

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549
FORM 10-K

(Mark One)

☒ **ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
For the fiscal year ended December 31, 2022

or

☐ **TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**
Commission File No. 1-9172

NACCO INDUSTRIES, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

34-1505819

(I.R.S. Employer Identification No.)

5875 Landerbrook Drive, Suite 220

Cleveland, Ohio

44124-4069

(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: **(440) 229-5151**

Securities registered pursuant to Section 12(b) of the Act

Title of each class	Trading Symbol	Name of each exchange on which registered
Class A Common Stock, \$1 par value per share	NC	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: Class B Common Stock, \$1 par value per share. Class B Common Stock is not publicly listed for trade on any exchange or market system; however, Class B Common Stock is convertible into Class A Common Stock on a share-for-share basis.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ☒ No ☐

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes ☒ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or an emerging growth company. See definitions of "large accelerated filer," "accelerated filer," "smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer ☐ **Accelerated filer** ☒ Non-accelerated filer ☐ **Smaller reporting company** ☒ Emerging growth company ☐

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. ☐

Indicate by check mark whether the registrant has filed a report on and attestation to its management's assessment of the effectiveness of its internal control over financial reporting under Section 404(b) of the Sarbanes-Oxley Act (15 U.S.C. 7262(b)) by the registered public accounting firm that prepared or issued its audit report. ☒

If securities are registered pursuant to Section 12(b) of the Act, indicate by check mark whether the financial statements of the registrant included in the filing reflect the correction of an error to previously issued financial statements. ☐

Indicate by check mark whether any of those error corrections are restatements that required a recovery analysis of incentive-based compensation received by any of the registrant's executive officers during the relevant recovery period pursuant to §240.10D-1(b). ☐

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act) Yes ☐ No ☒

Aggregate market value of Class A Common Stock and Class B Common Stock held by non-affiliates as of June 30, 2022 (the last business day of the registrant's most recently completed second fiscal quarter): \$159,988,559

Number of shares of Class A Common Stock outstanding at March 3, 2023: 5,936,134

Number of shares of Class B Common Stock outstanding at March 3, 2023: 1,565,929

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's Proxy Statement for its 2023 annual meeting of stockholders are incorporated herein by reference in Part III of this Form 10-K.

NACCO INDUSTRIES, INC.
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PART I

Item 1. BUSINESS

General

NACCO Industries, Inc.[®] (“NACCO” or the “Company”) brings natural resources to life by delivering aggregates, minerals, reliable fuels and environmental solutions through its robust portfolio of NACCO Natural Resources businesses. The Company operates under three business segments: Coal Mining, North American Mining (“NAMining”) and Minerals Management. The Coal Mining segment operates surface coal mines for power generation companies. The NAMining segment is a trusted mining partner for producers of aggregates, activated carbon, lithium and other industrial minerals. The Minerals Management segment, which includes the Catapult Mineral Partners (“Catapult”) business, acquires and promotes the development of mineral interests. Mitigation Resources of North America[®] (“Mitigation Resources”) provides stream and wetland mitigation solutions.

The Company has items not directly attributable to a reportable segment that are not included as part of the measurement of segment operating profit, which primarily includes administrative costs related to public company reporting requirements at the parent company and the financial results of Mitigation Resources and Bellaire Corporation (“Bellaire”). Bellaire manages the Company’s long-term liabilities related to former Eastern U.S. underground mining activities.

NACCO was incorporated as a Delaware corporation in 1986 in connection with the formation of a holding company structure for a predecessor corporation organized in 1913.

Business Strategy

NACCO’s portfolio of businesses operates under the umbrella of NACCO Natural Resources. NACCO continues to focus on the execution of its two key strategies – Protect the Core and Grow and Diversify. Management continues to be optimistic about the long-term outlook in the NAMining and Minerals Management segments and in the Company’s Mitigation Resources business. Each of these businesses continues to expand its pipeline of potential new projects with opportunities for growth and diversification. The Company also continues to pursue activities which can strengthen the resiliency of its existing coal mining operations.

NAMining remains committed to expanding its business while improving operating efficiencies and scalability. NAMining continues to work with Lithium Americas to develop the Thacker Pass Project in northern Nevada, one of the largest lithium projects in the United States. The Company believes NAMining can grow to be a substantial contributor to operating profit over time, but the pace of growth will be dependent on the mix and scale of new projects and the successful implementation of projects to return NAMining to profitability.

The Minerals Management segment continues to pursue acquisitions of mineral and royalty interests in the United States. Catapult, the Company’s business unit focused on managing and expanding the Company’s portfolio of oil and gas mineral and royalty interests, has developed a proven business model and a strong network to source and secure new acquisitions. The goal is to construct a high-quality diversified portfolio of oil and gas mineral and royalty interests in the United States that deliver near-term cash flow yields and long-term projected growth. The Minerals Management segment will benefit from the continued development of its mineral properties without additional capital investment, as development costs are borne entirely by third-party producers who lease the minerals. This business model can deliver higher average operating margins over the life of a reserve than traditional oil and gas companies that bear the cost of exploration, production and/or development.

Mitigation Resources creates and sells stream and wetland mitigation credits and provides services to those engaged in permittee-responsible mitigation and environmental restoration. This business offers an opportunity for growth and diversification in an industry where the Company has substantial knowledge and expertise and a strong reputation. During 2022, Mitigation Resources purchased property near Dallas-Fort Worth, Texas and near Nashville, Tennessee to establish new mitigation banks. In addition, it established a joint venture to provide mitigation services for the Lake Ralph Hall reservoir project in North Texas. As of December 31, 2022, Mitigation Resources is involved in over 10 mitigation banks and permittee-responsible mitigation projects in Tennessee, Alabama, Mississippi and Texas. With additional projects in its pipeline for 2023, Mitigation Resources is making strong progress toward its goal to be a top ten provider of stream and wetland mitigation services in the southeastern United States. The Company believes that Mitigation Resources can provide solid rates of return as this business matures.

The Company continues to pursue activities which can strengthen the resiliency of its existing coal mining operations. The Company remains focused on managing coal production costs and maximizing efficiencies and operating capacity at mine locations to help customers with management fee contracts be more competitive. These activities benefit both customers and

the Company's Coal Mining segment, since fuel cost is a significant driver for power plant dispatch. An increase in power plant dispatch results in increased demand for coal by the Coal Mining segment's customers. Fluctuating natural gas prices and availability of renewable energy sources, such as wind and solar, could affect the amount of electricity dispatched from coal-fired power plants.

The Company is committed to maintaining a conservative capital structure as it continues to grow and diversify, while avoiding unnecessary risk. Strategic diversification will generate cash that can be re-invested to strengthen and expand the businesses. The Company also continues to maintain the highest levels of customer service and operational excellence with an unwavering focus on safety and environmental stewardship.

Business Developments

Mississippi Lignite Mining Company ("MLMC") is the exclusive supplier of lignite to the Red Hills Power Plant in Ackerman, Mississippi. Choctaw Generation Limited Partnership ("CGLP") leases the Red Hills Power Plant from a Southern Company subsidiary pursuant to a leveraged lease arrangement. CGLP's ability to make required payments to the Southern Company subsidiary is dependent on the operational performance of the Red Hills Power Plant. During 2020, Southern Company revised the estimated cash flows to be received under the leveraged lease which resulted in a full impairment of the lease investment. If lease payments are not paid in full, the Southern Company subsidiary may be unable to make its corresponding payment to the holders of the underlying non-recourse debt related to the Red Hills Power Plant. Failure to make the required payment to the debtholders could represent an event of default that would give the debtholders the right to foreclose on, and take ownership of, the Red Hills Power Plant from the Southern Company subsidiary. On October 27, 2022, Southern Company disclosed in its Form 10-Q that it provided notice to the lessee, CGLP, to terminate the related operating and maintenance agreement effective June 30, 2023. CGLP failed to make the semi-annual lease payment due December 15, 2022. As a result, the Southern Company subsidiary was unable to make its corresponding payment to the debtholders. The parties to the lease agreement are currently negotiating a potential restructuring, which could result in rescission of the termination notice. The parties to the lease have entered into a forbearance agreement which suspends the related contractual rights of the parties while they continue restructuring negotiations. The ultimate outcome of this matter cannot be determined at this time but could have a material impact on the Company's financial statements if the operating and maintenance agreement is terminated.

The Falkirk Mining Company ("Falkirk") operates the Falkirk Mine in North Dakota. Falkirk is the sole supplier of lignite coal to the Coal Creek Station power plant. Coal Creek Station was previously owned by Great River Energy ("GRE"). On May 2, 2022, GRE completed the sale of Coal Creek Station and the adjacent high-voltage direct current transmission line to Rainbow Energy Center, LLC ("Rainbow Energy") and its affiliates. As a result of the completion of the sale of Coal Creek Station, the Coal Sales Agreement, the Mortgage and Security Agreement and the Option Agreement between GRE and Falkirk were terminated. The Coal Sales Agreement ("CSA") between Falkirk and Rainbow Energy became effective upon the closing of the transaction. Falkirk continues to supply all coal requirements of Coal Creek Station and is paid a management fee per ton of coal delivered. To support the transfer to new ownership, Falkirk agreed to a reduction in the current per ton management fee from the effective date of the CSA through May 31, 2024. After May 31, 2024, the per ton management fee increases to a higher base in line with 2021 fee levels, and thereafter adjusts annually according to an index which tracks broad measures of U.S. inflation. Rainbow Energy is responsible for funding all mine operating costs, including mine reclamation, and directly or indirectly providing all of the capital required to operate the mine. The initial production period is expected to run through May 1, 2032, but the CSA may be extended or terminated early under certain circumstances.

The Company recognized \$30.9 million in the second quarter of 2022 as GRE paid NACoal \$14.0 million in cash, transferred ownership of an office building with an estimated fair value of \$4.1 million, and conveyed membership units in Midwest AgEnergy Group, LLC ("MAG"), a North Dakota-based ethanol business, with an estimated fair value of \$12.8 million, as agreed to under the termination and release of claims agreement between Falkirk and GRE.

Prior to receiving the membership units from GRE, the Company held a \$5.0 million investment in MAG. On December 1, 2022, HLCP Ethanol Holdco, LLC ("HLCP") completed its acquisition of MAG. Upon closing of the transaction, NACCO transferred its ownership interest in MAG to HLCP and received a cash payment of \$18.6 million.

The Sabine Mining Company ("Sabine") operates the Sabine Mine in Texas. All production from Sabine is delivered to Southwestern Electric Power Company's ("SWEPCO") Henry W. Pirkey Plant (the "Pirkey Plant"). SWEPCO is an American Electric Power ("AEP") company. AEP intends to retire the Pirkey Plant during March 2023. Sabine expects deliveries to cease in March 2023 and final reclamation to begin on April 1, 2023. Funding for mine reclamation is the responsibility of SWEPCO, and Sabine will receive compensation for providing mine reclamation services.

In 2022, Minerals Management, through its Catapult business, completed two acquisitions. It acquired \$11.4 million of mineral

and royalty interests in the Texas portion of the Permian Basin and the Wyoming portion of the Powder River Basin. It also completed a small acquisition of mineral interests in the New Mexico portion of the Permian Basin.

Operations

Coal Mining Segment

The Coal Mining segment, operating as The North American Coal Corporation® ("NACoal"), operates surface coal mines under long-term contracts with power generation companies pursuant to a service-based business model. Lignite coal is surface mined in North Dakota, Texas and Mississippi. Each mine is fully integrated with its customer's operations and is the exclusive supplier of coal to its customer's facilities.

During 2022, the Coal Mining segment's operating coal mines were: The Coteau Properties Company ("Coteau"), Coyote Creek Mining Company, LLC ("Coyote Creek"), Falkirk, MLMC and Sabine. Each of these mines supply lignite coal for power generation and delivers its coal production to an adjacent power plant or synfuels plant under a long-term supply contract. MLMC's coal supply contract contains a take or pay provision; all other coal supply contracts are requirements contracts under which earnings can fluctuate. Certain coal supply contracts can be terminated early, which would result in a reduction to future earnings.

At Coteau, Coyote Creek, Falkirk and Sabine, the Company is paid a management fee per ton of coal or heating unit (MMBtu) delivered. Each contract specifies the indices and mechanics by which fees change over time, generally in line with broad measures of U.S. inflation. The customers are responsible for funding all mine operating costs, including final mine reclamation, and directly or indirectly providing all of the capital required to build and operate the mine. This contract structure eliminates exposure to spot coal market price fluctuations while providing income and cash flow with minimal capital investment. Other than at Coyote Creek, debt financing provided by or supported by the customers is without recourse to NACCO and NACoal. See Note 16 to the Consolidated Financial Statements in this Form 10-K for further discussion of Coyote Creek's guarantees.

Coteau, Coyote Creek, Falkirk and Sabine each meet the definition of a variable interest entity ("VIE"). In each case, NACCO is not the primary beneficiary of the VIE as it does not exercise financial control; therefore, NACCO does not consolidate the results of these operations within its financial statements. Instead, these contracts are accounted for as equity method investments. The income before income taxes associated with these VIEs is reported as Earnings of unconsolidated operations on the Consolidated Statements of Operations and the Company's investment is reported on the line Investments in unconsolidated subsidiaries in the Consolidated Balance Sheets. The mines that meet the definition of a VIE are referred to collectively as the "Unconsolidated Subsidiaries." For tax purposes, the Unconsolidated Subsidiaries are included within the NACCO consolidated U.S. tax return; therefore, the Income tax provision line on the Consolidated Statements of Operations includes income taxes related to these entities. See Note 16 to the Consolidated Financial Statements in this Form 10-K for further information on the Unconsolidated Subsidiaries.

While Falkirk meets the definition of a VIE, the completion of the Rainbow Energy transaction resulted in a VIE reconsideration event. As the terms of the CSA between Falkirk and Rainbow Energy are substantially the same as the terms of the coal supply contract between Falkirk and GRE, Falkirk remains a VIE and Rainbow Energy is the primary beneficiary; therefore, NACCO will continue to account for Falkirk under the equity method.

The Company performs contemporaneous reclamation activities at each mine in the normal course of operations. Under all of the Unconsolidated Subsidiaries' contracts, the customer has the obligation to fund final mine reclamation activities. Under certain contracts, the Unconsolidated Subsidiary holds the mine permit and is therefore responsible for final mine reclamation activities. To the extent the Unconsolidated Subsidiary performs such final reclamation, it is compensated for providing those services in addition to receiving reimbursement from customers for costs incurred.

The MLMC contract is the only operating coal contract in which the Company is responsible for all operating costs, capital requirements and final mine reclamation; therefore, MLMC is consolidated within NACCO's financial statements. MLMC sells coal to its customer at a contractually agreed-upon price which adjusts monthly, primarily based on changes in the level of established indices which reflect general U.S. inflation rates. Profitability at MLMC is affected by customer demand for coal and changes in the indices that determine sales price and actual costs incurred. As diesel fuel is heavily weighted among the indices used to determine the coal sales price, fluctuations in diesel fuel prices can result in significant fluctuations in earnings at MLMC.

MLMC delivers coal to the Red Hills Power Plant in Ackerman, Mississippi. The Red Hills Power Plant supplies electricity to the Tennessee Valley Authority ("TVA") under a long-term Power Purchase Agreement ("PPA"). MLMC's contract with its

customer runs through 2032. TVA's power portfolio includes coal, nuclear, hydroelectric, natural gas and renewables. The decision of which power plants to dispatch is determined by TVA. Reduction in dispatch of the Red Hills Power Plant will result in reduced earnings at MLMC.

See "Item 2. Properties" on page 29 in this Form 10-K for discussion of the Company's mineral resources and mineral reserves.

NAMining Segment

The NAMining segment provides value-added contract mining and other services for producers of industrial minerals. The segment is a platform for the Company's growth and diversification of mining activities outside of the thermal coal industry. NAMining provides contract mining services for independently owned mines and quarries, creating value for its customers by performing the mining aspects of its customers' operations. This allows customers to focus on their areas of expertise: materials handling and processing, product sales and distribution. NAMining historically operated primarily at limestone quarries in Florida, but is focused on expanding outside of Florida, mining materials other than limestone and expanding the scope of mining operations provided to its customers. As of December 31, 2022, NAMining operates mines in Florida, Texas, Arkansas, Indiana, Virginia and Nebraska and will serve as exclusive contract miner for the Thacker Pass lithium project in northern Nevada.

Certain of the entities within the NAMining segment are VIEs and are accounted for under the equity method as Unconsolidated Subsidiaries. See Note 16 to the Consolidated Financial Statements in this Form 10-K for further information on the Unconsolidated Subsidiaries.

Minerals Management Segment

The Minerals Management segment derives income primarily by leasing its royalty and mineral interests to third-party exploration and production companies, and, to a lesser extent, other mining companies, granting them the rights to explore, develop, mine, produce, market and sell gas, oil, and coal in exchange for royalty payments based on the lessees' sales of those minerals.

The Minerals Management segment owns royalty interests, mineral interests, nonparticipating royalty interests and overriding royalty interests.

- **Royalty Interest.** Royalty interests generally result when the owner of a mineral interest leases the underlying minerals to an exploration and production company pursuant to an oil and gas lease. Typically, the resulting royalty interest is a cost-free percentage of production revenues for minerals extracted from the acreage. A holder of royalty interests is generally not responsible for capital expenditures or lease operating expenses, but royalty interests may be calculated net of post-production expenses, and typically has no environmental liability. Royalty interests leased to producers expire upon the expiration of the oil and gas lease and revert to the mineral owner.
- **Mineral Interest.** Mineral interests are perpetual rights of the owner to explore, develop, exploit, mine and/or produce any or all of the minerals lying below the surface of the property. The holder of a mineral interest has the right to lease the minerals to an exploration and production company. Upon the execution of an oil and gas lease, the lessee (the exploration and production company) becomes the working interest owner and the lessor (the mineral interest owner) has a royalty interest.
- **Non-Participating Royalty Interest ("NPRI").** NPRI is an interest in oil and gas production which is created from the mineral estate. The NPRI is expense-free, bearing no operational costs of production. The term "non-participating" indicates that the interest owner does not share in the bonus, rentals from a lease, nor the right to participate in the execution of oil and gas leases. The NPRI owner does; however, typically receive royalty payments.
- **Overriding Royalty Interest ("ORRI").** ORRIs are created by carving out the right to receive royalties from a working interest. Like royalty interests, ORRIs do not confer an obligation to make capital expenditures or pay for lease operating expenses and have limited environmental liability; however, ORRIs may be calculated net of post-production expenses, depending on how the ORRI is structured. ORRIs that are carved out of working interests are linked to the same underlying oil and gas lease that created the working interest, and therefore, such ORRIs are typically subject to expiration upon the expiration or termination of the oil and gas lease.

The Company may own more than one type of mineral and royalty interest in the same tract of land. For example, where the Company owns an ORRI in a lease on the same tract of land in which it owns a mineral interest, the ORRI in that tract will relate to the same gross acres as the mineral interest in that tract.

The Minerals Management segment will benefit from the continued development of its mineral properties without the need for investment of additional capital once mineral and royalty interests have been acquired. The Minerals Management segment does not currently have any material investments under which it would be required to bear the cost of exploration, production or development.

Total consideration for the 2022 and 2021 acquisitions of mineral and royalty interests was \$11.9 million and \$5.3 million, respectively. The 2022 acquisitions included 13.6 thousand gross acres and 880 net royalty acres. The 2021 acquisitions included 20.6 thousand gross acres and 1.8 thousand net royalty acres. Total mineral and royalty interests included approximately 141.4 thousand gross acres and 60.8 thousand net royalty acres at December 31, 2022.

The acquisition criteria for building a blended portfolio of mineral and royalty interests includes (i) new wells anticipated to come online within one to two years of investment, (ii) areas with forecasted future development within five years after acquisition, or (iii) existing producing wells further along the decline curve that will generate stable cash flow. In addition, acquisitions should extend the geographic footprint to diversify across multiple basins with a preliminary focus on the more oil-rich Permian basin and a secondary focus on other diversifying basins to increase regional exposure. While the current focus is on the acquisition of mineral and royalty interests, the Company would also consider investments in ORRIs, NPRIs or non-operated working interests under certain circumstances. The current acquisition strategy does not contemplate any near-term working interest investments in which the Company would act as the operator.

The Company also manages legacy royalty and mineral interests located in Ohio (Utica and Marcellus shale natural gas), Louisiana (Haynesville shale and Cotton Valley formation natural gas), Texas (Cotton Valley and Austin Chalk formation natural gas), Mississippi (coal), Pennsylvania (coal, coalbed methane and Marcellus shale natural gas), Alabama (coal, coalbed methane and natural gas) and North Dakota (coal, oil and natural gas). The majority of the Company's legacy reserves were acquired as part of its historical coal mining operations.

See "Item 2. Properties" on page 29 in this Form 10-K for discussion of the Company's proved reserves.

Customers

The principal customers of the Coal Mining segment are electric utilities and an independent power provider.

The principal customers of the NAMining segment are limestone producers and to a lesser extent, sand and gravel producers. In addition, NAMining will serve as exclusive contract miner for the Thacker Pass lithium project in northern Nevada.

The Minerals Management segment generates income primarily from royalty-based lease payments from oil, gas and to a lesser extent, coal producers. The pricing of oil, gas and coal sales is primarily determined by supply and demand in the marketplace and can fluctuate considerably. As a mineral owner, the Company has limited access to timely information, involvement, and operational control over the volumes of oil, gas and coal produced and sold and the terms and conditions on which such volumes are marketed and sold.

In 2022 and 2021, two customers individually accounted for more than 10% of consolidated revenues. The following represents the revenue attributable to each of these entities as a percentage of consolidated revenues for those years:

Segment	Percentage of Consolidated Revenues	
	2022	2021
Coal Mining customer	39 %	43 %
NAMining customer	17 %	19 %

The loss of either of these customers could have a material adverse effect on the results of operations attributable to the applicable segment and on the Company's consolidated results of operations.

Competition

Coteau, Coyote Creek, Falkirk, MLMC and Sabine each have only one customer for which they extract and deliver coal. The Company's coal mines are directly adjacent to the customer's property, with economical delivery methods that include

conveyor belt delivery systems linked to the customer's facilities or short-haul rail systems. All of the mines in the Coal Mining segment are the most economical suppliers to each of their respective customers as a result of transportation advantages over competitors. In addition, the customers' facilities were specifically designed to use the coal being mined.

The coal industry competes with other sources of energy, particularly oil, gas, hydro-electric power and nuclear power. In addition, it competes with subsidized sources of energy, primarily wind and solar. Among the factors that affect competition are the price and availability of oil and natural gas, environmental and related political considerations, the time and expenditures required to develop new energy sources, the cost of transportation, the cost of compliance with governmental regulations, the impact of federal and state energy policies, the impact of subsidies on renewable pricing and the Company's customers' dispatch decisions, which may also take into account carbon dioxide emissions. The ability of the Coal Mining segment to maintain comparable levels of coal production at existing facilities and develop its reserves will depend upon the interaction of these factors.

Electricity generating units are chosen to run primarily based on operating costs, of which fuel costs account for the largest share. Natural gas-fired power plants have the most potential to displace coal-fired electric baseload power generation in the near term. Federal and state mandates for increased use of electricity derived from renewable energy sources could also negatively affect demand for coal. Such mandates, combined with other incentives to use renewable energy sources, such as tax credits, make alternative fuel sources more competitive with coal. Fluctuations in natural gas prices and the availability of renewable generation, particularly wind, can contribute to changes in power plant dispatch and customer demand for coal. Sustained higher natural gas prices could lead to increased demand for coal and positively affect the Coal Mining segment results. Over the longer term, the Company continues to believe that customer demand will remain pressured by continuing increases in subsidized renewable generation sources, particularly wind and solar. See "Item 1. Business — Government Regulation" on page 8 in this Form 10-K for further discussion. Environmental, social and governance considerations can also have an impact on power plant dispatch and demand for coal.

Based on industry information, the Company believes it was one of the ten largest coal producers in the U.S. in 2022 based on total coal tons produced.

NAMining faces competition from producers of aggregates, lithium or other minerals that choose to self-perform mining operations and from other mining companies.

In the Minerals Management segment, the oil and gas industry is intensely competitive; the Company primarily competes with companies and investors for the acquisition of oil and gas properties, some of which have greater resources and may be able to pay more for productive oil and natural gas properties or to define, evaluate, bid for and purchase a greater number of properties than the Company's financial resources permit. Additionally, many of the Minerals Management segment's competitors are, or are affiliated with, operators that engage in the exploration and production of their oil and gas properties, which allows them to acquire larger assets that include operated properties. Larger or more integrated competitors may be able to absorb the burden of existing, and any changes to, federal, state and local laws and regulations more easily than the Company can, which would adversely affect its competitive position. The integrated competitors may also have a better understanding of when minerals they acquire will be developed, as they are often the developer. The Minerals Management segment's ability to acquire additional properties in the future will be dependent upon its ability to evaluate and select suitable properties and to consummate transactions in a highly competitive environment.

Seasonality

The Company has experienced limited variability in its results due to the effect of seasonality; however, variations in coal demand can occur as a result of the timing and duration of planned or unplanned outages at customers' facilities. Variations in coal demand can also occur as a result of changes in market prices of competing fuels such as natural gas, wind and solar power and demand for electricity, which can fluctuate based on changes in weather patterns.

The NAMining segment extracts a significant amount of the annual limestone produced in Florida. The Florida construction industry can be affected by the cyclicity of the economy, seasonal weather conditions and pandemics, all of which can result in variations in demand for aggregates.

In the Minerals Management segment, oil and natural gas wells have high initial production rates and follow a natural decline before settling into relatively stable, long-term production. Decline rates can vary due to factors like well depth, well length, geology, formation pressure, and facility design. In addition to the natural production decline curve, royalty income can fluctuate favorably or unfavorably in response to a number of factors outside of the Company's control, including the number of wells being operated by third parties, fluctuations in commodity prices (primarily oil and natural gas), fluctuations in

production rates associated with operator decisions, regulatory risks, the Company's lessees' willingness and ability to incur well-development and other operating costs, and changes in the availability and continuing development of infrastructure.

Human Capital

As of December 31, 2022, the Company and its subsidiaries had approximately 1,600 employees, including approximately 1,100 employees at the Company's unconsolidated mining operations, none of which are represented by a collective bargaining agreement. NACCO believes it has good relations with its employees.

Market-Based Compensation: NACCO believes its employees are critical to its success and invests in its employees by offering a market-based competitive total rewards package that includes a combination of salaries and wages and a benefits package that promotes employee well-being across all aspects of their lives. The Company provides employee wages that are competitive and consistent with employee positions, skill levels, experience, knowledge and geographic location. Benefits offered to employees include:

- Medical, dental and vision benefits for employees, spouses and dependents;
- Flexible spending accounts for both healthcare and dependent care;
- Health savings accounts and health reimbursement accounts, both of which receive company contributions;
- Paid vacation and holidays;
- Parental leave;
- Short-term and long-term disability benefits;
- Wellness incentives for employees;
- Life and AD&D insurance benefits;
- Charitable donation matches; and
- Employee assistance program.

Employee Development: The Company recognizes that its culture and success is strengthened when employees are respected, motivated and engaged. The Company works to match employees with assignments that capitalize on the skills, talents and potential of each employee, and provides opportunities for professional growth. The Company believes in hiring, engaging, developing and promoting people who are fully able to meet the demands of each position, regardless of race, color, religion, gender, sexual orientation, gender identity, national origin, age, veteran status or disability.

Safety: Employee safety in the workplace is one of the Company's core values. The Company is committed to strict compliance with applicable laws and regulations regarding workplace safety and provides on-going safety training, education and communication. The National Mining Association ranks NACCO as an industry leader in safety, and the Company's incident rate is consistently below the national average for comparable mines, based on Mine Safety and Health Administration data. The Company has earned more than 100 safety awards at the state and national levels. Hazards in the workplace are actively identified and management tracks incidents so remedial actions can be taken to improve workplace safety. The Company believes communication related to "near misses," safety incidents and protocols is essential to continuously developing and maintaining best-practices related to safety and enables identification and correction of operational practices that might impair employee safety or health.

Company Ethics: The Company has processes in place for compliance with its Code of Corporate Conduct, Insider Trading Policy and Anti-Corruption Policy. All of the Company's Directors and employees annually complete certifications with respect to compliance with the Company's Code of Corporate Conduct. In addition, all employees of the Company are required to complete annual Code of Corporate Conduct training. The Code of Corporate Conduct, Insider Trading Policy and Anti-Corruption Policy require employees to comply with applicable laws and regulations, maintain high ethical standards and report situations of actual or potential noncompliance. The Company also maintains an ethics related hotline, managed by a third party, through which individuals can anonymously raise concerns or ask questions about business behavior.

Community Engagement: The Company supports its local communities and is committed to helping them remain safe, healthy and resilient. The Company's past activities include corporate donations, volunteerism and education. Community engagement is encouraged and supported through the Company's matching gift program. The Company will match employee contributions up to \$5,000 per employee if program criteria are met.

Available Information

The Company makes its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports available through its website, www.nacco.com, as soon as reasonably practicable after such material is electronically filed with, or furnished to, the Securities and Exchange Commission ("SEC"). The content of the Company's website is not incorporated by reference into this Form 10-K or in any other report or document filed with the SEC, and any reference to the Company's website is intended to be an inactive textual reference only. The SEC maintains an internet site at <http://www.sec.gov> that contains reports, proxy and information statements, and other information regarding the Company and other issuers that file electronically with the SEC.

Under Rule 12b-2 of the Exchange Act, the Company qualifies as a "smaller reporting company" because its public float as of the last business day of the Company's most recently completed second quarter was less than \$250 million. For as long as the Company remains a "smaller reporting company," it may take advantage of certain exemptions from the SEC's reporting requirements that are otherwise applicable to public companies that are not smaller reporting companies.

Government Regulation

The Company's operations are subject to various federal, state and local laws and regulations on matters such as employee health and safety, and certain environmental laws and regulations relating to, among other matters, the reclamation and restoration of coal mining properties, air pollution, water pollution, the disposal of wastes and effects on groundwater. In addition, the electric power generation industry is subject to extensive regulation regarding the environmental impact of its power generation activities that could affect demand for coal from the Company's Coal Mining segment.

Numerous governmental permits and approvals are required for coal mining operations. The Company's subsidiaries hold or will hold the necessary permits at all of its lignite coal mining operations. At the coal mining operations where the Company's subsidiaries hold the permits, the Company is required to prepare and present to federal, state or local governmental authorities data pertaining to the effect or impact that any proposed exploration for or production of coal may have upon the environment and public and employee health and safety.

Some laws, as discussed below, place many requirements on the coal mining operations and the limestone quarries where the Company provides services. Federal and state regulations require regular monitoring of the Company's operations to ensure compliance.

Many aspects of the production, pricing and marketing of oil and natural gas are regulated by federal and state agencies. Legislation affecting the oil and natural gas industry is under constant review for amendment or expansion, which frequently increases the regulatory burden on affected members of the industry and could affect the results of the Company's Minerals Management segment.

Mine Health and Safety Laws

The Federal Mine Safety and Health Act of 1977 imposes safety and health standards on all mining operations. Regulations are comprehensive and affect numerous aspects of mining operations, including training of mine personnel, mining procedures, blasting, the equipment used in mining operations and other matters. The Federal Mine Safety and Health Administration enforces compliance with these federal laws and regulations.

Environmental Laws

The Company's coal mining operations are subject to various federal environmental laws, as amended, including:

- the Surface Mining Control and Reclamation Act of 1977 ("SMCRA");
- the Clean Air Act, including amendments to that act in 1990 ("CAA");
- the Clean Water Act of 1972 ("CWA");
- the Resource Conservation and Recovery Act ("RCRA");
- the National Environmental Policy Act of 1970 ("NEPA"); and
- the Comprehensive Environmental Response, Compensation and Liability Act ("CERCLA").

In addition to these federal environmental laws, various states have enacted environmental laws that provide for higher levels of environmental compliance than similar federal laws. These state environmental laws require reporting, permitting and/or approval of many aspects of coal mining operations. Both federal and state inspectors regularly visit mines to enforce compliance. The Company has ongoing training, compliance and permitting programs to ensure compliance with such environmental laws. Changes in environmental laws and regulations occur frequently, and any changes that result in more stringent and costly pollution control or waste handling, storage, transport, disposal or cleanup requirements could materially adversely affect the Coal Mining segment.

Surface Mining Control and Reclamation Act

SMCRA establishes mining, environmental protection and reclamation standards for all aspects of surface coal mining operations. Where state regulatory agencies have adopted federal mining programs under SMCRA, the state becomes the primary regulatory authority.

Coal mine operators must obtain SMCRA permits and permit renewals for coal mining operations from the applicable regulatory agency. These SMCRA permit provisions include requirements for coal prospecting, mine plan development, topsoil removal, storage and replacement, selective handling of overburden materials, mine pit backfilling and grading, protection of the hydrologic balance, surface drainage control, mine drainage and mine discharge control and treatment, and revegetation.

Although mining permits have stated expiration dates, SMCRA provides for a right of successive renewal. The cost of obtaining surface mining permits can vary widely depending on the quantity and type of information that must be provided to obtain the permits; however, the cost of obtaining a permit is usually between \$1,000,000 and \$5,000,000, and the cost of obtaining a permit renewal is usually between \$15,000 and \$100,000.

The Abandoned Mine Land Fund, which is provided for by SMCRA, imposes a fee on certain coal mining operations. The proceeds are intended to be used principally to reclaim mine lands closed prior to 1977. In addition, the Abandoned Mine Land Fund also makes transfers annually to the United Mine Workers of America Combined Benefit Fund (the "Fund"), which provides health care benefits to retired coal miners who are beneficiaries of the Fund. The 2021 Infrastructure Investment and Jobs Act reauthorized the Abandoned Mine Land fee at a reduced rate. The fee for lignite coal was reduced from \$0.08 per ton to \$0.064 per ton and for other surface-mined coal from \$0.28 per ton to \$0.224 per ton. These fees have been reauthorized until the end of fiscal year 2035.

SMCRA establishes operational, reclamation and closure standards for surface coal mines. The Company accrues for the costs of current mine disturbance and final mine closure, including the cost of treating mine water discharges, at mines where the Company's subsidiaries hold the mining permit. These obligations are largely unfunded, with the exception of the final mine closure costs for the Coyote Creek Mine, which are being funded throughout the production stage.

SMCRA stipulates compliance with many other major environmental programs, including the CAA and CWA. The U.S. Army Corps of Engineers regulates activities affecting navigable waters, and the U.S. Bureau of Alcohol, Tobacco and Firearms regulates the use of explosives for blasting. In addition, the U.S. Environmental Protection Agency (the "EPA"), the U.S. Army Corps of Engineers and the Office of Surface Mining Reclamation and Enforcement ("OSMRE") have engaged in a series of rulemakings and other administrative actions under the CWA and other statutes that are directed at reducing the impact of coal mining operations on water bodies.

The Company does not believe there is any significant risk to the Company's subsidiaries ability to maintain its existing mining permits or its ability to acquire future mining permits for its mines.

Clean Air Act

The process of burning coal can cause many compounds and impurities in the coal to be released into the air, including sulfur dioxide, nitrogen oxides, mercury, particulates and other matter. The CAA and the corresponding state laws that extensively regulate the emissions of materials into the air affect coal mining operations both directly and indirectly. Direct impacts on coal mining operations occur through CAA permitting requirements and/or emission control requirements relating to air contaminants, especially particulate matter. Indirect impacts on coal mining operations occur through regulation of the air emissions of sulfur dioxide, nitrogen oxides, mercury, particulate matter and other compounds emitted by coal-fired power plants. The EPA has promulgated or proposed regulations that impose tighter emission restrictions in a number of areas, some of which are currently subject to litigation. The general effect of tighter restrictions is to reduce demand for coal. Ongoing reduction in coal's share of the capacity for power generation could have a material adverse effect on the Company's business, financial condition and results of operations.

States are required to submit to the EPA revisions to their state implementation plans ("SIPs") that demonstrate the manner in which the states will attain national ambient air quality standards ("NAAQS") every time a NAAQS is issued or revised by the EPA. The EPA has adopted NAAQS for several pollutants, which continue to be reviewed periodically for revisions. When the EPA adopts new, more stringent NAAQS for a pollutant, some states have to change their existing SIPs. If a state fails to revise its SIP and obtain EPA approval, the EPA may adopt regulations to effect the revision. Coal mining operations and coal-fired power plants that emit particulate matter or other specified material are, therefore, affected by changes in the SIPs. Through this process over the last few years, the EPA has reduced the NAAQS for particulate matter, ozone, and nitrogen oxides. The Company's coal mining operations and power generation customers may be directly affected when the revisions to the SIPs are made and incorporate new NAAQS for sulfur dioxide, nitrogen oxides, ozone and particulate matter. In March 2019, the EPA

published a final rule that retains the current primary (health-based) NAAQS for sulfur oxides ("SOx") without revision. The current primary standard is set at a level of 75 parts per billion, as the 99th percentile of daily maximum 1-hour SO₂ concentrations, averaged over 3 years.

In mid-2011, the EPA finalized the Cross-State Air Pollution Rule ("CSAPR") to address interstate transport of pollutants. This affects states in the eastern half of the U.S. and Texas. This rule imposes additional emission restrictions on coal-fired power plants to attain ozone and fine particulate NAAQS. The EPA began implementation of the rule in 2015, when Phase I emission reductions in sulfur dioxide and nitrogen dioxide became effective. Phase II reductions became effective in 2017. In 2016, the EPA mandated additional reductions in nitrogen oxide emissions. The U.S. Court of Appeals for the District of Columbia Circuit ("D.C. Circuit") remanded the CSAPR Update to the EPA to address the court's holding that the rule unlawfully allows significant contribution to continue beyond downwind attainment deadlines. In 2018, the EPA finalized all remaining ozone designations to comply with the 2015 ozone air quality standards. The U.S. Court of Appeals for the D.C. Circuit issued a per curiam opinion rejecting various industry challenges to the EPA's 2015 revisions to the ozone NAAQS, including that the EPA was required to consider certain adverse effects and background ozone when setting the standards. None of the power plants supplied by the Company are within non-attainment areas for ozone. In March 2022, the EPA announced a federal plan to "help states fully resolve their Clean Air Act 'good neighbor' obligations for the 2015 ozone NAAQS. This new plan would double the number of covered states and require daily limits on emissions from large coal-fired power plants. The plan would also broaden the existing nitrogen oxides power plant trading program from 12 states to 25 during the summertime ozone season while also ratcheting down nitrogen oxides caps for states, starting in 2023. If this plan is finalized as proposed, it could have a material adverse effect on the Company's business, financial condition or results of operations.

The CAA Acid Rain Control Provisions were promulgated as part of the CAA Amendments of 1990 in Title IV of the CAA ("Acid Rain Program"). The Acid Rain Program required reductions of sulfur dioxide emissions from coal-fired power plants. The Acid Rain Program is now a mature program, and the Company believes that any market impacts of the required controls have likely been factored into the coal market.

The EPA promulgated a regional haze program designed to protect and to improve visibility at and around Class I Areas, which are generally National Parks, National Wilderness Areas and International Parks. This program may restrict the construction of new coal-fired power plants, the operation of which may impair visibility at and around the Class I Areas. Additionally, the program requires certain existing coal-fired power plants to install additional control measures designed to limit haze-causing emissions, such as sulfur dioxide, nitrogen oxide and particulate matter. States were required to submit Regional Haze SIPs to the EPA in 2007; however, many states did not meet that deadline. In 2016, the EPA finalized revisions to the Regional Haze Rule which addresses requirements for the second planning period. In September 2019, the EPA issued final regional haze guidance that indicates that a re-evaluation of sources already subject to best available retrofit technologies ("BART") is likely unnecessary. The guidance also encourages states to balance visibility benefits against other factors in selecting the measures necessary to make "reasonable progress" toward natural visibility conditions. Finally, when comparing various control options to determine which ones may be "cost-effective," the final guidance recommends comparing cost to visibility benefits. In July of 2021, the EPA released a memorandum to clarify the guidance issued in 2019. While this clarification memorandum attempted to reverse some of the core conclusions made in the 2019 guidance, it was released after the air analyses to develop individual SIPs had been completed and just prior to the SIP submittal deadline to the EPA, which was July 31, 2021. Many SIP submittals were delayed due to emissions modeling and continue to be developed and scrutinized. SIPs have been sent to the EPA for approval following both review by federal land managers of the National Park Service, the United States Fish and Wildlife Service and the United States Forest Service and all corresponding public comment periods.

State implementation of the EPA's Regional Haze Rule could require Coyote Creek's customers to incur significant new costs at the Coyote Station power plant, which could result in the premature closure of the power plant and the Coyote Creek mine. The North Dakota Department of Environmental Quality ("NDDEQ") finalized its state implementation plan and submitted it to the EPA for approval in August 2022. The NDDEQ determined that visibility progress was being made and did not require significant emissions controls at Coyote Station power plant. Notwithstanding NDDEQ's determination, the EPA may require additional costly emission controls and it may not be economically feasible for Coyote Creek's customers to invest in such equipment, which could result in early retirement of Coyote Station and the Coyote Creek mine.

Under the CAA, new and modified sources of air pollution must meet certain new source standards (the "New Source Review Program"). In the late 1990s, the EPA filed lawsuits against owners of many coal-fired power plants in the eastern U.S. alleging that the owners performed non-routine maintenance, causing increased emissions that should have triggered the application of these new source standards. Some of these lawsuits have been settled with the owners agreeing to install additional emission control devices in their coal-fired power plants. The EPA has clarified the process for evaluating whether the New Source Review ("NSR") permitting program would apply to proposed projects at existing air pollution sources. Under the NSR program, before constructing a new stationary emission source or a modification of an existing major source, the source owner

or operator must determine whether the new source will emit or the modification will increase air emissions above certain thresholds. The rule makes it clear that both emissions increases and decreases from a major modification at an existing source are to be considered during Step 1 of the two-step NSR applicability test which is designed to determine if there is a “significant emission increase”. In October 2021, the EPA denied a petition for reconsideration and administrative stay of the final rule; however, the remaining litigation and the uncertainty around the NSR program rules could adversely impact demand for coal. Any additional new controls may have an adverse impact on the demand for coal, which may have a material adverse effect on the Company’s business, financial condition or results of operations.

Under the CAA, the EPA also adopts national emission standards for hazardous air pollutants. In December 2011, the EPA adopted a final rule called the Mercury and Air Toxics Standard (“MATS”), which applies to new and existing coal-fired and oil-fired units. This rule requires mercury emission reductions in fine particulates, which are being regulated as a surrogate for certain metals.

The Company’s power generation customers must incur substantial costs to control emissions to meet all of the CAA requirements, including the requirements under MATS and the EPA’s regional haze program. These costs raise the price of coal-generated electricity, making coal-fired power less competitive with other sources of electricity, thereby reducing demand for coal. If the Company’s customers cannot offset the cost to control certain regulated pollutant emissions by lowering costs or if the Company’s customers elect to close coal-fired units, the Company’s business, financial condition and results of operations could be materially adversely affected.

Global climate change continues to attract considerable attention in the United States. The U.S. Congress has considered climate change legislation aimed at reducing greenhouse gas (“GHG”) emissions, particularly from coal combustion by power plants. Enactment of laws and passage of regulations regarding GHG emissions by the U.S. or additional states, or other actions to limit carbon dioxide emissions, such as opposition by environmental groups to expansion or modification of coal-fired power plants, could result in electric generators switching from coal to other fuel sources.

The U.S. Congress continues to consider a variety of proposals to reduce GHG emissions from the combustion of coal and other fuels. These proposals include emission taxes, emission reductions, including carbon tax and “cap-and-trade” programs, and mandates or incentives to generate electricity by using renewable resources, such as wind or solar power. Some states have established programs to reduce GHG emissions. Further, governmental agencies have been providing grants or other financial incentives to entities developing or selling alternative energy sources with lower levels of GHG emissions, which may lead to more competition from those entities.

The EPA introduced a GHG regulation program under the CAA by issuing a finding that the emission of six GHGs, including carbon dioxide and methane, may reasonably be anticipated to endanger public health and welfare. Based on that finding, the EPA published a New Source Performance Standard for greenhouse gases, applicable to certain new power plants. In 2019, the EPA issued the Affordable Clean Energy (“ACE”) Rule to reduce GHG emissions from existing electric generating units (“EGUs”). In contrast to the Clean Power Plan, which preceded the ACE rule, the ACE rule limited “best system of emission reduction” to only “inside the fenceline” heat rate improvement technologies or systems that can be applied at an affected coal-fired EGU. The ACE rule was challenged by a suite of petitioners before the U.S. Circuit Court of Appeals, District of Columbia Circuit (“DC Circuit”) which subsequently ruled that the EPA erred when it rescinded the Clean Power Plan and vacated the ACE rule. In early 2021, the EPA issued an endangerment/significant contribution finding for carbon dioxide emissions from coal-fired power plants. In addition, the DC Circuit court ruling was challenged by several parties, including the Company, and the Supreme Court of the United States granted certiorari. In June 2022, the U.S. Supreme Court reversed the D.C. Circuit’s decision on the ACE rule and remanded the case back to the D.C. Circuit. The EPA has indicated that it will draft a new rule to regulate carbon dioxide emissions which, depending on the scope and applicability of the rule, may have a material adverse effect on the Company’s business, financial condition or results of operations.

