1-hour standard of 75 ppb was promulgated, and the 24-hour standard was revoked.

The EPA approved the ACHD's SO_2 SIP in late April 2020 with the final rule becoming effective on May 26, 2020.



History of SO_2 NAAQS demonstrating change from a 24-hour average to a much lower 1-hour standard

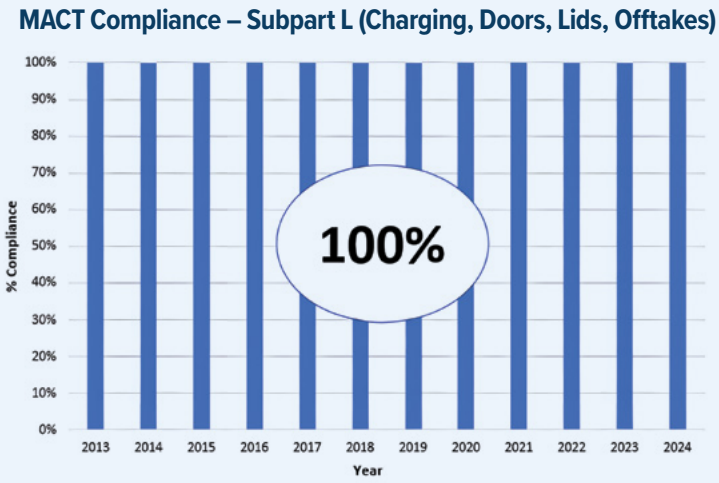
SO_2 data from the Liberty monitor continues to show attainment of the standard based on the 3-year 99th percentile, supporting a finding that the current SO_2 SIP is working as U. S. Steel's SIP controls were implemented in late 2018, and the Liberty monitor continues to demonstrate SO_2 attainment. On April 28, 2025, EPA redesignated Allegheny County to attainment with the 2010 SO_2 NAAQS.

Federal NESHAP Standards

The Federal Clean Air Act (CAA) requires EPA to regulate emissions of hazardous air pollutants for listed sources via National Emission Standards for Hazardous Air Pollutants (NESHAP). Hazardous air pollutants are also known as toxic air pollutants or air toxics. They are pollutants that have been found to cause or may cause cancer or other serious health effects or adverse environmental and ecological effects. The EPA is required to control 188 hazardous air pollutants, or HAPs. Details for the NESHAP regulations applicable to the Mon Valley are summarized in the National Emission Standards for Hazardous Air Pollutants Summary table.

NESHAP Standard	NESHAP Category	Applicable Plant
40 CFR Part 63 Subpart L	Coke Oven Batteries	Clairton
40 CFR Part 63 Subpart CCCCC	Coke Ovens: Pushing, Quenching and Battery Stacks	Clairton
40 CFR Part 61 Subpart L	Benzene Emission from Coke Byproduct Recovery Plants	Clairton
40 CFR Part 61 Subpart FF	Benzene Waste Operations	Clairton
40 CFR Part 63 Subpart FFFFF	Integrated Iron and Steel Manufacturing Facilities	Edgar Thomson
40 CFR Part 63 Subpart DDDDD	Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters	Edgar Thomson, Clairton and Irvin
40 CFR Part 63 Subpart CCC	Steel Pickling — HCl Process Facilities and Hydrochloric Acid Regeneration Plants	Irvin

National Emission Standards for Hazardous Air Pollutants Plant Applicability Summary



Clairton plant facility-wide Subpart L, National Emission Standards for Coke Oven Batteries, maximum achievable control technology compliance rate from 2013 to 2024

The Coke Oven Battery NESHAP is applicable to the Clairton Plant. In 1992, EPA proposed national emission standards for the control of emissions from new and existing coke oven batteries. This action promulgated the national emission standards and visible emissions observation standards, Method 303, for the determination of visible emissions from byproduct and nonrecovery coke oven batteries. U. S. Steel is 100% compliant with the requirements of Subpart L.

> **Method 303 is the USEPA method to determine visible emissions from byproduct coke oven batteries.**

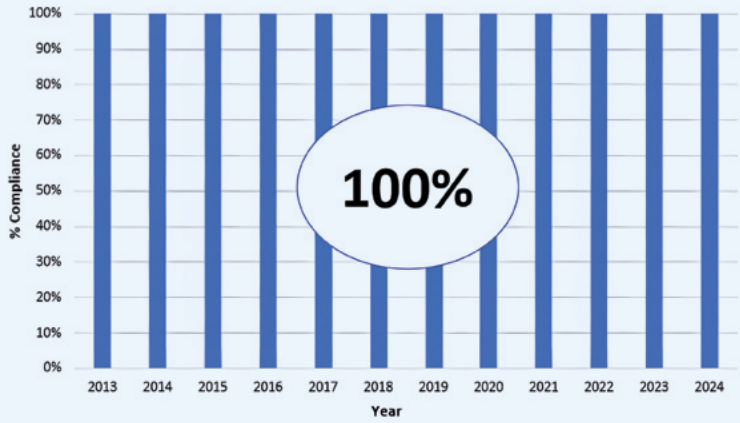
ACHD employs a third-party visible emissions observation contractor that is on-site every day of the year at the Clairton Plant. The third-party contractor implements the EPA required Method 303 opacity readings to monitor visible emissions from every battery on a daily basis at the plant. These observations are used to determine compliance with Federal Maximum Achievable Control Technology (MACT) Standards pursuant to Method 303 as well as to provide ACHD with data to determine compliance with Article XXI standards.

