UNITED STATES SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549



ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2019

Commission file number 1-14287

Centrus Energy Corp.

6901 Rockledge Drive, Suite 800, Bethesda, Maryland 20817 (301) 564-3200

Delaware (State of incorporation)

share, outstanding.

52-2107911

(IRS Employer Identification No.)

Securities registered pursuant to Section 12(b) of the Act: Name of each exchange on which registered Title of each class Trading Symbol Class A Common Stock, par value \$0.10 per share LEU NYSE American Securities registered pursuant to Section 12(g) of the Act: None 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 D 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 the 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 × Smaller reporting company Accelerated filer П Emerging growth company Non-accelerated filer 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. \Box Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes 🗆 No 🗷

The aggregate market value of Common Stock held by non-affiliates computed by reference to the price at which the Common Stock was last sold

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the definitive proxy statement for the 2020 annual meeting of shareholders to be filed with the Securities and Exchange commission within 120 days after the end of fiscal year 2019 are incorporated by reference into Part III of this Annual Report on Form 10-K.

as reported on the New York Stock Exchange as of June 28, 2019, was \$16.8 million. As of March 2, 2020, there were 8,673,976 shares of the registrant's Class A Common Stock, par value \$0.10 per share, and 798,413 shares of the registrant's Class B Common Stock, par value \$0.10 per

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K, including *Management's Discussion and Analysis of Financial Condition and Results of Operations* in Part II, Item 7, contains "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934. In this context, forward-looking statements mean statements related to future events, may address our expected future business and financial performance, and often contain words such as "expects", "anticipates", "intends", "plans", "believes", "will", "should", "could", "would" or "may" and other words of similar meaning. Forward-looking statements by their nature address matters that are, to different degrees, uncertain. For Centrus Energy Corp., particular risks and uncertainties that could cause our actual future results to differ materially from those expressed in our forward-looking statements include: risks related to our significant long-term liabilities, including material unfunded defined benefit pension plan obligations and postretirement health and life benefit obligations; risks relating to our 8.25% notes (the "8.25% Notes") maturing in February 2027 and our Series B Senior Preferred Stock; risks related to the use of our net operating loss ("NOLs") carryforwards and net unrealized built-in losses ("NUBILs") to offset future taxable income and the use of the Rights Agreement (as defined herein) to prevent an "ownership change" as defined in Section 382 of the Internal Revenue Code of 1986, as amended (the "Code") and our ability to generate taxable income to utilize all or a portion of the NOLs and NUBILs prior to the expiration thereof; risks related to the limited

trading markets in our securities; risks related to our ability to maintain the listing of our Class A Common Stock on the NYSE American LLC (the "NYSE American"); risks related to decisions made by our Class B stockholders and our Series B Senior Preferred stockholders regarding their investment in the Company based upon factors that are unrelated to the Company's performance; risks related to the Company's capital concentration; risks related to natural and other disasters, including the continued impact of the March 2011 earthquake and tsunami in Japan on the nuclear industry and on our business, results of operations and prospects; the impact and potential extended duration of the current supply/demand imbalance in the market for low-enriched uranium ("LEU"); our dependence on others for deliveries of LEU including deliveries from the Russian government-owned entity TENEX, Joint-Stock Company ("TENEX"), under a commercial supply agreement with TENEX and deliveries under a long-term supply agreement with Orano Cycle ("Orano"); risks related to existing or new trade barriers and contract terms that limit our ability to deliver LEU to customers; risks related to actions, including government reviews, that may be taken by the United States government, the Russian government or other governments that could affect our ability to perform under our contract obligations or the ability of our sources of supply to perform under their contract obligations to us, including the imposition of sanctions, restrictions or other requirements, including risks relating to the potential expiration of the 1992 Russian Suspension Agreement ("RSA") and/or a renewal of the RSA on terms not favorable to us; risks related to our ability to sell the LEU we procure pursuant to our purchase obligations under our supply agreements; risks relating to our sales order book, including uncertainty concerning customer actions under current contracts and in future contracting due to market conditions and lack of current production capability; risks related to financial difficulties experienced by customers, including possible bankruptcies, insolvencies or any other inability to pay for our products or services; pricing trends and demand in the uranium and enrichment markets and their impact on our profitability; movement and timing of customer orders; risks related to the value of our intangible assets related to the sales order book and customer relationships; risks associated with our reliance on third-party suppliers to provide essential products and services to us; the impact of government regulation including by the U.S. Department of Energy ("DOE") and the U.S. Nuclear Regulatory Commission; uncertainty regarding our ability to commercially deploy competitive enrichment technology; risks and uncertainties regarding funding for deployment of the American Centrifuge technology and our ability to perform and absorb costs under our agreement with DOE to demonstrate the capability to produce high assay low enriched uranium ("HALEU") and our ability to obtain and/or perform under other agreements; risks relating to whether or when government or commercial demand for HALEU will materialize; the potential for further demobilization or termination of our American Centrifuge work; risks related to our ability to perform and receive timely payment under agreements with the DOE, including risk and uncertainties related to the ongoing funding of the government and potential audits; the competitive bidding process associated with obtaining a federal contract; risks related to our ability to perform fixed-price and cost-share contracts, including the risk that costs could be higher than expected; risks that we will be unable to obtain new business opportunities or achieve market acceptance of our products and services or that products or services provided by others will render our products or services obsolete or noncompetitive; risks that we will not be able to timely complete the work that we are obligated to perform; failures or security breaches of our information technology systems; risks related to pandemics and other health crises, such as the global novel coronavirus (COVID-19) outbreak; potential strategic transactions, which could be difficult to implement, disrupt our business or change our business profile significantly; the outcome of legal proceedings and other contingencies (including lawsuits and government investigations or audits); the competitive environment for our products and services; changes in the nuclear energy industry; the impact of financial market conditions on our business, liquidity, prospects, pension assets and insurance facilities; the risks of revenue and operating results fluctuating significantly from quarter to quarter, and in some cases, year to year; and other risks and uncertainties discussed in this and our other filings with the Securities and Exchange Commission.