The Taxpayer Certainty and Disaster Tax Relief Act of 2020 extended the production tax credit (“PTC”) under Section 45 of the Internal Revenue Code and the investment tax credit (“ITC”) under Section 48 of the Code. The PTC for wind was extended at the current phase-out level (60% of the otherwise allowable credits) for facilities where construction began in 2021. The ITC for solar was extended at 26% for energy property where construction begins in 2021-2022 and at 22% where construction begins in 2023-2025. Solar energy property placed in service after December 31, 2025 will receive a 10% ITC.

On August 16, 2022, President Biden signed into law the Inflation Reduction Act of 2022 (the “Inflation Reduction Act”). The Inflation Reduction Act contains hundreds of billions of dollars in incentives for the development of renewable energy, clean hydrogen, clean fuels, electric vehicles and supporting infrastructure and carbon capture and sequestration, among other provisions. These incentives could further accelerate the transition of the U.S. economy away from the use of fossil fuels and impact demand for fossil fuels. The ultimate impact on fossil fuel demand and the Company is uncertain and may change as

implementation of the Inflation Reduction Act moves forward. The subsidization of alternative energy sources may have a material adverse effect on the Company's business, financial condition or results of operations.

The U.S. has not implemented the 1992 Framework Convention on Global Climate Change ("Kyoto Protocol"), which became effective for many countries on February 16, 2005. The Kyoto Protocol was intended to limit or reduce emissions of GHGs. The U.S. has not ratified the emission targets of the Kyoto Protocol or any other GHG agreement. Though the U.S. has not accepted these international GHG limiting treaties, numerous lawsuits and regulatory actions have been undertaken by states and environmental groups to try to force controls on the emission of carbon dioxide; or to prevent the construction of new coal-fired power plants.

As a successor to the Kyoto Protocol, in 2015, international negotiators finalized the Paris Agreement under the United Nations Framework Convention on Climate Change ("Paris Agreement"). Unlike the Kyoto Protocol, the Paris Agreement has no binding GHG reduction mandates on signatories. Participating countries only submit a description of their intended GHG reductions, and provide periodic progress updates, with no penalties for not meeting their self-imposed targets. The Paris Agreement also includes language stating that developed countries will provide financial assistance to help developing countries meet their GHG targets and adapt to climate change, but there are no mandated contributions. In November 2020, the United States formally withdrew from the Paris Agreement; however, the United States rejoined in February 2021. The renegotiation and implementation of the Paris Agreement, or other international agreements, the regulations promulgated to date by the EPA with respect to GHG emissions or the adoption of new legislation or regulations to control GHG emissions, could have a material adverse effect on the Company's business, financial condition and results of operations.

Significant public opposition has also been raised with respect to the proposed construction of certain new coal-fired EGUs due to the potential for increased air emissions. Such opposition, as well as any corporate or investor policies against coal-fired EGUs or requiring disclosures related to global climate change, could also reduce the demand for the Company's coal or marketability of NACCO stock. Further, policies limiting available financing for the development of new coal-fueled EGUs or coal mines or the retrofitting of existing EGUs could adversely impact the global demand for coal in the future. The potential impact on the Company of future laws, regulations or other policies or circumstances will depend upon the degree to which any such laws, regulations or other policies or circumstances force electricity generators to diminish their reliance on coal as a fuel source. In view of the significant uncertainty surrounding each of these factors, it is not possible for the Company to predict reasonably the impact that any such laws, regulations or other policies may have on the Company's business, financial condition and results of operations. However, such impacts could have a material adverse effect on the Company's business, financial condition and results of operations.

The Company believes it has obtained all necessary permits under the CAA at all of its coal mining operations where it is responsible for permitting and is in compliance with such permits.

Clean Water Act

The Clean Water Act ("CWA") affects coal mining operations by establishing in-stream water quality standards and treatment standards for waste water discharge. Permits requiring regular monitoring, reporting and performance standards govern the discharge of pollutants into water. Waters discharged from coal mines are required to meet these standards. These federal and state requirements could require more costly water treatment and could materially adversely affect the Company's business, financial condition and results of operations.

The Company believes it has obtained all permits required under the CWA and corresponding state laws and is in compliance with such permits. In many instances, mining operations require securing CWA authorization or a permit from the U.S. Army Corps of Engineers for operations in waters of the United States. The U.S. Army Corps of Engineers and EPA jointly revised the definition of a water of the United States ("WOTUS") in the June 2020 Navigable Water Protection Rule ("NWPR"). The new definition was challenged in court and two court cases resulted in vacatur of the NWPR. The Supreme Court of the United States heard the Sackett vs. EPA case in October 2022 that challenges how federal jurisdiction of wetlands should be determined. A decision is expected by June 2023. In the meantime, in January 2023, the EPA published a new rule that redefines WOTUS that relies on the significant nexus test established by the 2006 Rapanos decision. The new definition expands the scope of the federal jurisdiction over land and water features which could cause some of the Company's operations to incur additional costs to mitigate streams and wetlands.

Bellaire is treating mine water drainage from coal refuse piles associated with former underground coal mines in Ohio and Pennsylvania and is treating mine water from a former underground coal mine in Pennsylvania. Bellaire anticipates that it will need to continue these activities indefinitely. Bellaire was notified by the Pennsylvania Department of Environmental Protection during 2004 that in order to obtain renewal of a permit, Bellaire would be required to establish a mine water

treatment trust. See Note 7 and Note 9 to the Consolidated Financial Statements in this Form 10-K for further information on Bellaire.

Resource Conservation and Recovery Act

The Resource Conservation and Recovery Act ("RCRA") affects coal mining operations by establishing requirements for the treatment, storage and disposal of wastes, including hazardous wastes. Coal mine wastes, such as overburden and coal cleaning wastes, currently are exempted from hazardous waste management. In 2014, the EPA finalized a rule specifying management standards for coal combustion residuals or coal ash ("CCRs") as a non-hazardous waste. In 2018, the EPA finalized revisions to the 2014 regulations in response to litigation of the 2014 rule. One revision allows a state director (in a state with an approved CCR permit program) or the EPA (where EPA is the permitting authority) to suspend groundwater monitoring requirements if there is evidence that there is no potential for migration of hazardous constituents to the uppermost aquifer during the active life of the unit and post closure care. The second revision allows issuance of technical certifications in lieu of a professional engineer. In addition, the EPA revised the groundwater protection standards and extended the deadline for some facilities that must close CCR units. In 2020, the EPA finalized additional changes to the CCR rule that classified all clay-lined surface impoundments that receive CCR as unlined, which triggered a pond closure date of April 2021 for impoundments that failed the aquifer location restriction. The EPA also established alternative deadlines to cease receipt of waste to include new site-specific alternatives due to lack of capacity with a deadline to initiate closure no later than October 15, 2023 and a new site-specific alternative due to permanent cessation of coal-fired boilers with two deadlines to complete closure: (a) no later than October 17, 2023 for surface impoundments 40 acres or smaller; and (b) October 17, 2028 for surface impoundments larger than 40 acres. Additionally, the CCR Part B Final Rule allowed facilities to demonstrate that there is no reasonable probability of adverse effects to human health and the environment at non-conforming units. These new rules may raise the cost for CCR disposal at coal-fired power plants, making them less competitive, and/or result in early closure which could have an adverse impact on demand for coal and ultimately result in the early closure of the mines servicing these plants, including closure of the Company's mines. Any such closure of the Company's mines could have a material adverse effect on the Company's business, financial condition and results of operations.

The EPA rule exempts CCRs beneficially used at mine sites and reserves any regulation thereof to the OSMRE. The OSMRE suspended all rulemaking actions on CCRs, but could re-initiate them in the future. The outcome of these rulemakings, and any subsequent actions by the EPA and OSMRE, could impact those Company operations that beneficially use CCRs. If the Company were unable to beneficially use CCRs, its revenues for handling CCRs from its customers may decrease and its costs may increase due to the purchase of alternative materials for beneficial uses.

National Environmental Policy Act

NEPA requires federal agencies to review the environmental impacts of their decisions and issue either an environmental assessment or an environmental impact statement. There are certain actions associated with surface coal mining that may trigger these types of assessments by federal agencies. When a NEPA action is required, the Company provides the required information to the appropriate federal agency so that they may complete the environmental assessment. Historically, this process has been lengthy and may take several years to complete. In 2020, the White House Council on Environmental Quality ("CEQ") issued a final rule updating the original NEPA regulations; however, it was immediately challenged by states and non-governmental organizations. In April 2022, the CEQ issued a new draft rule rescinding many of the revisions from the 2020 update. In January 2023, the CEQ issued interim guidance that instructs federal agencies to quantify GHG emissions for each alternative and use the social cost of greenhouse gases to calculate a monetary metric that gives decision makers and the public useful information and context about a proposed actions' climate effects. The revised NEPA regulations and interim guidance could adversely affect the Company's ability to secure necessary permits.

Regulation of the Oil and Natural Gas Industry

The oil and natural gas industry is extensively regulated by numerous federal, state and local authorities. Legislation affecting the oil and natural gas industry is under constant review for amendment or expansion, frequently increasing the regulatory burden. Also, numerous departments and agencies, both federal and state, are authorized by statute to issue rules and regulations that are binding on the oil and natural gas industry and its individual members, some of which carry substantial penalties for failure to comply. Although the regulatory burden on the oil and natural gas industry increases the cost of doing business, these burdens generally do not affect the Company any differently or to any greater or lesser extent than they affect other companies in the industry with similar types, quantities and locations of production.

The availability, terms and cost of transportation significantly affect sales of oil and natural gas. The interstate transportation of oil and natural gas and the sale or resale of natural gas is subject to federal regulation, including regulation of the terms, conditions and rates for interstate transportation, storage and various other matters, primarily by the Federal Energy Regulatory Commission ("FERC"). Federal and state regulations govern the price and terms for access to oil and natural gas pipeline

transportation. FERC's regulations for interstate oil and natural gas transmission in some circumstances may also affect the intrastate transportation of oil and natural gas.

Although oil and natural gas prices are currently unregulated, Congress historically has been active in the area of oil and natural gas regulation. The Company cannot predict whether new legislation to regulate oil and natural gas might be proposed, what proposals, if any, might be enacted by Congress or the various state legislatures, and what effect, if any, the proposals might have on the Minerals Management segment. Sales of crude oil, condensate and natural gas liquids ("NGLs") are not currently regulated and are made at market prices.

Environmental Matters

Oil and natural gas exploration, development and production operations are subject to stringent laws and regulations governing the discharge of materials into the environment or otherwise relating to protection of the environment or occupational health and safety. These laws and regulations have the potential to impact production on the Company's mineral interests, which could materially adversely affect the Minerals Management segment. Numerous federal, state and local governmental agencies, such as the EPA, issue regulations that often require difficult and costly compliance measures that carry substantial administrative, civil and criminal penalties and may result in injunctive obligations for non-compliance. These laws and regulations may require the acquisition of a permit before drilling commences, restrict the types, quantities and concentrations of various substances that can be released into the environment in connection with drilling and production activities, limit or prohibit construction or drilling activities on certain lands lying within wilderness, wetlands, ecologically sensitive and other protected areas, require action to prevent or remediate pollution from current or former operations, such as plugging abandoned wells or closing earthen pits, result in the suspension or revocation of necessary permits, licenses and authorizations, require that additional pollution controls be installed and impose substantial liabilities for pollution resulting from operations. The strict, joint and several liability nature of such laws and regulations could impose liability upon the operators on the Company's mineral interests, regardless of fault. Moreover, it is not uncommon for neighboring landowners and other third parties to file claims for personal injury and property damage allegedly caused by the release of hazardous substances, hydrocarbons or other waste products into the environment. Changes in environmental laws and regulations occur frequently, and any changes that result in more stringent and costly pollution control or waste handling, storage, transport, disposal or cleanup requirements could materially adversely affect the Minerals Management segment.

Drilling and Production

The operations of the Company's third-party lessees are subject to various types of regulation at the federal, state and local level. These types of regulation include requiring permits for the drilling of wells, drilling bonds and generating reports concerning operations. The states, and some counties and municipalities, in which the Company has mineral interests also regulate one or more of the following:

- the location of wells;
- the method of drilling and casing wells;
- the timing of construction or drilling activities, including seasonal wildlife closures;
- the rates of production or "allowables";
- the surface use and restoration of properties upon which wells are drilled;
- the plugging and abandoning of wells; and
- notice to, and consultation with, surface owners and other third parties.

State laws regulate the size and shape of drilling and spacing units or proration units governing the pooling of oil and natural gas properties. Some states allow forced pooling or integration of tracts to facilitate exploration while other states rely on voluntary pooling of lands and leases. In some instances, forced pooling or unitization may be implemented by third parties and may reduce the Company's interest in the unitized properties. In addition, state conservation laws establish maximum rates of production from oil and natural gas wells, generally prohibit the venting or flaring of natural gas and impose requirements regarding the ratability of production. These laws and regulations may limit the amount of oil and natural gas that the lessees of the Company's mineral interests can produce from existing wells or limit the number of wells or the locations at which operators can drill. Moreover, each state generally imposes a production or severance tax with respect to the production and sale of oil, natural gas and NGLs within its jurisdiction. States do not regulate wellhead prices or engage in other similar direct regulation, but the effect of any future regulations could have a material effect on the Minerals Management segment. The effect of such future regulations may be to limit the amounts of oil and natural gas that may be produced from the Company's mineral interests, negatively affect the economics of production from these wells or limit the number of locations operators can drill.

Federal, state and local regulations provide detailed requirements for the abandonment of wells, closure or decommissioning of production facilities and pipelines and for site restoration in areas where the operators of the acreage underlying the Company's mineral and royalty interests operate. The U.S. Army Corps of Engineers and many other state and local authorities also have

regulations for plugging and abandonment, decommissioning and site restoration. Although the U.S. Army Corps of Engineers does not require bonds or other financial assurances, some state agencies and municipalities do have such requirements.

Regulation of Hydraulic Fracturing

Hydraulic fracturing is an important common practice that is used to stimulate production of hydrocarbons, particularly natural gas, from tight formations, including shales. The process involves the injection of water, sand and chemicals under pressure into formations to fracture the surrounding rock and stimulate production. The CWA regulates the underground injection of substances through the Underground Injection Control (“UIC”) program. Hydraulic fracturing generally is exempt from regulation under the UIC program, and the hydraulic fracturing process is typically regulated by state oil and gas commissions. However, in recent years efforts have been made to regulate hydraulic fracturing at the federal level. The Biden administration has also signaled the intent to stop hydraulic fracturing on federal land.

Several states, including Texas, have adopted, or are considering adopting, regulations that could restrict or prohibit hydraulic fracturing in certain circumstances and/or require the disclosure of the composition of hydraulic fracturing fluids. The Texas Legislature previously adopted legislation requiring oil and gas operators to publicly disclose the chemicals used in the hydraulic fracturing process, effective as of September 1, 2011. The Texas Railroad Commission subsequently adopted rules and regulations implementing this legislation that apply to all wells for which the Railroad Commission issues an initial drilling permit. This law requires that the well operator disclose the list of chemical ingredients subject to the requirements of the Occupational Safety and Health Act for disclosure on an internet website and also file the list of chemicals with the Texas Railroad Commission with the well completion report. The total volume of water used to hydraulically fracture a well must also be disclosed to the public and filed with the Texas Railroad Commission. Further, in May 2013, the Texas Railroad Commission issued a “well integrity rule,” which updates the requirements for drilling, putting pipe down, and cementing wells. The rule also includes new testing and reporting requirements, such as: (i) the requirement to submit cementing reports after well completion or after cessation of drilling, whichever is later; and (ii) the imposition of additional testing on wells less than 1,000 feet below usable groundwater. The well integrity rule took effect in January 2014. Local governments also may seek to adopt ordinances within their jurisdictions regulating the time, place and manner of drilling activities in general or hydraulic fracturing activities in particular or prohibit the performance of well drilling in general or hydraulic fracturing in particular.

There has been increasing public controversy regarding hydraulic fracturing with regard to the use of fracturing fluids, impacts on drinking water supplies, use of water and the potential for impacts to surface water, groundwater and the environment generally. A number of lawsuits and enforcement actions have been initiated across the country implicating hydraulic fracturing practices. If new laws or regulations that significantly restrict hydraulic fracturing are adopted, such laws could make it more difficult or costly to perform fracturing to stimulate production from tight formations as well as make it easier for third parties opposing the hydraulic fracturing process to initiate legal proceedings based on allegations that specific chemicals used in the fracturing process could adversely affect groundwater. In addition, if hydraulic fracturing is further regulated at the federal or state level, fracturing activities could become subject to additional permitting and financial assurance requirements, more stringent construction specifications, increased monitoring, reporting and recordkeeping obligations, plugging and abandonment requirements and also to attendant permitting delays and potential increases in costs. Such legislative or regulatory changes could cause operators of the operation on the acreage underlying the Company’s mineral interests to incur substantial compliance costs, and compliance or the consequences of any failure to comply by operators could have a material adverse effect on the Minerals Management segment.

In addition, hydraulic fracturing operations require the use of a significant amount of water, and the inability of the operators of the acreage underlying the Company’s mineral interests to locate sufficient amounts of water or dispose of or recycle water used in their drilling and production operations could adversely impact their operations. Moreover, new environmental initiatives and regulations could include restrictions on the ability to conduct certain operations such as hydraulic fracturing or disposal of waste, including, but not limited to, produced water, drilling fluids and other wastes associated with the development or production of natural gas.

In some instances, the operation of underground injection wells has been alleged to cause earthquakes. Such issues have sometimes led to orders prohibiting continued injection or the suspension of drilling in certain wells identified as possible sources of seismic activity. Such concerns also have resulted in stricter regulatory requirements in some jurisdictions relating to the location and operation of underground injection wells. Future orders or regulations addressing concerns about seismic activity from well injection could affect operations on the acreage underlying the Company’s mineral interests.

Endangered Species Act

The Endangered Species Act (“ESA”) and analogous state laws restrict activities that may affect endangered or threatened species or their habitats. Pursuant to a settlement with environmental groups, the U.S. Fish and Wildlife Service (“USFWS”)

was required to determine whether over 250 species required listing as threatened or endangered under the ESA. USFWS has not yet completed its review, but the potential remains for new species to be listed under the ESA. Some of the Company's properties or mineral interests may be located in areas that are or may be designated as habitats for endangered or threatened species, and previously unprotected species may later be designated as threatened or endangered in areas where the Company holds interests. For example, recently, there have been renewed calls to review protections currently in place for the Dunes Sagebrush Lizard, whose habitat includes portions of the Permian Basin, and to reconsider listing the species under the ESA. Likewise, there have been calls to review protections in place for the Greater Sage Grouse, which can be found across a large swath of the northwestern United States in oil and gas producing states. The listing of either of these species, or any others, in areas where the Company holds mineral interests could cause lessees to incur increased costs arising from species protection measures, delay the completion of exploration and production activities, and/or result in limitations on operating activities that could have an adverse impact the Minerals Management segment.

Natural Gas Sales and Transportation

Historically, federal legislation and regulatory controls have affected the price and marketing of natural gas. FERC has jurisdiction over the transportation and sale for resale of natural gas in interstate commerce by natural gas companies under the Natural Gas Act of 1938 ("NGA") and the Natural Gas Policy Act of 1978. Since 1978, various federal laws have been enacted which have resulted in the complete removal of all price and non-price controls for sales of domestic natural gas sold in "first sales." Under the Energy Policy Act of 2005, FERC has substantial enforcement authority to prohibit the manipulation of natural gas markets and enforce its rules and orders, including the ability to assess substantial civil penalties.

FERC also regulates interstate natural gas transportation rates and service conditions and establishes the terms under which operators may use interstate natural gas pipeline capacity, which affects the marketing of natural gas that operators produce, as well as the revenues operators receive for sales of natural gas and release of natural gas pipeline capacity. Commencing in 1985, FERC promulgated a series of orders, regulations and rule makings that significantly fostered competition in the business of transporting and marketing gas. Today, interstate pipeline companies are required to provide nondiscriminatory transportation services to producers, marketers and other shippers, regardless of whether such shippers are affiliated with an interstate pipeline company. FERC's initiatives have led to the development of a competitive, open access market for natural gas purchases and sales that permits all purchasers of natural gas to buy gas directly from third-party sellers other than pipelines. However, the natural gas industry historically has been very heavily regulated; therefore, the Company cannot guarantee that the less stringent regulatory approach currently pursued by FERC and Congress will continue indefinitely into the future nor can the Company determine what effect, if any, future regulatory changes might have on natural gas-related activities.

Under FERC's current regulatory regime, transmission services must be provided on an open-access, nondiscriminatory basis at cost-based rates or at market-based rates if the transportation market at issue is sufficiently competitive. Gathering service, which occurs upstream of jurisdictional transmission services, is regulated by the states onshore and in-state waters. Section 1(b) of the NGA exempts natural gas gathering facilities from regulation by FERC as a natural gas company under the NGA. Although its policy is still in flux, FERC has in the past reclassified certain jurisdictional transmission facilities as non-jurisdictional gathering facilities, which has the tendency to increase operators' costs of transporting gas to point-of-sale locations.

Oil Sales and Transportation

Sales of crude oil, condensate and natural gas liquids are not currently regulated and are made at negotiated prices. Nevertheless, Congress could reenact price controls in the future.

Crude oil sales are affected by the availability, terms and cost of transportation. The transportation of oil in common carrier pipelines is also subject to rate regulation. FERC regulates interstate oil pipeline transportation rates under the Interstate Commerce Act and intrastate oil pipeline transportation rates are subject to regulation by state regulatory commissions. The basis for intrastate oil pipeline regulation, and the degree of regulatory oversight and scrutiny given to intrastate oil pipeline rates, varies from state to state. Insofar as effective interstate and intrastate rates are equally applicable to all comparable shippers, the Company believes that the regulation of oil transportation rates will not affect its operations in any materially different way than such regulation will affect the operations of competitors.

Further, interstate and intrastate common carrier oil pipelines must provide service on a non-discriminatory basis. Under this open access standard, common carriers must offer service to all shippers requesting service on the same terms and under the same rates. When oil pipelines operate at full capacity, access is governed by portioning provisions set forth in the pipelines' published tariffs. Accordingly, the Company believes that access to oil pipeline transportation services generally will be available to its operators to the same extent as to the Company or its competitors.

State Regulation

Texas regulates the drilling for, and the production, gathering and sale of, oil and natural gas, including imposing severance taxes and requirements for obtaining drilling permits. Texas currently imposes a 4.6% severance tax on the market value of oil production and a 7.5% severance tax on the market value of natural gas production. States also regulate the method of developing new fields, the spacing and operation of wells and the prevention of waste of oil and natural gas resources. States may regulate rates of production and may establish maximum daily production allowable from oil and natural gas wells based on market demand or resource conservation, or both. States do not regulate wellhead prices or engage in other similar direct economic regulation, but the Company cannot be certain that they will not do so in the future. The effect of these regulations may be to limit the amount of oil and natural gas that may be produced from wells drilled by third-party lessee's and to limit the number of wells or locations the Company's third-party lessee operators can drill.

The petroleum industry is also subject to compliance with various other federal, state and local regulations and laws. Some of those laws relate to resource conservation and equal employment opportunity. The Company does not believe that compliance with these laws will have a material adverse effect on its results of operations or financial condition.

Comprehensive Environmental Response, Compensation and Liability Act

CERCLA and similar state laws create liabilities for the investigation and remediation of releases of hazardous substances into the environment and for damages to natural resources. The Company must also comply with reporting requirements under the Emergency Planning and Community Right-to-Know Act and the Toxic Substances Control Act.

From time to time, the Company has been the subject of administrative proceedings, litigation and investigations relating to environmental matters.

The extent of the liability and the cost of complying with environmental laws cannot be predicted with certainty due to many factors, including the lack of specific information available with respect to many sites, the potential for new or changed laws and regulations, the development of new remediation technologies and the uncertainty regarding the timing of work with respect to particular sites. As a result, the Company may incur material liabilities or costs related to environmental matters in the future, and such environmental liabilities or costs could materially and adversely affect the Company's results of operations and financial condition. In addition, there can be no assurance that changes in laws or regulations would not affect the manner in which the Company is required to conduct its operations.

INFORMATION ABOUT OUR EXECUTIVE OFFICERS

The following tables set forth as of March 1, 2023 the name, age, current position and principal occupation and employment during the past five years of the Company's executive officers. There exists no arrangement or understanding between any executive officer and any other person pursuant to which such executive officer was selected.

EXECUTIVE OFFICERS OF THE COMPANY

Name	Age	Current Position
J.C. Butler, Jr.	62	President and Chief Executive Officer of NACCO and President and Chief Executive Officer of NACoal (from prior to 2018)
Elizabeth I. Loveman	53	Vice President and Controller and Principal Financial Officer (from prior to 2018)
John D. Neumann	47	Vice President, General Counsel and Secretary of NACCO, Vice President, General Counsel and Secretary of NACoal (from prior to 2018)
Thomas A. Maxwell	45	Vice President - Financial Planning and Analysis and Treasurer (from prior to 2018)

PRINCIPAL OFFICERS OF THE COMPANY'S SUBSIDIARIES

Name	Age	Current Position
J.C. Butler, Jr.	62	President and Chief Executive Officer of NACCO and President and Chief Executive Officer of NACoal (from prior to 2018)
Carroll L. Dewing	66	Vice President - Operations of NACoal (from prior to 2018)
John D. Neumann	47	Vice President, General Counsel and Secretary of NACCO, Vice President, General Counsel and Secretary of NACoal (from prior to 2018)
J. Patrick Sullivan, Jr.	64	Vice President and Chief Financial Officer of NACoal (from prior to 2018)

Item 1A. RISK FACTORS

The Company operates in a rapidly changing environment that involves a number of risks. The following discussion highlights some of these risks and others are discussed elsewhere in this report. These and other risks could materially and adversely affect the Company's business, financial condition, operating results or cash flows. The following risk factors are not an exhaustive list of the risks associated with the Company's business. New factors may emerge or changes to these risks could occur that could materially affect the Company's business.

Risks related to the Coal Mining segment

Termination of or default under long-term mining contracts could adversely affect the Company's business, financial condition, results of operation and cash flows.

Substantially all of the Coal Mining segment's profits are derived from long-term mining contracts. Although the Company has long-term contracts, numerous regulatory authorities, along with well-funded political and environmental activist groups, are devoting substantial resources to anti-coal activities to minimize or eliminate the use of coal as a source of electricity generation. Any customer's premature facility closure could have a material adverse effect on the Company's business, financial condition and results of operations.

See "Item 1. Business — Business Developments" on page 2 in this Form 10-K for discussion of Sabine's 2023 closure.

See "Item 1. Business — Government Regulation" on page 8 in this Form 10-K for discussion of regulations that could materially adversely affect the Coal Mining segment, particularly the discussion of the implementation of the EPA's Regional Haze Rule and its potential impact at Coyote Creek.

The loss of, or significant reduction in, purchases by NACCO's coal customers could adversely affect the Company's business, financial condition, results of operation and cash flows.

Earnings from the Coal Mining segment's customers may fluctuate from time to time based on numerous factors, including market conditions and the realignment of customers' power generation portfolios that reduce the electric power generated from coal, which may be outside of the Company's control. Future environmental regulation of GHG emissions, CCRs and/or new federal and state mandates for increased use of electricity derived from renewable energy sources could accelerate the use by utilities of fuels other than coal. Such mandates, combined with other incentives to use renewable energy sources, such as tax credits, could accelerate the realignment of customers' power generation portfolios to reduce the electric power generated from coal.

If any of the Coal Mining segment's customers experience declining demand due to market, economic, regulatory or competitive conditions, it could have an adverse effect on the Company's profitability, cash flows and financial position. In addition, if any customers were to significantly reduce or eliminate their purchases of coal from us or if the Company is unable to renew expiring long-term sales agreements with existing customers or enter into new supply agreements, the Company's business, financial condition, results of operations and cash flows could be adversely affected. See "Item 1. Business — Business Developments" on page 2 in this Form 10-K for further discussion.

MLMC is subject to risks associated with its capital investment, operating and equipment costs, growing use of alternative generation that competes with coal-fired generation, changes in customer demand and inflationary adjustments.

The profitability of MLMC is subject to the risk of loss of investment in this operation, increases in the cost of mining, changes in customer demand, growing competition from alternative power generation that competes with coal-fired generation and the emergence of adverse mining conditions. At MLMC, the costs of mining operations are not reimbursed by MLMC's customer. As such, increased costs at MLMC or decreased revenues could materially reduce the Company's profitability. Any reduction in customer demand at MLMC, including reductions related to reduced mechanical availability of the customer's power plant, would adversely affect the Company's operating results and could result in significant impairments.

Similar to the Company's unconsolidated mines, all production costs at MLMC are capitalized into inventory and recognized in cost of sales as tons are delivered. In periods of limited or no deliveries, MLMC may be required to reduce its inventory carrying value using the lower of cost and net realizable value approach, which could adversely affect MLMC's results of operations.

MLMC has approximately \$125 million of long-lived assets, including property, plant and equipment and a coal supply agreement intangible asset, which are subject to periodic impairment analysis and review. Identifying and assessing whether impairment indicators exist, or if events or changes in circumstances have occurred, including assumptions about future power plant dispatch levels, changes in operating costs and other factors that impact anticipated revenue and customer demand, requires significant judgment. Actual future operating results could differ significantly from these estimates, which may result in an impairment charge in a future period, which could have a substantial impact on the Company's results of operations.

Profitability at MLMC is affected by customer demand for coal and changes in the indices that determine sales price and actual costs incurred. MLMC sells lignite at contractually agreed upon prices which are subject to changes in the level of established indices over time. Diesel fuel is heavily weighted among the indices used to determine the coal sales price. The diesel fuel-related component of the coal sales price is based on average price changes over time whereas the impact on actual costs from changes in diesel fuel prices is more immediate; therefore, fluctuations in diesel fuel prices can result in significant fluctuations in earnings at MLMC.

Changes in customer demand for any reason, including, but not limited to, reduced mechanical availability of the customer's power plant, dispatch of power generated by other energy sources ahead of coal, fluctuations in demand due to unanticipated weather conditions, regulations or comparable policies which may promote planned and unplanned outages at the Red Hills Power Plant, economic conditions, including an economic slowdown and a corresponding decline in the use of electricity, governmental regulations and inflationary adjustments could have a material adverse effect on MLMC's financial condition, results of operations and cash flows.

The Coal Mining segment's Unconsolidated Subsidiaries are subject to risks created by changes in customer demand and inflationary adjustments.

The contracts with the Unconsolidated Subsidiaries' customers are primarily based on a "management fee" approach, whereby compensation includes reimbursement of all operating costs, plus a fee based on the amount of coal delivered. The fees earned adjust over time in line with various indices which reflect general U.S. inflation rates. During the production stage, the Unconsolidated Subsidiaries' customers pay the Company its agreed upon fee only for the coal delivered to them for consumption or use. As a result, reduced coal usage by customers for any reason, including, but not limited to, fluctuations in demand due to unanticipated weather conditions, scheduled and unscheduled outages at the Coal Mining segment's customers' facilities, unplanned equipment failures, economic conditions or governmental regulations or comparable policies which may promote dispatch of power generated by renewables, such as wind or solar, and the realignment of customers' power generation portfolios that reduce the electric power generated from coal could have a material adverse effect on the Company's results of operations. Because of the contractual price formulas for the management fees at these Unconsolidated Subsidiaries, the profitability of these operations is also subject to fluctuations in inflationary adjustments (or lack thereof) that can impact the agreed upon management fees. These factors could materially reduce the Company's profitability.

Changes in coal consumption patterns of U.S. electric power generators could adversely affect the Company's profitability.

The amount of coal consumed by the electric power generation industry is affected by general economic conditions; overall demand for electricity; availability of transmission; competition from alternative fuel sources for power generation, such as natural gas, nuclear, hydroelectric, wind and solar power, and the location, availability, quality and price of those alternative fuel sources; environmental and other governmental regulations, including those impacting coal-fired power plants; and energy conservation efforts and related governmental policies.

Changes in the utility industry that affect NACCO's customers could also adversely affect the Company. The increased availability of renewable energy sources has contributed to a reduction in demand for coal-fired electric power generation. Competition from natural gas-fired plants that are relatively more efficient, less expensive to construct and less difficult to permit than coal-fired plants has the most potential to continue to displace a significant amount of coal-fired electric power generation in the near term. Federal and state mandates for increased use of electricity derived from renewable energy sources have also adversely affected demand for coal-fired electric power generation. Such mandates make alternative fuel sources more competitive with coal-fired electric power generation.

Changes in federal and state mandates that would include an acceleration in the use of electricity derived from renewable energy sources could result in a decrease in coal consumption by the electric power generation industry and the Company's customers.

Certain of the Coal Mining segment's customers, including MLMC's customer, benefit or have benefited from a tax credit under Section 45 of the Internal Revenue Code. The benefit results in a reduction to the cost of coal-fired electric power generation. The elimination or expiration of the Section 45 tax credit would increase the cost of the coal-fired electric power generation from these facilities and could result in the power these facilities produce being less economical than other sources of power generation, which could reduce demand and result in a decrease in coal consumption.

Any of these risks could result in a decrease in coal consumption by the Company's customers and could have a material adverse effect on the Company's business, financial condition and results of operations.

Government regulations could impose costly requirements on the Company and its customers.

The coal mining industry and the electric generation industry are subject to extensive regulation by federal, state and local authorities on matters concerning the health and safety of employees, land use, stream and wetland protection, permit and licensing requirements, air and water quality standards, plant and wildlife protection, reclamation and restoration of mining properties after mining, the discharge of GHGs and other materials into the environment, surface subsidence from underground mining and the effects that mining has on groundwater quality and availability. Legislation mandating certain benefits for current and retired coal miners also affects the industry. Mining operations require numerous governmental and regulatory permits and approvals. The Company is required to prepare and present to federal, state or local authorities data pertaining to the impact the production and combustion of coal may have upon the environment. The public, including non-governmental organizations, opposition groups and individuals, have statutory rights to comment upon and submit objections to requested permits and approvals and to legally challenge certain permits subsequent to their issuance. Compliance with these requirements is costly and time-consuming and may delay commencement or continuation of development or production. New legislation and/or regulations and orders may materially adversely affect the Company's mining operations or its cost structure, or its customers. All of these factors could significantly reduce the Company's profitability. See "Item 1. Business — Government Regulation" on page 8 in this Form 10-K for further discussion.

The Company is subject to burdensome federal and state mining regulations and the assumptions underlying the Company's reclamation and mine closure obligations could be materially inaccurate.

Federal and state statutes require the Company to restore mine property in accordance with specified standards and an approved reclamation plan, and require that the Company obtain and periodically renew permits for mining operations. Regulations require the Company to incur the cost of reclaiming current mine disturbance at operations where the Company holds the mining permit. Estimates of the Company's total reclamation and mine closing liabilities are based upon permit requirements and the Company's engineering expertise related to these requirements. While management regularly reviews the estimated reclamation liabilities and believes that appropriate accruals have been recorded for all expected reclamation and other costs associated with closed mines, the estimate can change significantly if actual costs vary from assumptions or if governmental regulations change significantly. Such changes could have a material adverse effect on the Company's business and could significantly reduce its profitability.

The Clean Air Act could reduce the demand for coal.

The process of burning coal can cause many compounds and impurities in the coal to be released into the air, including carbon dioxide, sulfur dioxide, nitrogen oxides, mercury, particulates and other matter. The CAA and the corresponding state laws that extensively regulate the emissions of materials into the air affect coal mining operations both directly and indirectly. Direct impacts on coal mining operations occur through CAA permitting requirements and/or emission control requirements relating to air contaminants, especially particulate matter. Indirect impacts on coal mining operations occur through regulation of the air emissions of carbon dioxide, sulfur dioxide, nitrogen oxides, mercury, particulate matter and other compounds emitted by coal-fired power plants. The EPA has discussed issuing or issued regulations that impose tighter emission restrictions on a number of these compounds, some of which are currently subject to litigation. The general effect of tighter restrictions is to reduce demand for coal. A reduction in coal's share of the capacity for power generation could have a material adverse effect on the Company's business, financial condition and results of operations. See "Item 1. Business — Government Regulation" on page 8 in this Form 10-K for further discussion.

The Coal Mining segment's customers' operations require significant capital expenditures.

Maintaining and installing environmental controls on power plants requires significant capital expenditures. Any delay or reduction in making capital expenditures to maintain or upgrade coal-fired power plants by the Coal Segment's customers, principally electric utilities, could result in an increase in outage days and a corresponding decrease in coal consumption. A decrease in coal consumption could have a material adverse effect on the Coal Mining segment's financial condition, results of operations and cash flows.

Mining operations are vulnerable to weather and other conditions that are beyond the Company's control.

Many conditions beyond the Company's control can decrease the delivery, and therefore the use, of coal to the Company's customers. These conditions include weather, pandemics, adverse mining conditions, unexpected maintenance problems and shortages of replacement parts, any of which could significantly reduce the Company's profitability.

The Company faces numerous uncertainties in estimating economically recoverable reserves and resources, and inaccuracies in estimates could result in lower than expected revenues, higher than expected costs and decreased profitability.

Information concerning the Company's mining operations in "Item 2 - Properties" on page 28 has been prepared in accordance with the requirements of subpart 1300 of Regulation S-K. A mineral is economically recoverable when the price at which it can be sold exceeds the costs and expenses of mining, processing and selling the mineral. Forecasts of NACCO's future performance are based on, among other things, estimates of mineral reserves and resources. Mineral reserve and resource estimates of the remaining tons of coal at MLMC are based on many factors, including engineering, economic and geological data assembled and analyzed by internal staff, which includes various engineers and geologists, the area and volume covered by mining rights, assumptions regarding extraction rates and duration of mining operations, and the quality of in-place reserves and resources. The reserve and resource estimates as to both quantity and quality are updated from time to time to reflect, among other matters, production of minerals, new mining or other data received.

There are numerous uncertainties inherent in estimating quantities and qualities of minerals and costs to mine recoverable reserves and resources, including many factors beyond the Company's control. While the Company believes that its mineral reserve and resource estimates are developed using well-established practices and with appropriate controls, mineral reserve and mineral resource estimation is an imprecise and subjective process. Estimates of mineral reserves and resources depend upon a number of variable factors and assumptions, any one of which may, if incorrect, result in an estimate that varies considerably from actual results. These factors and assumptions include:

- Geologic and mining conditions, including the Company's ability to access certain mineral deposits as a result of the nature of the geologic formations of coal deposits or other factors, which may not be fully identified by available exploration data and may differ from past experience;
- Demand for the Company's minerals;
- Contractual arrangements, operating costs and capital expenditures;
- Development and reclamation costs;
- Mining technology and processing improvements;
- The effects of regulation by governmental agencies;
- The ability to obtain, maintain and renew all required permits;
- Employee health and safety; and
- NACCO's ability to convert all or any part of mineral resources to economically extractable mineral reserves.

As a result, actual tonnage recovered, estimated revenues, expenditures and cash flows with respect to reserves and resources may vary materially from estimates. Thus, these estimates may not accurately reflect the Company's actual reserves and resources. Any material inaccuracy in estimates related to the Company's reserves or resources could result in lower than expected revenues, higher than expected costs or decreased profitability and changes in future cash flow, which could materially and adversely affect the Company business, results of operations, financial position and cash flows. Additionally, reserve and resource estimates may be adversely affected in the future by interpretations of, or changes to, the SEC's property disclosure requirements for mining companies.

A defect in title or the loss of a leasehold interest in certain property could limit the Company's ability to mine coal reserves or result in significant unanticipated costs.

The Company conducts a significant part of its coal mining operations on leased properties. A title defect or the loss of a lease could adversely affect the ability to mine the associated coal reserves. The Company may not verify title to leased properties or associated coal reserves until the Company has committed to developing those properties or coal reserves. The Company may not commit to develop property or coal reserves until the Company has obtained necessary permits and completed exploration. As such, the title to property that the Company intends to lease or mine may contain defects prohibiting the ability to conduct mining operations. Similarly, leasehold interests may be subject to superior property rights of third parties. In order to conduct mining operations on properties where these defects exist, the Company may incur unanticipated costs. In addition, some leases require the Company to produce a minimum quantity of coal and/or pay minimum production royalties. The Company's inability to satisfy those requirements may cause the leasehold interest to terminate.

Risks related to the NAMining segment

The Company has experienced growth in its NAMining business in recent periods and it may not be able to sustain growth or manage future growth effectively.

The Company has expanded its overall NAMining business, operations and headcount in recent periods. NAMining's operating expenses may continue to increase as the Company scales the NAMining business, including growth outside of Florida. As NACCO continues to grow the NAMining business, the Company must effectively integrate, develop and motivate new employees, as well as existing employees who are promoted or moved into new roles, while maintaining the effectiveness of its business execution. In part, NAMining's success depends on its ability to integrate new customers in an efficient and effective manner. The Company anticipates that it will continue to incur costs and capital expenditures associated with future growth prior to realizing the full measure of anticipated long-term benefits, and the return on these investments may be lower, may develop more slowly than expected or may never be realized. If the Company is unable to manage this growth and the associated expenses effectively, the Company may not be able to take advantage of market opportunities or remain competitive. The Company may also fail to execute on its business plan or respond to competitive pressures, any of which could adversely affect the NAMining business, operating results and financial condition.

NAMining faces competition from aggregates producers that choose to self-perform mining operations and from other mining companies.

NAMining faces competition from existing and prospective customers that are capable of performing, or engaging other companies to perform the services NAMining provides. NAMining cannot be certain that its existing customers will continue to outsource these services to NAMining in the future, which could adversely affect the NAMining business, operating results and financial condition.

The Company is subject to risks involved in the development of new mining projects.

From time to time, the Company seeks to develop new mining projects, including the Thacker Pass project. The risks associated with such projects can be substantial. New mining projects can take up to several years to complete, are complex and require significant capital expenditures. These projects are subject to significant risks, including delays, extreme weather events, unexpected increases in the cost of required materials, and disputes with third party providers of materials, equipment or services, and a completed project may not yield the anticipated operational or financial benefit, any of which could have a material adverse effect on the Company's business, financial condition and results of operations.

NAMining operations are currently geographically concentrated and therefore subject to regional economic risk, regulatory conditions, natural disasters, severe weather events or other circumstances affecting Florida.

As of December 31, 2022, over 75% of the quarries NAMining operates are located in Florida. A prolonged economic downturn or adverse change in regulatory conditions in the Florida mining or construction industry could result in a significant reduction in demand for NAMining's services. The occurrence of one or more natural disasters, severe weather events, terrorist attacks, or disruptive political events in Florida could adversely affect the NAMining business.

Risks related to the Minerals Management segment

The Company has no control over the timing of the development and operation of its natural gas, oil and coal reserves extracted by third parties.

The Company owns mineral and royalty interests in the continental United States. The Company does not develop oil and gas reserves and is not a natural gas and oil producer. The Company derives income from royalty-based leases under which lessees make payments to the Company based on their sale of natural gas, oil and coal. Future royalty-based income is dependent on the number of oil and gas wells being developed and operated on the Company's mineral acreage. The decision to pursue development and operation of oil and gas wells is made by third-party operators, not by the Company, and depends on a number of factors outside of the Company's control, including fluctuations in commodity prices (primarily natural gas), regulatory risk, the Company's lessees' willingness and ability to incur well-development and other operating costs, the rate of production of the reserves and changes in the availability and continuing development of infrastructure. Lower commodity prices may reduce the amount of oil and natural gas that third-party operators can produce economically. In the event that new federal or state restrictions related to the hydraulic fracturing process are adopted in areas where the Company owns mineral and royalty interests, the Company's lessees may incur additional costs or permitting requirements to comply with such requirements that may be significant and could result in added restrictions, delays or curtailments in the pursuit of exploration, development, or production activities. In addition, if a lessee were to experience financial difficulty, the lessee might not be able to pay its royalty payments or continue operations. A failure on the part of the lessee to make royalty payments gives the Company the right to terminate the lease, repossess the property and enforce payment obligations under the lease. If the Company repossessed any of its properties, it would seek a replacement lessee. However, the Company may not be able to find a replacement lessee and, if it did, the Company might not be able to enter into a new lease on favorable terms within a reasonable period of time. In addition, if the Company is able to enter into a new lease with a new lessee, the replacement lessee may not achieve the same levels of production or sales prices as the lessee it replaced. Any of these risks could materially reduce the Company's expected royalty income and the Company's profitability.