The Coke Ovens: Pushing, Quenching and Battery Stacks NESHAP, commonly referred to as the Coke MACT, is applicable to the Clairton Plant. The EPA issued a final rule to reduce emissions of toxic air pollutants from coke oven batteries in 2003. This rule applies to each new or existing coke oven battery at any coke plant that is considered a major source of toxic air emissions. Major sources are those that emit 10 tons per year or more of a single toxic air pollutant, or 25 tons or more of a combination of toxic air pollutants. The CAA requires EPA to identify categories of industrial sources that emit one or more listed 188 toxic air pollutants, of which coke oven emissions are one. U. S. Steel is 100% compliant with the requirements of the Coke MACT.

The CAA requires EPA to assess the remaining risk after application of the final air toxics standards. This is known as a residual risk assessment, or Risk and Technology Review (RTR). Based on the completion of this risk assessment, including available health information and associated uncertainties, the EPA determines whether the risks from the source sector are acceptable or not and whether the current standards provide an ample margin of safety to protect public health. During the residual risk assessment and as required by the CAA, the EPA will review and revise the maximum achievable control technology (MACT) standards as necessary, considering developments in practices, processes, and control technologies since the standards were first issued in 2003.

In August 2015, the EPA began an Information Collection Request (ICR) to be used in the RTR for the Coke MACT. On July 5, 2024, the EPA finalized revisions to the Coke MACT regulation,

MACT Compliance – Subpart CCCCC (Pushing, Quenching, Combustion Stacks)



Clairton plant facility-wide Subpart CCCCC, National Emission Standards for Hazardous Air Pollutants for Coke Ovens: Pushing, Quenching and Battery Stacks, maximum achievable control technology compliance rate from 2013 to 2024

as well as the Part 63 Subpart L regulation. On March 12, 2025, EPA announced they would reconsider multiple NESHAPs for American energy and manufacturing sectors, including the revised coke rules.

The Benzene Emissions from Coke Byproduct Recovery Plants NESHAP is also applicable to the Clairton Plant. These standards are applicable to the equipment associated with the byproducts recovery plant (tar decanters, tar storage tanks, light-oil condensers, light-oil sumps, etc). The Benzene Waste Operations NESHAP is also applicable to the Clairton Plant because the plant operates a coke byproduct recovery plant with benzene-containing hazardous waste.
The Integrated Iron and Steel Manufacturing Facilities NESHAP is applicable to the Edgar Thomson Plant. These standards are applicable to processes at the blast furnaces and BOP Shop. The rule became effective May 20, 2003, then was amended in 2006, 2020, and 2024. During 2020 rulemaking, the EPA determined risks to be acceptable and that the current standards provided an ample margin of safety to protect public health. The technology assessment did not identify any developments that would further reduce hazardous air pollutant (HAP) emissions from point sources.

This rule is often called the Integrated Iron and Steel (II&S) MACT. On April 3, 2024, EPA published final amendments to the II&S NESHAP that significantly impacted the rule. On March 12, 2025, EPA announced they would reconsider multiple NESHAPs for American energy and manufacturing sectors, including the revised II&S rule. On July 3, 2025, EPA published an interim final rule to extend all compliance dates in the rule to April 3, 2027.

> **The Edgar Thomson Plant is in compliance with the II&S rule, including the 2020 amendments; the 2024 amendments are not effective and the rule is being reconsidered.**

The Industrial, Commercial, and Institutional Boilers and Process Heaters NESHAP, commonly called the Boiler MACT, is applicable to the Clairton, Edgar Thomson, and Irvin plants. The EPA has promulgated national emission standards for hazardous air pollutants from three major source categories: industrial boilers, commercial and institutional boilers, and process heaters. In addition, all major source boilers and process heaters are subject to a work practice standard to periodically conduct tune-ups of the boiler or process heater.

The Edgar Thomson Plant is exempt from the requirements of this rule because the boilers receive 90% or more of their total annual gas volume from recycled blast furnace gas.

In promulgating the blast furnace gas (BFG) fired boiler exclusion, the EPA recognized the unique properties of BFG, in which little to no organic hazardous air pollutants are generated or emitted from the combustion of BFG.

The Irvin Plant is subject to the Steel Pickling — HCl Process Facilities and Hydrochloric Acid Regeneration Plants NESHAP. This rule is often called Pickle MACT. These standards are applicable to processes at pickle lines. The rule became effective in 2012.

The Pickle MACT applies to each major source pickling process that uses hydrochloric acid (HCl) to remove oxide scale from the surface of steel. The process emits HCl, a HAP. Irvin captures and controls these emissions using a wet scrubber.

Allegheny County Health Department (ACHD) Standards

In addition to certain federal regulations, the Mon Valley is subject to the ACHD requirements, which include performance metrics that, in most instances, are much more stringent than the corresponding federal standards.

ACHD has recognized that it has promulgated the most stringent air regulations for coke plants in the country. The regulations, found in Article XXI, in most cases are much more stringent than corresponding EPA regulations and are enforceable by ACHD as well as the EPA as part of the State Implementation Plan.

Title V Permits

Title V Permits are issued to facilities that are designated as major sources as defined in Title V of the Clean Air Act. In Allegheny County, these permits are issued through ACHD and are enforceable by both ACHD and EPA.

The Clairton, Edgar Thomson, and Irvin plants are issued Title V operating permits that are specific to the plant's operation. These permits include emissions limits, standards, and work practice requirements, as well as air pollution control equipment, stack testing, monitoring, recordkeeping, and reporting requirements. U. S. Steel is required to provide agencies with periodic monitoring reports, certify compliance at least annually, and identify any deviations from any of the applicable requirements.

> **In 2024, Edgar Thomson Plant's compliance with all Title V Air Operating Permit requirements was greater than 99%. This includes numerical mass emission limits and required continuous monitoring requirements.**

> **In 2024, Irvin Plant's compliance with all Title V Air Operating Permit requirements was greater than 99%. This includes numerical mass emission limits and required continuous monitoring requirements.**

In addition to periodic facility inspections that are conducted throughout the year, ACHD performs a comprehensive Title V inspection of each plant every two years. These inspections often consist of a thorough records review and site inspection.