For a discussion of these risks and uncertainties and other factors that may affect our future results, please see Part I, Item 1A, *Risk Factors*, and the other sections of this Annual Report on Form 10-K. These factors may not constitute all factors that could cause actual results to differ from those discussed in any forward-looking statement. Accordingly, forward-looking statements should not be relied upon as a predictor of actual results. Readers are urged to carefully review and consider the various disclosures made in this report and in our other filings with the Securities and Exchange Commission that attempt to advise interested parties of the risks and factors that may affect our business. We do not undertake to update our forward-looking statements to reflect events or circumstances that may arise after the date of this Annual Report on Form 10-K, except as required by law.

Item 1. Business

Overview

Centrus Energy Corp., a Delaware corporation ("Centrus" or the "Company"), is a trusted supplier of nuclear fuel and services for the nuclear power industry. References to "Centrus", the "Company", "our", or "we" include Centrus Energy Corp. and its wholly owned subsidiaries as well as the predecessor to Centrus, unless the context otherwise indicates. We were incorporated in 1998 as part of the privatization of the United States Enrichment Corporation.

Centrus operates two business segments: (a) low-enriched uranium ("LEU"), which supplies various components of nuclear fuel to utilities, and (b) technical solutions, which provides advanced engineering, design, and manufacturing services to government and private sector customers. The technical solutions segment was formerly our contract services segment. The segment was renamed the technical solutions segment on December 31, 2019, to better reflect the nature of work performed and is consistent with our marketing of service offerings as Centrus Technical Solutions. There was no change to the composition of the segment as a result of the re-naming.

Our LEU segment provides most of the Company's revenue and involves the sale of LEU, its components, and natural uranium to utilities operating commercial nuclear power plants. LEU is a critical component in the production of nuclear fuel for reactors that produce electricity. We supply LEU to both domestic and international utilities for use in nuclear reactors worldwide. We provide LEU from multiple sources including our inventory, medium- and long- term supply contracts and spot purchases. As a long-term supplier of LEU to our customers, our objective is to provide value through the reliability and diversity of our supply sources. Our long-term goal is to resume commercial enrichment production, and we are exploring approaches to that end.

Our technical solutions segment utilizes the unique technical expertise, operational experience and specialized facilities that we developed over nearly two decades as part of our uranium enrichment technology program. We are leveraging these capabilities to expand and diversify our business beyond uranium enrichment, offering new services to existing and new customers in complementary markets.

With the specialized capabilities and workforce at our Technology and Manufacturing Center in Oak Ridge, Tennessee, we are performing technical, engineering and manufacturing services for a range of commercial and government customers and actively working to secure new customers. Our experience developing, licensing, manufacturing and operating advanced nuclear components and systems positions us to provide critical design, engineering, manufacturing and other services to a broad range of potential clients, including those involving sensitive or classified technologies. This work includes design, engineering, manufacturing and licensing services support for advanced reactor and fuel fabrication projects as well as decontamination and decommissioning ("D&D") work.

With several decades of experience in enrichment, we continue to be a leader in the development of an advanced U.S. uranium enrichment technology, which we believe could play a critical role in supplying fuel for advanced reactors, meeting U.S. national and energy security needs, and achieving our nation's nonproliferation objectives.

On October 31, 2019, we signed a three-year cost-share contract (the "HALEU Contract") with DOE to deploy a cascade of centrifuges to demonstrate production of high-assay, low-enriched uranium ("HALEU") fuel with existing United States origin enrichment technology and provide DOE with HALEU for near term use in its research and development for the advancement of civilian nuclear energy and national security, as well as other programmatic missions. The program has been under way since May 31, 2019, when the Company and DOE signed a preliminary agreement that allowed work to begin while the HALEU Contract was being finalized.

Under the HALEU Contract, DOE agreed to reimburse the Company for 80% of its costs incurred in performing the contract, up to a maximum of \$115 million. The Company's cost share is the corresponding 20% and any costs incurred above these amounts. Costs under the HALEU Contract include *program costs*, including direct labor and materials and associated indirect costs that are classified as *Cost of Sales*, and an allocation of corporate costs supporting the program that are classified as *Selling, General and Administrative Expenses*. Services to be provided over the three-year contract include constructing and assembling centrifuge machines and related infrastructure in a cascade formation. When estimates of remaining program costs to be incurred for such an integrated, construction-type contract exceed estimates of total revenue to be earned, a provision for the remaining loss on the contract is recorded to *Cost of Sales* in the period the loss is determined. Our corporate costs supporting the program are recognized as expense as incurred over the duration of the contract term. As of December 31, 2019, the portion of our anticipated cost share under the HALEU Contract representing our share of remaining projected program costs was recognized in *Cost of Sales* as an accrued loss of \$18.3 million. The accrued loss on the contract will be adjusted over the remaining contract term based on actual results and remaining program cost projections.