Minerals are a depleting asset. Unless the Company replaces existing mineral and royalty interests with new mineral and royalty interests and third-party lessees develop those mineral and royalty interests, the Company's reserves and royalty income will decline.

Producing oil and natural gas reservoirs are generally characterized by declining production rates that vary depending upon reservoir characteristics and other factors. Unless the Company's third-party lessees conduct successful ongoing well development activities or the Company continually acquires mineral and royalty interests, production and income related to the Company's mineral and royalty interests will decline as those reserves are depleted. The future cash flow and results of operations of the Minerals Management segment are highly dependent on third-party operators' success in developing the Company's current and future mineral and royalty interests. These operators may not have access to the capital needed to develop the Company's mineral interests. The Company may not be able to acquire or find sufficient additional mineral and royalty interests to replace third-party operators' current and future production. Further, the decline curve the Company uses to project future royalty income is subject to numerous assumptions and limitations. Natural gas wells have high initial production rates and follow a natural decline before settling into relatively stable, long-term production. Decline rates can vary due to factors like well depth, well length, formation pressure, and facility design. Any of these risks could materially reduce the Company's expected royalty income and the Company's profitability.

Substantially all of the Minerals Management segment's revenues are derived from royalty payments that are based on the price at which oil and natural gas produced from the acreage underlying the Company's interests are sold. Prices of oil and natural gas are volatile due to factors beyond the Company's control. A substantial or extended decline in commodity prices may adversely affect the Minerals Management segment's financial condition or results of operations.

The Minerals Management segment's revenues and operating results depend significantly upon the prevailing prices for oil and natural gas. Historically, oil and natural gas prices have been volatile and are subject to fluctuations in response to changes in supply and demand, market uncertainty and a variety of additional factors that are beyond the Company's control; market expectations about future prices of oil and natural gas; the level of global oil and natural gas exploration and production; the cost of exploring for, developing, producing and delivering oil and natural gas; the price and quantity of foreign imports and U.S. exports of oil and natural gas; the level of U.S. domestic production; political and economic conditions in oil producing regions; the ability of members of the Organization of Petroleum Exporting Countries to agree to and maintain oil price and production controls; trading in oil and natural gas derivative contracts; the level of consumer product demand; weather conditions and natural disasters; technological advances affecting energy consumption, energy storage and energy supply; domestic and foreign governmental regulations and taxes; the continued threat of terrorism and the impact of military and other action, including the ongoing conflict between Russia and Ukraine and associated oil and natural gas import bans as well as

U.S. military operations in the Middle East and economic sanctions such as those imposed by the U.S. on oil and gas exports from Iran; the proximity, cost, availability and capacity of oil and natural gas pipelines and other transportation facilities; the price and availability of alternative fuels; and overall domestic and global economic conditions. A substantial or extended decline in commodity prices may adversely affect the Minerals Management segment's financial condition or results of operations.

Risks related to corporate structure

The amount and frequency of dividend payments made on NACCO's common stock could change.

The Board of Directors has the power to determine the amount and frequency of the payment of dividends. Decisions regarding whether or not to pay dividends and the amount of any dividends are based on earnings, capital and future expense requirements, financial conditions and other factors the Board of Directors may consider. Accordingly, holders of NACCO's common stock should not rely on past payments of dividends in a particular amount as an indication of the amount of dividends that will be paid in the future.

The price of NACCO's securities may be volatile.

The price of the Company's common stock may fluctuate due to a variety of market and industry factors that may materially reduce the market price of NACCO's common stock regardless of operating performance, including, among others: (i) actual or anticipated fluctuations in the Company's quarterly and annual results and those of other public companies in the industry; (ii) industry cycles and trends; (iii) changes in government regulation; (iv) potential or actual military conflicts or acts of terrorism; (v) announcements concerning NACCO, its customers or its competitors; (vi) lack of trading liquidity as a result of low trading volumes could make it difficult for investors to sell shares; and (vii) the general state of the securities market. In addition, the stock market in general has experienced significant volatility that often has been unrelated to the operating performance of companies whose shares are traded. These market fluctuations could adversely affect the trading price of the Company's common stock, regardless of NACCO's actual operating performance. As a result of all of these factors, investors in the Company's common stock may not be able to resell their stock at or above the price they paid or at all. Further, NACCO could be the subject of securities class action litigation due to any such stock price volatility, which could divert management's attention and have a material adverse effect on the Company's operating results.

NACCO's certificate of incorporation and by-laws include provisions that may discourage a takeover attempt.

Provisions contained in the Company's certificate of incorporation and by-laws and Delaware law could make it more difficult for a third-party to acquire the Company, even if doing so might be beneficial to NACCO's stockholders. Provisions of the Company's by-laws and certificate of incorporation impose various procedural and other requirements that could make it more difficult for stockholders to affect certain corporate actions. These provisions could limit the price that certain investors might be willing to pay in the future for shares of NACCO's common stock and may have the effect of delaying or preventing a change in control.

The Company's stock repurchase program could affect the price of NACCO's common stock and increase volatility and may not enhance long-term shareholder value.

The Company's Board of Directors has authorized a stock repurchase program. The timing and amount of any repurchases under the stock repurchase program are determined at the discretion of the Company's management based on a number of factors, including the availability of capital, other capital allocation alternatives, market conditions for the Company's Class A common stock and other legal and contractual restrictions. The stock repurchase program does not require the Company to acquire any specific number of shares and may be modified, suspended, extended or terminated without prior notice and may be executed through open market purchases, privately negotiated transactions or otherwise.

Repurchases under the stock repurchase program could affect the price of the Company's Class A common stock. The existence of a stock repurchase program could cause the price of the Company's Class A common stock to be higher than it would be in the absence of such a program and could potentially reduce the market liquidity for the Company's Class A common stock. There can be no assurance that any stock repurchases will enhance shareholder value because the market price of the Company's Class A common stock may decline below the levels at which the Company repurchased the shares. Although the stock repurchase program is intended to enhance long-term shareholder value, there is no assurance that it will do so and short-term price fluctuations in the Class A common stock could reduce the program's effectiveness. Furthermore, the stock repurchase program does not obligate the Company to repurchase any dollar amount or number of shares of the Company's

Class A common stock, and it may be suspended or discontinued at any time and any suspension or discontinuation could cause the market price of the Company's Class A common stock to decline.

NACCO is a smaller reporting company and cannot be certain if the reduced disclosure requirements applicable to smaller reporting companies will make the Company's common stock less attractive to investors.

The Company is currently a “smaller reporting company” as defined in the Securities Exchange Act of 1934, and thus allowed to provide simplified executive compensation disclosures and other decreased disclosure in SEC filings. The reduced disclosures may make it more difficult to compare the Company's performance with other public companies.

NACCO cannot predict whether investors will find the Company's common stock less attractive because of these exemptions. If some investors find NACCO's common stock less attractive as a result, there may be a less active trading market for the Company's common stock and the stock price may be more volatile.

Certain members of the Company's extended founding family own a substantial amount of its Class A and Class B common stock and, if they were to act in concert, could control the outcome of director elections and other stockholder votes on significant corporate actions.

The Company has two classes of common stock: Class A common stock and Class B common stock. Holders of Class A common stock are entitled to cast one vote per share and, as of December 31, 2022, accounted for approximately 27 percent of the voting power of the Company. Holders of Class B common stock are entitled to cast ten votes per share and, as of December 31, 2022, accounted for the remaining voting power of the Company. As of December 31, 2022, certain members of the Company's extended founding family held approximately 34 percent of the Company's outstanding Class A common stock and approximately 99 percent of the Company's outstanding Class B common stock. On the basis of this common stock ownership, certain members of the Company's extended founding family could have exercised approximately 81 percent of the Company's total voting power. Although there is no voting agreement among such extended family members, in writing or otherwise, if they were to act in concert, they could control the outcome of director elections and other stockholder votes on significant corporate actions, such as certain amendments to the Company's certificate of incorporation and sales of the Company or substantially all of its assets. Because certain members of the Company's extended founding family could prevent other stockholders from exercising significant influence over significant corporate actions, the Company may be a less attractive takeover target, which could adversely affect the market price of its common stock.

General Risk Factors

The Company's effective income tax rate could be volatile and materially change as a result of changes in tax laws, mix of earnings and other factors.

The Company is subject to income taxes in the United States and the effective income tax rate is impacted by certain U.S. federal income tax benefits currently available to coal mining and oil and gas exploration and development companies. Future results of operations could be affected by changes in the Company's effective income tax rate as a result of an increase in the statutory tax rate or the reduction or elimination of percentage depletion as well as changes in the mix of earnings between entities that benefit from percentage depletion and those that do not.

Current and future capital and credit market conditions could adversely affect the Company's ability to obtain bank financing on reasonable terms. Certain financial institutions have acted to limit available financing for companies in the fossil fuel industry, including coal mining, which could result in increases in costs of borrowing or in the Company's ability to maintain financing at current levels.

The Company may be unable to obtain financing on reasonable terms. Historically, the Company has addressed its liquidity needs (including funds required to pay dividends and fund working capital and planned capital expenditures) with operating cash flow and borrowings under credit facilities. The Company's wholly-owned subsidiary, NACoal, has a revolving line of credit of up to \$150.0 million that expires in November 2025. The Company's ability to access the capital markets and the costs and terms of available financing depends on many factors, including perceived credit risks of companies with coal and/or oil and gas exposure as a result of current market sentiment for fossil fuels. Certain financial institutions have taken actions to limit available financing to entities that produce or use fossil fuels. The volatility in the energy industry combined with recent bankruptcies and additional perceived credit risks of companies with coal and/or oil and gas exposure has resulted in traditional bank lenders seeking to reduce or eliminate their lending exposure to these companies. An inability to obtain bank financing, or

refinance with terms that are as favorable as the existing terms of such indebtedness, could have a material adverse effect on the Company's operating results and financial condition.

Failure to obtain financial assurance to secure reclamation and other long-term obligations, including surety bonds and letters of credit on acceptable terms, could affect NACCO's ability to mine.

Federal and state laws require the Company to provide financial assurance or financial security to secure performance or payment of certain long-term obligations, such as mine closure or reclamation costs, federal and state workers' compensation and black lung benefit costs, leases and other obligations. Future federal and state laws and regulations may require higher amounts of financial security, including as a result of changes to certain factors used to calculate the bonding or security amounts. Bond issuers may demand higher fees or additional collateral, including cash or letters of credit or other terms less favorable upon renewals. As the Company is required by state and federal law to have bonds or other acceptable security in place before mining can commence or continue, the failure to maintain surety bonds, letters of credit or other guarantees or security arrangements would materially and adversely affect NACCO's ability to mine. That failure could result from a variety of factors, including lack of availability, higher expense or unfavorable market terms, the exercise by third-party surety bond issuers of their right to refuse to renew the surety and restrictions on availability of collateral for current and future third-party surety bond issuers under the terms of the Company's financing arrangements. In addition, as a result of increasing credit pressures on the coal industry, it is possible that surety bond providers could demand cash collateral as a condition to providing or maintaining surety bonds. Any such demands, could have a material adverse impact on the Company's liquidity and financial position. If the Company is unable to meet collateral requirements and cannot otherwise obtain or retain required surety bonds, it may be unable to satisfy legal requirements necessary to conduct mining operations. Difficulty in acquiring surety bonds, or additional collateral requirements, would increase the Company's costs and likely require greater use of alternative sources of funding for this purpose, which would reduce the Company's liquidity.

Insurance coverage is increasingly expensive, contains more stringent terms and may be difficult to obtain in the future. A number of global insurance companies have taken steps to limit coverage for companies in the fossil fuel industry, including coal mining, which could result in significant increases in costs of insurance or in the Company's ability to maintain insurance coverage at current levels.

The Company holds a number of insurance policies, including director and officers' liability and property and casualty insurance coverages. Because the Company is involved in coal mining, costs of insurance may increase substantially or insurance carriers may limit or decide not to insure the Company in the future. In addition, if the Company makes significant insurance claims under the Company's insurance policies, such claims may have a material adverse effect on its ability to obtain future insurance coverage at commercially reasonable rates. Limited, or an inability to obtain, insurance coverage, significant increases in the premiums or deductibles of insurance, or losses in excess of its liability insurance coverage limits, could have a material adverse effect on the Company's operating results and financial condition.

Increasing emphasis and changing expectations with respect to environmental, social and governance matters may impose additional costs on the Company or expose the Company to new or additional risks.

Expectations relating to environmental, social and governance ("ESG") matters have been rapidly evolving and increasing. Government organizations, including the SEC, are enhancing or advancing legal, regulatory and disclosure requirements specific to ESG matters. The heightened focus on ESG issues requires the continuous monitoring of various and evolving laws, regulations, standards and expectations and the associated reporting requirements. Investor advocacy groups, certain institutional investors, investment funds and other influential investors are also increasingly focused on ESG practices. The Company could face pressures from investors, who are increasingly focused on climate change, to prioritize sustainable energy practices, reduce the Company's carbon footprint and promote sustainability. Investors may request the Company implement ESG procedures or standards as a condition to maintain their investment or to make further investments. Lenders and insurers may also limit lending to and insuring of companies that do not meet certain ESG measures endorsed by them. Additionally, the Company may face reputational challenges in the event its ESG practices are inconsistent with the third-party views of acceptable ESG practices. Companies which do not adapt to or comply with regulatory, investor or stakeholder expectations and standards, which are evolving, or which are perceived to have not responded appropriately, may suffer from reputational damage and the business, financial condition, and/or stock price of such a company could be materially and adversely affected.

The Company may be subject to litigation seeking to hold energy companies accountable for the effects of climate change.

Increasing attention to climate change risk has also resulted in a recent trend of governmental investigations and private litigation by local and state governmental agencies as well as private plaintiffs in an effort to hold energy companies

accountable for the effects of climate change. Other public nuisance lawsuits have been brought in the past against power, coal, oil and gas companies alleging that their operations are contributing to climate change. The plaintiffs in these suits sought various remedies, including punitive and compensatory damages and injunctive relief. While the U.S. Supreme Court held that any federal common law had been displaced by the CAA and thus dismissed the public nuisance claims against the defendants in those cases, tort-type liabilities remain a possibility and a source of concern. We could incur substantial legal costs associated with defending such lawsuits in the future. Government entities in certain states have brought similar claims seeking to hold a wide variety of companies that produce fossil fuels liable for the alleged impacts of the GHG emissions attributable to those fuels or for other grounds related to climate change, such as improper disclosure of climate change risks. Those lawsuits allege damages as a result of climate change and the plaintiffs are seeking unspecified damages and abatement under various tort theories. We have not been made a party to these suits, but it is possible that we could be included in similar future lawsuits initiated by state and local governments as well as private claimants.

The Company's business could suffer if NACCO's information technology systems are disrupted, cease to operate effectively or if the Company experiences a security breach, a cyber incident or cyber attack.

Like many other companies, the Company is the target of malicious cyber attack attempts in the normal course of business. Cybersecurity incidents involving businesses and other institutions are on the rise. Cyber threats are rapidly evolving and those threats and the means for obtaining access to information in digital and other storage media are becoming increasingly sophisticated. Cyber threats and cyber attackers can be sponsored by nation states or sophisticated criminal organizations or be the work of independent hackers.

As cyber threats evolve and become more difficult to detect and successfully defend against, one or more cyber attacks might defeat the Company's or a third-party service provider's security measures in the future. Employee error or other irregularities may also result in a failure of security measures and a breach of information systems. Moreover, hardware, software or applications the Company may use have inherent defects of design, manufacture or operations or could be inadvertently or intentionally implemented or used in a manner that could compromise information security.

A security breach and loss of information may not be discovered for a significant period of time after it occurs. Any compromise of data security could result in a violation of applicable privacy and other laws or standards, the loss of valuable business data, or a disruption of the Company's business. A security breach involving the misappropriation, loss or other unauthorized disclosure of sensitive or confidential information could give rise to unwanted media attention, materially damage customer relationships and the Company's reputation, and result in fines, fees, or liabilities, which may not be covered by insurance policies.

The Company relies on information technology systems to operate its business and to record and process transactions; respond to customer inquiries; purchase supplies; provide services; deliver inventory on a timely basis; and maintain cost-efficient operations. Despite the Company's efforts, the Company's information technology systems may be vulnerable, from time to time, to damage or interruption from user error, computer viruses, power outages, third-party intrusions and other technical malfunctions.

Through the Company's business operations, the Company collects and stores confidential information from its customers and vendors and personal information and other confidential information from its employees. Although the Company has taken steps designed to safeguard such information, there can be no assurance that such information will be protected against unauthorized access, use or disclosure. Unauthorized parties may penetrate the Company's or its vendors' network security and, if successful, misappropriate such information. Additionally, methods to obtain unauthorized access to confidential information change frequently and may be difficult to detect, which can impact the Company's ability to respond appropriately.

The Company could be subject to liability for failure to comply with privacy and information security laws, for failing to protect personal information or for failing to respond appropriately. Loss, unauthorized access to, or misuse of confidential or personal information could disrupt the Company's operations, damage the Company's reputation, and expose the Company to claims from customers, financial institutions, regulators, employees and other persons, any of which could have an adverse effect on the Company's business, financial condition and results of operations.

Security breaches, cyber incidents or cyber attacks could include, among other things, computer viruses, malicious or destructive code, ransomware, social engineering attacks (including phishing and impersonation), hacking, denial of service attacks and other attacks. Cybersecurity threats to, and incidents involving, vendors and other third-parties who support the Company's activities could impact the business. For example, although the Company has not experienced any material impacts from the SolarWinds Orion cybersecurity breach that was widely publicized in December 2020, similar future events could have a material impact on the Company. The Company is continuously installing new and upgrading existing information

technology systems. The Company uses employee awareness training around phishing, malware, and other cyber risks. The Company believes these incidents are likely to continue and is unable to predict the direct or indirect impact of future attacks or breaches to business operations.

The Company's results of operations, financial condition, cash flows and stock price could be adversely affected by pandemics, epidemics or other public health emergencies.

The Company's results of operations, financial condition, cash flows and stock price could be adversely affected by pandemics, epidemics or other public health emergencies. Although the Company operates facilities consistent with federal guidelines and state and local orders, any pandemic and the preventive or protective actions taken by governmental authorities may have a material adverse effect on the Company's operations, work force, supply chain or customers, including business shutdowns or disruptions. The extent to which pandemics may adversely impact the Company's businesses depends on future developments, which are highly uncertain and unpredictable, including the extent of new outbreaks, the nature of government public health guidelines and the public's adherence to those guidelines. Any resulting financial impact cannot reasonably be estimated at this time, but could have a material adverse effect on the Company's financial condition, cash flows and results of operations.

Even after any pandemic has subsided, the Company may experience material adverse effects due to a decline in economic activity.

The Company's operations could be disrupted by natural or human causes beyond its control.

The Company's operations are subject to disruption from natural or human causes beyond its control, including physical risks from hurricanes, severe storms, floods and other forms of severe weather, accidents, fires, earthquakes, terrorist acts and epidemic or pandemic diseases such as the coronavirus, any of which could result in suspension of operations or harm to people or the environment. While all of the Company's operations are located in the United States, the Company participates in a global supply chain, and if governments regulate or restrict the flow of labor or products or impede the travel of Company personnel, the Company's ability to conduct normal business operations could be impacted which could adversely affect the Company's results of operations and liquidity.

Item 1B. UNRESOLVED STAFF COMMENTS

None.

Item 2. PROPERTIES

Coal Mining Segment - Operations

NACCO-owned Properties

1.0 INTRODUCTION

Information concerning the Company's mining properties in this Form 10-K have been prepared in accordance with the requirements of subpart 1300 of Regulation S-K. As used in this Report on Form 10-K, the terms "mineral resource," "measured mineral resource," "indicated mineral resource," "inferred mineral resource," "mineral reserve," "proven mineral reserve" and "probable mineral reserve" are defined and used in accordance with subpart 1300 of Regulation S-K. Under subpart 1300 of Regulation S-K, mineral resources may not be classified as "mineral reserves" unless the determination has been made by a qualified person that the mineral resources can be the basis of an economically viable project. Readers are specifically cautioned not to assume that any part or all of the mineral deposits (including any mineral resources) in these categories will ever be converted into mineral reserves, as defined by the subpart 1300 of Regulation S-K.

Readers are cautioned that, except for that portion of mineral resources classified as mineral reserves, mineral resources do not have demonstrated economic value. Inferred mineral resources are estimates based on limited geological evidence and sampling and have too high of a degree of uncertainty as to their existence to apply relevant technical and economic factors likely to influence the prospects of economic extraction in a manner useful for evaluation of economic viability. Estimates of inferred mineral resources may not be converted to a mineral reserve. It cannot be assumed that all or any part of an inferred mineral resource will ever be upgraded to a higher category. A significant amount of exploration must be completed in order to determine whether an inferred mineral resource may be upgraded to a higher category. Therefore, readers are cautioned not to assume that all or any part of an inferred mineral resource exists, that it can be the basis of an economically viable project, or

that it will ever be upgraded to a higher category. Likewise, readers are cautioned not to assume that all or any part of measured or indicated mineral resources will ever be converted to mineral reserves. See "Item 1A - "Risk Factors" on page 19.

The information that follows is derived, for the most part, from, and in some instances is an extract from, the technical report summary ("TRS") prepared in compliance with the Item 601(b)(96) and subpart 1300 of Regulation S-K. The TRS was prepared by employees of the Company. Portions of the following information are based on assumptions, qualifications and procedures that are not fully described herein. Reference should be made to the full text of the TRS, incorporated herein by reference and made a part of this Report on Form 10-K. The information regarding MLMC was reviewed by employees of the Company that are qualified persons as defined by subpart 1300 of Regulation S-K.

Coteau, Falkirk, Coyote Creek and MLMC, each wholly-owned subsidiaries of NACCO, operate surface coal mines under long-term contracts with power generation companies pursuant to a service-based business model.

The Company operates additional surface coal mines where the customer owns or controls the coal tonnages. The Company conducts activities to extract these customer-owned coal tonnages pursuant to long-term contracts. The Company has determined these properties are not subject to subpart 1300 of Regulation S-K reporting and has not estimated mineral resources or reserves for these properties in accordance with subpart 1300 of Regulation S-K.

Locations of the properties subject to SEC Section 1300 reporting are shown in Figure 1.1 Surface Coal Mines Operational During 2022 Subject to SEC Section 1300 Reporting.

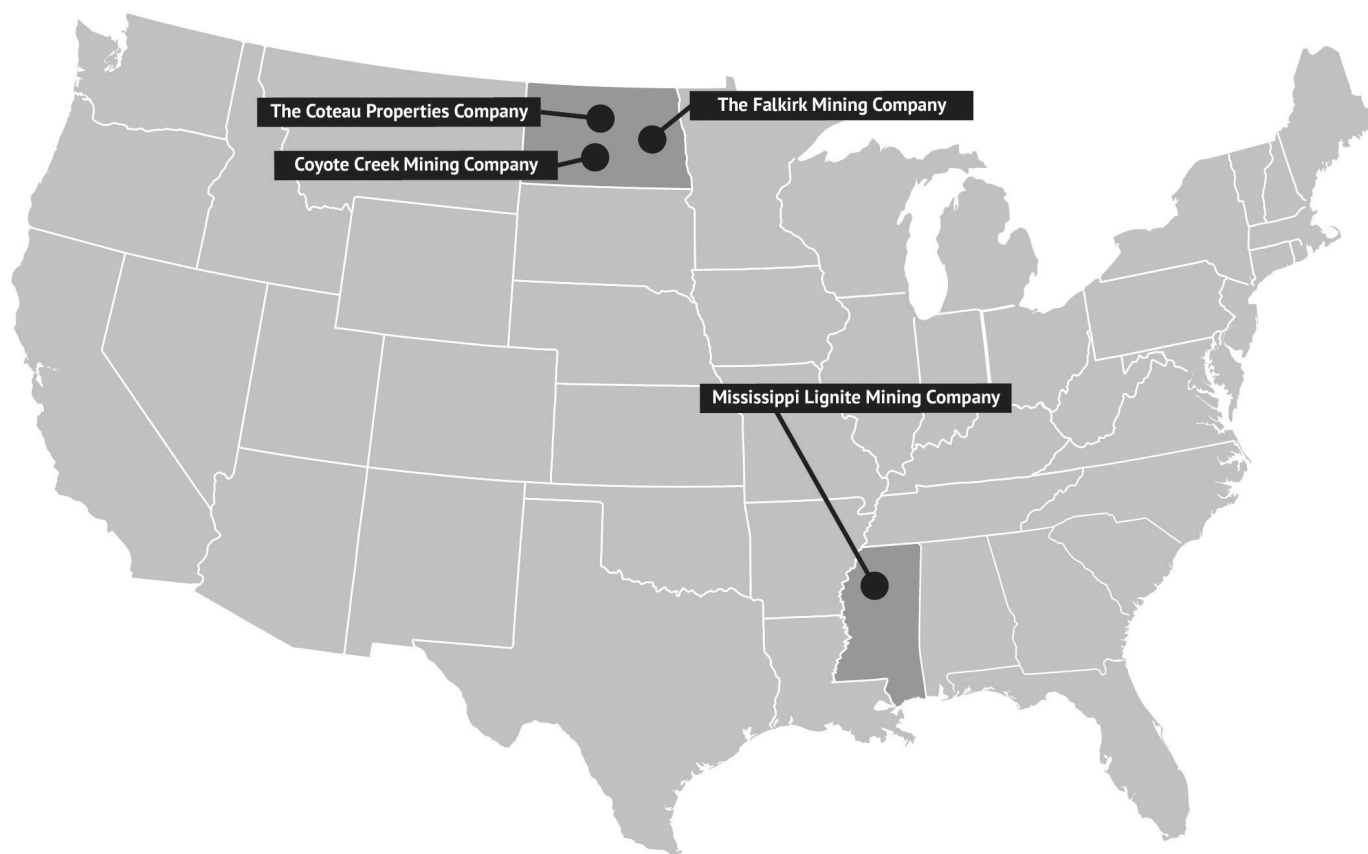


Figure 1.1 Surface Coal Mines Operational During 2022 Subject to SEC Section 1300 Reporting

A summary of coal production at the Mines subject to SEC Section 1300 Reporting for the past three years has been tabulated and is presented on Table 1.1 Production Summary.

	Tons (in millions)		
	2020	2021	2022
The Coteau Properties Company	12.6	12.5	13.4
The Falkirk Mining Company	7.2	7.9	7.6
Coyote Creek Mining Company	2.0	2.0	1.8
Mississippi Lignite Mining Company	2.5	3.0	3.2
Totals	24.3	25.4	26.0

Table 1.1 Production Summary

2.0 MINING PROPERTIES SUBJECT TO SUBPART 1300 OF REGULATION S-K REPORTING

2.1 Red Hills Mine — Mississippi Lignite Mining Company

MLMC is the owner and operator of the Red Hills Mine. The Red Hills Mine is a lignite surface mine in production. Prior to MLMC, there were no previous mining operations on the Red Hills Mine property.

The MLMC contract is the only operating coal contract in which the Company is responsible for all operating costs, capital requirements and final mine reclamation; therefore, MLMC is consolidated within NACCO's financial statements. MLMC sells coal to its customer at a contractually agreed-upon price which adjusts monthly, primarily based on changes in the level of established indices which reflect general U.S. inflation rates. Profitability at MLMC is affected by customer demand for coal and changes in the indices that determine sales price and actual costs incurred.

A summary of coal production at MLMC for the past three years has been tabulated and is presented on Table 2.1 Production Summary.

	Tons (in millions)		
	2020	2021	2022
Mississippi Lignite Mining Company	2.5	3.0	3.2

Table 2.1 Production Summary

The Red Hills Mine generally produces between 2 million and 3 million tons of lignite coal annually. The Red Hills Mine started delivering coal in 2000. All production from the mine is delivered to its customer's Red Hills Power Plant.

The Red Hills Mine, operated by MLMC, is located approximately 120 miles northeast of Jackson, Mississippi (Figure 2.1). The entrance to the mine is by means of a paved road located approximately one mile west of Highway 9. MLMC owns in fee approximately 7,773 acres of surface interest and 4,761 acres of coal interests. MLMC holds leases granting the right to mine approximately 5,538 acres of coal interests and the right to utilize approximately 5,065 acres of surface interests. MLMC holds subleases under which it has the right to mine approximately 1,623 acres of coal interest. The majority of the leases held by MLMC were originally acquired during the mid-1970s to the early 1980s with terms extending 50 years, many of which can be further extended by the continuation of mining operations. The lignite deposits of the Gulf Coast are found primarily in a narrow band of strata that outcrops/subcrops along the margin of the Mississippi Embayment. The potentially exploitable tertiary lignites in Mississippi are found in the Wilcox Group. The outcropping Wilcox is composed predominately of non-marine sediments deposited on a broad flat plain.

The towns of Ackerman, Eupora, Starkville, Louisville, Kosciusko, and numerous smaller communities are within a 40-mile radius of the Red Hills Mine and provide a vast employment base. Furthermore, Mississippi State University (MSU) is located approximately 30 miles east of the mine in Starkville. MLMC has a history of partnership with MSU as well as the local community colleges for science, technology, engineering, and mathematics (STEM) research and skilled trades training.

The Red Hills Mine sources power for mine office facilities and operations from 4-County Electric Power Association, and water for the mine office facilities from the Choctaw Water Association. Fuel for equipment is supplied by Dickerson

Petroleum located in Kosciusko. The Red Hills Mine has, or is currently constructing, all supporting infrastructure for mining operations.

Local access to the Red Hills Mine is by way of Highway 9 between Ackerman, Mississippi and Eupora, Mississippi which connects to Pensacola Road that leads to the Red Hills Mine paved access road. Pensacola Road connects with Highway 9 approximately 5 miles north of Ackerman, MS. The mine road is approximately 1 mile west from Highway 9 along Pensacola Road.

Travel to the Red Hills Mine by air is possible using the Jackson-Medgar Wiley Evers International Airport in Jackson, Mississippi, approximately 104 miles south of the mine, and then using ground transportation, traveling via Highway 25, Highway 15, and Highway 9. Alternatively, the Golden Triangle Regional Airport is a smaller airport approximately 50 miles from the Red Hills Mine by means of Highway 82 west, Highway 15 south, and Highway 9 north.

The Red Hills Mine is in close proximity to river ports of the Tennessee-Tombigbee Waterway and the Mississippi River. The Lowndes County Port is approximately 60 miles east of the mine. The Port of Greenville is approximately 135 miles west of the mine, and the Port of Vicksburg, approximately 150 miles southwest of the mine. All ports are connected by major state and federal highways.

In addition to transportation via roadways, air and waterways, the Kansas City Southern (KCS) railroad has a depot located approximately 5 miles south of the mine in Ackerman, and is accessible by Highway 9 and Highway 15. MLMC currently has all permits in place for the Red Hills Mine to operate and adhere to a mine plan projected through April 2032. No mineral processing occurs at the Red Hills Mine.

The geology encountered at the Red Hills Mine is stratigraphic in nature with depositional sequences of sands, silts, clays, and lignite. The vertical repetition of geologic strata facilitated a straightforward setting to establish and study the baseline geological, geochemical, geotechnical, and geohydrological conditions at the Red Hills Mine.

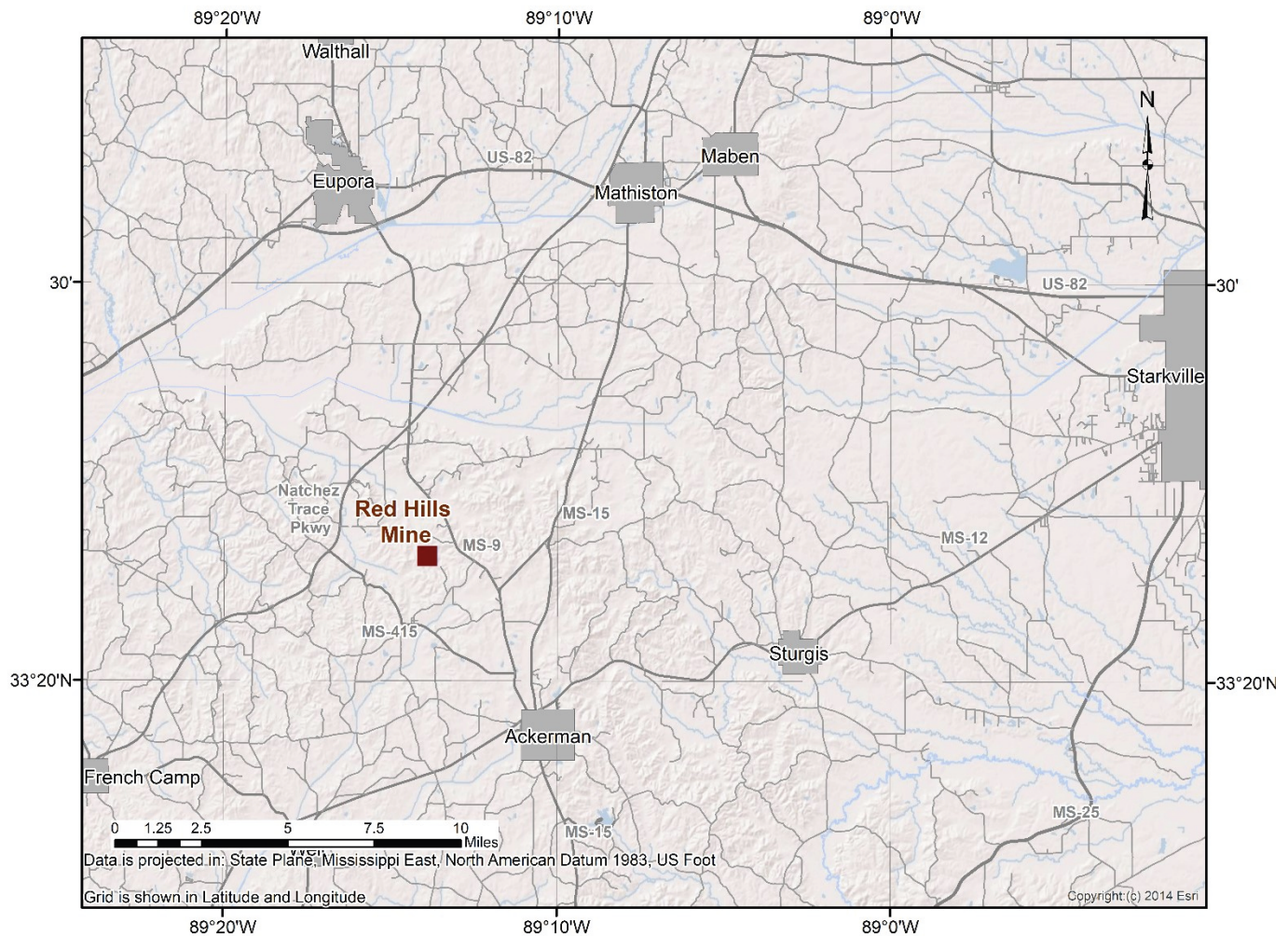
Development of the Red Hills Mine began in 1997, with full commercial deliveries commencing in 2002. The mining operation is comprised of four major equipment fleets. Primary removal of burden is achieved with one 82-cubic yard electric-powered dragline, four large track-type push dozers, and a truck and shovel fleet utilizing a 41-cubic yard electric rope shovel. Lignite is mined using a surface miner or a hydraulic backhoe to load a fleet of end dump haul trucks, and is directly shipped to the RHPP or the lignite stockpile. The overall average quality of the mined lignite seams meets the required power plant quality specifications. Therefore, no mineral processing is performed by MLMC.

The mine office facilities and original equipment fleets at the Red Hills Mine were constructed, acquired, or purchased new during the development stage of the mine. The facilities and equipment are maintained to allow for safe and efficient operation. The equipment is well maintained, in good physical condition and is either updated or replaced periodically with newer models or upgrades available to keep up with modern technology. As equipment wears out, MLMC evaluates what replacement option will be the most cost-efficient, including the evaluation of both new and used equipment.

The total cost of the property and equipment, net of applicable accumulated amortization, depreciation and impairment as of December 31, 2022 is \$80.4 million.

The Red Hills Mine currently has no significant encumbrances to the property. No mining permit violations have been issued at the Red Hills Mine in the past ten years. One notice of violation ("NOV") was issued in April 2020 for a water quality exceedance that was determined to not be the fault of Red Hills Mine and no further action was required. A second NOV was issued in June 2022 for a water sampling violation. Both NOVs were not related to the mining permit. Permitting requirements are discussed in Section 17.0 of the TRS.

Figure 2.1 – Red Hills Mine Location



Mineral resources and reserves have been summarized from the TRS for MLMC and have been included as Table 2.2 and Table 2.3. Qualities are being reported on an as-received moisture basis. Prices in Table 2.2 are based on economic cut-off grades of \$29.66 per ton at MLMC. Prices in Table 2.3 are based on economic cut-off grades of \$36.06 per ton at MLMC.

Material assumptions and criteria used in the determination of Mineral Resource and Mineral Reserves reported herein are provided within the filed TRS for the Mississippi Lignite Mining Company – Red Hills Mine dated December 2022.

Section 11.0 of the TRS describes the key assumptions, parameters, and methods used for the estimation of Mineral Resources. Assumptions include a maximum cumulative stripping ratio of 18:1 based on an assumed lignite sales price of \$29.66 per ton. A further description of the verified drilling data used to model the lignite deposit for estimation of Mineral Resources is provided in Section 7.2 Drilling Exploration, 8.0 Sample Preparation, Analyses, and Security, and Section 9.0 Data Verification.

Section 12.0 of the TRS describes the key assumptions, parameters, and methods used for the estimation of Mineral Reserves, and include the following:

- Maximum stripping ratio: 14:1;
- Mining production rates on a cubic yard and per ton basis remain relatively consistent with historical performance;
- Mining costs on a unit basis remain relatively consistent with historical performance;
- Minimum minable lignite thickness: 1.0 feet;
- Minimum parting thickness before seams are composited: 6.0 inches;
- Maximum depth of mining: approximately 320 feet;
- Lignite density defined by seam from coal core drilling data and modified by dilution parameters and approximately 80 lb/ft³; and

- Recovery rates by seam ranging from 67% to 100%.

Modifying factors including dilution parameters and technical information related to the mining process are described in detail under Section 13.0 Mining Methods. Economic factors to support the Mineral Reserve estimates are described in Section 18.0 Capital and Operating Costs and 19.0 Economic Analyses.

The Mineral Resources presented in Table 2.2 below have been estimated by applying a series of geologic and physical limits as well as high-level mining and economic constraints. The mining and economic constraints were limited to a level sufficient to support reasonable prospect for future economic extraction of the estimated Mineral Resources. The categorized Mineral Resources reported herein are exclusive of Mineral Reserves.

Lignite Coal	Resource Classification	Tonnage (Kiloton "Kt")	Grades/Qualities			
			Calorific Value (Btu/lb)	Moisture (%wt)	Ash (%wt)	Sulfur (%wt)
Mississippi Lignite Mining Company	Measured	4,300	5,210	44.6	12.8	0.6
Mississippi Lignite Mining Company	Indicated	500	5,300	43.6	12.7	0.7
Mississippi Lignite Mining Company	Measured + Indicated	4,800	5,220	44.5	12.8	0.6
Mississippi Lignite Mining Company	Inferred	1,600	5,370	46.0	9.9	0.5

Note:

- Mineral Resources that are not Mineral Reserves do not have demonstrated economic viability and there is no certainty that all or any part of such Mineral Resources will be converted into Mineral Reserves.
- Mineral Resources are in-situ and exclusive of 25.4 million tons (Mt) of Mineral Reserves.
- Mineral Resources are reported using an economic cutoff of \$29.66 per ton.
- Resources are presented with a minimum 1 foot seam thickness, a maximum as received moisture basis ash content of 30%, and a minimum calorific value of 4000 BTUs on an as received moisture basis cutoff.
- Resources are estimated using Vulcan Software.
- Tonnages and qualities have been rounded to an accuracy level deemed appropriate by the QP. Summation errors due to rounding may exist.

Table 2.2 Mineral Resources Summary as of December 31, 2022

The Mineral Reserves presented in Table 2.3 below were determined to be the economically mineable portion of the measured and indicated Mineral Resources after the consideration of modifying factors related to the mining process. Inferred Mineral Resources were not considered for Mineral Reserves.

Lignite Coal	Reserve Classification	Tonnage (Kt)	Grades/Qualities			
			Calorific Value (Btu/lb)	Moisture (%wt)	Ash (%wt)	Sulfur (%wt)
Mississippi Lignite Mining Company	Proven	18,000	5,090	43.4	14.8	0.6
Mississippi Lignite Mining Company	Probable	7,400	5,120	42.6	15.4	0.7
Mississippi Lignite Mining Company	Total	25,400	5,100	43.1	15.0	0.6

Note:

- Mineral Reserves have been demonstrated to be economic based on a positive cash flow
- Mineral Reserves are stated on a Run of Mine basis
- An economic cutoff in the Life of Mine plan averaged \$36.06 per ton and was used to demonstrate coal reserves
- Recovery varies by coal seam and ranges from 67% to 100%
- Mineral Reserves use an economic cut-off of a maximum cumulative stripping ratio of 14:1. There are some instances where the stripping ratio for a single year could exceed 14:1, but the average for the entire area evaluated is less than 14:1.
- Historical coal recovery rates at Red Hills Mine have been applied to generate the Mineral Reserve tonnages.
- Mineral Reserves are estimated using Vulcan Software.

- Tonnages and qualities have been rounded to an accuracy level deemed appropriate by the Qualified person ("QP"). Summation errors due to rounding may exist.

Table 2.3 Mineral Reserves Summary as of December 31, 2022

Table 2.4 describes the difference between the Mineral Reserves and Mineral Resources reported as of December 31, 2021 and December 31, 2022.

Resource Classification	December 31, 2021 Tonnage (Kt)	December 31, 2022 Tonnage (Kt)	Percent Change
Measured	11,500	4,300	(63)%
Indicated	15,200	500	(97)%
Measured + Indicated	26,700	4,800	(82)%
Inferred	—	1,600	N/A

Reserve Classification	December 31, 2021 Tonnage (Kt)	December 31, 2022 Tonnage (Kt)	Percent Change
Proven	17,200	18,000	4%
Probable	10,300	7,400	(28)%
Proven + Probable	27,400	25,400	(7)%

Table 2.4. Net difference of reported Mineral Resources and Mineral Reserves from previous reporting period to current reporting period.

The Mineral Resources and Mineral Reserves as of December 31, 2022 reflect an update to the life of mine ("LOM") plan and economic assessment. The methodology used to determine the Mineral Resource classification has been revised by the mineral resource QP. The change in methodology included revised estimates of quality and thickness cutoff assumptions as well as the removal of minor seams and the exclusion of certain areas that are no longer considered to contain recoverable coal. Additionally, MLMC delivered 3.2 million tons during 2022.

2.2 Material Properties with no Mineral Resources or Mineral Reserves

The lignite coal tonnages at Coteau, Falkirk and Coyote Creek have not been classified as “measured resources”, “indicated resources”, or “inferred resources” as defined in Items 1300 through 1305 of Regulation S-K, and as a result, do not have any “proven” or “probable” reserves under such definition and are therefore classified as an “Exploration Stage Property” pursuant to Items 1300 through 1305 of Regulation S-K. Coteau, Falkirk and Coyote Creek will continue to be classified as exploration stage properties until such time as proven or probable mineral reserves have been established in accordance with subpart 1300 of Regulation S-K, even though they continue to deliver lignite to their respective customers.

At Coteau, Coyote Creek and Falkirk, the Company is paid a management fee per ton of coal or heating unit (MMBtu) delivered. Each contract specifies the indices and mechanics by which fees change over time, generally in line with broad measures of U.S. inflation. The customers are responsible for funding all mine operating cost, including final mine reclamation, and directly or indirectly providing all of the capital required to build and operate the mine. This contract structure eliminates the Company's exposure to spot coal market price fluctuations.

Coteau, Coyote Creek and Falkirk each have only one customer for which they extract and deliver coal. These customers operate coal-fired electric generation power plants adjacent to each mine location (and in the case of Coteau, a synthetic natural gas and chemical/fertilizer production facility).