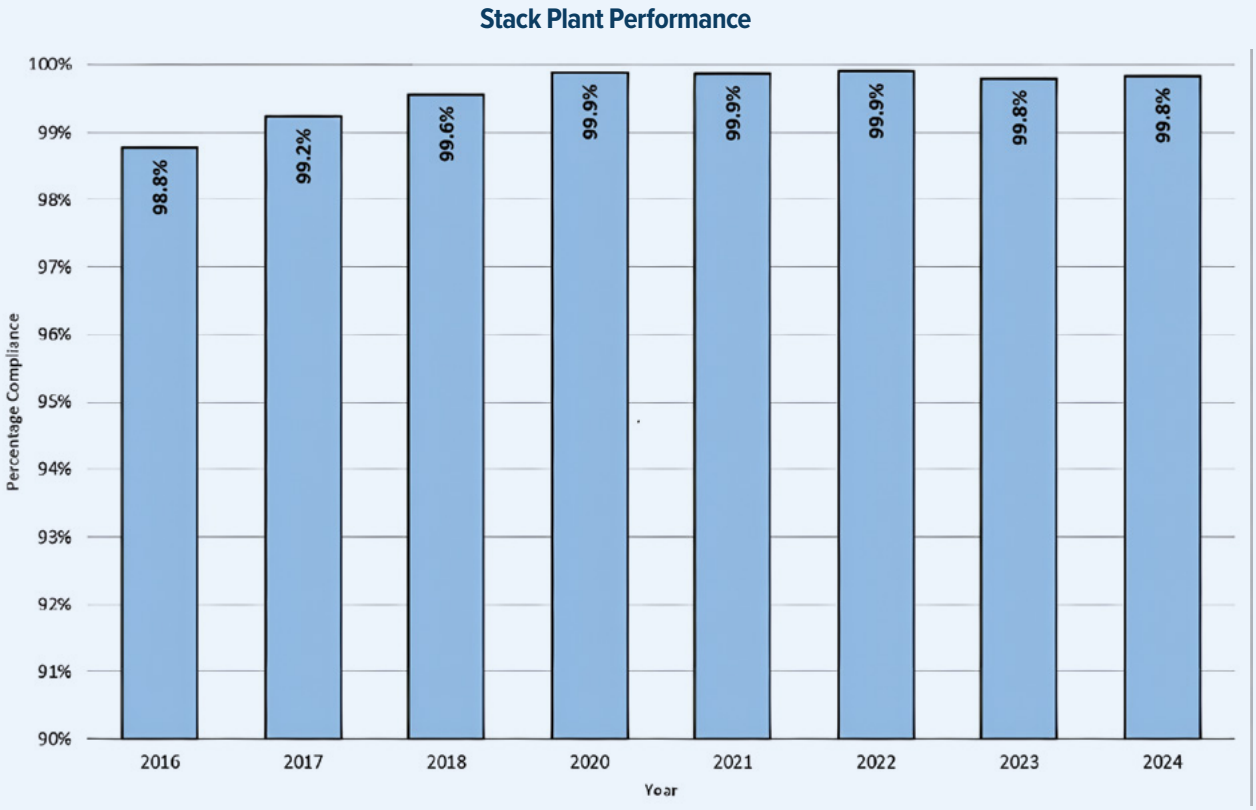
The Fairless Plant, located in Bucks County, is issued its Title V Permit through the PA DEP. Like the other facilities, the permit includes emission limits, standards, work practice requirements, as well as other air pollution control requirements.

> **In 2024, Fairless Plant's compliance with all Title V Air Operating Permit requirements was greater than 99%. This includes numerical mass emission limits and required continuous monitoring requirements.**