HALEU is a component of an advanced nuclear reactor fuel that is not commercially available today and may be required for a number of advanced reactor designs currently under development in both the commercial and government sectors. Existing reactors typically operate on LEU with the uranium-235 isotope concentration below 5%. HALEU has a uranium-235 concentration ranging from 5% to 20%, giving it several potential technical and economic advantages. For example, the higher concentration of uranium-235 means that fuel assemblies and reactors can be smaller and reactors will require less frequent refueling. Reactors can also achieve higher "burnup" rates, meaning a smaller volume of fuel will be required overall and less waste will be produced. HALEU may also be used in the future to fabricate next-generation fuel forms for the existing fleet of reactors in the United States and around the world. These new HALEU-based fuels could improve the economics of nuclear reactors and inherent safety features while increasing the amount of electricity that can be generated at existing reactors. HALEU fuel may also ultimately be used in new commercial and government applications in the future, such as reactors for the military.

We believe our investment in the HALEU technology will position the Company to meet the needs of our customers in the future as they deploy advanced reactors and next generation fuels. By investing in HALEU technology now, and as the only domestically-owned company with HALEU enrichment capability, we believe the Company could be well positioned to capitalize on a potential new market as the demand for HALEU based fuels increases with the development of advanced reactors. There are no guarantees about whether or when government or commercial demand for HALEU will materialize, and there are a number of technical, regulatory and economic hurdles that must be overcome for these fuels and reactors to come to the market.

In 2019, our management team led the Company's successful efforts to add new sales and customers to the LEU order book, reduce costs, expand into new areas of the nuclear fuel cycle, and maintain our position as a trusted partner to the global nuclear industry and return value to our shareholders. Our competitive strengths include:

- Developing fuel for the next generation of reactors: In 2019, we finalized an agreement to deploy a cascade of centrifuges to demonstrate production of HALEU with existing United States origin enrichment technology and provide DOE with HALEU for near term use in its research and development for the advancement of civilian nuclear energy and security, and other programmatic missions. The program leverages our domestic enrichment and advanced manufacturing experience to demonstrate uranium enrichment at levels not commercially available today that may be required for a number of advanced reactor designs currently under development in both the commercial and government sectors.
- Enrichment technology development: We continued to advance our centrifuge technology in specialized facilities in Oak Ridge, Tennessee to support potential future government and/or commercial use and ensure that it remains ready to be deployed.

- Positioned for the long term: We have long-term nuclear fuel sales and supply contracts in place that extend to 2030; these contracts will provide a stream of revenue for many years and provide a foundation for growth. Because we do not have the large capital and overhead costs of a commercial production facility, we are positioned to continue to obtain supply of LEU from an oversupplied market experiencing prices near their historic lows, which we believe will strengthen our position for the future.
- **Diverse supply portfolio:** In 2019, we continued our efforts to diversify and expand our sources of supply and improve our logistics for delivery of enriched uranium. For example, we acquired access to additional enriched uranium supply from the excess inventories of utility operators of nuclear power plants and from other primary and secondary sources of enriched uranium supply. Our strategy is to remain a highly diversified and reliable supplier of LEU with the flexibility to meet the evolving needs of our customers and effectively compete in the marketplace.

We believe that our position as a leading provider of enriched uranium and our long-standing global relationships will enable us to increase our future market share in the nuclear fuel market and support our growth into complementary areas of the nuclear and other industries. We are well-positioned to capitalize on our heritage, industry-wide relationships, and diversity of supply to provide reliable and competitive sources of nuclear fuel and related services. Centrus continues to be valued by our customers as a source of diversity, stability, and competition in the enrichment market.

Nevertheless, both the LEU and the technical solutions segments of our business face considerable challenges. The nuclear industry in general, and the nuclear fuel industry in particular, is in a period of significant change, which continues to affect the competitive landscape. In the years following the 2011 Fukushima accident, the published market prices for uranium enrichment declined more than 75%. While the monthly price indicators gradually started to increase beginning in late 2018, the uranium enrichment segment of the nuclear fuel market remains oversupplied and faces uncertainty about future demand for nuclear power generation. For further details, refer to Part II, Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations - Market Conditions and Outlook.

Changes in the competitive landscape affect pricing trends, change customer spending patterns, and create uncertainty. To address these changes, we have taken steps to adjust our cost structure and may seek further adjustments to our cost structure and operations and to evaluate opportunities to grow our business organically or through acquisitions and other strategic transactions.

We are also actively considering, and expect to consider from time to time in the future, potential strategic transactions, which could involve, without limitation, acquisitions and/or dispositions of businesses or assets, joint ventures or investments in businesses, products or technologies or changes to our capital structure. In connection with any such transaction, we may seek additional debt or equity financing, contribute or dispose of assets, assume additional indebtedness, or partner with other parties to consummate a transaction.

For a discussion of the potential risks and uncertainties facing our business, see Part I, Item 1A, Risk Factors.

Low Enriched Uranium

LEU consists of two components: separative work units ("SWU") and uranium. Revenue from our LEU segment is derived primarily from:

- sales of the SWU component of LEU,
- sales of both the SWU and uranium components of LEU, and
- sales of natural uranium.

Revenue for our LEU segment accounted for approximately 81% of our total revenue in 2019. Our customers are primarily domestic and international utilities that operate nuclear power plants. Our agreements with electric utilities are primarily long-term, fixed-commitment contracts under which our customers are obligated to purchase a specified quantity of the SWU component of LEU from us. Our agreements for natural uranium and enriched uranium product sales, where we sell both the SWU and uranium component of LEU, are generally shorter-term, fixed-commitment contracts.