The sales price under the Coteau, Coyote Creek and Falkirk contracts are not market driven. Unlike traditional sales made based on market factors, under the provisions of the long-term mining agreements, the coal sales price at Coteau, Coyote Creek and Falkirk includes (i) all costs incurred to extract, process and deliver coal (i.e. the cost of production) and (ii) the agreed-upon profit per ton of coal or MMBtu unit delivered to the customer. Cost of production includes all the costs actually incurred in the operation of the mine including mining, processing and delivery of coal. Costs included within revenue include all production, transportation and maintenance costs including, without limitation, the following types of costs:

- Labor, which include wages and all related payroll taxes, benefits and fringes, including welfare plans; group insurance, vacations and other comparable benefits of employees
- Materials and supplies,
- Tools,
- Machinery and equipment not capitalized or leased,
- Costs of acquiring interests in coal reserves and surface lands,
- Rental of machinery and equipment,
- Power costs,
- Reasonable and necessary services by third parties
- Insurance including worker's compensation
- Certain taxes, and
- Cost of reclamation

The contractually-determined coal sales price includes reimbursement of all costs incurred and the agreed-upon profit. The agreed-upon profit adjusts based on changes in the level of established indices (e.g., CPI-U and/or PPI indices). The cost-plus nature of the contracts provide assurance that all costs incurred, including contemporaneous and final reclamation, will be reimbursed by the respective customer and negates any risk of loss which allows the mines to remain cash flow positive through the end of the contract terms. The coal sales price as well as profitability at Coteau, Falkirk and Coyote Creek are not subject to any change based on market factors. Profitability at these mines is affected by two factors: demand for coal (because this impacts units of agreed profit that are charged) and changes in the indices that determine coal sales price (because this adjusts the agreed-upon per unit profit). Under any scenario, Coteau, Coyote Creek and Falkirk will be cash flow positive as a result of the terms of the mining agreements.

Extraction of Coteau, Coyote Creek and Falkirk's lignite tonnages is only economically viable as a result of the long-term mining agreements in place with each mine's respective customer. The development of the Coteau, Coyote Creek and Falkirk mines was conducted in tandem with the development of the respective mine mouth power plants each serve. The power plants were designed to operate exclusively on the coal provided by the adjacent mines. No other market exists for the lignite at Coteau, Coyote Creek and Falkirk as the cost of transportation makes sales to any entity other than the current mine-mouth operator unprofitable.

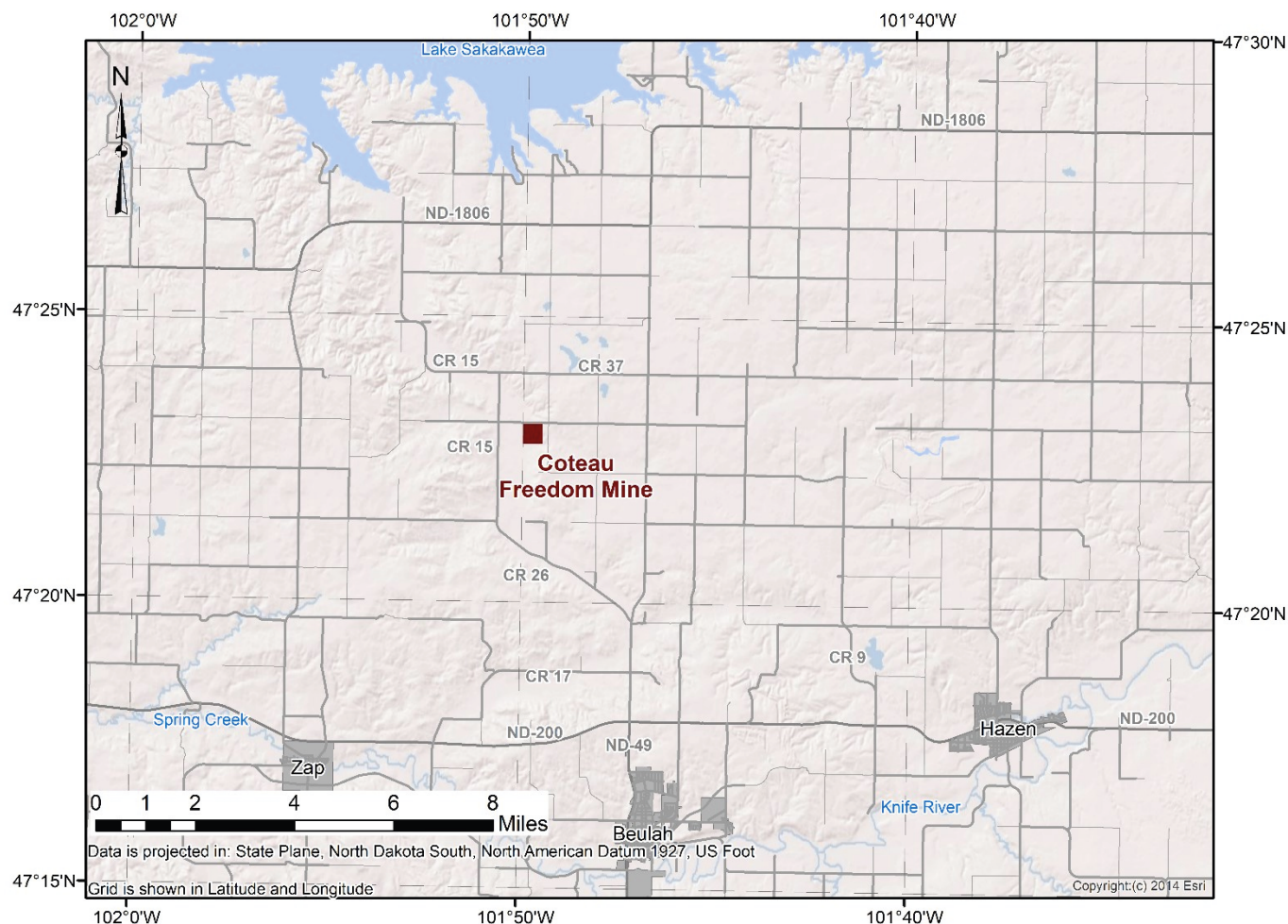
Coteau, Coyote Creek and Falkirk meet the definition of a variable interest entity ("VIE"). In each case, NACCO is not the primary beneficiary of the VIE as it does not exercise financial control; therefore, NACCO does not consolidate the results of these operations within its financial statements. Instead, these contracts are accounted for as equity method investments. The income before income taxes associated with these VIEs is reported as Earnings of unconsolidated operations on the Consolidated Statements of Operations, and the Company's investment is reported on the line Investments in Unconsolidated Subsidiaries in the Consolidated Balance Sheets

Coteau

The Freedom Mine, operated by Coteau, generally produces between 12.5 million and 13.5 million tons of lignite coal annually. The mine started delivering coal in 1983. All production from the mine is delivered to Dakota Coal Company, a wholly owned subsidiary of Basin Electric. Dakota Coal Company then sells the coal to the Synfuels Plant, Antelope Valley Station and Leland Olds Station, all of which are operated by affiliates of Basin Electric. The Synfuels Plant is a coal gasification plant that manufactures synthetic natural gas and produces fertilizers, solvents, phenol, carbon dioxide, and other chemical products for sale.

The Freedom Mine is located approximately 90 miles northwest of Bismarck, North Dakota (Figure 2.2). The main entrance to the Freedom Mine is accessed by means of a paved road and is located on County Road 15. Coteau holds 374 leases granting the right to extract approximately 33,966 acres of coal interests and the right to utilize approximately 23,451 acres of surface interests. In addition, Coteau owns in fee 33,888 acres of surface interests and 4,107 acres of coal interests. Substantially all of the leases held by Coteau were acquired in the early 1970s and have been replaced with new leases or have lease terms for a period sufficient to meet Coteau's contractual production requirements.

Figure 2.2 – Freedom Mine Location



The towns of Beulah, Hazen, and Stanton along with other smaller communities are within a 40-mile radius of the Freedom Mine and provide a vast supply of the employment base. Employees also come from the cities of Bismarck, Minot, and Dickinson, all of which are less than 100 miles away from the mine.

The Freedom Mine sources power for mine office facilities and operations from Roughrider Electric Cooperative, and water for the mine office facilities from the Southwest Water Authority. Fuel for equipment is supplied by multiple local vendors. The Freedom Mine has, or is currently constructing, all supporting infrastructure for mining operations.

The main entrance to the Freedom Mine is accessed by traveling north of Beulah on Highway 49 for one mile, then north on County Road 21 for two miles, then west on County Road 26 for three miles, and then north on County Road 15 for two miles as shown on Figure 2.2. Location of the Freedom Mine.

Travel to the Freedom Mine by air is possible by means of the Bismarck Municipal Airport, Bismarck, ND, which is approximately 90 miles southeast of the mine. From the airport, the mine is accessed by means of ground transportation by traveling west approximately 50 miles via Interstate 94, taking exit 110 and traveling north approximately 28 miles on ND Highway 49 to Beulah, ND, and so on as explained in the previous paragraph.

Travel to the Freedom Mine by rail is possible using the Amtrak Network, which runs through northern North Dakota mostly along the US Highway 2 corridor, and passes through the larger cities of Williston, Minot, Grand Forks, and Fargo, and smaller cities of Stanley, Rugby, and Devils Lake. From these locations, the mine can be accessed via ground transportation on Interstate 29 or Interstate 94 and various highways. The main highways are US Highway 2, US Highway 83, US Highway 85, US Highway 200, and US Highway 281.

North Dakota's freight rail service is largely provided by Burlington Northern Santa Fe Railway and Canadian Pacific Railway.

The coal tonnages are located in Mercer County, North Dakota, starting approximately two miles north of Beulah, North Dakota. The formations of sedimentary origin were deposited in the Williston Basin, the dominant structural feature of western North Dakota. The center of the basin is located near the city of Williston, North Dakota, approximately 100 miles northwest of the Freedom Mine. The economically mineable coal occurs in the Sentinel Butte Formation, and is overlain by the Coleharbor Formation. The Coleharbor Formation unconformably overlies the Sentinel Butte Formation. It includes all of the unconsolidated sediments resulting from deposition during glacial and interglacial periods. Lithologic types include gravel, sand, silt, clay and till. The modified glacial channels are in-filled with gravels, sands, silts and clays overlain by till. The coarser gravel and sand beds are generally limited to near the bottom of the channel fill. The general stratigraphic sequence in the upland portions of the reserve area consists of till, silty sands and clayey silts.

Fill-in drilling programs are routinely conducted by Coteau for the purpose of refining guidance related to ongoing operations. It is common practice at the Freedom Mine to tighten the drilling density within the three to four-year block ahead of active operations to an average drill hole spacing of 660-feet. However, additional exploration may also be scheduled in areas farther out to increase confidence in future mine plan projections.

Coteau utilizes standard surface mining techniques to extract coal from the proposed permit area. Mining operations will typically occur in a sequence of seven events: SPGM removal, overburden removal, coal removal, overburden replacement, final grading, SPGM replacement, and revegetation.

The mine office facilities and original equipment fleets at the Freedom Mine were constructed, acquired, or purchased new during the development stage of the mine. The facilities and equipment are maintained to allow for safe and efficient operation. The equipment is well maintained, in good physical condition and is either updated or replaced periodically with newer models or upgrades available to keep up with modern technology. As equipment wears out, Coteau evaluates what replacement option will be the most cost-efficient, including the evaluation of both new and used equipment.

The total cost of the property, plant and equipment, net of applicable accumulated amortization, depreciation and impairment as of December 31, 2022 is \$90.4 million.

The Freedom Mine currently has no significant encumbrances to the property. No NOV's have been issued at the Freedom Mine in the past three years. Coteau currently has all permits in place for the Freedom Mine to operate through 2031. Permit expansions required to extend the life of the mine through 2045 will be acquired as needed. No mineral processing occurs at the Freedom Mine.

Falkirk Mine

The Falkirk Mine generally produces between 7 million and 8 million tons of lignite coal annually. The mine started delivering coal in 1978 primarily for the Coal Creek Station, an electric power generating station. Coal Creek Station was owned by GRE until May 1, 2022 when it was purchased by Rainbow Energy. In 2014, Falkirk began delivering coal to Spiritwood Station, another electric power generating station owned by GRE.

The Falkirk Mine, operated by Falkirk, is located approximately 50 miles north of Bismarck, North Dakota on a paved access road off U.S. Highway 83 (Figure 2.3). Falkirk holds 340 leases granting the right to extract approximately 43,648 acres of coal interests and the right to utilize approximately 24,164 acres of surface interests. In addition, Falkirk owns in fee 40,666 acres of surface interests and 1,788 acres of coal interests. Substantially all of the leases held by Falkirk were acquired in the early 1970s with initial terms that have been further extended by the continuation of mining operations.

The towns of Underwood and Washburn are located within ten miles of the mine, with other small communities also nearby. Numerous employees also reside in Bismarck and Mandan, a distance of about 50 miles.

The Falkirk Mine receives both its power and water from Coal Creek Station. However, Falkirk's East shift change building receives water from McLean-Sheridan Rural Water. Fuel for equipment is supplied by multiple local vendors including: Farstad Oil, Missouri Valley Petroleum, and Enerbase Cooperative Resources.

The main entrance to the Falkirk Mine is accessed by traveling north from Bismarck on State Highway 83 for approximately 50 miles, then going west on the access road, 1st Street SW located four miles south of Underwood. The mine office is located two miles to the west.

Travel to the Falkirk Mine by air is possible using the Bismarck Airport in Bismarck, ND, approximately 55 miles south of the mine, and then using ground transportation, traveling via US Highway 83.

The main railway systems near the Falkirk Mine are Canadian Pacific, BNSF, and Dakota Missouri Valley & Western (DMVW). DMVW crosses through the Falkirk Mine Reserve.

The coal tonnages are located in McLean County, North Dakota, from approximately nine miles northwest of the town of Washburn, North Dakota to four miles north of the town of Underwood, North Dakota. Structurally, the area is located on an intercratonic basin containing a thick sequence of sedimentary rocks. The economically mineable coal occurs in the Sentinel Butte Formation and the Bullion Creek Formation and are unconformably overlain by the Coleharbor Formation. The Sentinel Butte Formation conformably overlies the Bullion Creek Formation. The general stratigraphic sequence in the upland portions of the reserve area (Sentinel Butte Formation) consists of till, silty sands and clayey silts, main hagel lignite bed, silty clay, lower lignite of the hagel lignite interval and silty clays. Beneath the Tavis Creek, there is a repeating sequence of silty to sand clays with generally thin lignite beds.

Operationally, overburden and interburden removal are accomplished using scrapers, dozers, front end loaders, truck shovel fleets, and draglines. Lignite is mined with front end loaders or hydraulic backhoes, and loaded into haul trucks to transport to the stockpile or directly to the customer via truck dumps and conveyors.

Fill-in drilling programs are routinely conducted by Falkirk for the purpose of refining guidance related to ongoing operations. It is common practice at the Falkirk Mine to tighten the drilling density within the three to four-year block ahead of active operations to an average drill hole spacing of 1320-feet. However, additional exploration may also be scheduled in areas farther out to increase confidence in future mine plan projections.

The mine office facilities and original equipment fleets at the Falkirk Mine were constructed, acquired, or purchased new during the development stage of the mine. The facilities and equipment are maintained to allow for safe and efficient operation. The equipment is well maintained, in good physical condition and is either updated or replaced periodically with newer models or upgrades available to keep up with modern technology. As equipment wears out, Falkirk evaluates what replacement option will be the most cost-efficient, including the evaluation of both new and used equipment.

The total cost of the property, plant and equipment, net of applicable accumulated amortization, depreciation and impairment as of December 31, 2022 is \$22.4 million.

The Falkirk Mine currently has no significant encumbrances to the property. No Notice of Violations (NOVs) have been issued at the Falkirk Mine in the past three years. There are no outstanding permits related to the LOM plan awaiting regulatory approval. The Falkirk Mining Company currently has all permits in place to operate and adhere to the current mine plan. No mineral processing occurs at the Falkirk Mine.

Figure 2.3 – Falkirk Mine Location

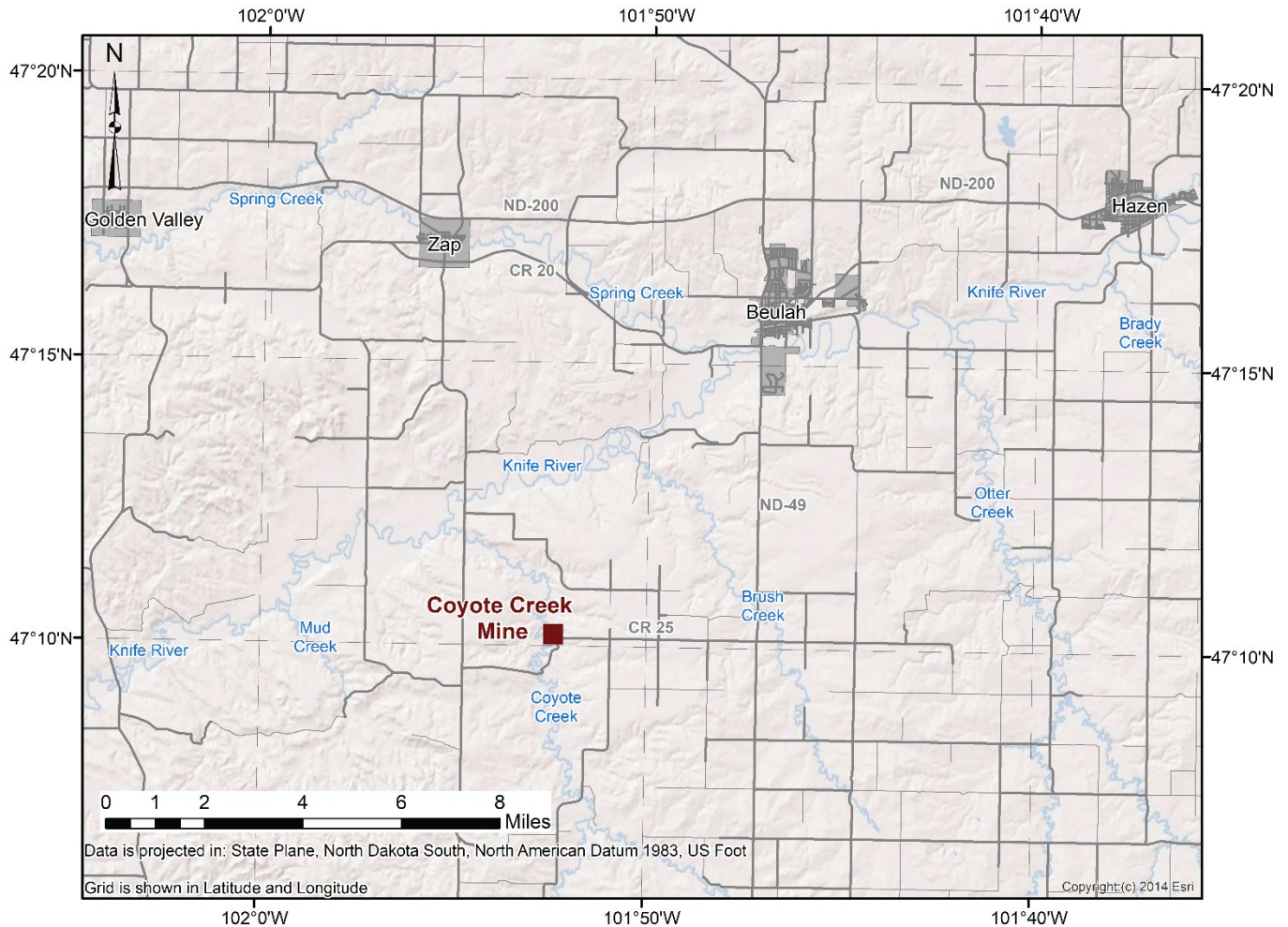


Coyote Creek

The Coyote Creek Mine generally produces between 1.5 million and 2.0 million tons of lignite annually. The mine began delivering coal in 2016 to the Coyote Station owned by Otter Tail Power Company, Northern Municipal Power Agency, Montana-Dakota Utilities Company and Northwestern Corporation.

The Coyote Creek Mine is located approximately 70 miles northwest of Bismarck, North Dakota (Figure 2.4). The main entrance to the Coyote Creek Mine is accessed by means of a four-mile paved road extending west off of State Highway 49. Coyote Creek holds a sublease to 86 leases granting the right to mine approximately 8,129 acres of coal interests and the right to utilize approximately 15,168 acres of surface interests. In addition, Coyote Creek Mine owns in fee 160 acres of surface interests and has four easements to conduct coal mining operations on approximately 352 acres.

Figure 2.4 – Coyote Creek Mine Location



The towns of Beulah, Hazen, and Stanton along with other smaller communities are within a 40-mile radius of the Coyote Creek Mine and provide a vast supply and employment base. A vast supply and employment base also come from some of the major cities of Bismarck, Minot, and Dickinson, all of which are less than 100 miles away from the mine.

The Coyote Creek Mine sources power for mine office facilities and operations from Roughrider Electric Cooperative and Montana-Dakota Utilities Co., and water for the mine office facilities from the Southwest Water Authority. Fuel for equipment is supplied by multiple local vendors. The Coyote Creek Mine has all supporting infrastructure for mining operations.

The main entrance to the mine will be accessed by traveling south of Beulah on Highway 49 for five miles, then west on County Road 25 for four miles. The general location of the Coyote Creek Mine is shown in Figure 1.0 Location of Coyote Creek Mine.

Travel to the Coyote Creek Mine by air is possible using the Bismarck Municipal Airport, Bismarck, ND, approximately 75 miles southeast of the mine. From the airport, the mine is accessed using ground transportation by traveling west approximately 50 miles via Interstate 94, taking exit 110 and traveling north approximately 21 miles on ND Highway 49 to County Road 25, then west for four miles on County Road 25.

Travel to the Coyote Creek Mine by rail is possible using the Amtrak Network, which runs through northern North Dakota mostly along the US Highway 2 corridor, and passes through the larger cities of Williston, Minot, Grand Forks, and Fargo, and smaller cities of Stanley, Rugby, and Devils Lake. From these locations, the mine can be accessed via ground transportation on Interstate 29 or Interstate 94 and various highways. The main highways are US Highway 2, US Highway 83, US Highway 85, US Highway 200, and US Highway 281.

North Dakota's freight rail service is largely provided by Burlington Northern Santa Fe Railway and Canadian Pacific Railway.

The coal tonnages are located in Mercer County, North Dakota, starting approximately six miles southwest of Beulah, North Dakota. The formations of sedimentary origin were deposited in the Williston Basin, the dominant structural feature of western North Dakota. The center of the basin is located near the city of Williston, North Dakota, approximately 110 miles northwest of the Coyote Creek Mine. The economically mineable coal occurs in the Sentinel Butte Formation, and is overlain by the Coleharbor Formation. The Coleharbor Formation unconformably overlies the Sentinel Butte Formation. It includes all of the unconsolidated sediments resulting from deposition during glacial and interglacial periods. Lithologic types include gravel, sand silt, clay and till. The modified glacial channels are in-filled with gravels, sands, silts and clays overlain by till. The coarser gravel and sand beds are generally limited to near the bottom of the channel fill. The general stratigraphic sequence in the upland portions of the reserve area consists of till, silty sands and clayey silts.

Fill-in drilling programs are routinely conducted by Coyote Creek for the purpose of refining guidance related to ongoing operations. It is common practice at the Coyote Creek Mine to tighten the drilling density within the three to four-year block ahead of active operations to an average drill hole spacing of 660-feet. However, additional exploration may also be scheduled in areas farther out to increase confidence in future mine plan projections.

Operationally, overburden removal is accomplished using scrapers, dozers, front end loaders, excavators, truck fleets, and a dragline. Lignite is mined with front end loaders, and loaded into haul trucks to transport to the coal stockpile.

The mine office facilities and original equipment fleets at the Coyote Creek Mine were constructed, acquired, or purchased during the development stage of the mine. The facilities and equipment are maintained to allow for safe and efficient operation. The equipment is well maintained, in good physical condition and is either updated or replaced periodically with newer models or upgrades available to keep up with modern technology. As equipment wears out, Coyote Creek evaluates what replacement option will be the most cost-efficient, including the evaluation of both new and used equipment.

The total cost of the property, plant and equipment, net of applicable accumulated amortization, depreciation and impairment as of December 31, 2022 is \$122.7 million.

The Coyote Creek Mine currently has no significant encumbrances to the property. No NOV's have been issued at the Coyote Creek Mine in the past three years. There are no outstanding permits related to the LOM plan awaiting regulatory approval. Coyote currently has all permits in place for the Coyote Creek Mine to operate and adhere to a mine plan projected through 2040. No mineral processing occurs at the Coyote Creek Mine.

3.0 Internal Control Disclosure Over Mineral Resources and Reserves

The modeling and analysis of the Company's resources and reserves has been developed by Company mine personnel and reviewed by several levels of internal management, including the QPs. The development of such resources and reserves estimates, including related assumptions, was a collaborative effort between the QPs and Company staff. This section summarizes the internal control considerations for the Company's development of estimations, including assumptions, used in resource and reserve analysis and modeling.

When determining resources and reserves, as well as the differences between resources and reserves, management developed specific criteria, each of which must be met to qualify as a resource or reserve, respectively. These criteria, such as demonstration of economic viability, points of reference and grade, are specific and attainable. The QPs and Company management agree on the reasonableness of the criteria for the purposes of estimating resources and reserves. Calculations using these criteria are reviewed and validated by the QPs.

Estimations and assumptions were developed independently for each significant mineral location. All estimates require a combination of historical data and key assumptions and parameters. When possible, resources and data from generally accepted industry sources were used to develop these estimations. Review teams were created by utilizing subject matter experts from across all of NACCO to review the cost assumptions and estimations used as the basis of the classification of mineral resources and reserves.

Geological modeling and mine planning efforts serve as a base assumption for resource estimates at MLMC. These outputs have been prepared and reviewed by Company personnel. Mine planning decisions are determined and agreed upon by Company management. Management adjusts forward-looking models by reference to historic mining results, including by reviewing actual versus predicted levels of production from the mineral deposit, and if necessary, re-evaluating mining

methodologies if production outcomes were not realized as predicted. Ongoing mining of the mineral deposit, coupled with product quality validation pursuant to Company and customer expectations, provides further empirical evidence as to the homogeneity, continuity and characteristics of the deposit. Geologic modeling assumptions are evaluated to historic mining results and are adjusted if necessary to better reflect actual mining results. Ongoing quality validation of production also provides a means to monitor for any potential changes in quality. Also, ongoing monitoring of ground conditions within the mine, surveying for evidence of subsidence and other visible signs of deterioration that may signal the need to re-evaluate rock mechanics and structure of the mine ultimately inform extraction ratios and mine design, which underpin mineral reserve estimates.

Management also assesses risks inherent in mineral resource and reserve estimates, such as the accuracy of geophysical data that is used to support mine planning, changes in QPs, identifying hazards and informing operations of the presence of mineable deposits. Also, management is aware of risks associated with potential gaps in assessing the completeness of mineral extraction licenses, entitlements or rights, or changes in laws or regulations that could directly impact the ability to assess mineral resources and reserves or impact production levels. Risks inherent in overestimated reserves can impact financial performance when revealed, such as changes in amortizations that are based on life of mine estimates.

4.0 Customer-owned Properties

South Hallsville No. 1 Mine — The Sabine Mining Company

The South Hallsville No. 1 Mine generally produces between 1.5 million and 2.0 million tons of lignite annually. The mine began delivering coal in 1985. All production from the mine is delivered to Southwestern Electric Power Company's ("SWEPCO") Henry W. Pirkey Plant (the "Pirkey Plant"). SWEPCO is an American Electric Power ("AEP") company. The mine's coal tonnages are owned and controlled by AEP. The Company conducts activities to extract these customer-owned and controlled coal tonnages.

The South Hallsville No. 1 Mine, operated by Sabine, is located approximately 150 miles east of Dallas, Texas on FM 968. The entrance to the mine is by means of a paved road. Sabine has no title, claim, lease or option to acquire any of the reserves at the South Hallsville No. 1 Mine. Southwestern Electric Power Company controls all of the reserves within the South Hallsville No. 1 Mine.

AEP intends to retire the Pirkey Plant during 2023. Sabine expects deliveries to cease in March 2023. Sabine expects to begin final reclamation on April 1, 2023. Funding for mine reclamation is the responsibility of SWEPCO.

5.0 Facilities and Equipment

The facilities and equipment for each of the coal mines are maintained to allow for safe and efficient operation. The equipment is well maintained, in good physical condition and is either updated or replaced periodically with newer models or upgrades available to keep up with modern technology. As equipment wears out, the mines evaluate what replacement option will be the most cost-efficient, including the evaluation of both new and used equipment, and proceed with that replacement. The mining method and total cost of the property, plant and equipment, net of applicable accumulated amortization, depreciation and impairment as of December 31, 2022 is set forth in the chart below:

Location	Mining Method	Total Historical Cost of Mine Property, Plant and Equipment (excluding Coal Land, Real Estate and Construction in Progress), Net of Applicable Accumulated Amortization, Depreciation and Impairment
Unconsolidated Mining Operations		<i>(in millions)</i>
Freedom Mine — The Coteau Properties	Dragline operation with 3 draglines	\$ 90.4
Falkirk Mine — The Falkirk Mining Company	Dragline operation with 4 draglines	\$ 22.4
South Hallsville No. 1 Mine — The Sabine Mining Company	Dragline operation with 4 draglines	\$ 15.0
Coyote Creek Mine — Coyote Creek Mining Company, LLC	Dragline operation with 1 dragline	\$ 122.7

Consolidated Mining Operations

Red Hills Mine — Mississippi Lignite Mining Company	Dragline operation with 1 dragline	\$	80.4
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NAMining Segment - Operations

NAMining provides contract mining services for independently owned mines and quarries, primarily operating and maintaining draglines at limestone quarries and utilizing other mining equipment at sand and gravel quarries. During 2022, NAMining operated 32 draglines and other equipment at 25 quarries. Of the 32 draglines, 8 are owned by the Company and 24 are owned by customers. At December 31, 2022, NAMining had \$42.4 million in property, plant and equipment, net of applicable accumulated amortization, depreciation and impairment.

The mining process at the limestone mines involves excavating limestone from a water-filled quarry utilizing draglines. The excavated limestone is transported and processed by the customer. The following mines were operational during 2022:

Location Name	Aggregate	Location	State	Customer	Started Operations
White Rock — North	Limestone	Miami	FL	WRQ	1995
Krome	Limestone	Miami	FL	Cemex	2003
Alico	Limestone	Ft. Myers	FL	Cemex	2004
FEC	Limestone	Miami	FL	Cemex	2005
SCL	Limestone	Miami	FL	Cemex	2006
Central State Aggregates	Limestone	Zephyrhills	FL	McDonald Group	2016
Mid Coast Aggregates	Limestone	Sumter County	FL	McDonald Group	2016
West Florida Aggregates	Limestone	Hernando County	FL	McDonald Group	2016
St. Catherine	Limestone	Sumter County	FL	Cemex	2016
Center Hill	Limestone	Sumter County	FL	Cemex	2016
Inglis	Limestone	Crystal River	FL	Cemex	2016
Titan Corkscrew	Limestone	Ft. Myers	FL	Titan America	2017
Palm Beach Aggregates	Limestone	Loxahatchee	FL	Palm Beach Aggregates	2017
Perry	Limestone	Lamont	FL	Martin Marietta	2018
SDI Aggregates	Limestone	Florida City	FL	Blue Water Industries	2018
Queensfield	Sand and gravel	King William County	VA	King William Sand and Gravel Company, Inc.	2018
Newberry	Limestone	Alachua County	FL	Argos USA, LLC	2019
Titan Pennsuco ^(a)	Limestone	Miami	FL	Titan America	2020
Seven Diamonds	Limestone	Pasco County	FL	Seven Diamonds, LLC	2021
Johnson County	Sand and gravel	Johnson County	IN	Martin Marietta	2021
Little River	Sand and gravel	Ashdown	AR	Lehigh Hanson	2021
Rosser	Sand and gravel	Ennis	TX	Lehigh Hanson	2021
Brooksville Cement Plant	Limestone	Brooksville	FL	Cemex	2021
Ash Grove	Limestone	Louisville	NE	Ash Grove	2022

^(a) The Titan Pennsuco contract was terminated during the second quarter of 2022. NAMining mined de minimis amounts of limestone at this location during the 2022 and 2021 periods.

NAMining's customers control all of the limestone and sand reserves within their respective mines. NAMining has no title, claim, lease or option to acquire any of the reserves at any of the mines where it provides services.

Access to the White Rock mine is by means of a paved road from 122nd Avenue.

Access to the Krome mine is by means of a paved road from Krome Avenue.

Access to the Alico mine is by means of a paved road from Alico Road.

Access to the FEC mine is by means of a paved road from NW 118th Avenue.

Access to the SCL mine is by means of a paved road from NW 137th Avenue.

Access to the Central State Aggregates mine is by means of a paved road from Yonkers Boulevard.

Access to the Mid Coast Aggregates mine is by means of a paved road from State Road 50.

Access to the West Florida Aggregates mine is by means of a paved road from Cortez Boulevard.

Access to the St. Catherine mine is by means of a paved road from County Road 673.

Access to the Center Hill mine is by means of a paved road from West Kings Highway.

Access to the Inglis mine is by means of a paved road from Highway 19 South.

Access to the Titan Corkscrew mine is by means of a paved road from Corkscrew Road.

Access to the Palm Beach Aggregates mine is by means of a paved road from State Road 80.

Access to the Perry mine is by means of paved road from Nutall Rise Road.

Access to the SDI Aggregates mine is by means of paved road from SW 167th AVE.

Access to the Queensfield Mine is by means of paved road from Dabney's Mill Road (SR 604).

Access to the Newberry mine is by means of paved road from NW County Road 235 (CR 235).

Access to the Seven Diamonds mine is by means of a paved road from US-41 S/Broad St.

Access to the Johnson County mine is by means of a paved road from Old State 37/N Waverly Park Road.

Access to the Little River mine is by means of an unpaved road from Little River 60.

Access to the Rosser mine is by means of a paved road from TX-34 S.

Access to Brooksville Cement plant is by means of a paved road from Cement Plant Road.

Access to Ash Grove Louisville Quarry is by means of a paved road from HWY 50.

Minerals Management - Operations

As an owner of royalty and mineral interests, the Company's access to information concerning activity and operations of its royalty and mineral interests is limited. The Company does not have information that would be available to a company with oil and natural gas operations because detailed information is not generally available to owners of royalty and mineral interests. Consequently, the exact number of wells producing from or drilling on the Company's mineral interests at a given point in time is not determinable. The following table sets forth the Company's estimate of the number of gross and net productive wells:

	December 31, 2022		December 31, 2021	
	Gross	Net	Gross	Net
Oil	1,049	3.3	467	0.9
Natural Gas	251	10.1	398	11.4
Total	1,300	13.4	865	12.3

Gross wells are the total wells in which an interest is owned.

Net wells are calculated based on the Company's net royalty interest, factoring in both ownership percentage of gross wells and royalty rate.

The majority of the Company's producing mineral and royalty interest acreage now, or in the future, can be pooled with third-party acreage to form pooled units. Pooling proportionately reduces the Company's royalty interest in wells drilled in a pooled unit, and it proportionately increases the number of wells in which the Company has such reduced royalty interest.

The following table includes the Company's estimate of acreage for oil and gas mineral interests, NPRIs, and ORRIs:

	December 31, 2022		December 31, 2021	
	Gross Acres	Net Royalty Acres	Gross Acres	Net Royalty Acres
Appalachia	34,661	36,199	34,661	36,199
Gulf Coast	27,932	20,105	27,932	20,105
Permian	77,278	2,050	63,998	1,243
Rockies	326	72	—	—
Williston	1,194	2,388	1,194	2,388
Total	141,391	60,814	127,785	59,935

The Company may own more than one type of interest in the same tract of land, but the overlap is not significant. Net Royalty Acres are calculated based on the Company's ownership and royalty rate, normalized to a standard 1/8th royalty lease, and assumes a 1/4th royalty rate for unleased acres.

The following table includes the Company's estimate of developed and undeveloped acreage based on the gross acres in a basin or region and includes mineral interests, NPRIs, and ORRIs:

	December 31, 2022			December 31, 2021		
	Developed Acreage	Undeveloped Acreage	Gross Acreage	Developed Acreage	Undeveloped Acreage	Gross Acreage
Appalachia	32,027	2,634	34,661	28,011	6,650	34,661
Gulf Coast	22,191	5,741	27,932	21,784	6,148	27,932
Permian	73,862	3,416	77,278	62,496	1,502	63,998
Rockies	326	—	326	—	—	—
Williston	—	1,194	1,194	—	1,194	1,194
Total	128,406	12,985	141,391	112,291	15,494	127,785

Undeveloped acres are either unleased and open or are leased acres on which wells have not been drilled or completed to a point that would permit the production of commercial quantities of oil or natural gas, regardless of whether such acreage contains proved reserves.

Production and Price History

The following table sets forth the estimated oil and natural gas production data related to the Company's mineral and royalty interests as well as certain price and cost information for the years ended December 31:

	2022 ⁽⁴⁾	2021 ⁽⁴⁾
Production data:		
Oil (bbl) ⁽¹⁾	46,571	32,627
NGL (bbl) ⁽¹⁾	61,511	63,559
Residue gas (Mcf) ⁽²⁾	7,329,985	6,225,422
Total BOE ⁽³⁾	1,329,747	1,133,756
Average realized prices:		
Oil (bbl) ⁽¹⁾	\$ 94.31	\$ 66.87
NGL (bbl) ⁽¹⁾	\$ 36.81	\$ 29.33
Residue gas (Mcf) ⁽²⁾	\$ 5.87	\$ 3.36
Average unit cost		
BOE ⁽³⁾	\$ 4.26	\$ 4.99

⁽¹⁾ Bbl. One stock tank barrel, or 42 U.S. gallons liquid volume.

⁽²⁾ Mcf. One thousand cubic feet of natural gas at the contractual pressure and temperature bases.

⁽³⁾ BOE. Barrel of Oil Equivalent, a conversion factor of 6 MCF of gas was used for 1 equivalent bbl of oil.

⁽⁴⁾ As an owner of mineral and royalty interests, the Company's access to information concerning activity and operations of its royalty and mineral interests is limited. As a result, the Company estimated the last two months of 2022 and 2021 production and pricing data using projections based on decline rates of wells and prior expense information.

Evaluation and Review of Reserves

The reserve estimates as of December 31, 2022 were prepared by Haas Petroleum Engineering Services, Inc. ("Haas Engineering"). Haas Engineering has provided reservoir engineering services, consulting and ongoing support for major and independent petroleum companies, public utilities, financial institutions, investors, and government agencies since 1980. Haas Engineering does not own an interest in NACCO or any of the Company's properties, nor is it employed on a contingent basis. A copy of Haas Engineering's estimated proved reserve report as of December 31, 2022 is incorporated by reference herein to Exhibit 99.1 to this Form 10-K.

The properties evaluated for proved reserves are located in Alabama, Louisiana, Ohio, Pennsylvania, Texas and Wyoming and represent all of the Company's oil and gas reserves. A reserves audit is not the same as a financial audit. Reserve engineering is a subjective process of estimating volumes of economically recoverable oil and natural gas that cannot be measured in an exact manner. The accuracy of any reserve estimate is a function of the quality of available data and of engineering and geological interpretation. As a result, the estimates of different engineers often vary. In addition, the results of drilling, testing, and production may justify revisions of such estimates. Accordingly, reserve estimates often differ from the quantities of oil and natural gas that are ultimately recovered. Estimates of economically recoverable oil and natural gas and of future net revenues are based on several variables and assumptions, all of which may vary from actual results, including geologic interpretation, prices, and future production rates and costs.

The reserves estimates have been prepared using standard engineering practices generally accepted by the petroleum industry. Decline curve analysis was used to estimate the remaining reserves of pressure depletion reservoirs with enough historical production data to establish decline trends. Reservoirs under non-pressure depletion drive mechanisms and non-producing reserves were estimated by volumetric analysis, research of analogous reservoirs, or a combination of both. Reserves have been estimated using deterministic and probabilistic methods. The appropriate methodology was used, as deemed necessary, to estimate reserves in conformance with SEC regulations. The maximum remaining reserves life assigned to wells included in this report is 50 years.

Total net proved reserves are defined as those natural gas and hydrocarbon liquid reserves to the Company's interests after deducting all royalties, overriding royalties, and reversionary interests owned by outside parties that become effective upon

payout of specified monetary balances. All reserves estimates have been prepared using standard engineering practices generally accepted by the petroleum industry and conform to guidelines developed and adopted by the SEC.

Technologies Used in Reserve Estimation

The SEC's reserves rules allow the use of techniques that have been proved effective by actual production from projects in the same reservoir or an analogous reservoir or by other evidence using reliable technology that establishes reasonable certainty. The term "reasonable certainty" implies a high degree of confidence that the quantities of oil, natural gas and/or NGLs actually recovered will equal or exceed the estimate. To achieve reasonable certainty, the Company employed technologies that have been demonstrated to yield results with consistency and repeatability. The technologies and economic data used in the estimation of the Company's proved reserves include, but are not limited to, well logs, geologic maps, seismic data, well test data, production data, historical price and cost information and property ownership interests. The accuracy of the estimates of the Company's reserves is a function of:

- the quality and quantity of available data and the engineering and geological interpretation of that data;
- estimates regarding the amount and timing of future operating costs, development costs and workovers, all of which may vary considerably from actual results;
- future prices of oil, natural gas and NGLs, which may vary considerably from those estimated; and
- the judgment of the persons preparing the estimates.

The following table presents the Company's estimated net proved oil and natural gas reserves based on the reserve report prepared by Haas Engineering, the Company's independent petroleum engineering firm. All of the Company's reserves are located in the United States.

	Net reserves as of December 31, 2022			Net reserves as of December 31, 2021		
	Oil (bbl) ⁽¹⁾	NGL (bbl) ⁽¹⁾	Residue gas (Mcf) ⁽²⁾	Oil (bbl) ⁽¹⁾	NGL (bbl) ⁽¹⁾	Residue gas (Mcf) ⁽²⁾
Proved developed	305,710	408,280	25,907,890	167,430	282,230	16,617,360
Proved undeveloped	32,570	11,030	1,784,670	220	90	1,210
Total	338,280	419,310	27,692,560	167,650	282,320	16,618,570

⁽¹⁾ Bbl. One stock tank barrel, or 42 U.S. gallons liquid volume.

⁽²⁾ Mcf. One thousand cubic feet of natural gas at the contractual pressure and temperature bases.

As an owner of mineral and royalty interests and not working interests, the Company is not required to make capital expenditures and did not make capital expenditures to convert proved undeveloped reserves from undeveloped to developed.

Internal Control Disclosure

The Company's internal staff works closely with Haas Engineering to ensure the integrity, accuracy and timeliness of the data used to calculate proved reserves relating to NACCO's assets. Internal technical team members met with independent reserve engineers periodically during the period covered by the reserves report to discuss the assumptions and methods used in the proved reserve estimation process.

The preparation of the Company's proved reserve estimates is completed in accordance with internal control procedures. These procedures, which are intended to ensure reliability of reserve estimations, include the following:

- Review and verification of historical production data, which data is based on actual production as reported by third-party producers who lease the Company's royalty and mineral interests;
- Preparation of reserve estimates by Haas Engineering under the direct supervision of internal staff;
- Verification of property ownership by the Company's land department; and
- No employee's compensation is tied to the amount of reserves booked.

The Minerals Management Segment's Vice President of Engineering and Finance is the technical person primarily responsible for overseeing the preparation of the internal reserve estimates and for coordinating with Haas Engineering in the preparation of the third-party reserve report. The Vice President of Engineering and Finance has over 15 years of industry experience with positions of increasing responsibility and reports directly to the President of Catapult Mineral Partners, the Company's business unit focused on managing and expanding the Company's portfolio of oil and gas mineral and royalty interests.

Estimated Proved Reserves

The following table summarizes changes in proved reserves during the year ended December 31, 2022:

	Estimated Proved Reserves		
	Oil (bbl) ⁽¹⁾	NGL (bbl) ⁽¹⁾	Residue gas (Mcf) ⁽²⁾
December 31, 2021	167,650	282,320	16,618,570
Purchases	99,345	35,222	202,314
Extensions and discoveries	121,542	68,167	12,801,109
Revisions of previous estimates ⁽³⁾	(2,504)	95,577	5,405,803
Production	(46,571)	(61,511)	(7,329,985)
Other	(1,182)	(465)	(5,251)
December 31, 2022	338,280	419,310	27,692,560

⁽¹⁾ Bbl. One stock tank barrel, or 42 U.S. gallons liquid volume.

⁽²⁾ Mcf. One thousand cubic feet of natural gas at the contractual pressure and temperature bases.

⁽³⁾ Revisions of previous estimates include technical revisions due to changes in commodity prices, historical and projected performance and other factors.