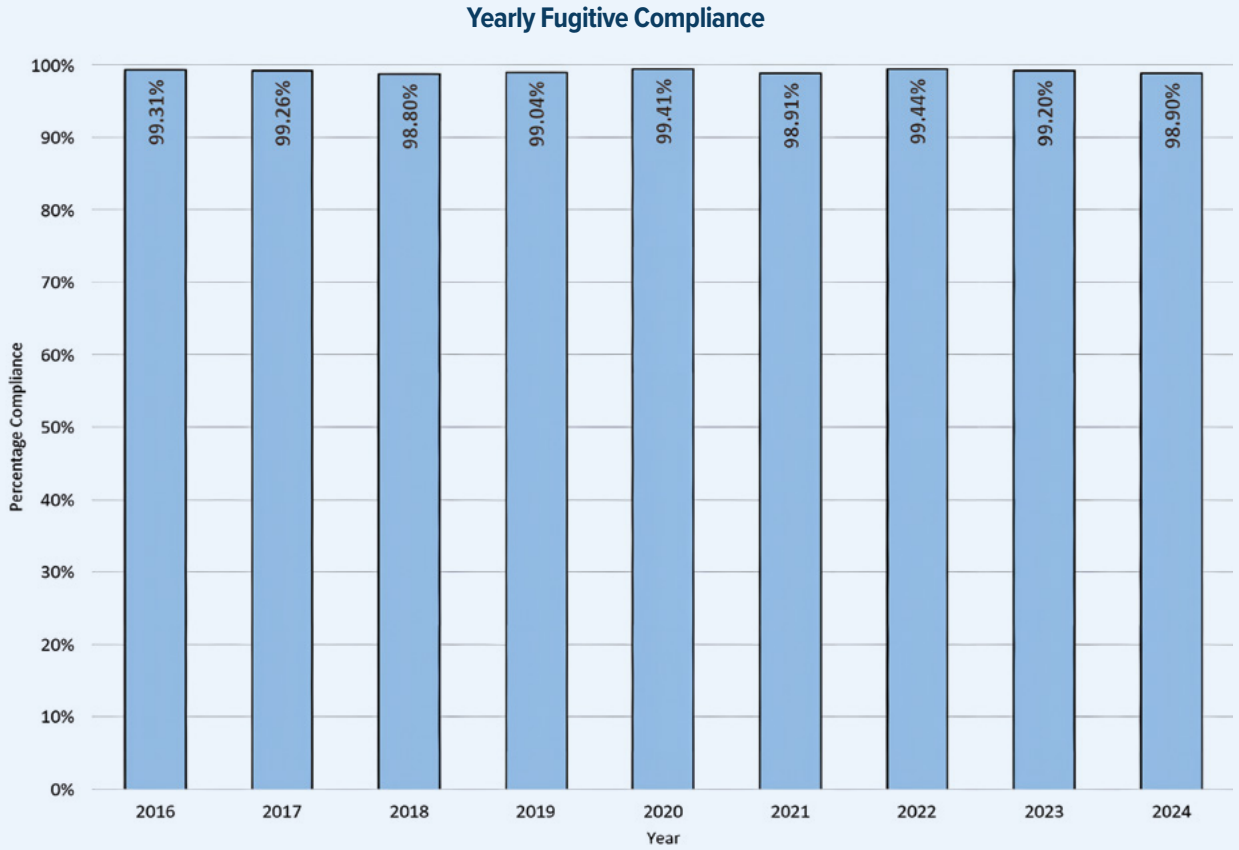
Air Monitoring and Performance

In addition to periodic monitoring, U. S. Steel continuously monitors many of its sources for environmental performance and compliance at the Clairton Plant. In addition to reviewing the plant reports and compliance records, ACHD maintains coke oven battery inspectors at the plant five days per week. The certified inspectors conduct daily visible emission observations of plant operations.

U.S. Steel uses continuous opacity monitors (COMs), continuous emissions monitors (CEMs), and various continuous parametric monitoring systems throughout the plant to read and record thousands of compliance monitoring data values every day.



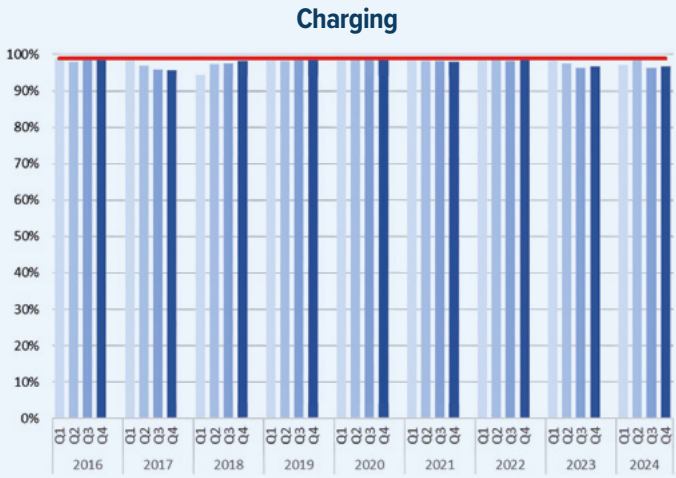
Clairton Plant facility-wide combustion stack performance from 2018–2024

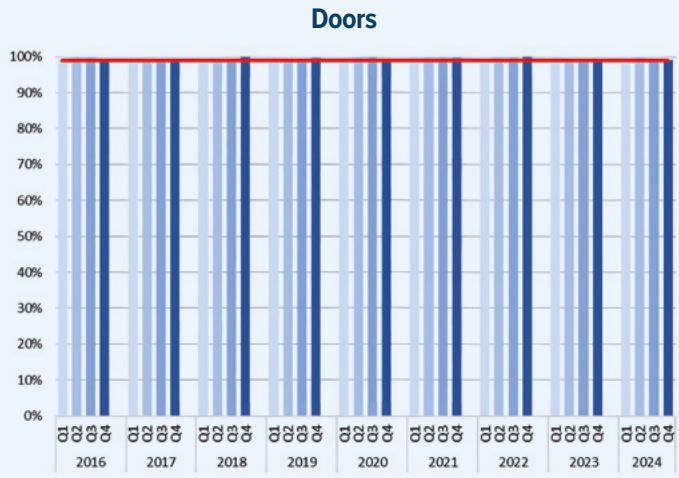


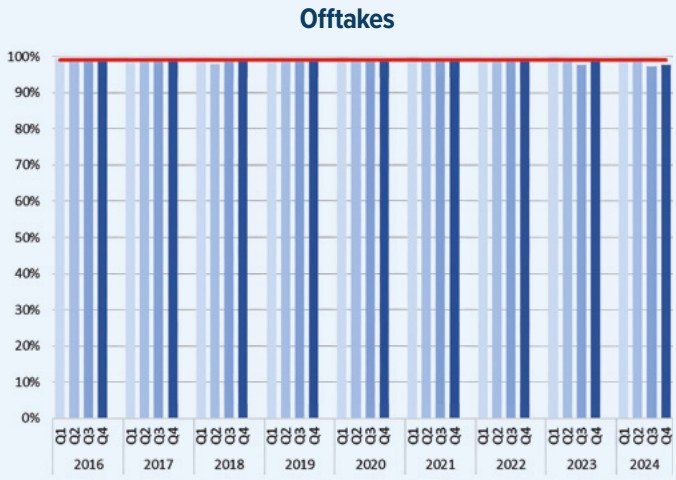
Clairton Fugitive Compliance Percentage Including All ACHD & Third-Party Inspections