Uranium and Enrichment

Uranium is a naturally occurring element and is mined from deposits located in Kazakhstan, Canada, Australia, and several other countries including the United States. According to the World Nuclear Association, there are adequate measured resources of uranium to fuel nuclear power at current usage rates for about 90 years. In its natural state, uranium is principally comprised of two isotopes: uranium-235 ("U²³⁵") and uranium-238 ("U²³⁸"). The concentration of U²³⁵ in natural uranium is only 0.711% by weight. Most commercial nuclear power reactors require LEU fuel with a U²³⁵ concentration greater than natural uranium and up to 5% by weight. Future reactor designs currently under development will likely require higher U²³⁵ concentration levels of up to 20%. Uranium enrichment is the process by which the concentration of U²³⁵ is increased.

SWU is a standard unit of measurement that represents the effort required to transform a given amount of natural uranium into two components: enriched uranium having a higher percentage of U^{235} and depleted uranium having a lower percentage of U^{235} . The SWU contained in LEU is calculated using an industry standard formula based on the physics of enrichment. The amount of enrichment deemed to be contained in LEU under this formula is commonly referred to as its SWU component and the quantity of natural uranium deemed to be contained in LEU under this formula is referred to as its uranium or "feed" component.

While in some cases customers purchase both the SWU and uranium components of LEU from us, utility customers typically provide uranium to us as part of their enrichment contracts, and in exchange we deliver LEU to these customers and charge for the SWU component. Title to uranium provided by customers generally remains with the customer until delivery of LEU, at which time title to LEU is transferred to the customer, and we take title to the uranium.

The following outlines the steps for converting natural uranium into LEU fuel, commonly known as the nuclear fuel cycle:

Mining and Milling. Natural, or unenriched, uranium is removed from the earth in the form of ore and then crushed and concentrated.

Conversion. Uranium concentrates (" U_3O_8 ") are combined with fluorine gas to produce uranium hexafluoride (" UF_6 "), a solid at room temperature and a gas when heated. UF_6 is shipped to an enrichment plant.

Enrichment. UF₆ is enriched in a process that increases the concentration of the U^{235} isotope in the UF₆ from its natural state of 0.711% up to 5%, or LEU, which is usable as a fuel for current light water commercial nuclear power reactors. Future commercial reactor designs may use uranium enriched up to 20% U^{235} , or HALEU.

Fuel Fabrication. LEU is then converted to uranium oxide and formed into small ceramic pellets by fabricators. The pellets are loaded into metal tubes that form fuel assemblies, which are shipped to nuclear power plants. As the advanced reactor market develops, HALEU may be converted to uranium oxide, metal, chloride or fluoride salts, or other forms and loaded into a variety of fuel assembly types optimized for the specific reactor design.

Nuclear Power Plant. The fuel assemblies are loaded into nuclear reactors to create energy from a controlled chain reaction. Nuclear power plants generate approximately 20% of U.S. electricity and 11% of the world's electricity.

Used Fuel Storage. After the nuclear fuel has been in a reactor for several years, its efficiency is reduced and the assembly is removed from the reactor's core. The used fuel is warm and radioactive and is kept in a deep pool of water for several years. Many utilities have elected to then move the used fuel into steel or concrete and steel casks for interim storage.

LEU Segment Order Book

Our order book of sales under contract in the LEU segment ("order book") extends to 2030. As of December 31, 2019, our order book was \$1.0 billion. The order book is the estimated aggregate dollar amount of revenue for future SWU and uranium deliveries, and includes \$0.3 billion of deferred revenue and advances from customers as of December 31, 2019, whereby customers have made advance payments to be applied against future deliveries. We anticipate our SWU and uranium revenue from sales currently under contract in our order book will be in a range of \$110 million to \$120 million during 2020. As of December 31, 2018, our order book was \$1.0 billion. In 2019, new contracts signed offset the impact of completed deliveries.

Most of our contracts provide for fixed purchases of SWU during a given year. Our estimate of the order book is partially based on customers' estimates of the timing and size of their fuel requirements and other assumptions that are subject to change. For example, depending on the terms of specific contracts, the customer may be able to increase or decrease the quantity delivered within an agreed range. Our order book estimate is also based on our estimates of selling prices, which may be subject to change. For example, depending on the terms of specific contracts, prices may be adjusted based on escalation using a general inflation index, published SWU price indicators prevailing at the time of delivery, and other factors, all of which are variable. We use external composite forecasts of future market prices and inflation rates in our pricing estimates. Refer to Part I, Item 1A, *Risk Factors*, for a discussion of risks related to our order book.

Suppliers

We have a diverse base of supply that includes:

- existing inventory of LEU,
- mid- and long-term contracts with enrichment producers,
- purchases and loans from secondary sources including fabricators and utility operators of nuclear power plants that have excess inventory, and
- spot purchases of SWU and uranium.

We have and will seek to continue to further diversify this base of supply and take advantage of the opportunities to obtain additional short and long-term supplies of LEU.

Currently, our largest suppliers of SWU are the Russian government entity TENEX, Joint-Stock Company ("TENEX") and the French government owned company Orano Cycle ("Orano").