Estimated Proved Undeveloped Reserves ("PUDs")

The following table summarizes changes in PUDs during the year ended December 31, 2022:

	Estimated Proved Undeveloped Reserves		
	Oil (bbl) ⁽¹⁾	NGL (bbl) ⁽¹⁾	Residue gas (Mcf) ⁽²⁾
December 31, 2021	220	90	1,210
Purchases	21,790	5,104	38,571
Extensions and discoveries	10,780	5,926	1,746,099
Revisions of previous estimates ⁽³⁾	(220)	(90)	(1,210)
December 31, 2022	32,570	11,030	1,784,670

⁽¹⁾ Bbl. One stock tank barrel, or 42 U.S. gallons liquid volume.

⁽²⁾ Mcf. One thousand cubic feet of natural gas at the contractual pressure and temperature bases.

⁽³⁾ Revisions of previous estimates include technical revisions due to changes in commodity prices, historical and projected performance and other factors.

As an owner of mineral and royalty interests, the Company generally does not have evidence or approval of operators' development plans. As a result, proved undeveloped reserve estimates are limited to those relatively few locations for which drilling permits have been publicly filed. As of December 31, 2022, PUD reserves consists of 42 wells in various stages of drilling or completions. As of December 31, 2022, approximately 6% of the Company's total proved reserves were classified as PUDs.

Headquarter locations

NACCO leases office space in Mayfield Heights, Ohio, a suburb of Cleveland, Ohio, which serves as its corporate headquarters.

Coal Mining and Minerals Management lease corporate headquarters office space in Plano, Texas.

NAMining leases office and warehouse space in Medley, Florida.

Item 3. LEGAL PROCEEDINGS

Neither the Company nor any of its subsidiaries is a party to any material legal proceeding other than ordinary routine litigation incidental to its respective business.

Item 4. MINE SAFETY DISCLOSURES

Information concerning mine safety violations or other regulatory matters required by Section 1503(a) of The Dodd-Frank Wall Street Reform and Consumer Protection Act and Item 104 of Regulation S-K is included in Exhibit 95 filed with this Form 10-K.

PART II

Item 5. MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

NACCO's Class A common stock is traded on the New York Stock Exchange under the ticker symbol "NC." Because of transfer restrictions, no trading market has developed, or is expected to develop, for the Company's Class B common stock. The Class B common stock is convertible into Class A common stock on a one-for-one basis.

At December 31, 2022, there were 683 Class A common stockholders of record and 120 Class B common stockholders of record.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Issuer Purchases of Equity Securities ⁽¹⁾

<u>Period</u>	(a) Total Number of Shares Purchased	(b) Average Price Paid per Share	(c) Total Number of Shares Purchased as Part of the Publicly Announced Program	(d) Maximum Number of Shares (or Approximate Dollar Value) that May Yet Be Purchased Under the Program ⁽¹⁾
October 1 to 31, 2022	—	\$ —	—	\$ 22,659,516
November 1 to 30, 2022	—	\$ —	—	\$ 22,659,516
December 1 to 31, 2022	—	\$ —	—	\$ 22,659,516
Total	—	\$ —	—	\$ 22,659,516

- (1) On November 10, 2021, the Company's Board of Directors approved a stock purchase program ("2021 Stock Repurchase Program") providing for the purchase of up to \$20.0 million of the Company's outstanding Class A common stock through December 31, 2023. See Note 12 to the Consolidated Financial Statements in this Form 10-K for a discussion of the Company's stock repurchase programs.

Item 6. [RESERVED]

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

NACCO INDUSTRIES, INC. AND SUBSIDIARIES

(Tabular Amounts in Thousands, Except Per Share and Percentage Data)

OVERVIEW

Management's Discussion and Analysis of Financial Condition and Results of Operations contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements are based upon management's current expectations and are subject to various uncertainties and changes in circumstances. Important factors that could cause actual results to differ materially from those described in these forward-looking statements are set forth below under the heading "Forward-Looking Statements."

Management's Discussion and Analysis of Financial Condition and Results of Operations include NACCO Industries, Inc.[®] ("NACCO" or the "Company"). NACCO brings natural resources to life by delivering aggregates, minerals, reliable fuels and environmental solutions through its robust portfolio of NACCO Natural Resources businesses. The Company operates under three business segments: Coal Mining, North American Mining ("NAMining") and Minerals Management. The Coal Mining segment operates surface coal mines for power generation companies. The NAMining segment is a trusted mining partner for producers of aggregates, activated carbon, lithium and other industrial minerals. The Minerals Management segment, which includes the Catapult Mineral Partners ("Catapult") business, acquires and promotes the development of mineral interests. Mitigation Resources of North America[®] ("Mitigation Resources") provides stream and wetland mitigation solutions.

The Company has items not directly attributable to a reportable segment that are not included as part of the measurement of segment operating profit, which primarily includes administrative costs related to public company reporting requirements at the parent company and the financial results of Mitigation Resources and Bellaire Corporation ("Bellaire"). Bellaire manages the Company's long-term liabilities related to former Eastern U.S. underground mining activities.

Effective January 1, 2022, the Company changed the composition of its reportable segments. As a result, the Company retrospectively changed its computation of segment operating profit to reclassify the results of Caddo Creek Resources Company, LLC ("Caddo Creek") and Demery Resources Company, LLC ("Demery") from the Coal Mining segment into the NAMining segment as these operations provide mining solutions for producers of industrial minerals, rather than for power generation. The Coal Mining segment now includes only mines that deliver coal to power generation companies. This segment reporting change has no impact on consolidated operating results. All prior period segment information has been reclassified to conform to the new presentation.

All financial statement line items below operating profit (other income, including interest expense and interest income, the provision for income taxes and net income) are presented and discussed within this Form 10-K on a consolidated basis.

See "Item 1. Business" beginning on page 1 in this Form 10-K for further discussion of NACCO's subsidiaries. Additional information relating to financial and operating data on a segment basis (including unallocated items) is set forth in Note 15 to the Consolidated Financial Statements contained in this Form 10-K.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The Company's discussion and analysis of its financial condition and results of operations are based upon the Company's consolidated financial statements, which have been prepared in accordance with U.S. generally accepted accounting principles. The preparation of these financial statements requires the Company to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities (if any). On an ongoing basis, the Company evaluates its estimates based on historical experience, actuarial valuations and various other assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from those estimates.

The Company believes the following critical accounting policies affect its more significant judgments and estimates used in the preparation of its consolidated financial statements.

Revenue recognition: Revenues are recognized when control of the promised goods or services is transferred to the Company's customers, in an amount that reflects the consideration the Company expects to be entitled to in exchange for those goods or services. The Company accounts for revenue in accordance with Accounting Standards Codification ("ASC") Topic 606, "Revenue from Contracts with Customers." See Note 3 to the Consolidated Financial Statements in this Form 10-K for further discussion of the Company's revenue recognition.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

NACCO INDUSTRIES, INC. AND SUBSIDIARIES

(Tabular Amounts in Thousands, Except Per Share and Percentage Data)

Long-lived assets: The Company periodically evaluates long-lived assets for impairment when changes in circumstances or the occurrence of certain events indicate the carrying amount of an asset may not be recoverable. Upon identification of indicators of impairment, the Company evaluates the carrying value of the asset by comparing the estimated future undiscounted cash flows generated from the use of the asset and its eventual disposition with the asset's net carrying value. If the carrying value of an asset is considered impaired, an impairment charge is recorded for the amount that the carrying value of the long-lived asset exceeds its fair value. Fair value is estimated as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

The Company regularly performs reviews of potential future development projects and identified certain legacy coal assets where future development is unlikely. The long-lived assets, which included land, prepaid royalties and capitalized leasehold costs, were written off in 2022 and resulted in non-cash asset impairment charges of \$3.9 million. See Note 9 to the Consolidated Financial Statements in this Form 10-K for further discussion of the Company's fair value measurements.

At MLMC, the costs of mining operations are not reimbursed by MLMC's customer. As such, increased costs at MLMC or decreased revenues could materially reduce the Company's profitability. Any reduction in customer demand at MLMC, including reductions related to reduced mechanical availability of the customer's power plant, would adversely affect the Company's operating results and could result in significant impairments. MLMC has approximately \$125 million of long-lived assets, including property, plant and equipment and its coal supply agreement intangible asset, which are subject to periodic impairment analysis and review. Identifying and assessing whether impairment indicators exist, or if events or changes in circumstances have occurred, including assumptions about future power plant dispatch levels, changes in operating costs and other factors that impact anticipated revenue and customer demand, requires significant judgment. Actual future operating results could differ significantly from these estimates, which may result in an impairment charge in a future period, which could have a substantial impact on the Company's results of operations.

Income taxes: The Company files income tax returns in the U.S. federal jurisdiction, and in various state and foreign jurisdictions. Tax law requires certain items to be included in the tax return at different times than the items are reflected in the financial statements. Some of these differences are permanent, such as expenses that are not deductible for tax purposes, and some differences are temporary, reversing over time, such as depreciation expense. These temporary differences create deferred tax assets and liabilities using currently enacted tax rates. The objective of accounting for income taxes is to recognize the amount of taxes payable or refundable for the current year, and deferred tax liabilities and assets for the future tax consequences of events that have been recognized in the financial statements or tax returns. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in the provision for income taxes in the period that includes the enactment date. Management is required to estimate the timing of the recognition of deferred tax assets and liabilities, make assumptions about the future deductibility of deferred tax assets and assess deferred tax liabilities based on enacted laws and tax rates for the appropriate tax jurisdictions to determine the amount of such deferred tax assets and liabilities. Changes in the calculated deferred tax assets and liabilities may occur in certain circumstances, including statutory income tax rate changes, statutory tax law changes, or changes in the structure or tax status.

The Company's tax assets, liabilities, and tax expense are supported by historical earnings and losses and the Company's best estimates and assumptions of future earnings. The Company assesses whether a valuation allowance should be established against its deferred tax assets based on consideration of all available evidence, both positive and negative, using a more likely than not standard. This assessment considers, among other matters, scheduled reversals of deferred tax liabilities, projected future taxable income, tax-planning strategies, and results of recent operations. The assumptions about future taxable income require significant judgment and are consistent with the plans and estimates the Company is using to manage the underlying businesses. When the Company determines, based on all available evidence, that it is more likely than not that deferred tax assets will not be realized, a valuation allowance is established.

Since significant judgment is required to assess the future tax consequences of events that have been recognized in the Company's financial statements or tax returns, the ultimate resolution of these events could result in adjustments to the Company's financial statements and such adjustments could be material. The Company believes the current assumptions, judgments and other considerations used to estimate the current year accrued and deferred tax positions are appropriate. If the actual outcome of future tax consequences differs from these estimates and assumptions, due to changes or future events, the resulting change to the provision for income taxes could have a material impact on the Company's results of operations and financial position. Since 2021, the Company has participated in a voluntary program with the IRS called Compliance Assurance Process ("CAP"). The objective of CAP is to contemporaneously work with the IRS to achieve federal tax compliance and resolve all or most issues prior to the filing of the tax return.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

NACCO INDUSTRIES, INC. AND SUBSIDIARIES

(Tabular Amounts in Thousands, Except Per Share and Percentage Data)

See Note 13 to the Consolidated Financial Statements in this Form 10-K for further discussion of the Company's income taxes.

CONSOLIDATED FINANCIAL SUMMARY

The results of operations for NACCO were as follows for the years ended December 31:

	2022	2021
Revenues:		
Coal Mining	\$ 95,204	\$ 82,831
NAMining	85,664	78,944
Minerals Management	60,242	31,003
Unallocated Items	2,952	4,695
Eliminations	(2,343)	(5,627)
Total revenue	<u>\$ 241,719</u>	<u>\$ 191,846</u>
Operating profit (loss):		
Coal Mining	\$ 38,309	\$ 45,784
NAMining	2,202	3,384
Minerals Management	52,214	26,080
Unallocated Items	(23,233)	(19,553)
Eliminations	494	(285)
Total operating profit	<u>\$ 69,986</u>	<u>\$ 55,410</u>
Interest expense	2,034	1,719
Interest income	(1,449)	(449)
Closed mine obligations	1,179	1,297
Loss (gain) on equity securities	283	(3,423)
Income from equity method investee	(2,194)	—
Other contract termination settlements	(16,882)	—
Other, net	(708)	(584)
Other income, net	<u>(17,737)</u>	<u>(1,440)</u>
Income before income tax provision	87,723	56,850
Income tax provision	13,565	8,725
Net income	<u>\$ 74,158</u>	<u>\$ 48,125</u>
Effective income tax rate	15.5 %	15.3 %

The components of the change in revenues and operating profit are discussed below in "Segment Results."

Other income, net

During the second quarter of 2022, GRE transferred ownership of an office building with an estimated fair value of \$4.1 million and conveyed membership units in Midwest AgEnergy Group, LLC ("MAG"), a North Dakota-based ethanol business, with an estimated fair value of \$12.8 million, as agreed to under the termination and release of claims agreement between Falkirk and GRE. As a result, the Company recognized \$16.9 million on the "Other contract termination settlements" line within the accompanying Consolidated Statements of Operations.

Prior to receiving the membership units from GRE, the Company held a \$5.0 million investment in MAG. Subsequent to the receipt of the additional membership units, the Company began to account for the investment under the equity method of

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accounting. During the third quarter of 2022, the Company recorded \$2.2 million, which represented its share of MAG's earnings on the "Income from equity method investee" line within the accompanying Consolidated Statements of Operations.

On December 1, 2022, HLCP Ethanol Holdco, LLC ("HLCP") completed its acquisition of MAG. Upon closing of the transaction, NACCO transferred its ownership interest in MAG to HLCP and received a cash payment of \$18.6 million and recognized a \$1.3 million loss during the fourth quarter of 2022 on the line "Other, net" within the accompanying Consolidated Statements of Operations.

Interest income increased \$1.0 million primarily due to higher interest rates and a higher average invested cash balance during 2022 compared with 2021.

Loss (gain) on equity securities represents changes in the market price of invested assets reported at fair value. The change during 2022 compared with 2021 was due to fluctuations in the market prices of the exchange-traded equity securities. See Note 9 to the Consolidated Financial Statements in this Form 10-K for further discussion of the Company's invested assets reported at fair value.

Income Taxes

Income tax expense of \$13.6 million for the year ended December 31, 2022 includes \$1.5 million of discrete tax benefits, primarily from the reversal of uncertain tax positions as a result of the conclusion of the IRS examination of the Company's 2013, 2014, 2015 and 2016 federal income tax returns. Excluding the \$1.5 million of discrete tax benefits, the effective income tax rate in 2022 was 17.1%.

Income tax expense of \$8.7 million for the year ended December 31, 2021 included \$1.0 million of discrete tax expense. Excluding the \$1.0 million of discrete tax expense, the effective income tax rate in 2021 was 13.5%.

The increase in the effective income tax rate for 2022 compared to 2021, excluding the impact of discrete items, is primarily due to an increase in earnings at entities that do not qualify for percentage depletion. The benefit from percentage depletion is not directly related to the amount of pre-tax income recorded in a period.

See Note 13 to the Consolidated Financial Statements in this Form 10-K for further discussion of the Company's income taxes.

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LIQUIDITY AND CAPITAL RESOURCES

Cash Flows

The following tables detail the change in cash flow for the years ended December 31:

	2022	2021	Change
Operating activities:			
Net income	\$ 74,158	\$ 48,125	\$ 26,033
Depreciation, depletion and amortization	26,816	23,085	3,731
Deferred income taxes	(8,471)	(3,553)	(4,918)
Stock-based compensation	7,541	5,561	1,980
Gain on sale of assets	(2,463)	(60)	(2,403)
Other contract termination settlements	(15,552)	—	(15,552)
Asset impairment charges	3,939	—	3,939
Other	(345)	1,973	(2,318)
Working capital changes	(17,888)	(256)	(17,632)
Net cash provided by operating activities	67,735	74,875	(7,140)
Investing activities:			
Expenditures for property, plant and equipment and acquisition of mineral interests	(54,447)	(44,561)	(9,886)
Proceeds from the sale of assets	2,837	633	2,204
Proceeds from the sale of private company equity units	18,628	—	18,628
Other	(170)	(219)	49
Net cash used for investing activities	(33,152)	(44,147)	10,995
Cash flow before financing activities	\$ 34,583	\$ 30,728	\$ 3,855

The \$7.1 million decrease in net cash provided by operating activities was primarily due to a decrease in cash provided by working capital partially offset by an increase in cash provided by net income adjusted for non-cash items. The \$17.6 million decrease in net cash provided by working capital was primarily due to a decrease in accounts payable during 2022 compared with an increase in accounts payable during 2021 due to timing of purchases and payments. The Company's non-cash items primarily include Depreciation, depletion and amortization, Deferred income taxes, Stock-based compensation, Gain on sale of assets, Other contract termination settlements and Asset impairment charges.

	2022	2021	Change
Financing activities:			
Net reductions to long-term debt and revolving credit agreements	\$ (3,828)	\$ (25,801)	\$ 21,973
Cash dividends paid	(6,012)	(5,617)	(395)
Other	—	(1,755)	1,755
Net cash used for financing activities	\$ (9,840)	\$ (33,173)	\$ 23,333

The change in net cash used for financing activities was primarily due to fewer repayments as a result of a reduction in borrowings under the Company's revolving line of credit during 2022 compared with 2021.

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Financing Activities

Financing arrangements are obtained and maintained at the subsidiary level. NACoal has a secured revolving line of credit of up to \$150.0 million (the "NACoal Facility") that expires in November 2025. There were no borrowings outstanding under the NACoal Facility at December 31, 2022. At December 31, 2022, the excess availability under the NACoal Facility was \$116.3 million, which reflects a reduction for outstanding letters of credit of \$33.7 million.

NACCO has not guaranteed any borrowings of NACoal. The NACoal Facility allows for the payment to NACCO of dividends and advances under certain circumstances. Dividends (to the extent permitted by the NACoal Facility) and management fees are the primary sources of cash for NACCO and enable the Company to pay dividends to stockholders.

The NACoal Facility has performance-based pricing, which sets interest rates based upon NACoal achieving various levels of debt to EBITDA ratios, as defined in the NACoal Facility. Borrowings bear interest at a floating rate plus a margin based on the level of debt to EBITDA ratio achieved. The applicable margins, effective December 31, 2022, for base rate and LIBOR loans were 1.23% and 2.23%, respectively. The NACoal Facility has a commitment fee which is based upon achieving various levels of debt to EBITDA ratios. The commitment fee was 0.34% on the unused commitment at December 31, 2022. During the year ended December 31, 2022, the average borrowing under the NACoal Facility was \$2.0 million. The weighted-average annual interest rate, including the floating rate margin, was 2.54% and 4.50% at December 31, 2022 and December 31, 2021, respectively.

The NACoal Facility contains restrictive covenants, which require, among other things, NACoal to maintain a maximum net debt to EBITDA ratio of 2.75 to 1.00 and an interest coverage ratio of not less than 4.00 to 1.00. The NACoal Facility provides the ability to make loans, dividends and advances to NACCO, with some restrictions based on maintaining a maximum debt to EBITDA ratio of 1.50 to 1.00, or if greater than 1.50 to 1.00, a Fixed Charge Coverage Ratio of 1.10 to 1.00, in conjunction with maintaining unused availability thresholds of borrowing capacity, as defined in the NACoal Facility, of \$15.0 million. At December 31, 2022, NACoal was in compliance with all financial covenants in the NACoal Facility.

The obligations under the NACoal Facility are guaranteed by certain of NACoal's direct and indirect, existing and future domestic subsidiaries, and is secured by certain assets of NACoal and the guarantors, subject to customary exceptions and limitations.

The Company believes funds available from cash on hand, the NACoal Facility and operating cash flows will provide sufficient liquidity to meet its operating needs and commitments arising during the next twelve months and until the expiration of the NACoal Facility in November 2025.

See Note 8 and Note 10 to the Consolidated Financial Statements in this Form 10-K for further information on the Company's other financing arrangements and leases, respectively.

Expenditures for property, plant and equipment and mineral interests

Following is a table which summarizes actual and planned expenditures (in millions):

	Planned 2023	Actual 2022	Actual 2021
NACCO	\$ 71.5	\$ 54.4	\$ 44.6

Planned expenditures for 2023 are expected to be approximately \$39 million in the NAMining segment, \$21 million in the Minerals Management segment, \$10 million in the Coal Mining segment and \$1 million at Mitigation Resources.

In the NAMining segment, 2023 capital expenditures are primarily related to the acquisition of equipment to be used at the Thacker Pass lithium project. Sawtooth is the contract miner for the Thacker Pass project. Under the terms of the contract mining agreement, the customer will reimburse Sawtooth for these capital expenditures over a five-year period from the equipment acquisition date.

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Expenditures are expected to be funded from internally generated funds and/or bank borrowings.

Capital Structure

NACCO's consolidated capital structure is presented below:

	December 31		Change
	2022	2021	
Cash and cash equivalents	\$ 110,748	\$ 86,005	\$ 24,743
Other net tangible assets	329,045	276,733	52,312
Intangible assets, net	28,055	31,774	(3,719)
Net assets	467,848	394,512	73,336
Total debt	(19,668)	(20,710)	1,042
Closed mine obligations	(21,214)	(21,686)	472
Total equity	\$ 426,966	\$ 352,116	\$ 74,850
Debt to total capitalization	4 %	6 %	(2)%

The \$52.3 million increase in other net tangible assets was primarily due to an increase in Property, plant and equipment including mineral interests and investments at Mitigation Resources, an increase in Inventories and an increase in Trade accounts receivable at December 31, 2022 compared with December 31, 2021. Inventories increased in the Coal Mining segment as MLMC is developing a new mine area and building inventory and in the NAMining segment due to an increase in supplies inventory. Trade accounts receivable increased due to higher customer requirements at MLMC.

Contractual Obligations, Contingent Liabilities and Commitments

Pension and postretirement funding can vary significantly each year due to plan amendments, changes in the market value of plan assets, legislation and the Company's decisions to contribute above the minimum regulatory funding requirements. The Company does not expect to contribute to its pension plan in 2023. NACCO maintains one supplemental retirement plan that pays monthly benefits to participants directly out of corporate funds and expects to pay benefits of approximately \$0.4 million per year from 2023 through 2032. Benefit payments beyond that time cannot currently be estimated. NACCO also expects to make payments related to its other postretirement plans of approximately \$0.2 million per year from 2023 through 2032. Benefit payments beyond that time cannot currently be estimated. All other pension benefit payments are made from assets of the pension plan.

NACCO has asset retirement obligations. See Note 7 to the Consolidated Financial Statements in this Form 10-K for further discussion of the Company's asset retirement obligations.

NACCO has unrecognized tax benefits, including interest and penalties. See Note 13 to the Consolidated Financial Statements in this Form 10-K for further discussion of the Company's income taxes.

NACoal is a party to certain guarantees related to Coyote Creek. The Company believes that the likelihood of NACoal's future performance under the guarantees is remote, and no amounts related to these guarantees have been recorded. See Note 16 to the Consolidated Financial Statements in this Form 10-K for further discussion of the Company's guarantees.

The Company utilizes letters of credit to support commitments made in the ordinary course of business. As of December 31, 2022 and 2021, outstanding letters of credit totaled \$33.7 million and \$29.8 million, respectively.

ENVIRONMENTAL MATTERS

The Company is affected by the regulations of numerous agencies, particularly the Federal Office of Surface Mining, the U.S. Environmental Protection Agency, the U.S. Army Corps of Engineers and associated state regulatory authorities. In addition, the Company closely monitors proposed legislation and regulation concerning SMCRA, CAA, ACE, CWA, RCRA, CERCLA and other regulatory actions.

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Compliance with these increasingly stringent regulations could result in higher expenditures for both capital improvements and operating costs. The Company's policies stress environmental responsibility and compliance with these regulations. Based on current information, management does not expect compliance with these regulations to have a material adverse effect on the Company's financial condition or results of operations. See Item 1 in Part I of this Form 10-K for further discussion of these matters.

Certain states have enacted, and others are considering enacting, mandatory clean energy standards requiring utilities to meet certain thresholds of renewable and/or carbon-free energy supply. The current presidential administration has made climate change a focus, including consideration for legislation on clean energy standards and GHG emission, and the Company expects that to continue. The Company believes the move to require utilities to generate a greater portion of energy from renewable energy sources could create imbalances in the existing electric grid if fossil-fuel power plants are retired faster than renewable sources are developed resulting in electrical grid disruptions and outages. The Company will continue to monitor the progress of these initiatives and assess the potential impacts they may have on its financial condition, results of operations and disclosures.

SEGMENT RESULTS

COAL MINING SEGMENT

FINANCIAL REVIEW

See "Item 2. Properties" on page 28 in this Form 10-K for discussion of the Company's mineral resources and mineral reserves.

Tons of coal delivered by the Coal Mining segment were as follows for the years ended December 31:

	2022	2021
Unconsolidated mines	25,236	27,759
Consolidated mines	3,215	3,025
Total tons delivered	28,451	30,784

The results of operations for the Coal Mining segment were as follows for the years ended December 31:

	2022	2021
Revenues	\$ 95,204	\$ 82,831
Cost of sales	89,670	72,596
Gross profit	5,534	10,235
Earnings of unconsolidated operations ^(a)	52,535	56,089
Contract termination settlement	14,000	10,333
Selling, general and administrative expenses	30,049	27,363
Amortization of intangible assets	3,719	3,556
Gain on sale of assets	(8)	(46)
Operating profit	\$ 38,309	\$ 45,784

^(a) See Note 16 to the Consolidated Financial Statements in this Form 10-K for a discussion of the Company's unconsolidated subsidiaries, including summarized financial information.

2022 Compared with 2021

Revenues increased 14.9% in 2022 compared with 2021 primarily due to a higher per ton sales price and an increase in customer requirements at MLMC.

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The following table identifies the components of change in operating profit for 2022 compared with 2021:

	Operating Profit
2021	\$ 45,784
Increase (decrease) from:	
Gross profit	(4,701)
Earnings of unconsolidated operations	(3,554)
Selling, general and administrative expenses	(2,686)
Amortization of intangibles	(163)
Net change on sale of assets	(38)
Contract termination settlements in 2022 and 2021, net	3,667
2022	\$ 38,309

Operating profit decreased \$7.5 million in 2022 compared with 2021. The change in operating profit was primarily due to a decrease in gross profit, a decrease in the earnings of unconsolidated operations and an increase in selling, general and administrative expenses.

The decrease in gross profit was primarily due to an increase in the cost per ton delivered at MLMC, due in part to an increase in the cost of diesel fuel.

The decrease in earnings of unconsolidated operations was primarily due to a reduction in the per ton management fee at Falkirk as well as a reduction in earnings as a result of the Bisti contract termination as of September 30, 2021. These decreases were partially offset by a contractual price escalation and an increase in customer requirements at Coteau.

The increase in selling, general and administrative expenses was primarily due to higher employee-related costs and professional service expenses.

The decreases in operating profit were partially offset by an increase in contract termination settlements. The \$14.0 million contract termination settlement from GRE was recognized during 2022. The \$10.3 million payment related to the Bisti contract termination was recognized during 2021.

NORTH AMERICAN MINING ("NAMining") SEGMENT

FINANCIAL REVIEW

Aggregate tons delivered by the NAMining segment were as follows for the years ended December 31:

	2022	2021
Total tons delivered	54,223	52,796

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The results of operations for the NAMining segment were as follows for the years ended December 31:

	2022	2021
Total revenues	\$ 85,664	\$ 78,944
Reimbursable costs	52,935	51,028
Revenues excluding reimbursable costs	<u>\$ 32,729</u>	<u>\$ 27,916</u>
Revenues	\$ 85,664	\$ 78,944
Cost of sales	79,842	73,649
Gross profit	5,822	5,295
Earnings of unconsolidated operations ^(a)	4,715	4,754
Selling, general and administrative expenses	8,260	6,610
Loss on sale of assets	75	55
Operating profit	<u>\$ 2,202</u>	<u>\$ 3,384</u>

^(a) See Note 16 to the Consolidated Financial Statements in this Form 10-K for a discussion of the Company's unconsolidated subsidiaries, including summarized financial information.

2022 Compared with 2021

Total revenues increased 8.5% in 2022 compared with 2021 primarily due to an increase in customer requirements as well as reimbursable costs, which have an offsetting amount in cost of sales and have no impact on operating profit. These improvements were partially offset by a reduction in revenue at Caddo Creek as the scope of final reclamation activities declined.

The following table identifies the components of change in operating profit for 2022 compared with 2021.

	Operating Profit
2021	\$ 3,384
Increase (decrease) from:	
Selling, general and administrative expenses	(1,413)
Voluntary retirement program charge	(769)
Earnings of unconsolidated operations	(39)
Net change on sale of assets	(20)
Gross profit	1,059
2022	<u>\$ 2,202</u>

Operating profit decreased \$1.2 million in 2022 compared with 2021 primarily due to an increase in selling, general and administrative expenses and a voluntary retirement program charge, partially offset by an increase in gross profit.

During 2022, the Company implemented a voluntary retirement program for employees who met certain age and service requirements to reduce overall headcount. As a result of this program, operating profit in 2022 includes a charge of \$0.8 million related to one-time termination benefits. The increase in selling, general and administrative expenses was primarily due to higher employee-related costs.

The increase in gross profit was primarily attributable to water sales at Caddo Creek as well as an increase in earnings at Sawtooth Mining for the Thacker Pass lithium project, partially offset by a decrease in gross profit from the active operations mainly due to an increase in employee-related costs.

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The results of operations for the Minerals Management segment were as follows for the years ended December 31:

	2022	2021
Revenues	\$ 60,242	\$ 31,003
Cost of sales	3,935	2,988
Gross profit	56,307	28,015
Selling, general and administrative expenses and asset impairment charges	6,623	2,004
Gain on sale of assets	(2,530)	(69)
Operating profit	\$ 52,214	\$ 26,080

During 2022, the oil and natural gas industry experienced continued improvement in commodity prices compared with 2021, primarily due to:

- Higher demand as the impact from COVID-19 abates;
- Changes in domestic supply and demand dynamics as well as increased discipline around production and capital investments by oil and gas companies; and
- Instability and constraints on global supply, particularly with respect to instability in Russia and Ukraine.

Oil and natural gas prices have been historically volatile and may continue to be volatile in the future. The table below demonstrates such volatility with the average price as reported by the United States Energy Information Administration for the twelve months ended December 31:

	2022	2021
West Texas Intermediate Average Crude Oil Price	\$ 94.79	\$ 67.99
Henry Hub Average Natural Gas Price	\$ 6.42	\$ 3.91

Revenues and operating profit increased in 2022 compared with 2021 primarily due to substantially higher natural gas and oil prices, increased production due in part to income generated from newly developed wells on Company leases during 2022, as well as \$2.1 million of settlement income recognized during 2022. The settlement relates to the Company's ownership interest in certain mineral rights. In addition, operating profit includes a \$2.4 million gain on the sale of land related to legacy operations during 2022.

The Company regularly performs reviews of potential future development projects and identified certain legacy coal assets where future development is unlikely. The long-lived assets, which included land, prepaid royalties and capitalized leasehold costs, were written off during 2022 and resulted in non-cash asset impairment charges of \$3.9 million.

UNALLOCATED ITEMS AND ELIMINATIONS**FINANCIAL REVIEW**

Unallocated Items and Eliminations were as follows for the years ended December 31:

	2022	2021
Operating loss	\$ (22,739)	\$ (19,838)

2022 Compared with 2021

The operating loss increased during 2022 compared with 2021 primarily due to higher employee-related costs.

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NACCO Industries, Inc. Outlook

Coal Mining Outlook

In 2023, the Company expects coal deliveries to decrease from 2022 levels. The owner of the power plant served by the Company's Sabine Mine in Texas plans to retire the Pirkey power plant in 2023. The cessation of Sabine deliveries starting effective April 1, 2023 is the primary driver for the year-over-year decline in deliveries.

Coal Mining operating profit and Segment Adjusted EBITDA for the 2023 full year are expected to decrease significantly year-over-year, including and excluding the \$14.0 million GRE termination payment received in 2022. The decline is primarily the result of an expected significant reduction in earnings at the consolidated operations, an anticipated moderate decrease in earnings of unconsolidated operations and higher operating expenses due to an increase in insurance and outside services expenses.

Results at the consolidated mining operations are projected to decrease significantly in 2023 versus 2022. The decrease is mainly due to an expected substantial decline in earnings at MLMC driven by a reduction in the profit per ton of coal delivered, due in part to increased costs associated with establishing operations in a new mine area, as well as higher depreciation expense related to recent capital expenditures to develop a new mine area. In 2023, capital expenditures are expected to be approximately \$10 million, primarily for mine development and equipment replacement. MLMC sells lignite at contractually agreed upon prices which are subject to changes in the level of established indices generally reflecting inflation over time. The increase in production costs will not be offset by an immediate increase in the revenue generated from contractual price escalation as there is a lag in the timing of the effect of inflation on the index-based coal sales price. In addition, certain costs can be passed through to the customer in the year following expense recognition.

The anticipated lower earnings at the unconsolidated coal mining operations is expected to be driven primarily by temporary price concessions at Falkirk effective May 2022 through May 2024. This will result in a reduction in the per ton management fee for 12 months in 2023 compared with eight months in 2022. The planned retirement of the Pirkey power plant and commencement of final reclamation of the Sabine Mine starting on April 1, 2023 will also contribute to the reduction in earnings. Sabine will receive compensation for providing final mine reclamation services, but at a lower rate than during active mining. Funding for Sabine's mine reclamation is the responsibility of the customer. These decreases are expected to be partly offset by higher earnings at Coteau.

The Company's contract structure at each of its coal mining operations eliminates exposure to spot coal market price fluctuations. However, fluctuations in natural gas prices and the availability of renewable power generation, particularly wind, can contribute to changes in power plant dispatch and customer demand for coal. Changes to customer power plant dispatch would affect the Company's outlook for 2023, as well as over the longer term.

NAMining Outlook

Full-year 2023 operating profit at NAMining is expected to decrease significantly primarily because final mine reclamation activities at Caddo Creek were substantially completed in 2022. Segment Adjusted EBITDA, however, is expected to increase over 2022 because of a significant unfavorable impact on operating profit from higher depreciation expense.

NAMining's 2022 financial results did not meet expectations. A number of initiatives are underway or in planning stages that are expected to support improved future financial results at NAMining's mining operations. Until profit improves at existing operations, NAMining has narrowed its business development efforts.

In 2023, NAMining capital expenditures are expected to be approximately \$39 million primarily for the acquisition of equipment to support the Thacker Pass lithium project.

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Minerals Management Outlook

The Minerals Management segment derives income from royalty-based leases under which lessees make payments to the Company based on their sale of natural gas, oil, natural gas liquids and coal, extracted primarily by third parties. Changing prices of natural gas and oil have a significant impact on Minerals Management's operating profit.

In 2023, operating profit and Segment Adjusted EBITDA are expected to decrease significantly compared with 2022. This decrease is primarily driven by current market expectations for natural gas and oil prices, an anticipated reduction in volumes as existing wells follow their natural production decline and modest expectations for development of new wells by third-party exploration and production companies.

Based on market expectations, the Company's forecast assumes oil and gas market prices moderate in 2023 to levels in line with 2021 averages; however, commodity prices are inherently volatile. The actions of OPEC, the Russia-Ukraine conflict, inventory levels of natural gas and oil and the uncertainty associated with demand, as well as other factors, have the potential to impact future oil and gas prices. An increase in natural gas and oil prices above current expectations could result in improvements to the 2023 forecast.

As an owner of royalty and mineral interests, the Company's access to information concerning activity and operations with respect to its interests is limited. The Company's expectations are based on the best information currently available and could vary positively or negatively as a result of adjustments made by operators, additional leasing and development and/or changes to commodity prices. Development of additional wells on existing interests in excess of current expectations could be accretive to future results.

Minerals Management is targeting additional investments in mineral and royalty interests of up to \$20 million in 2023. Future investments are expected to be accretive, but each investment's contribution to near-term earnings is dependent on the details of that investment, including the size and type of interests acquired and the stage and timing of mineral development.

Consolidated Outlook

Management continues to view the long-term business outlook for NACCO positively, despite an expected significant decrease in 2023 consolidated net income versus 2022. A substantial portion of the expected reduction in 2023 earnings is because 2022 included \$30.9 million of pre-tax contract termination income.

Excluding the contract termination settlement income recognized in the 2022 second quarter, net income in the first half of 2023 is still expected to be significantly lower than the first half of 2022. The decrease is primarily driven by an expected significant reduction in earnings at the Coal Mining and Minerals Management segments in the first half of 2023 versus the prior-year period. At the Coal Mining segment, an anticipated reduction in inventory levels during the first half of 2023 will result in a higher cost per ton and lower earnings at MLMC. In addition, a reduction in earnings from the unconsolidated mines, primarily Falkirk, is also contributing to the decrease. At Minerals Management, the decrease in the first half of 2023 is primarily driven by an expected significant reduction in commodity prices from historically high price levels in the first half of 2022. While consolidated net income in the second half of 2023 is expected to increase over the first half of 2023, it is expected to decline significantly versus the prior-year second half. Overall, 2023 consolidated net income is expected to decrease substantially versus 2022. These reductions are expected to be partially offset by lower income tax expense. The Company expects an effective income tax rate between 2% and 5% in 2023.

Mitigation Resources of North America[®] continued to build on the substantial foundation established over the past several years and ended 2022 with eight mitigation banks and four permittee-responsible mitigation projects located in Tennessee, Mississippi, Alabama and Texas. Mitigation Resources was recently named a designated provider of abandoned mine land restoration by the State of Texas. It plans to provide ecological restoration services for abandoned surface mines as well as pursue additional environmental restoration projects during 2023.

In 2023, the Company expects capital expenditures of approximately \$50 million, excluding Minerals Management. Minerals Management is targeting investments of up to \$20 million. Future investments at Minerals Management are expected to continue to align with the Company's strategy and objectives to establish a blended portfolio of mineral and royalty interests.

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As a result of the forecasted capital expenditures and anticipated substantial decrease in net income, cash flow before financing activities in 2023 is expected to be positive but decline significantly from 2022.

Long-Term Growth and Diversification Outlook

The Company is pursuing growth and diversification by strategically leveraging its core mining and natural resources management skills to build a strong portfolio of affiliated businesses. Management continues to be optimistic about the long-term outlook. In the Minerals Management segment, as well as in the Company's Mitigation Resources business, opportunities for growth remain strong. Acquisitions of additional mineral interests, an improvement in the outlook for the Company's largest Coal Mining segment customers and securing contracts for Mitigation Resources and new NAMining projects could be accretive to the Company's outlook. Additional business development expenditures will be incurred as part of this growth and would provide a partial offset to the additional income.

The Minerals Management segment continues to pursue acquisitions of mineral and royalty interests in the United States. The Minerals Management segment expects to benefit from the continued development of its mineral properties without additional capital investment, as development costs are borne entirely by third-party exploration and development companies who lease the minerals. This business model can deliver higher average operating margins over the life of a reserve than traditional oil and gas companies that bear the cost of exploration, production and/or development. Catapult, the Company's business unit focused on managing and expanding the Company's portfolio of oil and gas mineral and royalty interests, has developed a strong network to source and secure new acquisitions. The goal is to construct a high-quality diversified portfolio of oil and gas mineral and royalty interests in the United States that deliver near-term cash flow yields and long-term projected growth. The Company believes this business will provide unlevered after-tax returns on invested capital in the mid-teens as this business model matures.

The Company remains committed to expanding the NAMining business while improving profitability. NAMining intends to be a substantial contributor to operating profit over time. The pace of achieving that objective will be dependent on the execution and successful implementation of profit improvement initiatives in the aggregates operations, and the mix and scale of new projects. The Sawtooth Mining lithium project is expected to contribute more significantly when production commences at Thacker Pass.

Sawtooth Mining has a mining services agreement to serve as the exclusive contract miner for the Thacker Pass lithium project in northern Nevada, owned by Lithium Nevada Corp., a subsidiary of Lithium Americas Corp. (TSX: LAC) (NYSE: LAC). Lithium Americas owns the lithium reserves at Thacker Pass. In January 2023, Lithium Americas and General Motors announced that they will jointly invest to develop the Thacker Pass project. According to Lithium Americas, the GM agreement is a major milestone in moving Thacker Pass toward production. On March 2, 2023, Lithium Americas announced that construction has commenced. Phase 1 production is projected to begin in the second half of 2026. Sawtooth Mining plans to begin acquiring equipment for this project in 2023. Under the terms of the contract mining agreement, Lithium Americas will reimburse Sawtooth for these capital expenditures over a five-year period from the equipment acquisition date. Sawtooth will be reimbursed for all costs of mine construction plus a construction fee. The Company expects to recognize moderate income in 2024 and 2025 prior to commencement of production in 2026. Once production commences, Sawtooth will receive a management fee per metric ton of lithium delivered. At maturity, this contract is expected to deliver fee income similar to a mid-sized management fee coal mine.

Mitigation Resources continues to expand its business, which creates and sells stream and wetland mitigation credits and provides services to those engaged in permittee-responsible mitigation as well as provides other environmental restoration services. This business offers an opportunity for growth and diversification in an industry where the Company has substantial knowledge and expertise and a strong reputation. Mitigation Resources is making strong progress toward its goal of becoming a top ten provider of stream and wetland mitigation services in the southeastern United States. The Company believes that Mitigation Resources can provide solid rates of return as this business matures.

The Company also continues to pursue activities which can strengthen the resiliency of its existing coal mining operations. The Company remains focused on managing coal production costs and maximizing efficiencies and operating capacity at mine locations to help customers with management fee contracts be more competitive. These activities benefit both customers and the Company's Coal Mining segment, as fuel cost is a significant driver for power plant dispatch. Increased power plant

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

NACCO INDUSTRIES, INC. AND SUBSIDIARIES

(Tabular Amounts in Thousands, Except Per Share and Percentage Data)

dispatch results in increased demand for coal by the Coal Mining segment's customers. Fluctuating natural gas prices and availability of renewable energy sources, such as wind and solar, could affect the amount of electricity dispatched from coal-fired power plants. While the Company realizes the coal mining industry faces political and regulatory challenges and demand for coal is projected to decline over the longer-term, the Company believes coal will be an essential part of the energy mix in the United States for the foreseeable future. Subsequent to 2023, the Coal Mining segment expects increased profitability compared with 2023 expectations due in part to improvements at Falkirk and MLMC. At Falkirk, the temporary price concessions end in June 2024. At MLMC, the move to a new mine area will be completed during 2023, and as a result, cost per ton delivered in 2024 is expected to moderate. In addition, certain costs incurred at MLMC in 2023 will be passed through to the customer and included in revenues in 2024.

The Company continues to look for ways to create additional value by utilizing its core mining competencies which include reclamation and permitting. One such way the Company may be able to utilize these skills is through development of utility-scale solar projects on reclaimed mining properties. Reclaimed mining properties offer large tracts of land that could be well-suited for solar and other energy-related projects. These projects could be developed by the Company itself or through joint ventures that include partners with expertise in energy development projects.

The Company is committed to maintaining a conservative capital structure as it continues to grow and diversify, while avoiding unnecessary risk. Strategic diversification will generate cash that can be re-invested to strengthen and expand the businesses. The Company also continues to maintain the highest levels of customer service and operational excellence with an unwavering focus on safety and environmental stewardship.

RECENTLY ISSUED ACCOUNTING STANDARDS

See Note 2 to the Consolidated Financial Statements in this Form 10-K for a description of recently issued accounting standards, if any, including actual and expected dates of adoption and effects to the Company's Consolidated Financial Statements.