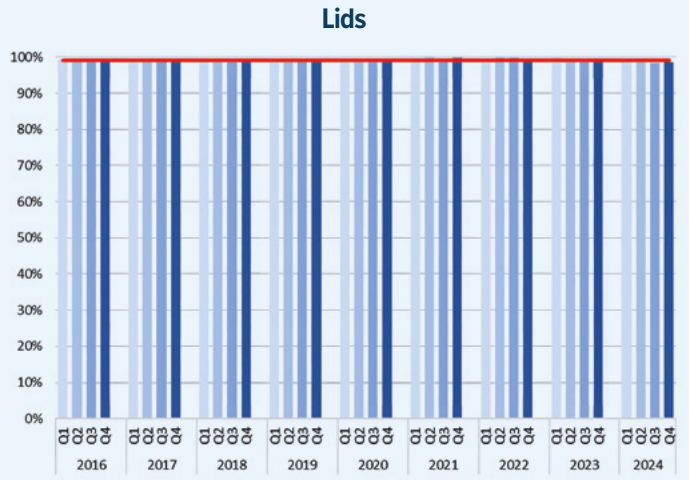
U. S. Steel focuses on continuously improving environmental performance. Combustion stacks are one of the more significant sources of emissions that has been continuously improving at the Clairton Plant. Combustion products generated by Clairton Plant's batteries during the coke making process are directed to coke battery combustion stacks. Each coke battery combustion stack is equipped with a continuous opacity monitoring system (COMS), which continuously measures the degree to which smoke, dust, and other particles block light at any given time. Any combustion issue with the batteries can result in visible emissions from these stacks. According to the ACHD, environmental violations occur anytime this opacity is greater than 20% for more than three minutes aggregated in any given hour, or any instantaneous reading over 60%. Stack performance is calculated daily for all coke batteries in the plant, and just one three-minute period in an hour could cause a 20% stack violation and put that battery at a 97.9% performance for the day.

Each hour, on every battery stack, there exists the opportunity for one or both violations to occur. Each year has a potential for 105,120 violations.







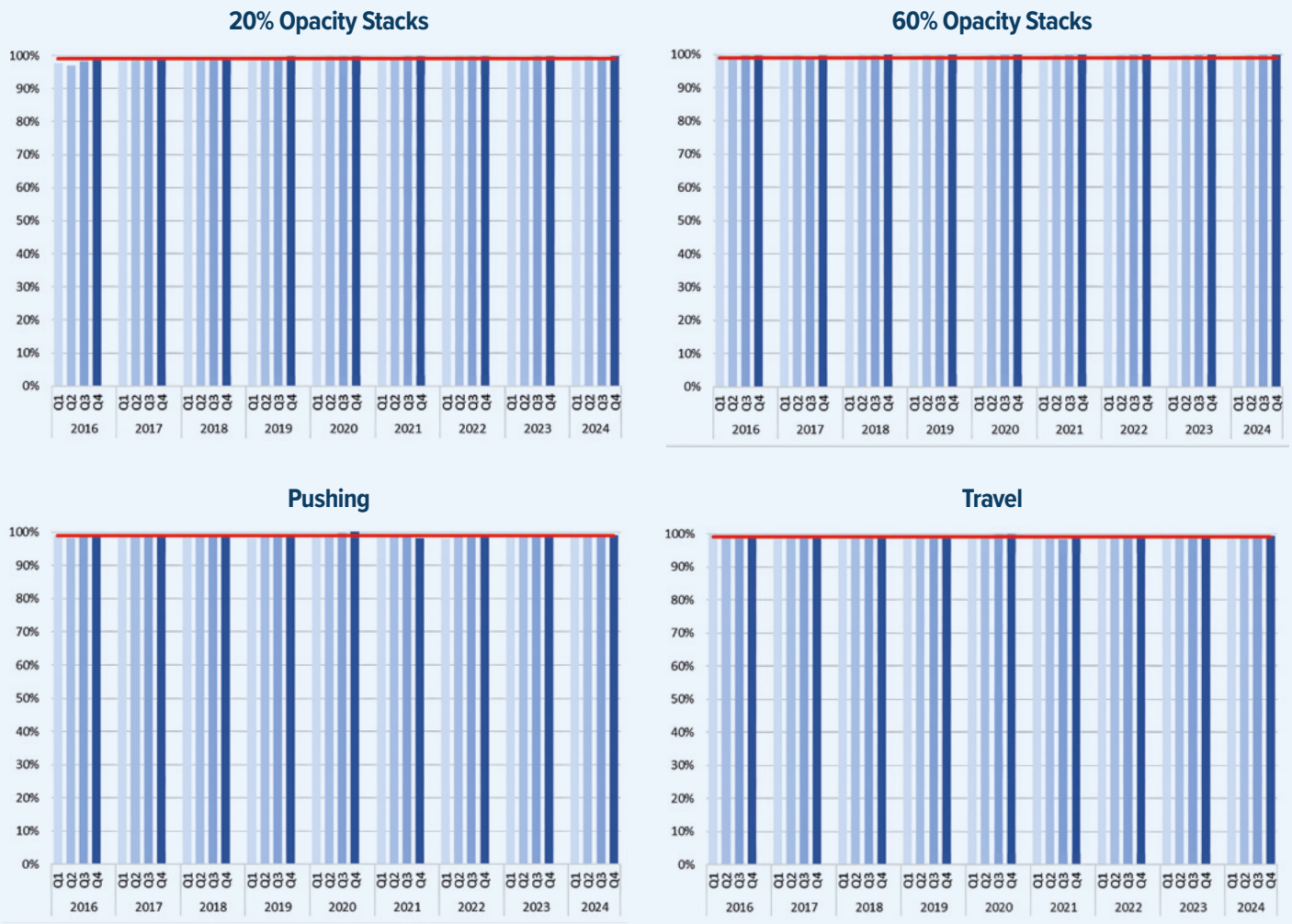


In 2024, the Clairton Plant maintained its excellent monthly, quarterly, and annual battery combustion stack environmental performance. Stack compliance at Clairton Plant continued to be 99.8% in 2024.