Under an agreement with TENEX (the "Russian Supply Agreement"), we purchase SWU contained in LEU received from TENEX, and we deliver natural uranium to TENEX for the LEU's uranium component. The Russian Supply Agreement was originally signed with commitments through 2022 but was modified in 2015 to give us the right to reschedule certain quantities of SWU of the original commitments into the period 2023 and beyond, in return for the purchase of additional SWU in those years. We have exercised our right to reschedule deliveries through 2028 when the Russian Supply Agreement is scheduled to terminate.

Under the Russian Supply Agreement, we pay for the SWU contained in the LEU delivered to us, and either supply natural uranium to TENEX for the uranium content of the LEU or, in limited cases, pay for such content. SWU pricing is determined by a formula that uses a combination of market-related price points and other factors. The LEU that we obtain from TENEX under the Russian Supply Agreement is currently subject to quotas and other restrictions under an agreement between the United States and the Russian Federation governing exports of Russian uranium products to the United States. This agreement is scheduled to expire as of December 31, 2020, but the U.S. Department of Commerce ("DOC") has proposed to extend the agreement on terms that may not expressly protect our ability to import LEU into the United States after 2020 under the Russian Supply Agreement. Further, although we expect an extension of this agreement would include quotas for imports of Russian uranium products after 2020, the Russian Supply Agreement does not require TENEX to provide us the right to use any or all of the post-2020 quotas potentially resulting from any agreement between the United States and the Russian Federation. If the Russian Supply Agreement is not protected from new quotas, we will have limited opportunities to sell the SWU in the LEU that we are obligated to order from TENEX under the Russian Supply Agreement. We may request that TENEX make quota available to us, sell the SWU in foreign markets or secure a deferral or cancellation of our purchase obligations under the Russian Supply Agreement; however, the likelihood of any or all of these alternatives is not known. In past circumstances involving similar negotiations between the United States and the Russian Federation, we have successfully agreed with TENEX to either secure additional quota or defer our contractual obligations to TENEX, but TENEX's willingness to enter into such agreements in the future, or the cost to us of securing their consent to such agreements, is not known. Moreover, unless the DOC agrees in its proposed extension of the trade agreement to increase the quotas available to cover imports into the United States of LEU under all of TENEX's contracts for sales to its U.S. customers and all of its sales to us under the Russian Supply Agreement, TENEX may not have sufficient quota available to allocate to all of its contract parties, including Centrus, to meet their needs.

TENEX may ultimately elect not to accept the terms offered by the DOC for an extension of the trade agreement. Depending upon the outcome of a pending administrative review of the existing agreement between the United States and the Russian Federation, the DOC may elect to terminate the agreement and restart a pending antidumping investigation of Russian imports of uranium products that was suspended in 1992, when the agreement between the United States and the Russian Federation was first signed. If the anti-dumping investigation is restarted, importers of Russian LEU, including the Company, could be required, pending the final outcome of the investigation, to deposit funds with the U.S. government to cover potential duties equal to over 115% of the value of the LEU that would owed if the investigation results in a final antidumping order,. The requirement to deposit those funds to cover potential duties would significantly increase our cost of importing Russian LEU during the pending investigation and, if the investigation results in an antidumping order that imposes duties, on a going-forward basis, to such an extent that we could not afford to import the LEU that we are obligated to order from TENEX, potentially threatening our key source of supply. Refer below to -Competition and Foreign Trade - Limitations on Imports of LEU from Russia.

Given these consequences, we are actively seeking to ensure that any extension of the trade agreement with Russia protects the Russian Supply Agreement and does not terminate the suspension of the antidumping investigation on terms that would require the deposit of funds to cover potential duties.

Subject to securing new customer contracts in challenging overseas markets, including markets protected by formal and informal trade barriers, we expect that a portion of the Russian LEU that we order during the term of the Russian Supply Agreement will need to be delivered to customers who will use it in foreign reactors. The Russian LEU that we deliver to foreign customers can be delivered either at fabrication facilities in the United States or in

foreign countries. The amount of SWU we must purchase from TENEX under the Russian Supply Agreement exceeds our current sales order book and, therefore, we will need to make new sales to place all the Russian LEU we must order to meet our SWU purchase obligations to TENEX. In addition, due to quotas and other limitations, not all of our delivery obligations under our existing contracts can be met with Russian LEU.

We also have an agreement (the "Orano Supply Agreement") with Orano for the long-term supply of SWU contained in LEU, nominally commencing in 2023. Under the Orano Supply Agreement, we will purchase SWU contained in LEU received from Orano, and then deliver natural uranium to Orano for the natural uranium feed material component of LEU. We have the option to extend the six-year purchase period for an additional two years. The Orano Supply Agreement provides significant flexibility to adjust purchase volumes, subject to annual minimums and maximums in fixed amounts that vary year by year. The pricing for the SWU purchased by us is determined by a formula that uses a combination of market-related price points and other factors, and is subject to certain floors and ceilings. Prices are payable in a combination of U.S. dollars and euros.

We procure LEU from other sources under short-term and long-term contracts and have inventories available that diversify our supply portfolio and provide flexibility to meet the needs of our customers.

Market prices for SWU fell substantially in the aftermath of the nuclear incident at Fukushima, Japan in 2011. Recent purchases of SWU and our long-term contract with Orano reflect this decline in market prices. We signed our large, long-term supply agreement with TENEX in 2011. Prices under the Russian Supply Agreement also have been adjusted to reflect lower market prices based on a one-time market related price reset that was agreed when we signed the contract in 2011. The reset occurred in 2018, reducing the unit cost per SWU for purchases we made in 2019 and will make for the duration of the contract.