Item 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

NACCO INDUSTRIES, INC. AND SUBSIDIARIES

(Tabular Amounts in Thousands, Except Per Share and Percentage Data)

FORWARD-LOOKING STATEMENTS

The statements contained in “Management’s Discussion and Analysis of Financial Condition and Results of Operations” and elsewhere throughout this Annual Report on Form 10-K that are not historical facts are “forward-looking statements” within the meaning of Section 27A of the Securities Act of 1933 and Section 21E of the Securities Exchange Act of 1934. These forward-looking statements are made subject to certain risks and uncertainties, which could cause actual results to differ materially from those presented. Readers are cautioned not to place undue reliance on these forward-looking statements, which speak only as of the date hereof. The Company undertakes no obligation to publicly revise these forward-looking statements to reflect events or circumstances that arise after the date hereof. Among the factors that could cause plans, actions and results to differ materially from current expectations are, without limitation: (1) changes to or termination of customer or other third-party contracts, or a customer or other third party default under a contract, (2) any customer's premature facility closure, (3) a significant reduction in purchases by the Company's customers, including as a result of changes in coal consumption patterns of U.S. electric power generators, or changes in the power industry that would affect demand for the Company's coal and other mineral reserves, (4) changes in the prices of hydrocarbons, particularly diesel fuel, natural gas, natural gas liquids and oil, (5) failure or delays by the Company's lessees in achieving expected production of natural gas and other hydrocarbons; the availability and cost of transportation and processing services in the areas where the Company's oil and gas reserves are located; federal and state legislative and regulatory initiatives relating to hydraulic fracturing; and the ability of lessees to obtain capital or financing needed for well-development operations and leasing and development of oil and gas reserves on federal lands, (6) failure to obtain adequate insurance coverages at reasonable rates, (7) supply chain disruptions, including price increases and shortages of parts and materials, (8) changes in tax laws or regulatory requirements, including the elimination of, or reduction in, the percentage depletion tax deduction, changes in mining or power plant emission regulations and health, safety or environmental legislation, (9) the ability of the Company to access credit in the current economic environment, or obtain financing at reasonable rates, or at all, and to maintain surety bonds for mine reclamation as a result of current market sentiment for fossil fuels, (10) impairment charges, (11) the effects of investors’ and other stakeholders’ increasing attention to environmental, social and governance matters, (12) changes in costs related to geological and geotechnical conditions, repairs and maintenance, new equipment and replacement parts, fuel or other similar items, (13) regulatory actions, changes in mining permit requirements or delays in obtaining mining permits that could affect deliveries to customers, (14) weather conditions, extended power plant outages, liquidity events or other events that would change the level of customers' coal or aggregates requirements, (15) weather or equipment problems that could affect deliveries to customers, (16) changes in the costs to reclaim mining areas, (17) costs to pursue and develop new mining, mitigation and oil and gas opportunities and other value-added service opportunities, (18) delays or reductions in coal or aggregates deliveries, (19) the ability to successfully evaluate investments and achieve intended financial results in new business and growth initiatives, (20) disruptions from natural or human causes, including severe weather, accidents, fires, earthquakes and terrorist acts, any of which could result in suspension of operations or harm to people or the environment, and (21) the ability to attract, retain, and replace workforce and administrative employees.

Item 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

As a “smaller reporting company” as defined by Rule 12b-2 of the Securities Exchange Act of 1934, the Company is not required to provide this information.

Item 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

The information required by this Item 8 is set forth in the Financial Statements and Supplementary Data contained in Part IV of this Form 10-K and is hereby incorporated herein by reference to such information.

Item 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

There were no disagreements with accountants on accounting and financial disclosure for the two-year period ended December 31, 2022 that require disclosure pursuant to this Item 9.

Item 9A. CONTROLS AND PROCEDURES

Evaluation of disclosure controls and procedures: An evaluation was carried out under the supervision and with the participation of the Company's management, including the principal executive officer and the principal financial officer, of the effectiveness of the Company's disclosure controls and procedures as of the end of the period covered by this report. Based on that evaluation, these officers have concluded that the Company's disclosure controls and procedures are effective.

Management's report on internal control over financial reporting: Management is responsible for establishing and maintaining adequate internal control over financial reporting. Under the supervision and with the participation of management, including the principal executive officer and principal financial officer, the Company conducted an evaluation of the effectiveness of internal control over financial reporting based on the framework in Internal Control — Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework). Based on this evaluation under the framework, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2022. The Company's effectiveness of internal control over financial reporting as of December 31, 2022 has been audited by Ernst & Young LLP, an independent registered public accounting firm, as stated in its report, which is included in Item 15 of this Form 10-K and incorporated herein by reference.

Changes in internal control: There have been no changes in the Company's internal control over financial reporting, that occurred during the fourth quarter of 2022, that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

Item 9B. OTHER INFORMATION

None.

Item 9C. DISCLOSURE REGARDING FOREIGN JURISDICTIONS THAT PREVENT INSPECTIONS

None.

PART III

Item 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information with respect to Directors of the Company will be set forth in the 2023 Proxy Statement under the subheadings “Part III — Proposals To Be Voted On At The 2023 Annual Meeting — Proposal 1 — Election of Directors,” which information is incorporated herein by reference.

Information with respect to the audit review committee and the audit review committee financial expert will be set forth in the 2023 Proxy Statement under the subheading “Part I — Corporate Governance Information — Directors' Meetings and Committees,” which information is incorporated herein by reference.

Information with respect to compliance with Section 16(a) of the Securities Exchange Act of 1934 by the Company's Directors, executive officers and holders of more than ten percent of the Company's equity securities will be set forth in the 2023 Proxy Statement under the subheading “Part IV — Other Important Information,” which information is incorporated herein by reference.

The Company has adopted a code of business conduct and ethics applicable to all Company personnel, including the principal executive officer, principal financial officer, principal accounting officer or controller, or other persons performing similar functions. The code of business conduct and ethics, entitled the “Code of Corporate Conduct,” is posted on the Company's website at www.nacco.com under “Corporate Governance.” If the Company makes any amendments to or grants any waivers from the code of business conduct and ethics which are required to be disclosed pursuant to the Securities and Exchange Act of 1934, the Company will make such disclosure on the NACCO website.

Item 11. EXECUTIVE COMPENSATION

Information with respect to executive compensation will be set forth in the 2023 Proxy Statement under the headings “Part II — Executive Compensation Information” and “Part III — Proposals To Be Voted On At The 2023 Annual Meeting — Proposal 1 — Election of Directors,” which information is incorporated herein by reference.

Item 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Information with respect to security ownership of certain beneficial owners and management will be set forth in the 2023 Proxy Statement under the subheading “Part IV — Other Important Information — Beneficial Ownership of Class A Common and Class B Common,” which information is incorporated herein by reference.

Information with respect to compensation plans (including individual compensation arrangements) under which equity securities are authorized for issuance will be set forth in the 2023 Proxy Statement under the subheading “Part IV — Other Important Information — Equity Compensation Plan Information,” which information is incorporated herein by reference.

Item 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

Information with respect to certain relationships and related transactions will be set forth in the 2023 Proxy Statement under the subheadings “Part I — Corporate Governance Information — Review and Approval of Related-Person Transactions,” which information is incorporated herein by reference.

Item 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

Information with respect to principal accountant fees and services will be set forth in the 2023 Proxy Statement under the heading “Part III — Proposals To Be Voted On At The 2023 Annual Meeting — Proposal 3 — Ratification of the Appointment of Company's Independent Registered Public Accounting Firm,” which information is incorporated herein by reference.

PART IV

Item 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

- (a) (1) and (2) The response to Item 15(a)(1) and (2) is set forth beginning at page F-1 of this Form 10-K.
- (b) Financial Statement Schedules — The response to Item 15(c) is set forth beginning at page F-41 of this Form 10-K.
- (c) Exhibits required by Item 601 of Regulation S-K

Exhibit Number	Exhibit Description
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(3) Articles of Incorporation and By-laws.

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| 3.1(i) | Restated Certificate of Incorporation of the Company is incorporated herein by reference to Exhibit 3(i) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1992, Commission File Number 1-9172. |
| 3.1(ii) | Amended and Restated By-laws of the Company are incorporated herein by reference to Exhibit 3.1 to the Company's Current Report on Form 8-K, filed by the Company on December 18, 2014, Commission File Number 1-9172. |

(4) Instruments defining the rights of security holders, including indentures.

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| 4.1 | The Company by this filing agrees, upon request, to file with the Securities and Exchange Commission the instruments defining the rights of holders of long-term debt of the Company and its subsidiaries where the total amount of securities authorized thereunder does not exceed 10% of the total assets of the Company and its subsidiaries on a consolidated basis. |
| 4.2 | The Mortgage and Security Agreement, dated April 8, 1976, between The Falkirk Mining Company (as Mortgagor) and Cooperative Power Association and United Power Association (collectively, as Mortgagee) is incorporated herein by reference to Exhibit 4(ii) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1992, Commission File Number 1-9172. |
| 4.3 | Amendment No. 1 to the Mortgage and Security Agreement, dated as of December 15, 1993, between Falkirk Mining Company (as Mortgagor) and Cooperative Power Association and United Power Association (collectively, as Mortgagee) is incorporated herein by reference to Exhibit 4(iii) to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 1997, Commission File Number 1-9172. |
| 4.4 | Amended and Restated Stockholders' Agreement, dated as of September 29, 2017, among NACCO Industries, Inc., the other signatories thereto and NACCO Industries, Inc., as depository, is incorporated by reference to Exhibit 10.4 to the Company's Current Report on Form 8-K, filed by the Company on October 5, 2017, Commission File Number 1-9172. |
| 4.5 | Amendment to Amended and Restated Stockholders' Agreement, dated as of February 14, 2019, among NACCO Industries, Inc., the other signatories thereto and NACCO Industries, Inc., as depository, is incorporated by reference to Exhibit 4.5 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2018, Commission File Number 1-9172. |
| 4.6 | Second Amendment to Amended and Restated Stockholders' Agreement, dated as of February 12, 2021, by and among the Depository, NACCO Industries, Inc., the new Participating Stockholders identified on the signature pages thereto and the Participating Stockholders under the Amended and Restated Stockholders' Agreement, dated as of September 29, 2017, as amended, is incorporated by reference to Exhibit 99.60 of the Company's General statement of acquisition of beneficial ownership on Form SC 13D, filed on February 12, 2021, Commission File Number 1-9172. |
| 4.7 | Third Amendment to Amended and Restated Stockholders' Agreement, dated as of February 11, 2022, by and among the Depository, NACCO Industries, Inc., the new Participating Stockholders identified on the signature pages thereto and the Participating Stockholders under the Amended and Restated Stockholders' Agreement, dated as of September 29, 2017, as amended, is incorporated by reference to Exhibit 99.62 of the Company's General statement of acquisition of beneficial ownership on Form SC 13D, filed on February 11, 2022, Commission File Number 1-9172. |
| 4.8 | Fourth Amendment to Amended and Restated Stockholders' Agreement, dated as of February 10, 2023, by and among the Depository, NACCO Industries, Inc., the new Participating Stockholders identified on the signature pages thereto and the Participating Stockholders under the Amended and Restated Stockholders' Agreement, dated as of September 29, 2017, as amended, is incorporated by reference to Exhibit 99.67 of the Company's General statement of acquisition of beneficial ownership on Form SC 13D, filed on February 10, 2023, Commission File Number 1-9172. |
| 4.9 | Description of Securities is incorporated herein by reference to Exhibit 4.6 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, Commission File Number 1-9172. |

Exhibit Number	Exhibit Description
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(10) Material contracts

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| 10.1* | NACCO Industries, Inc. Supplemental Executive Long-Term Incentive Bonus Plan (Amended and Restated March 1, 2012) is incorporated herein by reference to Appendix B to NACCO's Definitive Proxy Statement, filed by NACCO on March 16, 2012, Commission File Number 1-9172. |
| 10.2* | NACCO Industries, Inc. Executive Long-Term Incentive Compensation Plan (Amended and Restated March 1, 2021) is incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed by the Company on May 19, 2021, Commission File Number 1-9172. |
| 10.3* | NACCO Industries, Inc. Non-Employee Directors' Equity Compensation Plan (Amended and Restated May 19, 2021) is incorporated herein by reference to Exhibit 10.2 to the Company's Current Report on Form 8-K, filed by the Company on May 19, 2021, Commission File Number 1-9172. |
| 10.4* | Form of Award Agreement for the NACCO Industries, Inc. Supplemental Executive Long-Term Incentive Bonus Plan is incorporated by reference to Exhibit 10.8 to the Company's Current Report on Form 8-K, filed by the Company on September 17, 2012, Commission File Number 1-9172. |
| 10.5* | Form of Cashless Exercise Award Agreement for the NACCO Industries, Inc. Executive Long-Term Incentive Compensation Plan is incorporated herein by reference to Exhibit 10.9 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, Commission File Number 1-9172. |
| 10.6* | Form of Non-Cashless Exercise Award Agreement for the NACCO Industries, Inc. Executive Long-Term Incentive Compensation Plan is incorporated herein by reference to Exhibit 10.10 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2019, Commission File Number 1-9172. |
| 10.7 | Separation Agreement, dated as of September 29, 2017, between NACCO Industries, Inc. and Hamilton Beach Brands Holding Company, is incorporated by reference to Exhibit 10.1 of Hamilton Beach Brands Holding Company's Current Report on Form 8-K, filed on October 4, 2017, Commission File Number 1-9172. |
| 10.8 | Tax Allocation Agreement, dated as of September 29, 2017, between NACCO Industries, Inc. and Hamilton Beach Brands Holding Company, is incorporated by reference to Exhibit 10.3 of Hamilton Beach Brands Holding Company's Current Report on Form 8-K, filed on October 4, 2017, Commission File Number 1-9172. |
| 10.9 | Consulting Agreement, dated as of September 29, 2017, between NACCO Industries, Inc. and Alfred M. Rankin, Jr., is incorporated by reference to Exhibit 10.5 of NACCO Industries, Inc.'s Current Report on Form 8-K, filed on October 5, 2017, Commission File Number 1-9172. |
| 10.10 | Amendment to Consulting Agreement, dated as of December 15, 2020, between NACCO Industries, Inc. and Alfred M. Rankin, Jr., is incorporated by reference to Exhibit 10.1 of NACCO Industries, Inc.'s Current Report on Form 8-K, filed on December 15, 2020, Commission File Number 1-9172. |
| 10.11 | Amendment to Consulting Agreement, dated as of December 21, 2021, between NACCO Industries, Inc. and Alfred M. Rankin, Jr., is incorporated by reference to Exhibit 10.1 of NACCO Industries, Inc.'s Current Report on Form 8-K, filed on December 22, 2021, Commission File Number 1-9172. |
| 10.12* | NACCO Industries, Inc. Short-Term Incentive Compensation Plan (Effective as of March 1, 2019) is incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed by the Company on February 13, 2019, Commission File Number 1-9172. |
| 10.13* | The North American Coal Corporation Supplemental Retirement Benefit Plan (Amended and Restated as of January 1, 2008) is incorporated herein by reference to Exhibit 10.12 to the Company's Current Report on Form 8-K, filed by the Company on December 19, 2007, Commission File Number 1-9172. |
| 10.14* | Amendment No. 1 to The North America Coal Corporation Supplemental Retirement Benefit Plan (Amended and Restated as of January 1, 2008) is incorporated herein by reference to Exhibit 10.41 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2009, Commission File Number 1-9172. |
| 10.15* | The North American Coal Corporation Annual Incentive Compensation Plan (Amended and Restated Effective March 1, 2015) is incorporated herein by reference to Exhibit 10.3 to the Company's Current Report on Form 8-K, filed by the Company on May 18, 2015, Commission File Number 1-9172. |
| 10.16* | Amendment No. 2 to The North American Coal Corporation Supplemental Retirement Benefit Plan (Amended and Restated as of January 1, 2008) is incorporated herein by reference to Exhibit 10.40 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2010, Commission File Number 1-9172. |
| 10.17 | Coteau Lignite Sales Agreement by and between The Coteau Properties Company and Dakota Coal Company, dated as of January 1, 1990, is incorporated herein by reference to Exhibit 10.11 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.+ |
| 10.18 | First Amendment to Coteau Lignite Sales Agreement by and between The Coteau Properties Company and Dakota Coal Company, dated as of June 1, 1994, is incorporated herein by reference to Exhibit 10.12 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.+ |

Exhibit Number	Exhibit Description
10.19	Second Amendment to Coteau Lignite Sales Agreement by and between The Coteau Properties Company and Dakota Coal Company, dated as of January 1, 1997, is incorporated herein by reference to Exhibit 10.13 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.+
10.20	Option and Put Agreement by and among The North American Coal Corporation, Dakota Coal Company and the State of North Dakota, dated as of January 1, 1990, is incorporated herein by reference to Exhibit 10.14 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.
10.21	First Amendment to the Option and Put Agreement by and among The North American Coal Corporation, Dakota Coal Company and the State of North Dakota, dated as of June 1, 1994, is incorporated herein by reference to Exhibit 10.15 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.
10.22	Lignite Sales Agreement by and between Mississippi Lignite Mining Company and Choctaw Generation Limited Partnership, dated as of April 1, 1998, is incorporated herein by reference to Exhibit 10.16 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.+
10.23	First Amendment to Lignite Sales Agreement by and between Mississippi Lignite Mining Company and Choctaw Generation Limited Partnership, dated as of August 30, 2016, is incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed by the Company on November 1, 2016, Commission File Number 1-9172.+
10.24	Pay Scale Agreement by and between Mississippi Lignite Mining Company and Choctaw Generation Limited Partnership, dated as of September 29, 2005, is incorporated herein by reference to Exhibit 10.17 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.
10.25	Consent and Agreement by and among Mississippi Lignite Mining Company, Choctaw Generation Limited Partnership, SE Choctaw L.L.C. and Citibank, N.A., dated as of December 20, 2002, is incorporated herein by reference to Exhibit 10.29 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.
10.26	Amendment No. 1 to Lignite Sales Agreement, Settlement Agreement and Release by and between Mississippi Lignite Mining Company and Choctaw Generation Limited Partnership, LLLP, dated as of November 16, 2018, is incorporated herein by reference to Exhibit 10.33 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2018, Commission File Number 1-9172.
10.27	Amendment No. 2 to Lignite Sales Agreement, Settlement Agreement and Release by and between Mississippi Lignite Mining Company and Choctaw Generation Limited Partnership, LLLP, dated as of November 24, 2021, is incorporated herein by reference to Exhibit 10.29 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, Commission File Number 1-9172.
10.28	Termination Agreement and Release, by and among The Falkirk Mining Company, Great River Energy and NoDak Energy Investments Corporation, dated June 30, 2021, is incorporated herein by reference to Exhibit 10.6 to the Company's Quarterly Report on Form 10-Q, filed by the Company on August 4, 2021, Commission File Number 1-9172.
10.29	Amendment No. 1 to Termination Agreement and Release, by and between The Falkirk Mining Company, NoDak Energy Investments Corporation and Great River Energy, dated as of December 28, 2021, is incorporated herein by reference to Exhibit 10.36 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2021, Commission File Number 1-9172.
10.30 ***	Coal Sales Agreement, by and between The Falkirk Mining Company and Rainbow Energy Center, LLC, dated June 30, 2021, is incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed by the Company on August 4, 2021, Commission File Number 1-9172.
10.31	First Amendment to Coal Sales Agreement, by and between The Falkirk Mining Company and Rainbow Energy Center, LLC, dated March 8, 2022, is incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed by the Company on May 4, 2022, Commission File Number 1-9172.
10.32	Second Amendment to Coal Sales Agreement, by and between the Falkirk Mining Company and Rainbow Energy Center, LLC, dated August 5, 2022, is incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed by the Company on November 2, 2022, Commission File Number 1-9172.
10.33 ***	Guaranty by REMC Assets, LP, dated June 17, 2021, is incorporated herein by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, filed by the Company on August 4, 2021, Commission File Number 1-9172.
10.34 ***	Mortgage, Assignment of Leases, Rents and As-Extracted Collateral, Security Agreement, Financing Statement and Fixture Filing, by and between The Falkirk Mining Company and Rainbow Energy Center, LLC, dated June 30, 2021, is incorporated herein by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q, filed by the Company on August 4, 2021, Commission File Number 1-9172.

Exhibit Number	Exhibit Description
10.35	Security Agreement, by and between The Falkirk Mining Company and Rainbow Energy Center, LLC, dated June 30, 2021, is incorporated herein by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q, filed by the Company on August 4, 2021, Commission File Number 1-9172.
10.36	Option Agreement, by and between The Falkirk Mining Company, Rainbow Energy Center, LLC and the State of North Dakota, Doing Business as The Bank of North Dakota, dated June 30, 2021, is incorporated herein by reference to Exhibit 10.5 to the Company's Quarterly Report on Form 10-Q, filed by the Company on August 4, 2021, Commission File Number 1-9172.
10.37	Third Restatement of Lignite Mining Agreement by and between The Sabine Mining Company and Southwestern Electric Power Company, dated as of January 1, 2008, is incorporated herein by reference to Exhibit 10.21 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.+
10.38	Amendment No. 1 to Third Restatement of Lignite Mining Agreement by and between The Sabine Mining Company and Southwestern Electric Power Company, dated as of October 18, 2013 is incorporated herein by reference to Exhibit 10.43 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2014, Commission File Number 1-9172.
10.39	Option Agreement by and among The North American Coal Corporation, Southwestern Electric Power Company and Longview National Bank, dated as of January 15, 1981, is incorporated herein by reference to Exhibit 10.22 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.
10.40	Addendum to Option Agreement, by and among The North American Coal Corporation, Southwestern Electric Power Company and Longview National Bank, dated as of January 15, 1981 is incorporated herein by reference to Exhibit 10.23 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.
10.41	Amendment to Option Agreement, by and among The North American Coal Corporation, Southwestern Electric Power Company and Longview National Bank, dated as of December 2, 1996, is incorporated herein by reference to Exhibit 10.24 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.
10.42	Second Amendment to Option Agreement, by and among The North American Coal Corporation, Southwestern Electric Power Company and Regions Bank, dated as of January 1, 2008, is incorporated herein by reference to Exhibit 10.25 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.
10.43	Agreement by and among The North American Coal Corporation, Southwestern Electric Power Company, Texas Commerce Bank-Longview, Nortex Mining Company and The Sabine Mining Company, dated as of June 30, 1988, is incorporated herein by reference to Exhibit 10.26 to the Company's Quarterly Report on Form 10-Q/A, filed by the Company on March 20, 2013, Commission File Number 1-9172.
10.44	Lignite Sales Agreement between Coyote Creek Mining Company, L.L.C. and Otter Tail Power Company, Northern Municipal Power Agency, Montana-Dakota Utilities Co. and Northwestern Corporation dated as of October 10, 2012 is incorporated herein by reference to Exhibit 10.58 to the Company's Annual Report on Form 10-K, filed by the Company on March 6, 2013, Commission File Number 1-9172.++
10.45	First Amendment to Lignite Sales Agreement, dated as of January 30, 2014, between Coyote Creek Mining Company, L.L.C. and Otter Tail Power Company, Northern Municipal Power Agency, Montana-Dakota Utilities Co., a division of MDU Resources Group, Inc. and NorthWestern Corporation is incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 8-K, filed by the Company on January 30, 2014, Commission File Number 1-9172.
10.46	Second Amendment to Lignite Sales Agreement, dated as of March 16, 2015, between Coyote Creek Mining Company, L.L.C. and Otter Tail Power Company, Northern Municipal Power Agency, Montana-Dakota Utilities Co., a division of MDU Resources Group, Inc., and NorthWestern Corporation is incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed by the Company on May 5, 2015, Commission File Number 1-9172.
10.47*	Amendment No. 3 to The North American Coal Corporation Supplemental Retirement Benefit Plan (Amended and Restated as of January 1, 2008) is incorporated herein by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q, filed by the Company on October 30, 2013, Commission File Number 1-9172.
10.48*	Amendment No. 4 to The North American Coal Corporation Supplemental Retirement Benefit Plan (Amended and Restated as of January 1, 2008) is incorporated herein by reference to Exhibit 10.54 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2014, Commission File Number 1-9172.
10.49*	Amendment No. 5 to The North American Coal Corporation Supplemental Retirement Benefit Plan (Amended and Restated as of January 1, 2008) is incorporated herein by reference to Exhibit 10.57 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2015, Commission File Number 1-9172.

Exhibit Number	Exhibit Description
10.50*	Amendment No. 6 to The North American Coal Corporation Supplemental Retirement Benefit Plan (Amended and Restated as of January 1, 2008) is incorporated herein by reference to Exhibit 10.52 to the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2016, Commission File Number 1-9172.
10.51	Agreement, dated as of March 16, 2015, among The North American Coal Corporation, Otter Tail Power Company, Northern Municipal Power Agency, Montana-Dakota Utilities Co., a division of MDU Resources Group, Inc. and Northwestern Corporation is incorporated herein by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q, filed by the Company on May 5, 2015, Commission File Number 1-9172.
10.52	The North American Coal Corporation Excess Retirement Plan (Amended and Restated Effective January 1, 2020) is incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed by the Company on December 18, 2019, Commission File Number 1-9172.
10.53	Amended and Restated Credit Agreement by and among The North American Coal Corporation and the Guarantors party thereto and the Lenders party thereto and KeyBank National Association as Syndication Agent, PNC Bank National Association as Administrative Agent and KeyBanc Capital Markets Inc. and PNC Capital Markets LLC as Joint Lead Arrangers and Joint Bookrunners, dated as of November 12, 2021 is incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed by the Company on November 15, 2021, Commission File Number 1-9172.
10.54	Revolving Credit Commitment Increase Agreement, dated as of December 10, 2021 is incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed by the Company on December 13, 2021. Commission File Number 1-9172.
10.55	ESG Amendment to Amended and Restated Credit Agreement, dated as of June 30, 2022, is incorporated herein by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed by the Company on July 7, 2022. Commission File Number 1-9172.

(21**) Subsidiaries. A list of the subsidiaries of the Company is attached hereto as Exhibit 21.

(23) Consents of experts and counsel.

23.1** Consents of experts and counsel.

23.2** Consent of Qualified Person.

23.3** Consent of Qualified Person.

23.4** Consent of experts and counsel.

(24) Powers of Attorney.

24.1** A copy of a power of attorney for John S. Dalrymple is attached hereto as Exhibit 24.1.

24.2** A copy of a power of attorney for John P. Jumper is attached hereto as Exhibit 24.2.

24.3** A copy of a power of attorney for Dennis W. LaBarre is attached hereto as Exhibit 24.3.

24.4** A copy of a power of attorney for Michael S. Miller is attached hereto as Exhibit 24.4.

24.5** A copy of a power of attorney for Richard de J. Osborne is attached hereto as Exhibit 24.5.

24.6** A copy of a power of attorney for Alfred M. Rankin, Jr. is attached hereto as Exhibit 24.6.

24.7** A copy of a power of attorney for Matthew M. Rankin is attached hereto as Exhibit 24.7.

24.8** A copy of a power of attorney for Roger F. Rankin is attached hereto as Exhibit 24.8.

24.9** A copy of a power of attorney for Lori J. Robinson is attached hereto as Exhibit 24.9.

24.10** A copy of a power of attorney for Robert S. Shapard is attached hereto as Exhibit 24.10.

24.11** A copy of a power of attorney for Britton T. Taplin is attached hereto as Exhibit 24.11.

(31) Rule 13a-14(a)/15d-14(a) Certifications.

- 31(i)(1)
** Certification of J.C. Butler, Jr. pursuant to Rule 13a-14(a)/15d-14(a) of the Exchange Act is attached hereto as Exhibit 31(i)(1).
- 31(i)(2)
** Certification of Elizabeth I. Loveman pursuant to Rule 13a-14(a)/15d-14(a) of the Exchange Act is attached hereto as Exhibit 31(i)(2).
- (32)**** Certifications pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, signed and dated by J.C. Butler, Jr. and Elizabeth I. Loveman.
- (95)** Mine Safety Disclosure Exhibit is attached hereto as Exhibit 95.
- 96.1** Technical Report Summary relating to the Mississippi Lignite Mining Company, effective date as of December 31, 2022.
- (99.1**) Reserve Report of Catapult Mineral Partners.
- (99.2**) Supplemental Figures Attachment.

- 101.INS Inline XBRL Instance Document
- 101.SCH Inline XBRL Taxonomy Extension Schema Document
- 101.CAL Inline XBRL Taxonomy Extension Calculation Linkbase Document
- 101.DEF Inline XBRL Taxonomy Extension Definition Linkbase Document
- 101.LAB Inline XBRL Taxonomy Extension Label Linkbase Document
- 101.PRE Inline XBRL Taxonomy Extension Presentation Linkbase Document
- 104 Cover Page Interactive Data File (formatted as Inline XBRL and contained in Exhibit 101)

* Management contract or compensation plan or arrangement required to be filed as an exhibit pursuant to Item 15(b) of this Annual Report on Form 10-K.

** Filed herewith.

*** Certain confidential information contained in this agreement has been omitted because it (i) is not material and (ii) would be competitively harmful if publicly disclosed.

**** Furnished herewith.

+ Portions of Exhibit have been omitted and filed separately with the Securities and Exchange Commission in reliance on Rule 24b-2 and an Order from the Commission granting the Company's request for confidential treatment dated March 27, 2013. Portions for which confidential treatment has been granted have been marked with three asterisks [***] and a footnote indicating "Confidential treatment requested".

++ Portions of Exhibit have been omitted and filed separately with the Securities and Exchange Commission in reliance on Rule 24b-2 and an Order from the Commission granting the Company's request for confidential treatment dated April 2, 2013. Portions for which confidential treatment has been granted have been marked with three asterisks [***] and a footnote indicating "Confidential treatment requested".

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NACCO Industries, Inc.

By: /s/ Elizabeth I. Loveman

Elizabeth I. Loveman

Vice President and Controller
(principal financial and accounting officer)

March 15, 2023

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

<u>/s/ J.C. Butler, Jr.</u> J.C. Butler, Jr.	President and Chief Executive Officer (principal executive officer)	March 15, 2023
<u>/s/ Elizabeth I. Loveman</u> Elizabeth I. Loveman	Vice President and Controller (principal financial and accounting officer)	March 15, 2023
<u>*John S. Dalrymple</u> John S. Dalrymple	Director	March 15, 2023
<u>* John P. Jumper</u> John P. Jumper	Director	March 15, 2023
<u>* Dennis W. LaBarre</u> Dennis W. LaBarre	Director	March 15, 2023
<u>* Michael S. Miller</u> Michael S. Miller	Director	March 15, 2023
<u>* Richard de J. Osborne</u> Richard de J. Osborne	Director	March 15, 2023
<u>* Alfred M. Rankin, Jr.</u> Alfred M. Rankin, Jr.	Director	March 15, 2023
<u>* Matthew M. Rankin</u> Matthew M. Rankin	Director	March 15, 2023
<u>* Roger F. Rankin</u> Roger F. Rankin	Director	March 15, 2023
<u>*Lori J. Robinson</u> Lori J. Robinson	Director	March 15, 2023
<u>*Robert S. Shapard</u> Robert S. Shapard	Director	March 15, 2023
<u>* Britton T. Taplin</u> Britton T. Taplin	Director	March 15, 2023

* Elizabeth I. Loveman, by signing her name hereto, does hereby sign this Form 10-K on behalf of each of the above named and designated directors of the Company pursuant to a Power of Attorney executed by such persons and filed with the Securities and Exchange Commission.

<u>/s/ Elizabeth I. Loveman</u> Elizabeth I. Loveman, Attorney-in-Fact	March 15, 2023
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ANNUAL REPORT ON FORM 10-K
ITEM 8, ITEM 15(a)(1) AND (2), AND ITEM 15(c)
FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA
LIST OF FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULES
FINANCIAL STATEMENTS
FINANCIAL STATEMENT SCHEDULES
YEAR ENDED DECEMBER 31, 2022
NACCO INDUSTRIES, INC.
CLEVELAND, OHIO

FORM 10-K

ITEM 15(a)(1) AND (2)

NACCO INDUSTRIES, INC. AND SUBSIDIARIES

LIST OF FINANCIAL STATEMENTS AND FINANCIAL STATEMENT SCHEDULES

The following consolidated financial statements of NACCO Industries, Inc. and Subsidiaries and the reports of the Company's independent registered public accounting firm (PCAOB ID:42) are incorporated by reference in Item 8:

Report of Ernst & Young LLP, Independent Registered Public Accounting Firm — For each of the two years in the period ended December 31, 2022.	F-3
Report of Ernst & Young LLP, Independent Registered Public Accounting Firm on Internal Control Over Financial Reporting — As of December 31, 2022.	F-5
Consolidated Statements of Operations	F-6
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The following consolidated financial statement schedules of NACCO Industries, Inc. and Subsidiaries are included in Item 15(c):

Schedule II — Valuation and Qualifying Accounts

All other schedules for which provision is made in the applicable accounting regulation of the SEC are not required under the related instructions or are inapplicable, and therefore have been omitted.

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of NACCO Industries, Inc.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of NACCO Industries, Inc. and Subsidiaries (the Company) as of December 31, 2022 and 2021, the related consolidated statements of operations, comprehensive income (loss), equity and cash flows for the years then ended, and the related notes and the financial statement schedules listed in the Index at Item 15(a) (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company at December 31, 2022 and 2021, and the results of its operations and its cash flows for the years then ended, in conformity with U.S. generally accepted accounting principles.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) and our report dated March 15, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that our audits provide a reasonable basis for our opinion.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the financial statements that was communicated or required to be communicated to the audit review committee and that: (1) relates to accounts or disclosures that are material to the financial statements and (2) involved our especially challenging, subjective or complex judgments. The communication of the critical audit matter does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Falkirk VIE Reconsideration Event

Description of the Matter	<p>As discussed in Note 1 to the consolidated financial statements, on May 2, 2022, Great River Energy (“GRE”) completed the sale of Coal Creek Station and the adjacent high-voltage direct current transmission line to Rainbow Energy Center, LLC (“Rainbow Energy”) and its affiliates.</p> <p>While Falkirk meets the definition of a VIE, the completion of the Rainbow Energy transaction resulted in a VIE reconsideration event. As the terms of the CSA between Falkirk and Rainbow Energy are substantially the same as the terms of the coal supply contract between Falkirk and GRE, Falkirk remains a VIE and Rainbow Energy is the primary beneficiary; therefore, NACCO will continue to account for Falkirk under the equity method.</p> <p>Auditing the disclosure of the terms of the transaction was especially complex in determining whether the completion of the Rainbow Energy transaction resulted in a VIE reconsideration event, a change in the conclusion that Falkirk meets the definition of a VIE and the determination of the primary beneficiary of the VIE. Evaluating the Company’s judgments in determining whether an entity is a VIE and the primary beneficiary of the VIE requires a high degree of complex auditor judgment.</p>
How We Addressed the Matter in Our Audit	<p>We obtained an understanding, evaluated and tested the design and operating effectiveness of the controls surrounding the Company’s processes to assess the implications of significant transactions and events that could trigger a VIE reconsideration event.</p> <p>To test the implications of the transaction, our audit procedures included, among other things, inspecting the new CSA between Falkirk and Rainbow Energy that became effective upon regulatory approval of the sale of Coal Creek Station and evaluating the VIE assessment performed by the Company. We evaluated the significant terms of the contract and whether the agreement between Falkirk and Rainbow Energy resulted in a reconsideration event, a change in the conclusion that Falkirk meets the definition of a VIE and the determination of the primary beneficiary.</p>

/s/ Ernst & Young LLP

We have served as the Company’s auditor since 2002.
Cleveland, Ohio
March 15, 2023

Report of Independent Registered Public Accounting Firm

To the Stockholders and the Board of Directors of NACCO Industries, Inc.

Opinion on Internal Control Over Financial Reporting

We have audited NACCO Industries, Inc. and Subsidiaries' internal control over financial reporting as of December 31, 2022, based on criteria established in Internal Control—Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). In our opinion, NACCO Industries, Inc. and Subsidiaries (the Company) maintained, in all material respects, effective internal control over financial reporting as of December 31, 2022, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the 2022 consolidated financial statements of the Company and our report dated March 15, 2023 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting included in the accompanying Management's report on internal control over financial reporting in Item 9A. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects.

Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, testing and evaluating the design and operating effectiveness of internal control based on the assessed risk, and performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Ernst & Young LLP

Cleveland, Ohio
March 15, 2023

NACCO INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF OPERATIONS

	Year Ended December 31	
	2022	2021
	(In thousands, except per share data)	
Revenues	\$ 241,719	\$ 191,846
Cost of sales	173,877	148,394
Gross profit	67,842	43,452
Earnings of unconsolidated operations	57,250	60,843
Contract termination settlement	14,000	10,333
Operating expenses		
Selling, general and administrative expenses	63,911	55,722
Amortization of intangible assets	3,719	3,556
Gain on sale of assets	(2,463)	(60)
Asset impairment charges	3,939	—
	69,106	59,218
Operating profit	69,986	55,410
Other (income) expense		
Interest expense	2,034	1,719
Interest income	(1,449)	(449)
Closed mine obligations	1,179	1,297
Loss (gain) on equity securities	283	(3,423)
Income from equity method investee	(2,194)	—
Other contract termination settlements	(16,882)	—
Other, net	(708)	(584)
	(17,737)	(1,440)
Income before income tax provision	87,723	56,850
Income tax provision	13,565	8,725
Net income	\$ 74,158	\$ 48,125
Earnings per share:		
Basic earnings per share	\$ 10.14	\$ 6.73
Diluted earnings per share	\$ 10.06	\$ 6.69
Basic weighted average shares outstanding	7,312	7,146
Diluted weighted average shares outstanding	7,373	7,190

See notes to the Consolidated Financial Statements.

NACCO INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	Year Ended December 31	
	2022	2021
	(In thousands)	
Net income	\$ 74,158	\$ 48,125
Other comprehensive income		
Current period pension and postretirement plan adjustment, net of \$363 tax benefit and \$864 tax expense in 2022 and 2021, respectively	(1,310)	2,851
Reclassification of pension and postretirement adjustments into earnings, net of \$140 and \$170 tax benefit in 2022 and 2021, respectively	473	572
Total other comprehensive (loss) income	(837)	3,423
Comprehensive income	\$ 73,321	\$ 51,548

See notes to the Consolidated Financial Statements.

NACCO INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS

	December 31	
	2022	2021
	(In thousands, except share data)	
ASSETS		
Current assets		
Cash and cash equivalents	\$ 110,748	\$ 86,005
Trade accounts receivable	37,940	25,667
Accounts receivable from affiliates	6,638	5,605
Inventories	71,488	54,085
Federal income tax receivable	15,687	15,054
Prepaid insurance	1,999	2,016
Other current assets	15,907	14,621
Total current assets	260,407	203,053
Property, plant and equipment, net	217,952	193,167
Intangibles, net	28,055	31,774
Investment in unconsolidated subsidiaries	14,927	19,090
Operating lease right-of-use assets	6,419	8,911
Other non-current assets	40,312	51,225
Total assets	\$ 568,072	\$ 507,220
LIABILITIES AND EQUITY		
Current liabilities		
Accounts payable	\$ 11,952	\$ 12,208
Accounts payable to affiliates	1,362	741
Current maturities of long-term debt	3,649	2,527
Asset retirement obligations	1,746	1,820
Accrued payroll	18,105	16,339
Deferred revenue	833	4,082
Other current liabilities	6,623	8,299
Total current liabilities	44,270	46,016
Long-term debt	16,019	18,183
Operating lease liabilities	7,528	9,733
Asset retirement obligations	44,256	42,131
Pension and other postretirement obligations	5,082	6,605
Deferred income taxes	6,122	14,792
Liability for uncertain tax positions	9,329	10,113
Other long-term liabilities	8,500	7,531
Total liabilities	141,106	155,104
Stockholders' equity		
Common stock:		
Class A, par value \$1 per share, 5,782,944 shares outstanding (2021 - 5,616,568 shares outstanding)	5,783	5,616
Class B, par value \$1 per share, convertible into Class A on a one-for-one basis, 1,566,129 shares outstanding (2021 - 1,566,613 shares outstanding)	1,566	1,567
Capital in excess of par value	23,706	16,331
Retained earnings	404,924	336,778
Accumulated other comprehensive loss	(9,013)	(8,176)
Total stockholders' equity	426,966	352,116
Total liabilities and equity	\$ 568,072	\$ 507,220

See notes to the Consolidated Financial Statements.

NACCO INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CASH FLOWS

	Year Ended December 31	
	2022	2021
	(In thousands)	
Operating Activities		
Net income	\$ 74,158	\$ 48,125
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation, depletion and amortization	26,816	23,085
Amortization of deferred financing fees	446	326
Deferred income taxes	(8,471)	(3,553)
Stock-based compensation	7,541	5,561
Gain on sale of assets	(2,463)	(60)
Other contract termination settlements	(15,552)	—
Asset impairment charges	3,939	—
Other	(791)	1,647
Working capital changes:		
Affiliates receivable/payable	—	495
Accounts receivable	(13,224)	(13,685)
Inventories	(6,834)	(6,534)
Other current assets	1,308	3,320
Accounts payable	252	7,445
Income taxes receivable/payable	(416)	2,699
Other current liabilities	1,026	6,004
Net cash provided by operating activities	67,735	74,875
Investing Activities		
Expenditures for property, plant and equipment	(42,523)	(39,230)
Acquisition of mineral interests	(11,924)	(5,331)
Proceeds from the sale of assets	2,837	633
Proceeds from the sale of private company equity units	18,628	—
Other	(170)	(219)
Net cash used for investing activities	(33,152)	(44,147)
Financing Activities		
Net reductions to revolving credit agreement	(4,000)	(26,000)
Additions to long-term debt	3,091	3,634
Reductions to long-term debt	(2,919)	(3,435)
Cash dividends paid	(6,012)	(5,617)
Other	—	(1,755)
Net cash used for financing activities	(9,840)	(33,173)
Cash and Cash Equivalents		
Total increase (decrease) for the year	24,743	(2,445)
Balance at the beginning of the year	86,005	88,450
Balance at the end of the year	\$ 110,748	\$ 86,005

See notes to the Consolidated Financial Statements.

NACCO INDUSTRIES, INC. AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF EQUITY

	Class A Common Stock	Class B Common Stock	Capital in Excess of Par Value	Retained Earnings	Accumulated Other Comprehensive (Loss) Income	Total Stockholders' Equity
(In thousands, except per share data)						
Balance, January 1, 2021	\$ 5,490	\$ 1,568	\$ 10,895	\$ 294,270	\$ (11,599)	\$ 300,624
Stock-based compensation	125	—	5,436	—	—	5,561
Conversion of Class B to Class A shares	1	(1)	—	—	—	—
Net income	—	—	—	48,125	—	48,125
Cash dividends on Class A and Class B common stock: \$0.7850 per share	—	—	—	(5,617)	—	(5,617)
Current period other comprehensive income, net of tax	—	—	—	—	2,851	2,851
Reclassification adjustment to net income, net of tax	—	—	—	—	572	572
Balance, December 31, 2021	\$ 5,616	\$ 1,567	\$ 16,331	\$ 336,778	\$ (8,176)	\$ 352,116
Stock-based compensation	166	—	7,375	—	—	7,541
Conversion of Class B to Class A shares	1	(1)	—	—	—	—
Net income	—	—	—	74,158	—	74,158
Cash dividends on Class A and Class B common stock: \$0.8200 per share	—	—	—	(6,012)	—	(6,012)
Current period other comprehensive income, net of tax	—	—	—	—	(1,310)	(1,310)
Reclassification adjustment to net income, net of tax	—	—	—	—	473	473
Balance, December 31, 2022	\$ 5,783	\$ 1,566	\$ 23,706	\$ 404,924	\$ (9,013)	\$ 426,966

See notes to the Consolidated Financial Statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NACCO INDUSTRIES, INC. AND SUBSIDIARIES

(Tabular Amounts in Thousands, Except Per Share, Percentage Data and Oil and Gas Disclosures)

NOTE 1—Principles of Consolidation and Nature of Operations

The Consolidated Financial Statements include the accounts of NACCO Industries, Inc.[®] (“NACCO”) and its wholly owned subsidiaries (collectively, the “Company”). NACCO brings natural resources to life by delivering aggregates, minerals, reliable fuels and environmental solutions through its robust portfolio of NACCO Natural Resources businesses. The Company operates under three business segments: Coal Mining, North American Mining (“NAMining”) and Minerals Management. The Coal Mining segment operates surface coal mines for power generation companies. The NAMining segment is a trusted mining partner for producers of aggregates, activated carbon, lithium and other industrial minerals. The Minerals Management segment, which includes the Catapult Mineral Partners (“Catapult”) business, acquires and promotes the development of mineral interests. Mitigation Resources of North America[®] (“Mitigation Resources”) provides stream and wetland mitigation solutions.

The Company also has items not directly attributable to a reportable segment. Intercompany accounts and transactions are eliminated in consolidation. See Note 15 to the Consolidated Financial Statements for further discussion of segment reporting.

The Company’s operating segments are further described below:

Coal Mining Segment

The Coal Mining segment, operating as The North American Coal Corporation[®] (“NACoal”), operates surface coal mines under long-term contracts with power generation companies pursuant to a service-based business model. Coal is surface mined in North Dakota, Texas, Mississippi and through September 30, 2021, on the Navajo Nation in New Mexico. Each mine is fully integrated with its customer’s operations.

As of December 31, 2022, the Company’s operating coal mines were: The Coteau Properties Company (“Coteau”), Coyote Creek Mining Company, LLC (“Coyote Creek”), The Falkirk Mining Company (“Falkirk”), Mississippi Lignite Mining Company (“MLMC”) and The Sabine Mining Company (“Sabine”).