Stack performance is considered a key indicator of the overall environmental performance of the coke batteries both internally and by U. S. Steel's regulating agency. That is why there is a strong emphasis placed on this compliance rate, and why this record-breaking performance is so important.

U. S. Steel's Clairton Plant has maintained 100% compliance rate with the federal standards and has demonstrated an unprecedented high compliance rate with the ACHD standards that apply to charging emissions, door leaks, battery combustion stack opacity (20% and 60%), offtakes, lids, pushing (cannot exceed 10% at any time), and travel (cannot exceed 10% at any time).

U. S. Steel's compliance with these standards are highlighted below:



Clairton Compliance Rates with ACHD Standards from 2016 through 2024

ENVIRONMENTAL PERFORMANCE – WATER

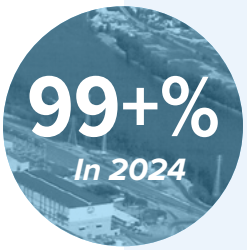
Each of the Mon Valley plants is issued a National Pollutant Discharge Elimination System (NPDES) permit by the Pennsylvania Department of Environmental Protection. NPDES permits address water pollution by regulating point sources that discharge pollutants into waters of the United States. The permits include discharge limits, monitoring and reporting requirements, and other provisions related to water quality.

The Clairton Plant has achieved greater than 99% compliance since 2016 with the NPDES permit limits.

Clairton discharges noncontact cooling water and treated process water. Noncontact cooling water is used to cool various processes and equipment; it does not physically touch the processes and remains uncontaminated. Approximately 60 million gallons of noncontact cooling water pass through the outfall each day, equivalent to about 22 billion gallons annually. More than than 1.1 million gallons of treated process water is discharged each day, equating to over 651 million gallons annually.

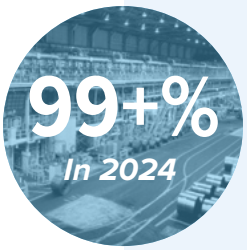
The Edgar Thomson Plant has achieved greater than 99% compliance since 2016 with the NPDES permit limits.

ET uses about 300 million gallons of water throughout the mill daily. Of these 300 million gallons, more than 100 million are recycled.



The Irvin Plant has achieved greater than 99% compliance in 2024 with the NPDES permit limits.

Steel finishing at Irvin requires a significant amount of cooling water to protect equipment from heat generated. The Irvin Plant is continuously upgrading technology and improving operating practices with the goal of minimizing impacts from plant discharges.



The Fairless Plant has achieved greater than 99% compliance in 2024 with the NPDES permit limits.

Water used at the Fairless Galvanize Line is sent to an on site treatment facility before being discharged to the Delaware River.

ENVIRONMENTAL PERFORMANCE – RECYCLING

U. S. Steel's Mon Valley Works is one of the most energy-efficient integrated iron and steel facilities. The Mon Valley Works reuses gases from the blast furnaces and coke ovens to support combustion processes at Clairton, Edgar Thomson, and Irvin, as well as to generate electricity at the Edgar Thomson and Clairton plants.

We reduce waste and emissions in steelmaking by reusing byproduct gases from blast furnaces and coke ovens, a practice that benefits both the environment and our business. Generating electricity at the Clairton and Edgar Thomson facilities allows the Mon Valley Works to beneficially reuse coke oven and blast furnace gases and purchase less electricity, reducing its carbon footprint.

Edgar Thomson produces several coproducts and byproduct materials from ironmaking and steelmaking operations that are recycled.