Technical Solutions

Our technical solutions segment reflects our technical, manufacturing, engineering and operations services offered to public and private sector customers, including the American Centrifuge engineering and testing activities we have performed as a contractor for UT-Battelle LLC ("UT-Battelle"), the contractor operating the Oak Ridge National Laboratory, and the engineering, procurement, construction, manufacturing and operations services being performed under the HALEU Contract. With our private sector customers, we seek to leverage our domestic enrichment experience, engineering know-how, and precision manufacturing facility to assist customers with a range of engineering, design, and advanced manufacturing projects including the production of fuel for next-generation nuclear reactors and the development of related facilities.

We have a long record as a global leader in advanced technology, manufacturing and engineering. Our manufacturing, engineering and testing facilities and our highly-trained workforce are deeply engaged in developing advanced nuclear fuel solutions, providing engineering and precision manufacturing services, and advancing the next generation of uranium enrichment technology.

We are exploring a number of options for returning to domestic production in the future. The economics for commercial deployment of new enrichment capacity are severely challenged by the current supply/demand imbalance in the market for LEU and related downward pressure on market prices for SWU, which reached a historic low in 2018 and have since gradually started to increase, as described above.

Government Contracting

On October 31, 2019, we signed the three-year cost-share HALEU Contract with DOE to deploy a cascade of centrifuges to demonstrate production of HALEU for advanced reactors. The program has been under way since May 31, 2019, when the Company and DOE signed an interim HALEU letter agreement that allowed work to begin while the full contract was being finalized.

Under the HALEU Contract, DOE agreed to reimburse the Company for 80% of its costs incurred in performing the contract, up to a maximum of \$115 million. The Company's cost share is the corresponding 20% and any costs incurred above these amounts. As described in *Overview* above, the portion of our anticipated cost share under the HALEU Contract representing our share of remaining projected program costs was recognized in *Cost of Sales* as an accrued loss of \$18.3 million as of December 31, 2019. The accrued loss on the contract will be adjusted over the remaining contract term based on actual results and remaining program cost projections. The HALEU Contract is incrementally funded and DOE is currently obligated for costs up to approximately \$53.2 million of the \$115 million. The Company received cash payments of \$10.7 million through December 31, 2019.

Over the past five years, our government contracts with UT-Battelle have provided for engineering and testing work on the American Centrifuge technology at our facilities in Oak Ridge, Tennessee. Our completed fixed-price contract with UT-Battelle for the period from October 1, 2017, through September 30, 2018, generated revenue of approximately \$16.0 million upon completion of defined milestones. Although the contract expired September 30, 2018, we continued to perform work on a limited basis towards the expected milestones as the parties worked toward a successor agreement. A successor fixed-price agreement was entered into with UT-Battelle in September 2019 and was completed in 2019 resulting in revenue of \$1.2 million. In February 2020, an additional \$4.4 million fixed-price agreement was entered into with UT-Battelle with a milestone deliverable in the second quarter of 2020.

We continue to invest in advanced technology because of the potential for future growth into new areas of business for the Company, while also preserving our unique workforce at our Technology and Manufacturing Center in Oak Ridge, Tennessee.

On September 27, 2018, we leveraged our D&D experience and entered into an agreement with DOE to decontaminate and decommission the K-1600 facility located at the East Tennessee Technology Park in Oak Ridge, Tennessee. Under the terms of the agreement, pursuant to a work authorization under our lease with DOE, we were required to remove and dispose of government owned materials and equipment in order to render the facility radiologically uncontaminated and unclassified. The contract was a cost-plus fixed fee contract totaling approximately \$15 million. The Company announced that it had successfully completed decontamination and decommissioning of the facility on October 9, 2019. In connection with the substantial completion of the work, we terminated our lease with DOE for the K-1600 facility on September 30, 2019.

In addition, we have entered into other contracts with DOE, other agencies and their contractors to provide engineering, design and manufacturing services.

Commercial Contracting

In March 2018, we entered into a services agreement with X Energy, LLC ("X-energy") to provide X-energy with (i) technical and resource support for criticality safety evaluation of processing equipment, design of fresh fuel transport packages, and conceptual mock-up of a nuclear fuel production facility and (ii) non-cash in-kind contributions subject to a cooperative agreement between X-energy and the United States government. The services were performed pursuant to separate task orders issued under the agreement. The initial task orders ran through December 31, 2018, and provided for time-and-materials based pricing with payments to be made to us totaling approximately \$4.4 million. In addition, we contributed non-cash in-kind contributions with a value of approximately \$2.5 million. In January 2020, we extended the period of performance through June 30, 2020 which resulted in revised total payments to be made to us of approximately \$4.6 million and non-cash in-kind contributions to be provided by us with a value of approximately \$2.6 million.

In November 2018, we entered into a second services agreement with X-energy to provide X-energy with (i) technical and resource support to the design and license application development of its nuclear fuel production facility and (ii) non-cash in-kind contributions subject to a cooperative agreement between X-energy and the United States government. The services will be performed pursuant to separate task orders issued under the agreement. The initial task orders ran through September 30, 2019 with deliverables to be completed through November 30, 2019, and provided for time-and-materials based pricing with payments to be made to us totaling approximately \$4.2 million. In addition, we agreed to provide non-cash in-kind contributions with a value of approximately \$2.4 million. In January 2020, we extended the second service agreement period of performance to June 30, 2020 with the addition of additional tasks orders which resulted in revised total payments to be made to us of approximately \$7.3 million and non-cash in-kind contributions to be provided by us of approximately \$3.9 million.