MLMC is the exclusive supplier of lignite to the Red Hills Power Plant in Ackerman, Mississippi. Choctaw Generation Limited Partnership (“CGLP”) leases the Red Hills Power Plant from a Southern Company subsidiary pursuant to a leveraged lease arrangement. CGLP’s ability to make required payments to the Southern Company subsidiary is dependent on the operational performance of the Red Hills Power Plant. During 2020, Southern Company revised the estimated cash flows to be received under the leveraged lease which resulted in a full impairment of the lease investment. If lease payments are not paid in full, the Southern Company subsidiary may be unable to make its corresponding payment to the holders of the underlying non-recourse debt related to the Red Hills Power Plant. Failure to make the required payment to the debtholders could represent an event of default that would give the debtholders the right to foreclose on, and take ownership of, the Red Hills Power Plant from the Southern Company subsidiary. On October 27, 2022, Southern Company disclosed in its Form 10-Q that it provided notice to the lessee, CGLP, to terminate the related operating and maintenance agreement effective June 30, 2023. CGLP failed to make the semi-annual lease payment due December 15, 2022. As a result, the Southern Company subsidiary was unable to make its corresponding payment to the debtholders. The parties to the lease agreement are currently negotiating a potential restructuring, which could result in rescission of the termination notice. The parties to the lease have entered into a forbearance agreement which suspends the related contractual rights of the parties while they continue restructuring negotiations. The ultimate outcome of this matter cannot be determined at this time but could have a material impact on the Company’s financial statements if the operating and maintenance agreement is terminated.

On May 2, 2022, Great River Energy (“GRE”) completed the sale of Coal Creek Station and the adjacent high-voltage direct current transmission line to Rainbow Energy Center, LLC (“Rainbow Energy”) and its affiliates. As a result of the completion of the sale of Coal Creek Station, the Coal Sales Agreement, the Mortgage and Security Agreement and the Option Agreement between GRE and Falkirk were terminated. The Coal Sales Agreement (“CSA”) between Falkirk and Rainbow Energy became effective upon the closing of the transaction. Falkirk continues to supply all coal requirements of Coal Creek Station and is paid a management fee per ton of coal delivered. To support the transfer to new ownership, Falkirk agreed to a reduction in the current per ton management fee from the effective date of the CSA through May 31, 2024. After May 31, 2024, the per ton management fee increases to a higher base in line with 2021 fee levels, and thereafter adjusts annually according to an index which tracks broad measures of U.S. inflation. Rainbow Energy is responsible for funding all mine operating costs, including

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mine reclamation, and directly or indirectly providing all of the capital required to operate the mine. The initial production period is expected to run through May 1, 2032, but the CSA may be extended or terminated early under certain circumstances.

The Company recognized a gain of \$30.9 million within the accompanying Condensed Consolidated Statements of Operations during the second quarter of 2022 as GRE paid NACoal \$14.0 million in cash, as well as transferred ownership of an office building with an estimated fair value of \$4.1 million, and conveyed membership units in Midwest AgEnergy Group, LLC ("MAG"), a North Dakota-based ethanol business, with an estimated fair value of \$12.8 million, as agreed to under the termination and release of claims agreement between Falkirk and GRE.

Prior to receiving the membership units from GRE, the Company held a \$5.0 million investment in the same privately-held company carried at cost, less impairment. Subsequent to the receipt of the additional membership units, the Company began to account for the investment under the equity method of accounting. During the third quarter, the Company recorded \$2.2 million, which represented its share of MAG's earnings on the "Income from equity method investee" line within the accompanying Consolidated Statements of Operations.

On December 1, 2022, HLCP Ethanol Holdco, LLC ("HLCP") completed its acquisition of MAG. Upon closing of the transaction, NACCO transferred its ownership interest in MAG to HLCP and received a cash payment of \$18.6 million and recognized a \$1.3 million loss during the fourth quarter of 2022 on the line "Other, net" within the accompanying Consolidated Statements of Operations.

The HLCP acquisition agreement includes two contingent earn-out arrangements under which additional payments are possible. The first earn-out is based on the achievement of EBITDA targets through December 31, 2024. The second earn-out is based on the development of a carbon dioxide pipeline that will support a carbon dioxide sequestration project over a four-year period commencing on the transaction closing date. Additional payments to NACCO could range from \$0 to approximately \$13.6 million based on achievement of the two earn-outs as well as payment of amounts held in escrow. Any future payments associated with the earn-outs or amounts held in escrow will be recognized when realized, consistent with the accounting for gain contingencies.

Sabine operates the Sabine Mine in Texas. All production from Sabine is delivered to Southwestern Electric Power Company's ("SWEPCO") Henry W. Pirkey Plant (the "Pirkey Plant"). SWEPCO is an American Electric Power ("AEP") company. AEP intends to retire the Pirkey Plant during March 2023. Sabine expects deliveries to cease in March 2023 and final reclamation to begin on April 1, 2023. Funding for mine reclamation is the responsibility of SWEPCO, and Sabine will receive compensation for providing mine reclamation services.

The contract mining agreement between Bisti Fuels Company, LLC ("Bisti") and its customer, Navajo Transitional Energy Company ("NTEC") was terminated effective September 30, 2021. As required under the agreement, NTEC paid the Company a termination fee of \$10.3 million reported on the line Contract termination settlement on the Consolidated Statements of Operations. As of October 1, 2021, NTEC assumed control and responsibility for operation and all reclamation of the Navajo Mine.

At all operating coal mines other than MLMC, the Company is paid a management fee per ton of coal or heating unit (MMBtu) delivered. Each contract specifies the indices and mechanics by which fees change over time, generally in line with broad measures of U.S. inflation. The customers are responsible for funding all mine operating costs, including final mine reclamation, and directly or indirectly provide all of the capital required to build and operate the mine. This contract structure eliminates exposure to spot coal market price fluctuations while providing income and cash flow with minimal capital investment. Other than at Coyote Creek, debt financing provided by or supported by the customers is without recourse to NACCO and NACoal. See Note 16 for further discussion of Coyote Creek's guarantees.

All operating coal mines other than MLMC meet the definition of a VIE. In each case, NACCO is not the primary beneficiary of the VIE as it does not exercise financial control; therefore, NACCO does not consolidate the results of these operations within its financial statements. Instead, these contracts are accounted for as equity method investments. The income before income taxes associated with these VIEs is reported as Earnings of unconsolidated operations on the Consolidated Statements of Operations, and the Company's investment is reported on the line Investments in unconsolidated subsidiaries in the Consolidated Balance Sheets. The mines that meet the definition of a VIE are referred to collectively as the "Unconsolidated Subsidiaries." For tax purposes, the Unconsolidated Subsidiaries are included within the NACCO consolidated U.S. tax return;

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therefore, the income tax expense line on the Consolidated Statements of Operations includes income taxes related to these entities. See Note 16 for further information on the Unconsolidated Subsidiaries.

While Falkirk meets the definition of a VIE, the completion of the Rainbow Energy transaction resulted in a VIE reconsideration event. As the terms of the CSA between Falkirk and Rainbow Energy are substantially the same as the terms of the coal supply contract between Falkirk and GRE, Falkirk remains a VIE and Rainbow Energy is the primary beneficiary; therefore, NACCO will continue to account for Falkirk under the equity method.

The Company performs contemporaneous reclamation activities at each mine in the normal course of operations. Under all of the Unconsolidated Subsidiaries' contracts, the customer has the obligation to fund final mine reclamation activities. Under certain contracts, the Unconsolidated Subsidiary holds the mine permit and is therefore responsible for final mine reclamation activities. To the extent the Unconsolidated Subsidiary performs such final reclamation, it is compensated for providing those services in addition to receiving reimbursement from customers for costs incurred.

The MLMC contract is the only operating coal contract in which the Company is responsible for all operating costs, capital requirements and final mine reclamation; therefore, MLMC is consolidated within NACCO's financial statements. MLMC sells coal to its customer at a contractually agreed-upon price which adjusts monthly, primarily based on changes in the level of established indices which reflect general U.S. inflation rates. Profitability at MLMC is affected by customer demand for coal and changes in the indices that determine sales price and actual costs incurred. As diesel fuel is heavily weighted among the indices used to determine the coal sales price, fluctuations in diesel fuel prices can result in significant fluctuations in earnings at MLMC.

MLMC delivers coal to the Red Hills Power Plant in Ackerman, Mississippi. The Red Hills Power Plant supplies electricity to the Tennessee Valley Authority ("TVA") under a long-term Power Purchase Agreement ("PPA"). MLMC's contract with its customer runs through 2032. TVA's power portfolio includes coal, nuclear, hydroelectric, natural gas and renewables. The decision of which power plants to dispatch is determined by TVA.

NAMining Segment

The NAMining segment provides value-added contract mining and other services for producers of industrial minerals. The segment is a platform for the Company's growth and diversification of mining activities outside of the thermal coal industry. NAMining provides contract mining services for independently owned mines and quarries, creating value for its customers by performing the mining aspects of its customers' operations. This allows customers to focus on their areas of expertise: materials handling and processing, product sales and distribution. NAMining historically operated primarily at limestone quarries in Florida, but is focused on expanding outside of Florida, mining materials other than limestone and expanding the scope of mining operations provided to its customers. As of December 31, 2022, NAMining operates mines in Florida, Texas, Arkansas, Indiana, Virginia and Nebraska and will serve as exclusive contract miner for the Thacker Pass lithium project in northern Nevada.

Certain of the entities within the NAMining segment are VIEs and are accounted for under the equity method as Unconsolidated Subsidiaries. See Note 16 for further discussion.

Minerals Management Segment

The Minerals Management segment derives income primarily by leasing its royalty and mineral interests to third-party exploration and production companies, and, to a lesser extent, other mining companies, granting them the rights to explore, develop, mine, produce, market and sell gas, oil, and coal in exchange for royalty payments based on the lessees' sales of those minerals.

The Minerals Management segment owns royalty interests, mineral interests, nonparticipating royalty interests and overriding royalty interests.

- **Royalty Interest.** Royalty interests generally result when the owner of a mineral interest leases the underlying minerals to an exploration and production company pursuant to an oil and gas lease. Typically, the resulting royalty interest is a cost-free percentage of production revenues for minerals extracted from the acreage. A holder of royalty interests is generally not responsible for capital expenditures or lease operating expenses, but royalty interests may be calculated

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net of post-production expenses, and typically has no environmental liability. Royalty interests leased to producers expire upon the expiration of the oil and gas lease and revert to the mineral owner.

- **Mineral Interest.** Mineral interests are perpetual rights of the owner to explore, develop, exploit, mine and/or produce any or all of the minerals lying below the surface of the property. The holder of a mineral interest has the right to lease the minerals to an exploration and production company. Upon the execution of an oil and gas lease, the lessee (the exploration and production company) becomes the working interest owner and the lessor (the mineral interest owner) has a royalty interest.
- **Non-Participating Royalty Interest (“NPRI”).** NPRI is an interest in oil and gas production which is created from the mineral estate. The NPRI is expense-free, bearing no operational costs of production. The term “non-participating” indicates that the interest owner does not share in the bonus, rentals from a lease, nor the right to participate in the execution of oil and gas leases. The NPRI owner does; however, typically receive royalty payments.
- **Overriding Royalty Interest (“ORRI”).** ORRIs are created by carving out the right to receive royalties from a working interest. Like royalty interests, ORRIs do not confer an obligation to make capital expenditures or pay for lease operating expenses and have limited environmental liability; however, ORRIs may be calculated net of post-production expenses, depending on how the ORRI is structured. ORRIs that are carved out of working interests are linked to the same underlying oil and gas lease that created the working interest, and therefore, such ORRIs are typically subject to expiration upon the expiration or termination of the oil and gas lease.

The Company may own more than one type of mineral and royalty interest in the same tract of land. For example, where the Company owns an ORRI in a lease on the same tract of land in which it owns a mineral interest, the ORRI in that tract will relate to the same gross acres as the mineral interest in that tract.

The Minerals Management segment will benefit from the continued development of its mineral properties without the need for investment of additional capital once mineral and royalty interests have been acquired. The Minerals Management segment does not currently have any material investments under which it would be required to bear the cost of exploration, production or development.

Total consideration for the 2022 and 2021 acquisitions of mineral and royalty interests was \$11.9 million and \$5.3 million, respectively. The 2022 acquisitions included 13.6 thousand gross acres and 880 net royalty acres. The 2021 acquisitions included 20.6 thousand gross acres and 1.8 thousand net royalty acres. Total mineral and royalty interests included approximately 141.4 thousand gross acres and 60.8 thousand net royalty acres at December 31, 2022. See Note 18 for further discussion of Minerals Management.

The Company also manages legacy royalty and mineral interests located in Ohio (Utica and Marcellus shale natural gas), Louisiana (Haynesville shale and Cotton Valley formation natural gas), Texas (Cotton Valley and Austin Chalk formation natural gas), Mississippi (coal), Pennsylvania (coal, coalbed methane and Marcellus shale natural gas), Alabama (coal, coalbed methane and natural gas) and North Dakota (coal, oil and natural gas). The majority of the Company’s legacy reserves were acquired as part of its historical coal mining operations.

NOTE 2—Significant Accounting Policies

Use of Estimates: The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and judgments. These estimates and judgments affect the reported amounts of assets and liabilities and the disclosure of contingent assets and liabilities (if any) at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Cash and Cash Equivalents: Cash and cash equivalents include cash in banks and highly liquid investments with original maturities of three months or less.

Property, Plant and Equipment, Net: Property, plant and equipment are initially recorded at cost. Depreciation, depletion and amortization are provided in amounts sufficient to amortize the cost of the assets, including assets recorded under finance leases, over their estimated useful lives using the straight-line method or the units-of-production method. Buildings and

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building improvements are depreciated over the life of the mine, which is generally 30 years. Estimated lives for machinery and equipment range from three to 15 years. The units-of-production method is used to amortize certain assets based on estimated recoverable tonnages. Repairs and maintenance costs are expensed when incurred, unless such costs extend the estimated useful life of the asset, in which case such costs are capitalized and depreciated. Asset retirement costs associated with asset retirement obligations are capitalized with the carrying amount of the related long-lived asset and depreciated over the asset's estimated useful life.

Royalty Interests in Oil and Natural Gas Properties: The Company follows the successful efforts method of accounting for its royalty and mineral interests. Under this method, costs to acquire mineral and royalty interests in oil and natural gas properties are capitalized when incurred. Acquisitions of royalty interests of oil and natural gas properties are considered asset acquisitions and are recorded at cost. As an owner of mineral and royalty interests and not working interests, the Company is not required to make capital expenditures and did not make capital expenditures to convert proved undeveloped reserves from undeveloped to developed.

Acquisition costs of proved royalty and mineral interests are amortized using the units of production method over the life of the property, which is estimated using proved reserves. For purposes of amortization, interests in oil and natural gas properties are grouped in a reasonable aggregation of properties with common geological structural features or stratigraphic condition.

The Company reviews and evaluates its royalty interests in oil and natural gas properties for impairment when events or changes in circumstances indicate that the related carrying amounts may not be recoverable. Proved oil and gas properties are reviewed for impairment when events and circumstances indicate a potential decline in the fair value of such properties below the carrying value, such as a downward revision of the reserve estimates or lower commodity prices. When such events or changes in circumstances occur, the Company estimates the undiscounted future cash flows expected in connection with the properties and compares such future cash flows to the carrying amounts of the properties to determine if the carrying amounts are recoverable. If the carrying value of the properties is determined to not be recoverable based on the undiscounted cash flows, an impairment charge is recognized by comparing the carrying value to the estimated fair value of the properties.

See Note 18 for further discussion of the Company's royalty and mineral interests.

Long-Lived Assets: The Company periodically evaluates long-lived assets for impairment when changes in circumstances or the occurrence of certain events indicate the carrying amount of an asset or asset group may not be recoverable. Upon identification of indicators of impairment, the Company evaluates the carrying value of the asset by comparing the estimated future undiscounted cash flows generated from the use of the asset or asset group and its eventual disposition with the asset's net carrying value. If the carrying value of an asset is considered impaired, an impairment charge is recorded for the amount that the carrying value of the long-lived asset or asset group exceeds its fair value. Fair value is estimated as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. See Note 9 for further discussion of the Company's nonrecurring fair value measurements.

At MLMC, the costs of mining operations are not reimbursed by MLMC's customer. As such, increased costs at MLMC or decreased revenues could materially reduce the Company's profitability. Any reduction in customer demand at MLMC, including reductions related to reduced mechanical availability of the customer's power plant, would adversely affect the Company's operating results and could result in significant impairments. MLMC has approximately \$125 million of long-lived assets, including property, plant and equipment and its coal supply agreement intangible asset, which are subject to periodic impairment analyses and review. Identifying and assessing whether impairment indicators exist, or if events or changes in circumstances have occurred, including assumptions about future power plant dispatch levels, changes in future sales price, operating costs and other factors that impact anticipated revenue and customer demand, requires significant judgment. Actual future operating results could differ significantly from these estimates, which may result in an impairment charge in a future period, which could have a substantial impact on the Company's results of operations.

Self-insurance Liabilities: The Company is generally self-insured for medical claims, certain workers' compensation claims and certain closed mine liabilities. An estimated provision for claims reported and for claims incurred but not yet reported under the self-insurance programs is recorded and revised periodically based on industry trends, historical experience and management judgment. In addition, industry trends are considered within management's judgment for valuing claims. Changes in assumptions for such matters as legal judgments and settlements, inflation rates, medical costs and actual experience could cause estimates to change in the near term.

Revenue Recognition: See Note 3 to the Consolidated Financial Statements for discussion of revenue recognition.

Stock Compensation: The Company maintains long-term incentive programs that allow for the grant of shares of Class A common stock, subject to restrictions, as a means of retaining and rewarding selected employees for long-term performance and

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to increase ownership in the Company. Shares awarded under the plans are fully vested and entitle the stockholder to all rights of common stock ownership except that shares may not be assigned, pledged or otherwise transferred during the restriction period. In general, for shares awarded for years ended December 31, 2022 and December 31, 2021, the restriction period ends at the earliest of (i) three years after the participant's retirement date, (ii) three, five or ten years from the award date, or (iii) the participant's death or permanent disability. Pursuant to the plans, the Company issued 165,574 and 138,306 shares related to the years ended December 31, 2022 and 2021, respectively. After the issuance of these shares, there were 396,120 shares of Class A common stock available for issuance under these plans. Compensation expense related to these share awards was \$6.4 million (\$5.0 million net of tax) and \$4.1 million (\$3.2 million net of tax) for the years ended December 31, 2022 and 2021, respectively. Compensation expense represents fair value based on the market price of the shares of Class A common stock at the grant date.

The Company also has a stock compensation plan for non-employee directors of the Company under which a portion of the annual retainer for each non-employee director is paid in restricted shares of Class A common stock. For the year ended December 31, 2022, \$110,000 (\$150,000 for the Chairman) of the non-employee director's annual retainer of \$175,000 (\$250,000 for the Chairman) was paid in restricted shares of Class A common stock. For the year ended December 31, 2021, \$105,000 (\$150,000 for the Chairman) of the non-employee director's annual retainer of \$167,000 (\$250,000 for the Chairman) was paid in restricted shares of Class A common stock. Shares awarded under the plan are fully vested and entitle the stockholder to all rights of common stock ownership except that shares may not be assigned, pledged, hypothecated or otherwise transferred during the restriction period. In general, the restriction period ends at the earliest of (i) ten years from the award date, (ii) the date of the director's death or permanent disability, (iii) five years (or earlier with the approval of the Board of Directors) after the director's date of retirement from the Board of Directors, (iv) the date the director has both retired from the Board of Directors and has reached age 70, or (v) at such other time as determined by the Board of Directors in its sole and absolute discretion. Pursuant to this plan, the Company issued 30,034 and 45,223 shares related to the years ended December 31, 2022 and 2021, respectively. In addition to the mandatory retainer fee received in restricted stock, directors may elect to receive shares of Class A common stock in lieu of cash for up to 100% of the balance of their annual retainer, committee retainer and any committee chairman's fees. These voluntary shares are not subject to any restrictions. Total shares issued under voluntary elections were 480 in 2022 and 753 in 2021. After the issuance of these shares, there were 136,047 shares of Class A common stock available for issuance under this plan. Compensation expense related to these awards was \$1.3 million (\$1.0 million net of tax) and \$1.3 million (\$1.1 million net of tax) for the years ended December 31, 2022 and 2021, respectively. Compensation expense represents fair value based on the market price of the shares of Class A common stock at the grant date.

Financial Instruments: Financial instruments held by the Company include cash and cash equivalents, accounts receivable, equity securities, accounts payable, revolving credit agreements and long-term debt.

Fair Value Measurements: The Company accounts for the fair value measurement of its financial assets and liabilities in accordance with U.S. generally accepted accounting principles, which defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date.

A fair value hierarchy requires an entity to maximize the use of observable inputs, where available, and minimize the use of unobservable inputs when measuring fair value.

Described below are the three levels of inputs that may be used to measure fair value:

- Level 1 - Quoted prices in active markets that are accessible at the measurement date for identical assets or liabilities.
- Level 2 - Observable prices that are based on inputs not quoted on active markets, but corroborated by market data.
- Level 3 - Unobservable inputs are used when little or no market data is available.

The hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. The classification of fair value measurements within the hierarchy is based upon the lowest level of input that is significant to the measurement. See Note 9 for further discussion of fair value measurements.

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NOTE 3—Revenue Recognition

Nature of Performance Obligations

At contract inception, the Company assesses the goods and services promised in its contracts with customers and identifies a performance obligation for each promised good or service that is distinct. To identify the performance obligations, the Company considers all of the goods or services promised in the contract regardless of whether they are explicitly stated or are implied by customary business practices.

Each mine or mine area has a contract with its respective customer that represents a contract under ASC 606. For its consolidated entities, the Company's performance obligations vary by contract and consist of the following:

At MLMC, each MMBtu delivered during the production period is considered a separate performance obligation. Revenue is recognized at the point in time that control of each MMBtu of lignite transfers to the customer. Fluctuations in revenue from period to period generally result from changes in customer demand.

At NAMining, the management service to oversee the operation of the equipment and delivery of aggregates or other minerals is the performance obligation accounted for as a series. Performance momentarily creates an asset that the customer simultaneously receives and consumes; therefore, control is transferred to the customer over time. Consistent with the conclusion that the customer simultaneously receives and consumes the benefits provided, an input-based measure of progress is appropriate. As each month of service is completed, revenue is recognized for the amount of actual costs incurred, plus the management fee or fixed fee and the general and administrative fee (as applicable). Fluctuations in revenue from period to period result from changes in customer demand primarily due to increases and decreases in activity levels on individual contracts and variances in reimbursable costs.

Included within NAMining, Caddo Creek has a fixed-price contract to perform mine reclamation. The management service to perform mine reclamation is the performance obligation accounted for as a series. Performance momentarily creates an asset that the customer simultaneously receives and consumes; therefore, control is transferred to the customer over time. Revenue from this contract is recognized over time utilizing the cost-to-cost method to measure the extent of progress toward completion of the performance obligation. The Company believes the cost-to-cost method is the most appropriate method to measure progress and that the rate at which costs are incurred to fulfill the contract best depicts the transfer of control to the customer. The extent of progress towards completion is measured based on the ratio of costs incurred to date compared to total estimated costs at completion, and revenue is recorded proportionally based on an estimated profit margin.

The Minerals Management segment enters into contracts which grant the right to explore, develop, produce and sell minerals controlled by the Company. These arrangements result in the transfer of mineral rights for a period of time; however, no rights to the actual land are granted other than access for purposes of exploration, development, production and sales. The mineral rights revert back to the Company at the expiration of the contract.

Under these contracts, granting exclusive right, title, and interest in and to minerals, if any, is the performance obligation. The performance obligation under these contracts represents a series of distinct goods or services whereby each day of access that is provided is distinct. The transaction price consists of a variable sales-based royalty and, in certain arrangements, a fixed component in the form of an up-front lease bonus payment. As the amount of consideration the Company will ultimately be entitled to is entirely susceptible to factors outside its control, the entire amount of variable consideration is constrained at contract inception. The Company believes that the pricing provisions of royalty contracts are customary in the industry. Up-front lease bonus payments represent the fixed portion of the transaction price and are recognized over the primary term of the contract, which is generally three to five years.

Mitigation Resources generates and sells stream and wetland mitigation credits (known as mitigation banking) and provides services to those engaged in permittee-responsible stream and wetland mitigation. Each mitigation credit sale is considered a separate performance obligation. Revenue is recognized at the point in time that control of each mitigation credit transfers to the customer. Fluctuations in revenue from period to period generally result from changes in customer demand. Under the permittee-responsible stream and wetland mitigation model, the contracts are generally structured as a management fee agreement under which Mitigation Resources is reimbursed for all costs incurred in performing the required mitigation plus an agreed profit percentage or a fixed fee. The mitigation services provided is the performance obligation and is accounted for as a series. Performance momentarily creates an asset that the customer simultaneously receives and consumes; therefore, control is transferred to the customer as work is completed. Consistent with the conclusion that the customer simultaneously receives and

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consumes the benefits provided, an input-based measure of progress is appropriate. As each month of service is completed, revenue is recognized for the amount of actual costs incurred, plus the management fee or fixed fee. Fluctuations in revenue from period to period result from changes in customer demand primarily due to increases and decreases in activity levels of individual contracts and variances in reimbursable costs.

Significant Judgments

The Company's contracts with its customers contain different types of variable consideration including, but not limited to, management fees that adjust based on volumes or MMBtu delivered, however, the terms of these variable payments relate specifically to the Company's efforts to satisfy one or more, but not all of, the performance obligations (or to a specific outcome from satisfying the performance obligations) in the contract. Therefore, the Company allocates each variable payment (and subsequent changes to that payment) entirely to the specific performance obligation to which it relates. Management fees, as well as general and administrative fees, are also adjusted based on changes in specified indices (e.g., CPI) to compensate for general inflation changes. Index adjustments, if applicable, are effective prospectively.

Recognition of revenue and recognition of profit related to the Caddo Creek contract requires the use of assumptions and estimates related to the total contract value, the total cost at completion, and the measurement of progress towards completion of the performance obligation. Due to the nature of the contract, developing the estimated total contract value and total cost at completion requires the use of significant judgment. The total contract value includes variable consideration. The Company includes variable consideration in the transaction price at the most likely amount to be earned, based upon the Company's assessment of expected performance. The Company records these amounts only to the extent it is probable that a significant reversal of cumulative revenue recognized will not occur when the uncertainty associated with the variable consideration is resolved.

Cost Reimbursement

Certain contracts include reimbursement from customers of actual costs incurred for the purchase of supplies, equipment and services in accordance with contractual terms. Such reimbursable revenue is variable and subject to uncertainty, as the amounts received and timing thereof is highly dependent on factors outside of the Company's control. Accordingly, reimbursable revenue is fully constrained and not recognized until the uncertainty is resolved, which typically occurs when the related costs are incurred on behalf of a customer. The Company is considered a principal in such transactions and records the associated revenue at the gross amount billed to the customer with the related costs recorded as an expense within cost of sales.

Prior Period Performance Obligations

The Company records royalty income in the month production is delivered to the purchaser. As a mineral owner the Company has limited visibility into when new wells start producing and production statements may not be received for 30 to 90 days or more after the date production is delivered. As a result, the Company is required to estimate the amount of production delivered to the purchaser of the product and the price that will be received for the sale of the product. The expected sales volumes and prices for these properties are estimated and recorded in "Trade accounts receivable" in the accompanying Consolidated Balance Sheets. The difference between the Company's estimates and the actual amounts received is recorded in the month that payment is received from the third-party lessee. During 2022, royalty income of \$2.1 million was recognized for a settlement related to the Company's ownership interest in certain mineral rights. During 2021, the Company recognized \$1.8 million of variable consideration that was previously constrained due to uncertainty of collectability.

Disaggregation of Revenue

In accordance with ASC 606-10-50, the Company disaggregates revenue from contracts with customers into major goods and service lines and timing of transfer of goods and services. The Company determined that disaggregating revenue into these categories achieves the disclosure objective of depicting how the nature, amount, timing, and uncertainty of revenue and cash flows are affected by economic factors. The Company's business consists of the Coal Mining, NAMining and Minerals Management segments as well as Unallocated Items. See Note 15 to the Consolidated Financial Statements for further discussion of segment reporting.

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The following table disaggregates revenue by major sources for the years ended December 31:

Major Goods/Service Lines	2022	2021
Coal Mining	\$ 95,204	\$ 82,831
NAMining	85,664	78,944
Minerals Management	60,242	31,003
Unallocated Items	2,952	4,695
Eliminations	(2,343)	(5,627)
Total revenues	<u>\$ 241,719</u>	<u>\$ 191,846</u>
<u>Timing of Revenue Recognition</u>		
Goods transferred at a point in time	\$ 92,842	\$ 80,515
Services transferred over time	148,877	111,331
Total revenues	<u>\$ 241,719</u>	<u>\$ 191,846</u>

Contract Balances

The opening and closing balances of the Company's current and long-term contract assets and liabilities and receivables are as follows:

	Contract balances				
	Trade accounts receivable	Contract asset (current)	Contract asset (long-term)	Contract liability (current)	Contract liability (long-term)
Balance at January 1, 2022	\$ 25,667	\$ —	\$ 5,985	\$ 4,082	\$ 1,453
Balance at December 31, 2022	37,940	409	5,985	833	1,709
Increase (decrease)	<u>\$ 12,273</u>	<u>\$ 409</u>	<u>\$ —</u>	<u>\$ (3,249)</u>	<u>\$ 256</u>

As described above, the Company enters into royalty contracts that grant exclusive right, title, and interest in and to minerals. The transaction price consists of a variable sales-based royalty and, in certain arrangements, a fixed component in the form of an up-front lease bonus payment. The timing of the payment of the fixed portion of the transaction price is upfront, however, the performance obligation is satisfied over the primary term of the contract, which is generally three to five years. Therefore, at the time any such up-front payment is received, a contract liability is recorded which represents deferred revenue. The amount of royalty revenue recognized in the years ended December 31, 2022 and December 31, 2021 that was included in the opening contract liability was \$1.0 million and \$1.4 million, respectively. This revenue consists of up-front lease bonus payments received under royalty contracts that are recognized over the primary term of the royalty contracts, which are generally three to five years.

The Company expects to recognize \$0.8 million in 2023, \$1.5 million in 2024, \$0.2 million in 2025, and de minimis amounts in 2026 and 2027 related to the contract liability remaining at December 31, 2022. The difference between the opening and closing balances of the Company's contract balances results from the timing difference between the Company's performance and the customer's payment.

The Company has no contract assets recognized from the costs to obtain or fulfill a contract with a customer.

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NOTE 4—Inventories

Inventories are summarized as follows:

	December 31	
	2022	2021
Coal	\$ 27,927	\$ 19,352
Mining supplies	43,561	34,733
Total inventories	<u>\$ 71,488</u>	<u>\$ 54,085</u>

The weighted average method is used for inventory valuation.

NOTE 5—Property, Plant and Equipment, Net

Property, plant and equipment, net includes the following:

	December 31	
	2022	2021
Coal lands and real estate	\$ 60,277	\$ 52,011
Mineral interests	31,436	19,512
Plant and equipment	290,511	264,110
Property, plant and equipment, at cost	382,224	335,633
Less allowances for depreciation, depletion and amortization	164,272	142,466
	<u>\$ 217,952</u>	<u>\$ 193,167</u>

Total depreciation, depletion and amortization expense on property, plant and equipment was \$23.1 million and \$19.5 million during 2022 and 2021, respectively.

NOTE 6—Intangible Assets

The Company has a coal supply agreement intangible asset which is subject to amortization based on units of production over the term of the lignite sales agreement which expires in 2032. The gross and net balances are set forth in the following table:

	Gross Carrying Amount	Accumulated Amortization	Net Balance
Balance at December 31, 2022			
Coal supply agreement	<u>\$ 84,200</u>	<u>\$ (56,145)</u>	<u>\$ 28,055</u>
Balance at December 31, 2021			
Coal supply agreement	<u>\$ 84,200</u>	<u>\$ (52,426)</u>	<u>\$ 31,774</u>

Amortization expense for intangible assets was \$3.7 million and \$3.6 million in 2022 and 2021, respectively.

Expected annual amortization expense of the coal supply agreement is \$3.2 million in 2023, \$3.1 million in 2024 and \$3.0 million in 2025 through 2027.

NOTE 7—Asset Retirement Obligations

The Company's obligations associated with the retirement of long-lived assets are recognized at fair value at the time the legal obligations are incurred. Upon initial recognition of a liability, a corresponding amount is capitalized as part of the carrying value of the related long-lived asset and is depreciated either by the straight-line method or the units-of-production method. The liability is accreted each period until the liability is settled, at which time the liability is removed. If the liability is settled for an amount other than the recorded amount, a gain or loss is recognized.

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The Company's asset retirement obligations are principally for costs to close its surface mines and reclaim the land it has disturbed as a result of its normal mining activities as well as for costs to dismantle certain mining equipment at the end of the life of the mine. Management's estimate involves a high degree of subjectivity. In particular, the obligation's fair value is determined using a discounted cash flow technique and is based upon mining permit requirements and various assumptions including credit adjusted risk-free-rates, estimates of disturbed acreage, life of the mine, estimated reclamation costs, the application of various environmental laws and regulation and assumptions regarding equipment productivity. The Company reviews its asset retirement obligations at each mine site at least annually and makes necessary adjustments for permit changes and for revisions of estimates of the timing and extent of reclamation activities and cost estimates.

The accretion of the liability is being recognized over the estimated life of each individual asset retirement obligation and is recorded in the line Cost of sales in the accompanying Consolidated Statements of Operations. The associated asset is recorded in Property, Plant and Equipment, net in the accompanying Consolidated Balance Sheets. The depreciation of the asset is recorded in the line Cost of sales in the accompanying Consolidated Statements of Operations.

A reconciliation of the Company's beginning and ending aggregate carrying amount of the asset retirement obligations are as follows:

	Coal Mining	Unallocated Items	NACCO Consolidated
Balance at January 1, 2021	\$ 25,040	\$ 16,692	\$ 41,732
Liabilities settled during the period	(184)	(869)	(1,053)
Accretion expense	1,996	1,304	3,300
Revision of estimated cash flows	46	(74)	(28)
Balance at December 31, 2021	\$ 26,898	\$ 17,053	\$ 43,951
Liabilities settled during the period	(223)	(956)	(1,179)
Accretion expense	2,190	1,332	3,522
Revision of estimated cash flows	(405)	113	(292)
Balance at December 31, 2022	\$ 28,460	\$ 17,542	\$ 46,002

Bellaire Corporation ("Bellaire") is a non-operating subsidiary of the Company with legacy liabilities relating to closed mining operations, primarily former Eastern U.S. underground coal mining operations. These legacy liabilities include obligations for water treatment and other environmental remediation that arose as part of the normal course of closing these underground mining operations. Since Bellaire's properties are no longer active operations, no associated asset has been capitalized.

Prior to 2021, Bellaire established a \$5.0 million Mine Water Treatment Trust to provide a financial assurance mechanism in order to assure the long-term treatment of post-mining discharges. The fair value of Bellaire's Mine Water Treatment assets, which are recognized as a component of Other non-current assets on the Consolidated Balance Sheets, are \$9.9 million and \$12.3 million at December 31, 2022 and December 31, 2021, respectively, and are legally restricted for purposes of settling the Bellaire asset retirement obligation. See Note 9 for further discussion of the Mine Water Treatment Trust.

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NOTE 8—Current and Long-Term Financing

Financing arrangements are obtained and maintained at the subsidiary level. NACCO has not guaranteed any borrowings of its subsidiaries.

The following table summarizes the Company's available and outstanding borrowings:

	December 31	
	2022	2021
Total outstanding borrowings of NACoal:		
Revolving credit agreement	\$ —	\$ 4,000
Other debt	19,668	16,710
Total debt outstanding	<u>\$ 19,668</u>	<u>\$ 20,710</u>
Current portion of borrowings outstanding	\$ 3,649	\$ 2,527
Long-term portion of borrowings outstanding	16,019	18,183
	<u>\$ 19,668</u>	<u>\$ 20,710</u>
Total available borrowings, net of limitations, under revolving credit agreement	<u>\$ 116,285</u>	<u>\$ 120,231</u>
Unused revolving credit agreement	<u>\$ 116,285</u>	<u>\$ 116,231</u>
Weighted average stated interest rate on total borrowings	3.9 %	3.7 %

Annual maturities of total debt, excluding leases, are as follows:

2023	2,873
2024	2,497
2025	1,620
2026	5,955
2027	236
Thereafter	5,692
	<u>\$ 18,873</u>

Interest paid on total debt was \$2.0 million and \$1.6 million during 2022 and 2021, respectively. Deferred financing fees of \$1.8 million were capitalized during 2021.

NACoal has a secured revolving line of credit of up to \$150.0 million (the “NACoal Facility”) that was refinanced during 2021 and expires in November 2025. There were no borrowings outstanding under the NACoal Facility at December 31, 2022. At December 31, 2022, the excess availability under the NACoal Facility was \$116.3 million, which reflects a reduction for outstanding letters of credit of \$33.7 million.

The NACoal Facility has performance-based pricing, which sets interest rates based upon NACoal achieving various levels of debt to EBITDA ratios, as defined in the NACoal Facility. Borrowings bear interest at a floating rate plus a margin based on the level of debt to EBITDA ratio achieved. The applicable margins, effective December 31, 2022, for base rate and LIBOR loans were 1.23% and 2.23%, respectively. The NACoal Facility has a commitment fee which is based upon achieving various levels of debt to EBITDA ratios. The commitment fee was 0.34% on the unused commitment at December 31, 2022. During the year ended December 31, 2022, the average borrowing under the NACoal Facility was \$2.0 million. The weighted-average annual interest rate, including the floating rate margin, was 2.54% and 4.50% at December 31, 2022 and December 31, 2021, respectively.

The NACoal Facility contains restrictive covenants, which require, among other things, NACoal to maintain a maximum net debt to EBITDA ratio of 2.75 to 1.00 and an interest coverage ratio of not less than 4.00 to 1.00. The NACoal Facility provides the ability to make loans, dividends and advances to NACCO, with some restrictions based on maintaining a maximum debt to EBITDA ratio of 1.50 to 1.00, or if greater than 1.50 to 1.00, a Fixed Charge Coverage Ratio of 1.10 to 1.00, in conjunction

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with maintaining unused availability thresholds of borrowing capacity, as defined in the NACoal Facility, of \$15.0 million. At December 31, 2022, NACoal was in compliance with all financial covenants in the NACoal Facility.

The obligations under the NACoal Facility are guaranteed by certain of NACoal's direct and indirect, existing and future domestic subsidiaries, and is secured by certain assets of NACoal and the guarantors, subject to customary exceptions and limitations.

NACoal has a demand note payable to Coteau, one of the unconsolidated subsidiaries, which bears interest based on the applicable quarterly federal short-term interest rate as announced from time to time by the Internal Revenue Service. At December 31, 2022 and 2021, the balance of the note was \$5.7 million and \$2.6 million and the interest rate was 3.36% and 0.18%, respectively.

NACoal has seven notes payable that are secured by twelve specified units of equipment, bear interest at a weighted average rate of 4.11%, and expire at various dates through 2027. One note includes a principal payment of \$4.4 million at the end of the term on December 15, 2026. At December 31, 2022 and 2021, the outstanding balances of the notes were \$13.2 million and \$13.8 million, respectively.

NOTE 9—Fair Value Disclosure

Recurring Fair Value Measurements: The following table presents the Company's assets accounted for at fair value on a recurring basis:

Description	December 31, 2022	Fair Value Measurements at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Equity securities	\$ 15,534	\$ 15,534	\$ —	\$ —
	<u>\$ 15,534</u>	<u>\$ 15,534</u>	<u>\$ —</u>	<u>\$ —</u>

Description	December 31, 2021	Fair Value Measurements at Reporting Date Using		
		Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets:				
Equity securities	\$ 16,070	\$ 16,070	\$ —	\$ —
	<u>\$ 16,070</u>	<u>\$ 16,070</u>	<u>\$ —</u>	<u>\$ —</u>

Bellaire's Mine Water Treatment Trust invests in available for sale securities that are reported at fair value based upon quoted market prices in active markets for identical assets; therefore, they are classified as Level 1 within the fair value hierarchy. The Mine Water Treatment Trust realized a loss of \$2.2 million and a gain of \$1.7 million in the years ended December 31, 2022 and 2021, respectively. See Note 7 for further discussion of Bellaire's Mine Water Treatment Trust.

Prior to 2021, the Company invested \$2.0 million in equity securities of a public company with a diversified portfolio of royalty producing mineral interests. The investment is reported at fair value based upon quoted market prices in active markets for identical assets; therefore, it is classified as Level 1 within the fair value hierarchy. The Company recognized a gain of \$1.9 million and \$1.7 million in the years ended December 31, 2022 and 2021, related to the investment in these equity securities. The change in fair value of equity securities is reported on the line Loss (gain) on equity securities in the Other (income) expense section of the Consolidated Statements of Operations.

There were no transfers into or out of Levels 1, 2 or 3 during the year ended December 31, 2022.

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Nonrecurring Fair Value Measurements: The Company recorded the estimated fair value of an office building during the second quarter of 2022. In determining the \$4.1 million fair value of the office building, the Company engaged an independent real estate appraiser to appraise the property utilizing observed sales transactions for similar assets as well as consideration of an income approach; therefore, it is classified as Level 2 within the fair value hierarchy. The office building is included in Property, plant and equipment, net in the accompanying Consolidated Balance Sheets.

The Company regularly performs reviews of potential future development projects and identified certain legacy assets where future development is unlikely. As a result, the Company estimated the fair value of the assets using unobservable inputs, which are classified as Level 3 inputs. The long-lived assets, which included land, prepaid royalties and capitalized leasehold costs, were written off to zero in the third quarter of 2022 and resulted in non-cash asset impairment charges of \$3.9 million in the Minerals Management segment. The impairment charges are reported on the line Asset impairment charges in the Consolidated Statements of Operations.

Other Fair Value Measurement Disclosures: The carrying amounts of cash and cash equivalents, accounts receivable and accounts payable approximate fair value due to the short-term maturities of these instruments. The fair values of revolving credit agreements and long-term debt, excluding finance leases, were determined using current rates offered for similar obligations taking into account subsidiary credit risk, which is Level 2 as defined in the fair value hierarchy. The fair value and the book value of revolving credit agreements and long-term debt, excluding finance leases, was \$18.1 million and \$18.9 million, respectively, at December 31, 2022 and \$20.5 million and \$20.4 million, respectively, at December 31, 2021.

Financial instruments that potentially subject the Company to concentration of credit risk consist principally of accounts receivable. Under its mining contracts, the Company recognizes revenue and a related receivable as coal or other aggregates are delivered or predevelopment services are provided. These mining contracts provide for monthly settlements. The Company's significant credit concentration is uncollateralized; however, historically minimal credit losses have been incurred. To further reduce credit risk associated with accounts receivable, the Company performs periodic credit evaluations of its customers, but does not generally require advance payments or collateral.

NOTE 10—Leases

The Company recognizes right-of-use assets ("ROU assets") and lease liabilities for operating leases of real estate, mining and other equipment that expire at various dates through 2032. The majority of the Company's leases are operating leases. NACCO does not recognize leases with a term of 12 months or less on the balance sheet. Instead, the Company recognizes the related lease expense on a straight-line basis over the lease term. The Company accounts for lease and non-lease components as a single lease component. The Company's lease agreements do not contain lease payments that depend on an index or a rate, as such, minimum lease payments do not include variable lease payments.

Leased assets and liabilities include the following at December 31:

Description	Location	2022	2021
Assets			
Operating	Operating lease right-of-use assets	\$ 6,419	\$ 8,911
Finance	Property, plant and equipment, net ^(a)	843	334
Liabilities			
Current			
Operating	Other current liabilities	\$ 1,039	\$ 1,463
Finance	Current maturities of long-term debt	776	150
Non-current			
Operating	Operating lease liabilities	\$ 7,528	\$ 9,733
Finance	Long-term debt	19	190

^(a) Finance leased assets are recorded net of accumulated amortization of \$0.2 million and \$0.3 million as of December 31, 2022 and December 31, 2021, respectively.