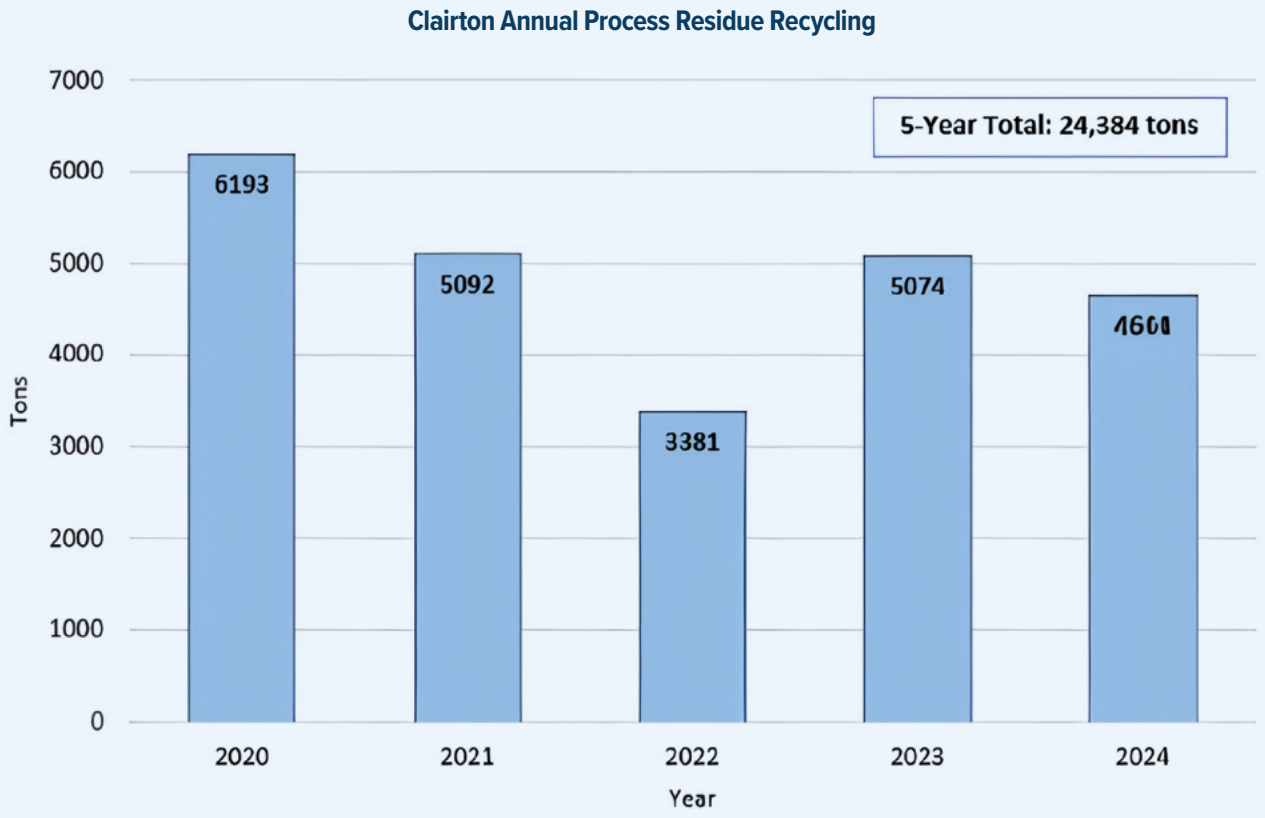
Blast furnace and steel slag are also produced as coproducts of the ironmaking and steelmaking operations. Slag is sold in place of naturally mined aggregates for use in asphalt, road construction, cement manufacturing, glass manufacturing, and mineral wool production. Sludges from blast furnaces and basic oxygen furnaces are used as feedstock to make briquettes that are then charged back into the process. Recycled briquettes offset the need for equivalent iron units from mined iron ore mineral deposits and scrap steel. 2024 showed a large reduction in briquetting due to struggles encountered by on-site third-party briquetting operations. The Edgar Thomson plant continues to evaluate and pursue new recycling opportunities across all processes.

Irvin recycles scale by sending it to Edgar Thomson for use in BOP revert briquettes. Spent hydrochloric acid from the pickling lines absorbs iron to form ferrous chloride solution. The ferrous chloride solution is transported by tanker truck to a facility that regenerates it into hydrochloric acid, which is returned to Irvin for use on the pickling lines.

CLAIRTON SPOTLIGHT

Expanded Recycling of Coke Plant Materials

Clairton generates process residues from the recovery of coal tar and light oil in the byproducts recovery plant. Rather than dispose of these residues, Clairton recycles the materials by blending them with coal feedstock and coke ovens for recovery in the byproducts plant.

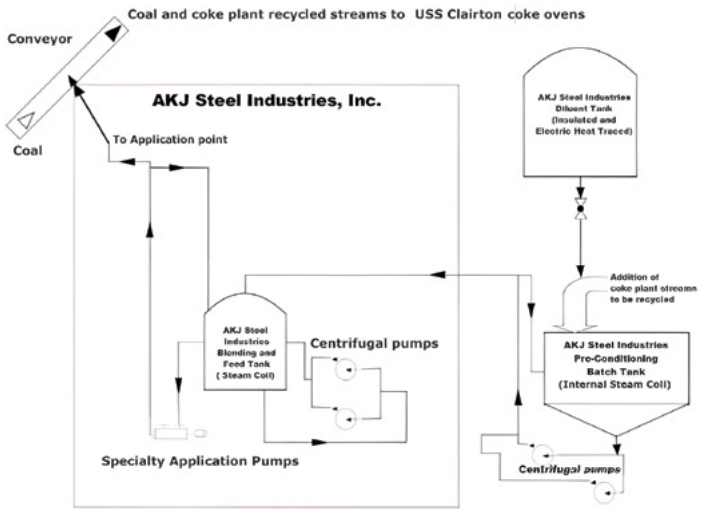


2019 through 2024 tons per year of process residue recycling

U. S. Steel and AKJ Industries teamed up to develop a new state-of-the-art facility to efficiently recycle coke plant materials. These difficult-to-dispose-of materials are valuable fuels in the coking process. The new facility integrates cutting-edge technology in pumping and controlled application rates in the process. The expanded facility also increases flexibility in the recovering energy units.

The numbers: The average amount of coke plant materials recycled annually is 6,000 tons. The air emissions reductions are equivalent to the removal of 26,000 passenger vehicles. Each ton recycled avoids the generation of 20 tons of CO_2 that would have been generated if the material had been incinerated.

Accolades: The project was honored with the Pennsylvania Governor's Award for Environmental Excellence. "The Environmental Excellence awardees embody the innovative thinking needed to protect our environment and shape a more sustainable future here in Pennsylvania," said DEP Acting Secretary Jessica Shirley.



AKJ Recycling Operating System

COMMUNITY INVOLVEMENT

Community is vital to U. S. Steel. We take pride in being a part of the Mon Valley community and an ally to our neighboring communities. In 2024, U. S. Steel demonstrated its commitment to the communities where it operates in by providing thousands of volunteer hours and financial support to a variety of projects and local organizations by benefiting education, recreation, and families. Some of these contributions and volunteer efforts are highlighted.

Community Advisory Panel (CAP)

The Community Advisory Panels (CAP) were created to increase communication between the plants in the Mon Valley and local community leaders in neighboring communities. Each plant holds a quarterly meeting to discuss plant performance, including environmental performance, updates, and current events, among other information. The time is also used to discuss questions from the communities and needs they have that U.S. Steel may be able to address.