In addition, we have entered into other contracts for the engineering, design, and advanced manufacturing services with other commercial entities.

Competition and Foreign Trade

It is estimated that the enrichment industry market is currently about 50 million SWU per year. Our global market share is less than 5%. Global LEU suppliers in our highly competitive industry compete on the basis of price and reliability of supply. The four largest LEU suppliers comprise over 95% of market share combined:

- Rosatom, a Russian government entity, which sells LEU through its wholly owned subsidiary TENEX;
- Urenco, a consortium of companies owned or controlled by the British and Dutch governments and two German utilities;
- Orano, a company largely owned by the French government that was formerly part of the French government owned company, AREVA; and
- To a lesser extent, China Nuclear Energy Industry Corporation ("CNEIC"), a company owned by the Chinese government.

The production capacity for Rosatom/TENEX is estimated by the World Nuclear Association to be approximately 27 million SWU per year. Imports of LEU and other uranium products produced in the Russian Federation are subject to restrictions as described below under —*Limitations on Imports of LEU from Russia*.

Urenco reported installed capacity at its European and U.S. enrichment facilities of 18.6 million SWU per year at the end of 2018.

Orano's gas centrifuge enrichment plant in France began commercial operations in 2011 and the plant's nominal capacity of 7.5 million SWU was reportedly in service at the end of 2016. Orano has reported that it has suspended planned capacity expansions beyond 7.5 million SWU.

CNEIC has emerged as a significant producer primarily focused on supplying domestic requirements in China. CNEIC's commercial SWU production capacity is estimated to be approximately 6.8 million SWU per year in 2020.

All of our current competitors are owned or controlled, in whole or in part, by foreign governments. These competitors may make business decisions in both domestic and international markets that are influenced by political or economic policy considerations rather than exclusively by commercial considerations.

There are also producers of LEU in Japan and Brazil that primarily serve a portion of their respective domestic markets.

LEU may also be produced by down-blending government stockpiles of highly-enriched uranium. Governments control the timing and availability of highly-enriched uranium released for this purpose, and the release of this material to the market could impact market conditions. Given the current oversupplied nuclear fuel market, any additional LEU from down-blended highly-enriched uranium released into the market would have a negative effect on prices for LEU.

LEU we supply to foreign customers is exported under the terms of international agreements governing nuclear cooperation between the United States and the country of destination or other entities, such as the European Union or the International Atomic Energy Agency. The LEU supplied to us is subject to the terms of cooperation agreements between the country in which the material is produced and the country of destination or other entities.

Russian Suspension Agreement

Imports into the United States of LEU and other uranium products produced in the Russian Federation, including LEU imported by Centrus under the Russian Supply Agreement, are subject, through December 31, 2020, to quotas imposed under legislation enacted into law in September 2008 and under the 1992 Russian Suspension Agreement ("RSA"), as amended in 2008. These quotas limit the amount of Russian LEU that can be imported into the United States for U.S. consumption.

The U.S. Department of Commerce ("DOC") is currently conducting an administrative review of the current status of, and compliance with, the RSA during the period October 2017 through September 2018 (the "Second Administrative Review") and in December 2019, initiated another review of the period October 2018 through September 2019 (the "Third Administrative Review"). In an earlier review (the "First Administrative Review"), which covered the period October 2016 through September 2017 and was completed in December 2017, the DOC found that TENEX, Centrus and others had complied with the terms of the RSA during the period of review, but deferred until the Second Administrative Review any decision on whether the RSA continues to meet the statutory requirements that the RSA (i) prevent the suppression or undercutting of price levels of domestic uranium products and (ii) continue to be in the public interest. In a preliminary determination in the Second Administrative Review, issued in December 2019, the DOC again found that Centrus and others had complied with the RSA, but again deferred making a determination on the statutory requirements, which it said would be addressed in a post-preliminary analysis, which has yet to be issued. A final determination in the Second Administrative Review is expected to be issued in June 2020.

If, in the final determination of the Second Administrative Review, the DOC finds evidence either of non-compliance with the RSA, or that the statutory requirements are no longer being met, it could terminate the RSA, reinitiate the antidumping investigation that the RSA suspended, and begin collecting duties in excess of 115% ad valorem on imports of Russian uranium products, including the LEU that the Company imports under the Russian Supply Agreement.

In February 2019, the DOC formally opened negotiations with the Russian Federation State Atomic Energy Corporation (Rosatom) with respect to a possible extension of the term of the RSA. In connection with these negotiations, the DOC is seeking a significant extension of the RSA. We are working with industry stakeholders and others to ensure that the extension will include sufficient quota to allow all existing contracts with TENEX, including the Russian Supply Agreement, to be fully implemented, but it is possible that the terms of the extension will not expressly protect our ability to import LEU under the Russian Supply Agreement or require that available quota be allocated to those imports.

An extension of the RSA would continue the existing suspension of the antidumping investigation and therefore not require payment of the duties described above, as long as the suspension remained in place. Centrus does not currently have in place any agreement with TENEX to share quotas that may apply after 2020, when the existing quotas terminate. Unless the RSA extension provides for sufficient quota or other relief that would allow Centrus to deliver in the United States all the Russian LEU we procure under the Russian Supply Agreement, (i) our ability to meet our commitments under our order book and to obtain new sales commitments would be substantially

jeopardized, and (ii) our ability to earn revenues with the Russian LEU we are required to procure under the Russian Supply Agreement would be substantially reduced. As a result, we would lose both revenue and market share to our competitors.