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The components of lease expense for the years ended December 31 are as follows:

Description	Location	2022	2021
Lease expense			
Operating lease cost	Selling, general and administrative expenses	\$ 1,881	\$ 2,122
Finance lease cost:			
Amortization of leased assets	Cost of sales	128	220
Interest on lease liabilities	Interest expense	13	31
Variable lease expense	Selling, general and administrative expenses	534	571
Short-term lease expense	Selling, general and administrative expenses	3,434	1,176
Total lease expense		<u>\$ 5,990</u>	<u>\$ 4,120</u>

Future minimum finance and operating lease payments were as follows at December 31, 2022:

	Finance Leases	Operating Leases	Total
2023	\$ 778	\$ 1,599	\$ 2,377
2024	12	1,474	1,486
2025	7	1,283	1,290
2026	—	1,314	1,314
2027	—	1,345	1,345
Subsequent to 2027	—	4,177	4,177
Total minimum lease payments	797	11,192	\$ 11,989
Amounts representing interest	2	2,625	
Present value of net minimum lease payments	<u>\$ 795</u>	<u>\$ 8,567</u>	

As most of the Company's leases do not provide an implicit rate, the Company determines the incremental borrowing rate based on the information available at the lease commencement date in determining the present value of lease payments. The Company considers its credit rating and the current economic environment in determining this collateralized rate. The assumptions used in accounting for ASC 842 for the years ended December 31 are as follows:

	2022	2021
Weighted average remaining lease term (years)		
Operating	7.66	8.38
Finance	1.41	2.44
Weighted average discount rate		
Operating	7.13 %	7.08 %
Finance	3.11 %	4.16 %

The following table details cash paid for amounts included in the measurement of lease liabilities for the years ended December 31:

	2022	2021
Operating cash flows from operating leases	\$ 2,097	\$ 2,260
Operating cash flows from finance leases	13	31
Financing cash flows from finance leases	183	275

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NOTE 11—Contingencies

Various legal and regulatory proceedings and claims have been or may be asserted against NACCO and certain subsidiaries relating to the conduct of their businesses. These proceedings and claims are incidental to the ordinary course of business of the Company. Management believes that it has meritorious defenses and will vigorously defend the Company in these actions. Any costs that management estimates will be paid as a result of these claims are accrued when the liability is considered probable and the amount can be reasonably estimated. If a range of amounts can be reasonably estimated and no amount within the range is a better estimate than any other amount, then the minimum of the range is accrued. The Company does not accrue liabilities when the likelihood that the liability has been incurred is probable but the amount cannot be reasonably estimated or when the liability is believed to be only reasonably possible or remote. For contingencies where an unfavorable outcome is probable or reasonably possible and which are material, the Company discloses the nature of the contingency and, in some circumstances, an estimate of the possible loss.

These matters are subject to inherent uncertainties, and unfavorable rulings could occur. If an unfavorable ruling were to occur, there exists the possibility of an adverse impact on the Company's financial position, results of operations and cash flows of the period in which the ruling occurs, or in future periods.

NOTE 12—Stockholders' Equity and Earnings Per Share

NACCO Industries, Inc. Class A common stock is traded on the New York Stock Exchange under the ticker symbol "NC." Because of transfer restrictions on Class B common stock, no trading market has developed, or is expected to develop, for the Company's Class B common stock. The Class B common stock is convertible into Class A common stock on a one-for-one basis at any time at the request of the holder. The Company's Class A common stock and Class B common stock have the same cash dividend rights per share. As the liquidation and dividend rights are identical, any distribution of earnings would be allocated to Class A and Class B stockholders on a proportionate basis, and accordingly the net income per share for each class of common stock is identical. The Class A common stock has one vote per share and the Class B common stock has ten votes per share. The total number of authorized shares of Class A common stock and Class B common stock at December 31, 2022 was 25,000,000 shares and 6,756,176 shares, respectively. Treasury shares of Class A common stock totaling 2,434,769 and 2,600,661 at December 31, 2022 and 2021, respectively, have been deducted from shares outstanding.

Stock Repurchase Program: On November 10, 2021, the Company's Board of Directors approved a stock purchase program ("2021 Stock Repurchase Program") providing for the purchase of up to \$20.0 million of the Company's outstanding Class A common stock through December 31, 2023. The timing and amount of any repurchases under the 2021 Stock Repurchase Program are determined at the discretion of the Company's management based on a number of factors, including the availability of capital, other capital allocation alternatives, market conditions for the Company's Class A common stock and other legal and contractual restrictions. The 2021 Stock Repurchase Program does not require the Company to acquire any specific number of shares and may be modified, suspended, extended or terminated by the Company without prior notice and may be executed through open market purchases, privately negotiated transactions or otherwise. All or part of the repurchases under the 2021 Stock Repurchase Program may be implemented under a Rule 10b5-1 trading plan, which would allow repurchases under pre-set terms at times when the Company might otherwise be restricted from doing so under applicable securities laws. There were no stock repurchases in 2022 or 2021 under the 2021 Stock Repurchase Program.

Stock Compensation: See Note 2 for a discussion of the Company's restricted stock awards.

Earnings per Share: The weighted average number of shares of Class A common stock and Class B common stock outstanding used to calculate basic and diluted earnings per share were as follows:

	2022	2021
Basic weighted average shares outstanding	7,312	7,146
Dilutive effect of restricted stock awards	61	44
Diluted weighted average shares outstanding	7,373	7,190
Basic earnings per share	\$ 10.14	\$ 6.73
Diluted earnings per share	\$ 10.06	\$ 6.69

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NOTE 13—Income Taxes

The Company provides for income taxes and the related accounts under the asset and liability method. Deferred tax assets and liabilities are determined based on the difference between the financial statement and tax bases of assets and liabilities using enacted tax rates expected to be in effect during the year in which the basis differences reverse. Valuation allowances are established when management determines it is more likely than not that some portion, or all, of the deferred tax assets will not be realized.

The components of Income before income tax provision and the Income tax provision for the years ended December 31 are as follows:

	2022	2021
Income before income tax provision		
Domestic	\$ 87,975	\$ 57,019
Foreign	(252)	(169)
	<u>\$ 87,723</u>	<u>\$ 56,850</u>
Income tax provision		
Current income tax provision (benefit):		
Federal	\$ 20,761	\$ 10,870
State	1,328	1,443
Foreign	(53)	(35)
Total current	<u>22,036</u>	<u>12,278</u>
Deferred income tax (benefit) provision:		
Federal	(8,887)	(4,449)
State	416	896
Total deferred	<u>(8,471)</u>	<u>(3,553)</u>
	<u>\$ 13,565</u>	<u>\$ 8,725</u>

The Company made income tax payments of \$23.4 million and \$11.5 million during 2022 and 2021, respectively. During the same periods, income tax refunds totaled \$0.1 million and \$2.6 million, respectively.

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The provision for income taxes differs from the amount computed by applying the statutory federal income tax rate to income before the provision for income taxes. A reconciliation of the federal statutory and effective income tax rate for the years ended December 31 is as follows:

	2022	2021
Income before income tax provision	\$ 87,723	\$ 56,850
Statutory taxes at 21.0%	\$ 18,422	\$ 11,939
State and local income taxes	1,629	1,890
Non-deductible expenses	745	725
Percentage depletion	(4,866)	(6,245)
R&D and other federal credits	(300)	(363)
Settlements and uncertain tax positions	(787)	166
Other, net	(1,278)	613
Income tax provision	\$ 13,565	\$ 8,725
Effective income tax rate	15.5 %	15.3 %

The Company recorded income tax expense of \$13.6 million for the year ended December 31, 2022 on income before income tax of \$87.7 million, or 15.5%, compared to income tax expense of \$8.7 million on income before income tax of \$56.9 million, or 15.3%, for the year ended December 31, 2021.

The income tax provision for the year ended December 31, 2022 includes \$1.5 million of discrete tax benefits, primarily from the reversal of uncertain tax positions as a result of the conclusion of the IRS examination of the Company's 2013, 2014, 2015 and 2016 federal income tax returns. Excluding the \$1.5 million of discrete tax benefits, the effective income tax rate in 2022 was 17.1%. The year ended December 31, 2021 included \$1.0 million of discrete tax expense. Excluding the \$1.0 million of discrete tax expense, the effective income tax rate in 2021 was 13.5%.

The increase in the effective income tax rate for 2022 compared to 2021, excluding the impact of discrete items, is primarily due to an increase in earnings at entities that do not qualify for percentage depletion. The benefit from percentage depletion is not directly related to the amount of pre-tax income recorded in a period.

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A detailed summary of the total deferred tax assets and liabilities in the Company's Consolidated Balance Sheets resulting from differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes is as follows:

	December 31	
	2022	2021
Deferred tax assets		
Lease liabilities	\$ 21,880	\$ 24,500
Tax carryforwards	12,398	13,837
Inventories	5,571	4,522
Accrued liabilities	8,176	9,243
Employee benefits	3,086	3,496
Land valuation adjustment	6,261	5,988
Other	6,850	6,527
Total deferred tax assets	64,222	68,113
Less: Valuation allowance	11,809	11,695
	52,413	56,418
Deferred tax liabilities		
Lease right-of-use assets	21,880	24,500
Depreciation and depletion	19,665	25,851
Partnership investment - development costs	6,069	9,840
Accrued pension benefits	10,921	10,941
Total deferred tax liabilities	58,535	71,132
Net deferred liability	\$ (6,122)	\$ (14,714)

The following table summarizes the tax carryforwards and associated carryforward periods and related valuation allowances where the Company has determined that realization is uncertain:

	December 31, 2022		
	Net deferred tax asset	Valuation allowance	Carryforwards expire during:
State net operating loss	\$ 15,347	\$ 14,422	2023-2042

	December 31, 2021		
	Net deferred tax asset	Valuation allowance	Carryforwards expire during:
State net operating loss	\$ 17,516	\$ 14,694	2022-2041

The Company has a valuation allowance for certain state and foreign deferred tax assets. Based upon the review of historical earnings and the relevant expiration of carryforwards, including utilization limitations in the various state taxing jurisdictions, the Company believes the valuation allowances are appropriate and does not expect to release valuation allowances within the next twelve months that would have a significant effect on the Company's financial position or results of operations.

Since 2021, the Company has participated in a voluntary program with the IRS called Compliance Assurance Process ("CAP"). The objective of CAP is to contemporaneously work with the IRS to achieve federal tax compliance and resolve all or most issues prior to the filing of the tax return. In general, the Company operates in taxing jurisdictions that provide a statute of limitations period ranging from three to five years for the taxing authorities to review the applicable tax filings. The tax returns of the Company and certain of its subsidiaries are under routine examination by various taxing authorities. The Company has not been informed of any material assessment for which an accrual has not been previously provided and the Company would

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vigorously contest any material assessment. Management believes any potential adjustment would not materially affect the Company's financial condition or results of operations.

The following is a reconciliation of the Company's total gross unrecognized tax benefits, defined as the aggregate tax effect of differences between tax return positions and the benefits recognized in the financial statements for the years ended December 31, 2022 and 2021. Approximately \$5.5 million and \$6.4 million of the gross unrecognized tax benefits as of December 31, 2022 and 2021, respectively, relate to permanent items that, if recognized, would impact the effective income tax rate. This amount differs from the gross unrecognized tax benefits presented in the table below due to (1) the deferred tax asset which would be available if the position were not sustained upon audit and (2) the decrease in U.S. federal income taxes which would occur upon the recognition of the state tax benefits included herein.

	2022	2021
Balance at January 1	\$ 10,554	\$ 10,459
Additions based on tax positions related to prior years	—	95
Decreases based on settlements with tax authorities	(928)	—
Balance at December 31	\$ 9,626	\$ 10,554

The Company records interest and penalties on uncertain tax positions as a component of the income tax provision. The Company recognized net expense of less than \$0.1 million in interest and penalties related to uncertain tax positions during both 2022 and 2021. The total amount of interest and penalties accrued was \$0.3 million and \$0.2 million as of December 31, 2022 and 2021, respectively.

The Company expects the amount of unrecognized tax benefits will change within the next 12 months; however, the change in unrecognized tax benefits, which is reasonably possible within the next 12 months, is not expected to have a significant effect on the Company's financial position, results of operations or cash flows.

NOTE 14—Retirement Benefit Plans

Defined Benefit Plans: The Company maintains defined benefit pension plans that provide benefits based on years of service and average compensation during certain periods. Prior to 2021, the Company amended the Combined Defined Benefit Plan for NACCO Industries, Inc. and its subsidiaries (the “Combined Plan”) to freeze pension benefits for all employees. The Company also amended the Supplemental Retirement Benefit Plan (the “SERP”) to freeze all pension benefits. All eligible employees of the Company, including employees whose pension benefits are frozen, receive retirement benefits under defined contribution retirement plans.

The assumptions used in accounting for the defined benefit plans were as follows for the years ended December 31:

	2022	2021
Weighted average discount rates for pension benefit obligation	5.36% - 5.40%	2.53% - 2.77%
Weighted average discount rates for net periodic benefit cost	2.53% - 2.77%	2.02% - 2.36%
Expected long-term rate of return on assets for net periodic benefit cost	7.00 %	7.00 %

Set forth below is detail of the net periodic pension income for the defined benefit plans for the years ended December 31:

	2022	2021
Interest cost	\$ 1,105	\$ 1,002
Expected return on plan assets	(2,707)	(2,568)
Amortization of actuarial loss	543	718
Amortization of prior service cost	58	59
Net periodic pension income	\$ (1,001)	\$ (789)

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Set forth below is detail of other changes in plan assets and benefit obligations recognized in other comprehensive loss (income) for the years ended December 31:

	2022	2021
Current year actuarial (gain) loss	\$ 1,717	\$ (3,793)
Amortization of actuarial loss	(543)	(718)
Amortization of prior service cost	(58)	(59)
Total recognized in other comprehensive loss (income)	<u>\$ 1,116</u>	<u>\$ (4,570)</u>

The following table sets forth the changes in the benefit obligation and the plan assets during the year and the funded status of the defined benefit plans at December 31:

	2022	2021
Change in benefit obligation		
Projected benefit obligation at beginning of year	\$ 41,663	\$ 44,600
Interest cost	1,105	1,002
Actuarial gain	(8,396)	(1,367)
Benefits paid	(2,650)	(2,572)
Projected benefit obligation at end of year	<u>\$ 31,722</u>	<u>\$ 41,663</u>
Accumulated benefit obligation at end of year	<u>\$ 31,722</u>	<u>\$ 41,663</u>
Change in plan assets		
Fair value of plan assets at beginning of year	\$ 44,009	\$ 41,099
Actual return on plan assets	(7,405)	4,995
Employer contributions	531	487
Benefits paid	(2,650)	(2,572)
Fair value of plan assets at end of year	<u>\$ 34,485</u>	<u>\$ 44,009</u>
Funded status at end of year	<u>\$ 2,763</u>	<u>\$ 2,346</u>
Amounts recognized in the balance sheets consist of:		
Non-current assets	\$ 6,991	\$ 7,806
Current liabilities	(491)	(542)
Non-current liabilities	(3,737)	(4,918)
	<u>\$ 2,763</u>	<u>\$ 2,346</u>
Components of accumulated other comprehensive loss consist of:		
Actuarial loss	\$ 10,682	\$ 9,510
Prior service cost	645	703
Deferred taxes	(2,490)	(2,254)
	<u>\$ 8,837</u>	<u>\$ 7,959</u>

The Company recognizes as a component of benefit (income) cost, as of the measurement date, any unrecognized actuarial net gains or losses that exceed 10% of the larger of the projected benefit obligations or the plan assets, defined as the "corridor." Amounts outside the corridor are amortized over the average expected remaining service of active participants expected to benefit under the retiree medical plans or over the average expected remaining lifetime of inactive participants for the pension plans. The (gain) loss amounts recognized in AOCI are not expected to be fully recognized until the plan is terminated or as settlements occur, which would trigger accelerated recognition. Prior service costs resulting from plan changes are also in AOCI.

The Company's policy is to make contributions to fund its pension plans within the range allowed by applicable regulations.

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The Company maintains one supplemental defined benefit plan that pays monthly benefits to participants directly out of corporate funds. All other pension benefit payments are made from assets of the pension plans.

Future pension benefit payments expected to be paid from assets of the pension plans are:

2023	\$	2,731
2024		2,729
2025		2,700
2026		2,691
2027		2,681
2028 - 2032		12,536
	<u>\$</u>	<u>26,068</u>

The expected long-term rate of return on defined benefit plan assets reflects management's expectations of long-term rates of return on funds invested to provide for benefits included in the projected benefit obligations. In establishing the expected long-term rate of return assumption for plan assets, the Company considers the historical rates of return over a period of time that is consistent with the long-term nature of the underlying obligations of these plans as well as a forward-looking rate of return. The historical and forward-looking rates of return for each of the asset classes used to determine the Company's estimated rate of return assumption were based upon the rates of return earned or expected to be earned by investments in the equivalent benchmark market indices for each of the asset classes.

Expected returns for pension plans are based on a calculated market-related value for pension plan assets. Under this methodology, asset gains and losses resulting from actual returns that differ from the Company's expected returns are recognized in the market-related value of assets ratably over three years.

The pension plans maintain investment policies that, among other things, establish a portfolio asset allocation methodology with percentage allocation bands for individual asset classes. The investment policies provide that investments are reallocated between asset classes as balances exceed or fall below the appropriate allocation bands.

The following is the actual allocation percentage and target allocation percentage for the pension plan assets at December 31:

	2022 Actual Allocation	2021 Actual Allocation	Target Allocation Range
U.S. equity securities	44.9 %	48.7 %	36.0% - 54.0%
Non-U.S. equity securities	20.5 %	19.7 %	16.0% - 24.0%
Fixed income securities	34.1 %	31.2 %	30.0% - 40.0%
Money market funds	0.5 %	0.4 %	0.0% - 10.0%

The defined benefit pension plans do not have any direct ownership of NACCO common stock.

The fair value of each major category of the Company's pension plan assets are valued using quoted market prices in active markets for identical assets, or Level 1 in the fair value hierarchy. Following are the values as of December 31:

	Level 1	
	2022	2021
U.S. equity securities	\$ 15,499	\$ 21,434
Non-U.S. equity securities	7,055	8,678
Fixed income securities	11,753	13,723
Money market funds	178	174
Total	<u>\$ 34,485</u>	<u>\$ 44,009</u>

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Postretirement Health Care: The Company also maintains health care plans which provide benefits to grandfathered eligible retired employees. All health care plans of the Company have a cap on the Company's share of the costs. The health care plans have network provided benefits which result in cost savings for the Company. These plans have no assets. Under the Company's current policy, plan benefits are funded at the time they are due to participants.

The assumptions used in accounting for the postretirement health care plans are set forth below for the years ended December 31:

	2022	2021
Weighted average discount rates for benefit obligation	5.29 %	2.12 %
Weighted average discount rates for net periodic benefit cost	2.12 %	1.37 %
Health care cost trend rate assumed for next year	6.25 %	6.50 %
Rate to which the cost trend rate is assumed to decline (ultimate trend rate)	4.50% - 4.75%	4.50 %
Year that the rate reaches the ultimate trend rate	2029	2029

Set forth below is detail of the net periodic benefit expense for the postretirement health care plans for the years ended December 31:

	2022	2021
Service cost	\$ 12	\$ 13
Interest cost	38	27
Amortization of actuarial loss	64	19
Amortization of prior service credit	(52)	(54)
Net periodic benefit expense	<u>\$ 62</u>	<u>\$ 5</u>

Set forth below is detail of other changes in plan assets and benefit obligations recognized in other comprehensive (income) loss for the years ended December 31:

	2022	2021
Current year actuarial gain	\$ (44)	\$ (48)
Amortization of actuarial loss	(64)	(19)
Amortization of prior service credit	52	54
Transfers	—	126
Total recognized in other comprehensive (income) loss	<u>\$ (56)</u>	<u>\$ 113</u>

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The following sets forth the changes in benefit obligations during the year and the funded status of the postretirement health care at December 31:

	2022	2021
Change in benefit obligation		
Benefit obligation at beginning of year	\$ 1,877	\$ 2,054
Service cost	12	13
Interest cost	38	27
Actuarial gain	(44)	(48)
Benefits paid	(332)	(169)
Benefit obligation at end of year	<u>\$ 1,551</u>	<u>\$ 1,877</u>
Funded status at end of year	<u>\$ (1,551)</u>	<u>\$ (1,877)</u>
Amounts recognized in the balance sheets consist of:		
Current liabilities	\$ (206)	\$ (190)
Noncurrent liabilities	(1,345)	(1,687)
	<u>\$ (1,551)</u>	<u>\$ (1,877)</u>
Components of accumulated other comprehensive loss consist of:		
Actuarial loss	\$ 412	\$ 520
Prior service credit	(56)	(108)
Deferred taxes	(180)	(195)
	<u>\$ 176</u>	<u>\$ 217</u>

Future postretirement health care benefit payments expected to be paid are:

2023	211
2024	188
2025	179
2026	183
2027	185
2028 - 2032	654
	<u>\$ 1,600</u>

Defined Contribution Plans: NACCO and its subsidiaries maintain a defined contribution (401(k)) plan for substantially all employees and provide employer matching contributions based on plan provisions. The plan also provides for a minimum employer contribution. Total costs, including Company contributions, for these plans were \$3.3 million and \$2.9 million in 2022 and 2021, respectively.

NOTE 15—Business Segments

The Company's operating segments are: (i) Coal Mining, (ii) NAMining and (iii) Minerals Management. The Company determines its reportable segments by first identifying its operating segments, and then by assessing whether any components of these segments constitute a business for which discrete financial information is available and where segment management regularly reviews the operating results of that component. The Company's Chief Operating Decision Maker utilizes operating profit to evaluate segment performance and allocate resources.

The Company has items not directly attributable to a reportable segment which are not included as part of the measurement of segment operating profit, which are primarily administrative costs related to public company reporting requirements at the parent company and the financial results of Mitigation Resources and Bellaire. Mitigation Resources generates and sells stream and wetland mitigation credits (known as mitigation banking) and provides services to those engaged in permittee-responsible

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stream and wetland mitigation. Bellaire manages the Company's long-term liabilities related to former Eastern U.S. underground mining activities.

Effective January 1, 2022, the Company changed the composition of its reportable segments. As a result, the Company retrospectively changed its computation of segment operating profit to reclassify the results of Caddo Creek Resources Company, LLC ("Caddo Creek") and Demery Resources Company, LLC ("Demery") from the Coal Mining segment into the NAMining segment as these operations provide mining solutions for producers of industrial minerals, rather than for power generation. The Coal Mining segment now includes only mines that deliver coal to power generation companies. This segment reporting change has no impact on consolidated operating results. All prior period segment information has been reclassified to conform to the new presentation.

All financial statement line items below operating profit (other income including interest expense and interest income, the provision for income taxes and net income) are presented and discussed within this Form 10-K on a consolidated basis.

See Note 1 for additional discussion of the Company's reportable segments. All current operations reside in the U.S. The accounting policies of the reportable segments are described in Note 2 and Note 18.

In 2022 and 2021, two customers individually accounted for more than 10% of consolidated revenue. The following represents the revenue attributable to each of these entities as a percentage of consolidated revenue for those years:

Segment	Percentage of Consolidated Revenue	
	2022	2021
Coal Mining customer	39 %	43 %
NAMining customer	17 %	19 %

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The following tables present revenue, operating profit, depreciation expense and capital expenditures for the years ended December 31:

	2022	2021
Revenues		
Coal Mining	\$ 95,204	\$ 82,831
NAMining	85,664	78,944
Minerals Management	60,242	31,003
Unallocated Items	2,952	4,695
Eliminations	(2,343)	(5,627)
Total	<u>\$ 241,719</u>	<u>\$ 191,846</u>
Operating profit (loss)		
Coal Mining	\$ 38,309	\$ 45,784
NAMining	2,202	3,384
Minerals Management	52,214	26,080
Unallocated Items	(23,233)	(19,553)
Eliminations	494	(285)
Total	<u>\$ 69,986</u>	<u>\$ 55,410</u>
Expenditures for property, plant and equipment and acquisition of mineral interests		
Coal Mining	\$ 14,853	\$ 16,830
NAMining	13,203	21,100
Minerals Management	13,388	6,423
Unallocated Items	13,003	208
Total	<u>\$ 54,447</u>	<u>\$ 44,561</u>
Depreciation, depletion and amortization		
Coal Mining	\$ 17,074	\$ 16,510
NAMining	6,457	4,574
Minerals Management	3,026	1,858
Unallocated Items	259	143
Total	<u>\$ 26,816</u>	<u>\$ 23,085</u>

Asset information by segment is not discretely maintained for internal reporting or used in evaluating performance.

NOTE 16—Unconsolidated Subsidiaries

Each of the Company's wholly owned Unconsolidated Subsidiaries, within the Coal Mining and NAMining segments, meet the definition of a VIE. The Unconsolidated Subsidiaries are capitalized primarily with debt financing provided by or supported by their respective customers, and generally without recourse to NACCO and NACoal. Although NACoal owns 100% of the equity and manages the daily operations of the Unconsolidated Subsidiaries, the Company has determined that the equity capital provided by NACoal is not sufficient to adequately finance the ongoing activities or absorb any expected losses without additional support from the customers. The customers have a controlling financial interest and have the power to direct the activities that most significantly affect the economic performance of the entities. As a result, the Company is not the primary beneficiary and therefore does not consolidate these entities' financial positions or results of operations. See Note 1 for a discussion of these entities.

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The Investment in the unconsolidated subsidiaries and related tax positions totaled \$14.9 million and \$19.1 million at December 31, 2022 and 2021, respectively. The Company's risk of loss relating to these entities is limited to its invested capital, which was \$7.1 million and \$7.6 million at December 31, 2022 and 2021, respectively.

NACoal is a party to certain guarantees related to Coyote Creek. Under certain circumstances of default or termination of Coyote Creek's Lignite Sales Agreement ("LSA"), NACoal would be obligated for payment of a "make-whole" amount to Coyote Creek's third-party lenders. The "make-whole" amount is based on the excess, if any, of the discounted value of the remaining scheduled debt payments over the principal amount. In addition, in the event Coyote Creek's LSA is terminated on or after January 1, 2024 by Coyote Creek's customers, NACoal is obligated to purchase Coyote Creek's dragline and rolling stock for the then net book value of those assets. To date, no payments have been required from NACoal since the inception of these guarantees. The Company believes that the likelihood NACoal would be required to perform under the guarantees is remote, and no amounts related to these guarantees have been recorded.

Summarized financial information for the unconsolidated subsidiaries is as follows:

	2022	2021
Statement of Operations		
Revenue	\$ 664,824	\$ 764,759
Gross profit	\$ 47,748	\$ 68,076
Income before income taxes	\$ 57,250	\$ 60,865
Net income	\$ 48,467	\$ 53,248
Balance Sheet		
Current assets	\$ 214,098	\$ 168,669
Non-current assets	\$ 805,833	\$ 900,924
Current liabilities	\$ 116,701	\$ 98,887
Non-current liabilities	\$ 896,134	\$ 963,128

Revenue includes all mine operating costs that are reimbursed by the customers of the Unconsolidated Subsidiaries as well as the compensation per ton of coal, heating unit (MMBtu) or ton of limestone delivered. Reimbursed costs have offsetting expenses and have no impact on income before income taxes. Income before income taxes represents the Earnings of the unconsolidated operations.

NACoal received dividends of \$49.0 million and \$51.7 million from the Unconsolidated Subsidiaries in 2022 and 2021, respectively.

NOTE 17—Related Party Transactions

One of the Company's directors is a retired Jones Day partner. Legal services rendered by Jones Day approximated \$1.0 million and \$1.2 million for the years ended December 31, 2022 and 2021.

Alfred M. Rankin, Jr. serves as the Chairman of the Board of Directors of NACCO and supports the President and Chief Executive Officer of NACCO upon request under the terms of a consulting agreement. Fees for consulting services rendered by Mr. Rankin approximated \$0.3 million and \$0.5 million for the years ended December 31, 2022 and 2021, respectively.

Hyster-Yale Materials Handling, Inc. ("Hyster-Yale") is a former subsidiary of the Company that was spun-off to stockholders in 2012. Mr. Rankin is Chairman, President and Chief Executive Officer of Hyster-Yale Materials Handling and Chairman, Hyster-Yale Group. In the ordinary course of business, NACoal leases or buys Hyster-Yale lift trucks. The terms may not be comparable to terms that would be obtained in a transaction between unaffiliated parties.

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NOTE 18—Supplemental Oil and Gas Disclosures (Unaudited)

The Minerals Management segment derives income primarily by leasing its royalty and mineral interests to third-party exploration and production companies, and, to a lesser extent, other mining companies, granting them the rights to explore, develop, mine, produce, market and sell gas, oil, and coal in exchange for royalty payments based on the lessees' sales of those minerals. As an owner of royalty and mineral interests, the Company's access to information concerning activity and operations of its royalty and mineral interests is limited. The Company does not have information that would be available to a company with working interests in oil and natural gas operations because detailed information is not generally available to owners of royalty and mineral interests. See Note 1, Note 2 and Note 15 for additional discussion of the Minerals Management segment.

Aggregate capitalized costs related to oil and gas royalty and mineral interests with applicable accumulated depreciation, depletion and amortization at December 31 are as follows:

	2022	2021
Proved developed	\$ 7,302	\$ 3,266
Proved undeveloped	24,134	16,246
Proved reserves	31,436	19,512
Less: accumulated depreciation, depletion and amortization	1,936	868
Net royalty interests in oil and natural gas properties	\$ 29,500	\$ 18,644

Total net proved reserves are defined as those natural gas and hydrocarbon liquid reserves to Company interests after deducting all royalties, overriding royalties, and reversionary interests owned by outside parties that become effective upon payout of specified monetary balances. Decline curve analysis was used to estimate the remaining reserves of pressure depletion reservoirs with enough historical production data to establish decline trends. Reservoirs under non-pressure depletion drive mechanisms and non-producing reserves were estimated by volumetric analysis, research of analogous reservoirs, or a combination of both. Reserves have been estimated using deterministic and probabilistic methods. All reserves estimates have been prepared using standard engineering practices generally accepted by the petroleum industry and conform to guidelines developed and adopted by the SEC.

The following table presents the Company's estimated net proved oil and natural gas reserves as of December 31 based on the reserve report prepared by Haas Engineering, the Company's independent petroleum engineering firm. All of the Company's reserves are located in the United States.

Net reserves as of December 31, 2022			
	Oil (bbl) ⁽¹⁾	NGL (bbl) ⁽¹⁾	Residue gas (Mcf) ⁽²⁾
Proved developed	305,710	408,280	25,907,890
Proved undeveloped	32,570	11,030	1,784,670
Total	338,280	419,310	27,692,560
Net reserves as of December 31, 2021			
	Oil (bbl) ⁽¹⁾	NGL (bbl) ⁽¹⁾	Residue gas (Mcf) ⁽²⁾
Proved developed	167,430	282,230	16,617,360
Proved undeveloped	220	90	1,210
Total	167,650	282,320	16,618,570

⁽¹⁾ Bbl. One stock tank barrel, or 42 U.S. gallons liquid volume.

⁽²⁾ Mcf. One thousand cubic feet of natural gas at the contractual pressure and temperature bases.

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Estimated Proved Reserves

The following table summarizes changes in proved reserves during the year ended December 31, 2022:

	Estimated Proved Reserves		
	Oil (bbl) ⁽¹⁾	NGL (bbl) ⁽¹⁾	Residue gas (Mcf) ⁽²⁾
December 31, 2021	167,650	282,320	16,618,570
Purchases	99,345	35,222	202,314
Extensions and discoveries	121,542	68,167	12,801,109
Revisions of previous estimates ⁽³⁾	(2,504)	95,577	5,405,803
Production	(46,571)	(61,511)	(7,329,985)
Other	(1,182)	(465)	(5,251)
December 31, 2022	338,280	419,310	27,692,560

⁽¹⁾ Bbl. One stock tank barrel, or 42 U.S. gallons liquid volume.

⁽²⁾ Mcf. One thousand cubic feet of natural gas at the contractual pressure and temperature bases.

⁽³⁾ Revisions of previous estimates include technical revisions due to changes in commodity prices, historical and projected performance and other factors.

Estimated Proved Undeveloped Reserves ("PUDs")

The following table summarizes changes in PUDs during the year ended December 31, 2022:

	Estimated Proved Undeveloped Reserves		
	Oil (bbl) ⁽¹⁾	NGL (bbl) ⁽¹⁾	Residue gas (Mcf) ⁽²⁾
December 31, 2021	220	90	1,210
Purchases	21,790	5,104	38,571
Extensions and discoveries	10,780	5,926	1,746,099
Revisions of previous estimates ⁽³⁾	(220)	(90)	(1,210)
December 31, 2022	32,570	11,030	1,784,670

⁽¹⁾ Bbl. One stock tank barrel, or 42 U.S. gallons liquid volume.

⁽²⁾ Mcf. One thousand cubic feet of natural gas at the contractual pressure and temperature bases.

⁽³⁾ Revisions of previous estimates include technical revisions due to changes in commodity prices, historical and projected performance and other factors.

As an owner of mineral and royalty interests, the Company generally does not have evidence of approval of operators' development plans. As a result, proved undeveloped reserve estimates are limited to those relatively few locations for which drilling permits have been publicly filed. As of December 31, 2022, PUD reserves consists of 42 wells in various stages of drilling or completions. As of December 31, 2022, approximately 6% of the Company's total proved reserves were classified as PUDs.

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Standardized Measure of Discounted Future Net Cash Flows

Future cash inflows represent expected revenues from production of period-end quantities of proved reserves based on the 12-month unweighted average of first-day-of-the-month commodity prices for the periods presented. Future cash inflows are computed by applying applicable prices relating to proved reserves to the year-end quantities of those reserves. Future production and costs are derived based on current costs assuming continuation of existing economic conditions. Federal income tax expenses are deducted from future production revenues in the calculation of the standardized measure using the statutory tax rate. The Company is subject to certain state-based taxes; however, these amounts are not material. The projections should not be viewed as realistic estimates of future cash flows, nor should the “standardized measure” be interpreted as representing current value to the Company. Material revisions to estimates of proved reserves may occur in the future; development and production of the reserves may not occur in the periods assumed; actual prices realized are expected to vary significantly from those used; and actual costs may vary.

The following table provides the future net cash flows relating to proved oil and gas reserves based on the standardized measure of discounted cash flows as of December 31, 2022:

	Gross Amounts	Statutory tax rate	Net Amounts
Future cash inflows	\$ 218,982		
Future production costs	39,841		
Future net cash flows before income tax expense	179,141	21 %	141,521
10% discount to reflect timing of cash flows	(62,615)	21 %	(49,465)
Standardized measure of discounted cash flows	\$ 116,526	21 %	\$ 92,056

The following table provides the future net cash flows relating to proved oil and gas reserves based on the standardized measure of discounted cash flows as of December 31, 2021:

	Gross Amounts	Statutory tax rate	Net Amounts
Future cash inflows	\$ 71,400		
Future production costs	14,664		
Future net cash flows before income tax expense	56,736	21 %	44,821
10% discount to reflect timing of cash flows	(19,897)	21 %	(15,719)
Standardized measure of discounted cash flows	\$ 36,839	21 %	\$ 29,102

The following summarizes the principal sources of change in the standardized measure of discounted future net cash flows during 2022:

	Gross amounts
December 31, 2021	\$ 36,839
Purchases	6,236
Extensions and discoveries	54,795
Revisions of previous estimates ⁽³⁾	18,695
Other	(39)
December 31, 2022	\$ 116,526

⁽³⁾ Revisions of previous estimates include technical revisions due to changes in commodity prices, historical and projected performance and other factors.

SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS
NACCO INDUSTRIES, INC. AND SUBSIDIARIES
YEAR ENDED DECEMBER 31, 2022 AND 2021

Description	Balance at Beginning of Period	Additions		Deductions — Describe	Balance at End of Period (A)
		Charged to Costs and Expenses	Charged to Other Accounts — Describe		
(In thousands)					
2022					
Reserves deducted from asset accounts:					
Deferred tax valuation allowances	\$11,695	\$ 114	\$ —	\$ —	\$11,809
2021					
Reserves deducted from asset accounts:					
Deferred tax valuation allowances	\$11,549	\$ 146	\$ —	\$ —	\$11,695

(A) Balances which are not required to be presented and those which are immaterial have been omitted.

SUBSIDIARIES OF NACCO INDUSTRIES, INC.

The following is a list of active subsidiaries as of the date of the filing with the Securities and Exchange Commission of the Annual Report on Form 10-K to which this is an Exhibit. Except as noted, all of these subsidiaries are wholly owned, directly or indirectly.

<u>Name</u>	<u>Incorporation</u>
America Lignite Energy LLC	Delaware (50%)
Bellaire Corporation	Ohio
C&H Mining Company, Inc.	Alabama
Caddo Creek Resources Company, LLC	Nevada
Camino Real Fuels, LLC	Nevada
Catapult Mineral Partners, LLC	Nevada
Centennial Natural Resources, LLC	Nevada
Coyote Creek Mining Company, LLC	Nevada
Demery Resources Company, LLC	Nevada
The Coteau Properties Company	Ohio
The Falkirk Mining Company	Ohio
GRENAC, LLC	Delaware (50%)
Liberty Fuels Company, LLC	Nevada
Mississippi Lignite Mining Company	Texas
Mitigation Resources of North America, LLC	Nevada
Mitigate Alabama, LLC	Nevada
Mitigate Tennessee, LLC	Nevada
Mitigate Texas, LLC	Nevada
NAM - AGL, LLC	Nevada
NAM - CMX, LLC	Nevada
NAM - Corkscrew, LLC	Nevada
NAM - CSA, LLC	Nevada
NAM - IND, LLC	Nevada
NAM - Little River, LLC	Nevada
NAM - MCA, LLC	Nevada
NAM - Newberry, LLC	Nevada
NAM - PBA, LLC	Nevada
NAM - Pasco, LLC	Nevada
NAM - Perry, LLC	Nevada
NAM - QueenField, LLC	Nevada
NAM - Rosser, LLC	Nevada
NAM - SDI, LLC	Nevada
NAM - WFA, LLC	Nevada
NAM - WRQ, LLC	Nevada
NAM - 7D, LLC	Nevada
NoDak Energy Investments Corporation	Nevada
The North American Coal Corporation	Delaware
North American Coal Corporation India Private Limited	India
North American Coal, LLC	Nevada
North American Mining, LLC	Nevada
North American Coal Royalty Company	Delaware
Otter Creek Mining Company LLC	Nevada
Red Hills Property Company LLC	Mississippi
The Sabine Mining Company	Nevada
Sawtooth Mining, LLC	Nevada
Trident Technology Services Group, LLC	Nevada
Trifecta Renewable Solutions, LLC	Delaware
TRU Global Energy Services, LLC	Delaware
TRU Energy Services, LLC	Nevada
Reed Minerals, Inc.	Alabama
Yockanookany Mitigation Resources, LLC	Nevada

Certifications

I, J.C. Butler, Jr., certify that:

1. I have reviewed this annual report on Form 10-K of NACCO Industries, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 15, 2023

/s/ J.C. Butler, Jr.

J.C. Butler, Jr.
President and Chief Executive Officer
(principal executive officer)

Certifications

I, Elizabeth I. Loveman, certify that:

1. I have reviewed this annual report on Form 10-K of NACCO Industries, Inc.;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 15, 2023

/s/ Elizabeth I. Loveman

Elizabeth I. Loveman
Vice President and Controller
(principal financial officer)

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO SECTION 906 OF
THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of NACCO Industries, Inc. (the “Company”) on Form 10-K for the year ended December 31, 2022, as filed with the Securities and Exchange Commission on the date hereof (the “Report”), each of the undersigned officers of the Company certifies, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that, to such officer's knowledge:

- (1) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of the dates and for the periods expressed in the Report.

Date: March 15, 2023

/s/ J.C. Butler, Jr.
J.C. Butler, Jr.
President and Chief Executive Officer
(principal executive officer)

Date: March 15, 2023

/s/ Elizabeth I. Loveman
Elizabeth I. Loveman
Vice President and Controller
(principal financial officer)

MINE SAFETY DISCLOSURES

NACCO Industries, Inc. (the “Company”) believes that The North American Coal Corporation and its affiliated mining companies (collectively, “NACoal”) is an industry leader in safety. NACoal has health and safety programs in place that include extensive employee training, accident prevention, workplace inspection, emergency response, accident investigation, regulatory compliance and program auditing. The objectives for NACoal's programs are to eliminate workplace incidents, comply with all mining-related regulations and provide support for both regulators and the industry to improve mine safety.

Under the Dodd-Frank Wall Street Reform and Consumer Protection Act, each operator of a coal or other mine is required to include certain mine safety results in its periodic reports filed with the Securities and Exchange Commission. The operation of NACoal's mines is subject to regulation by the Federal Mine Safety and Health Administration (“MSHA”) under the Federal Mine Safety and Health Act of 1977 (the “Mine Act”). MSHA inspects NACoal's mines on a regular basis and issues various citations and orders when it believes a violation has occurred under the Mine Act. The Company has presented information below regarding certain mining safety and health matters for NACoal's mining operations for the year ended December 31, 2022. In evaluating this information, consideration should be given to factors such as: (i) the number of citations and orders will vary depending on the size of the mine, (ii) the number of citations issued will vary from inspector to inspector and from mine to mine, and (iii) citations and orders can be contested and appealed, and in that process, are often reduced in severity and amount, and are sometimes vacated.

During the year ended December 31, 2022, neither the Company's current mining operations nor its closed mines: (i) were assessed any Mine Act section 104(b) orders for alleged failure to totally abate the subject matter of a Mine Act section 104(a) citation within the period specified in the citation; (ii) were assessed any Mine Act section 110(b)(2) penalties for failure to correct the subject matter of a Mine Act section 104(a) citation within the specified time period, which failure was deemed flagrant (i.e., reckless or repeated failure to make reasonable efforts to eliminate a known violation that substantially and proximately caused, or reasonably could have been expected to cause, death or serious bodily injury); (iii) received any Mine Act section 107(a) imminent danger orders to immediately remove miners; or (iv) received any MSHA written notices under Mine Act section 104(e) of a pattern of violation of mandatory health or safety standards or of the potential to have such a pattern. In addition, there were no mining-related fatalities at the Company's operations or its closed mines during the year ended December 31, 2022.

The following table sets forth the total number of specific citations and orders, the total dollar value of the proposed civil penalty assessments that were issued by MSHA, the total number of legal actions initiated and resolved before the Federal Mine Safety and Health Review Commission ("FMSHRC") during the year ended December 31, 2022, and the total number of legal actions pending before the FMSHRC at December 31, 2022, pursuant to the Mine Act, by individual mine at NACoal:

Name of Mine or Quarry ⁽¹⁾	Mine Act Section 104 Significant & Substantial Citations ⁽²⁾⁽³⁾	Mine Act Section 104(d) Citations	Total Dollar Value of Proposed MSHA Assessment	Number of Legal Actions Initiated before the FMSHRC for the year ended at December 31, 2022	Number of Legal Actions Resolved before the FMSHRC for the year ended at December 31, 2022	Number of Legal Actions Pending before the FMSHRC at December 31, 2022
Coteau (Freedom Mine)	—	—	\$ 348	—	—	—
Falkirk (Falkirk Mine)	—	—	—	—	—	—
Sabine (South Hallsville No. 1 Mine)	1	—	927	—	—	—
Demery (Five Forks Mine)	—	—	—	—	—	—
Caddo Creek (Marshall Mine)	—	—	—	—	—	—
Coyote Creek (Coyote Creek Mine)	—	—	—	—	—	—
MLMC (Red Hills Mine)	—	—	481	—	—	—
North American Mining Operations:	—	—	—	—	—	—
Alico Quarry	—	—	—	—	—	—
Center Hill Quarry	—	—	133	—	—	—
FEC Quarry	1	—	909	—	—	—
Inglis Quarry	—	—	—	—	—	—
Krome Quarry	—	—	—	—	—	—
SCL Quarry	—	—	252	—	—	—
St. Catherine Quarry	—	—	—	—	—	—
Seven Diamonds Quarry	—	—	—	—	—	—
Central State Aggregates Quarry	—	—	—	—	—	—
Johnson County Quarry	—	—	—	—	—	—
Little River Quarry	3	—	2,086	1	1	—
Mid Coast Aggregates Quarry	—	—	—	—	—	—
Newberry Quarry	—	—	610	—	—	—
County Line Quarry	—	—	—	—	—	—
Palm Beach Aggregates Quarry	1	—	2,198	—	—	—
Perry Quarry	—	—	—	—	—	—
Queensfield Mine	—	—	—	—	—	—
Rosser Quarry	—	—	—	—	—	—
SDI Aggregates Quarry	—	—	—	—	—	—
West Florida Aggregates Quarry	—	—	—	—	—	—
Titan Corkscrew Quarry	—	—	—	—	—	—
White Rock Quarry - North	—	—	—	—	—	—
Ash Grove	—	—	—	—	—	—
Total	6	—	\$ 7,944	1	1	—

⁽¹⁾ Bellaire's, Centennial's and Liberty's closed mines are not included in the table above and did not receive any of the indicated citations.

⁽²⁾ Mine Act section 104(a) significant and substantial citations are for alleged violations of a mining safety standard or regulation where there exists a reasonable likelihood that the hazard contributed to or will result in an injury or illness of a reasonably serious nature.

⁽³⁾ Two of the reported significant and substantial citations at Little River Quarry during the year ended December 31, 2022, were originally classified by MSHA as significant and substantial. These citations have been reduced to non-significant and substantial.

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