Community Involvement Projects & Events

Helping to Alleviate Food Insecurity

U. S. Steel began a partnership with Greater Pittsburgh Food Bank to provide and distribute food to local families. By partnering with the food bank, the benefit of financial support can be significantly increased, reaching more people in all the communities. Separate volunteer events and donations were also supported by individual plants, such as food drives in Clairton and holiday dinner donations in Rankin, North Braddock, and East Pittsburgh.

Serving Those Who Served

Mon Valley Works' SERVE (Strengthening and Enhancing Relationships of Veteran Employees) Employee Resource Group members volunteered their time to landscape and beautify the Memorial Hill Veterans Memorial in Clairton, Pennsylvania, just in time for Veterans Day.

Shepherd's Heart Fellowship and Veterans Home offers local veterans a variety of assistance. Clairton's SERVE chapter has developed a partnership with the nonprofit to aid its mission in several ways. Quarterly collections are held for clothes, shoes, household items, and toiletries.

Supporting Children and Our Community's Future

U. S. Steel continued its partnership with the Pittsburgh Steelers, providing the "Steelers STEM" program. The program is focused on helping local schools in 52 school districts teach the basics of Science, Technology, Engineering, and Math.

The Reading Champions program, a collaborative effort between U. S. Steel, the Pittsburgh Penguins Foundation, and Allegheny Intermediate Unit, is having a profound impact on the Pittsburgh community by improving student reading literacy in the Mon Valley.

Edgar Thomson Plant partnered with former NFL player and Woodland Hills High School alumnus Rob Gronkowski to fund a new fitness center at the high school.

U. S. Steel's Mon Valley Works, Clairton Plant, donated to Communities in Schools of Pittsburgh-Allegheny County (CISPAC). Over the last five years, CISPAC has matched more than 500 mentors with Pittsburgh students. CISPAC works directly with families and community leaders to help students and teachers with food and other basic needs, uniforms, and winter clothing, connected education devices, and parental support groups.

2024 Blood Drives

Once again, U. S. Steel's Mon Valley Works partnered with the American Red Cross for blood drives at Clairton and Irvin. Edgar Thomson sponsored the second annual Nicole Hogan Memorial Blood Drive.

Earth Day

At U. S. Steel, we believe every day is Earth Day because our “Environmental Stewardship” S.T.E.E.L. principle calls on us to operate our business in environmentally responsible ways. Employee volunteers weigh community trash collection efforts for bragging rights as the Mon Valley Litter League champion. Edgar Thomson snatched the trophy in 2024 from Clairton (2023’s champion) by collecting 5,050 pounds of trash!

Employees also volunteered their time to beautify the plants and surrounding communities. Earth Day efforts included landscaping at the Clairton Plant Hospital, trash cleanup, landscaping at the worker’s memorials, entrance gates, tree planting and trash cleanup at Peters Creek and Braddock Youth Project Garden, trash cleanup, mulching and planting trees at the Montour Trail entrance, and Ravensburg Bridge.

Cleanup efforts didn’t end on Earth Day, though. Volunteers continued throughout the summer at the Lincoln Borough playground and soccer field, Braddock and Rankin community cleanups, and Friends of the Riverfront trail cleanups.

A Part of the Community

U. S. Steel is an active member of the community, hosting tables at community days in Clairton, Braddock, North Braddock, Rankin, and East Pittsburgh. Employees passed out candy at the Braddock Trunk-or-Treat and sponsored the Elizabeth Volunteer Fire Co. Riverfest.

U. S. Steel was the presenting sponsor for the second year at the Rivers of Steel Festival of Combustion held at the historic Carrie Furnace. The festival, attended by thousands, is a vibrant celebration of industrial arts, featuring molten metal pours, hands-on workshops, and live performances.

U. S. Steel has been a generous partner to the Braddock Battlefield History Center in North Braddock. Located on the site of the Battle of the Monongahela and Braddock’s defeat, the History Center works to educate and connect the past, present, and future of the community.

Rivers of Steel Festival of Combustion at the Carrie Furnace

Edgar Thomson Plant Volunteers partnering with Toys for Tots at the Rankin Christian Center

Mon Valley Employees Spread Holiday Cheer to Local Families

In December 2024, employees from U. S. Steel's Clairton Plant bought, wrapped, and delivered gifts to low-income families for the holidays through a partnership with Go Time Ministries, Clairton mission. Additionally, the Clairton Plant teamed up with the Clairton Police Department for its Stuff-a-Store holiday mission. These efforts allowed employees to extend their generosity to children and families in Clairton and surrounding communities.

Meanwhile, Edgar Thomson employees were busy partnering with Toys for Tots and the Rankin Christian Center. In addition, Edgar Thomson provided the annual Braddock Civic Center Christmas tree and sponsored Braddock Light Up Night.

In 2024, the Irvin Plant worked with the West Mifflin Police Department in their Santa Cop program. Through this program, U. S. Steel was able to provide a donation and gifts for children in kindergarten through fourth grade.

Irvin Plant Donation to West Mifflin Santa Cop

COMMITMENT TO THE ENVIRONMENT AND COMMUNITY — NOW AND IN THE FUTURE

As shown throughout this 2024 report, U. S. Steel is strongly committed to environmental stewardship and to serving the communities in which we operate.

As we enter 2025, we remain committed to:

- Upholding our S.T.E.E.L. principles.
- Developing and implementing innovative projects to improve environmental performance.
- Providing ongoing support to the communities in which it operates.
- Assisting the company in achieving the Corporate GHG Reduction Goal to reduce its global greenhouse gas emissions intensity by 20 percent.*

*As measured by the rate of carbon dioxide (CO_2) equivalents emitted per ton of finished steel shipped, by 2030 based on 2018 baseline levels.