Similarly, if, instead of an extension of the RSA, the DOC reached an adverse final determination in the Second Administrative Review and elected to restart the antidumping investigation of Russian uranium products, including LEU, we would be obligated to deposit funds with the DOC to cover potential duties and potentially pay antidumping duties on a going-forward basis (if the antidumping investigation resulted in an antidumping order) that would render the LEU containing the SWU that we purchase under the Russian Supply Agreement too expensive to place into the market. Such an outcome would cause us to incur significant losses in fulfilling our existing contracts, and make it commercially challenging to win new contracts using the Russian LEU.

Limitations on Imports of LEU from France

The DOC imposed an antidumping order on imports of French LEU in 2002, subject to periodic review by the DOC to determine if the order should be maintained in effect. In connection with its most recent view of the order, the DOC did not receive any notices that domestic parties intended to participate in the review. Consequently, the order was revoked in the March 2019. Since the revocation of the Order, material imported from France, including material imported by Centrus under its Orano contract, is no longer subject to tariffs.

Other Trade Actions

In July 2019, in response to a finding of the Secretary of Commerce that uranium was being imported in such quantities and under such circumstances that it threatened to impair the national security of the United States, the President directed that a high-level U.S. government nuclear fuel working group be formed to develop recommendations for reviving and expanding domestic nuclear fuel production.

In 2018, in connection with withdrawal by the United States from a 2015 multilateral agreement known as the "Joint Comprehensive Plan of Action," or JCPOA, the U.S. government re-imposed sanctions on Iran's Atomic Energy Organization of Iran (AEOI) and a number of its subsidiaries. Waivers were granted to allow non-Iranian entities to continue to work on certain programs that, among other things, allowed affiliates of Rosatom to continue work at the Fordow enrichment plant in Iran. On October 29, 2019, the U.S. government extended four of these waivers for 90 days, but in November 2019, the U.S. State Department announced that one of the four waivers that permitted Rosatom's affiliates to continue work at the Fordow enrichment plant would terminate early, on December 15, 2019, in response to an announcement by Iran that it would enrich uranium at that facility. (The remaining three waivers were extended for an additional sixty days on January 31, 2020.) Termination of the waiver of sanctions that might have applied to Russian work at Fordow could have allowed the U.S. government to impose sanctions on Rosatom or its affiliates for conducting work at Fordow. In early December 2019, however, a Rosatom subsidiary announced that it was suspending work at the Fordow plant, thereby reducing the risk that Rosatom or its subsidiaries, including TENEX, would be sanctioned. To date, no sanctions have been imposed or announced on TENEX or its affiliate that producers LEU that would adversely affect our ability to implement the Russian Supply Agreement.

If TENEX or its affiliate that produces LEU for delivery under the Russian Supply Agreement were sanctioned and if the sanctions ultimately preclude the Company from purchasing LEU from TENEX, the Company would seek a license, waiver or other approval from the U.S. government to ensure that the Company could continue to fulfill its purchase and sales obligations. There is no assurance that such a license, waiver or approval would be granted. If a license, waiver or approval were not granted, the Company would need to look to alternative sources of LEU to replace the LEU that it could not procure from TENEX, and to the extent these sources were insufficient or more expensive, it would adversely impact our business, results of operations, and competitive position.

DOE Facilities

We produced LEU through 2001 at the former Portsmouth Gaseous Diffusion Plant ("Portsmouth GDP") in Piketon, Ohio and through 2013 at the former Paducah Gaseous Diffusion Plant ("Paducah GDP") in Paducah, Kentucky which we had leased from DOE. We currently store our existing inventory at third party offsite licensed locations under agreements with the operators of those facilities. Our prior enrichment operations generated hazardous, low-level radioactive and mixed wastes. The storage, treatment, and disposal of wastes are regulated by federal and state laws. The treatment and disposal of wastes from our prior operations at the Paducah GDP were completed in 2016. Regarding our past operations at the former Portsmouth GDP, DOE agreed in 2011 to accept ownership of all nuclear material at the site, some of which required processing for waste disposal. We agreed to pay DOE for costs for disposing of our share of such wastes. The treatment and disposal of wastes from our prior operations at the Portsmouth GDP were completed in 2017.

The Portsmouth and Paducah gaseous diffusion plants were operated by agencies of the U.S. government for more than 40 years prior to the creation of the Company through privatization of the Government enterprise in 1998. As a result of such operation, there are contamination and other potential environmental liabilities associated with the Government's prior operation of the plants. The USEC Privatization Act and our former leases for the plants provide that DOE remains responsible for the D&D of the gaseous diffusion plants. Further, DOE continued operations and cleanup activities both during and subsequent to our operations at the plants.

We lease facilities and related personal property in Piketon, Ohio from DOE. In connection with the HALEU letter agreement, DOE and Centrus amended the lease agreement, which was scheduled to expire by its terms on June 30, 2019. The lease was renewed and extended until May 31, 2022. Any facilities or equipment constructed or installed under contract with DOE will be owned by DOE and may be returned to DOE in an "as is" condition at the end of the lease term. DOE will be responsible for the D&D of any returned facilities or equipment. If we determine the equipment and facilities may benefit Centrus after completion of the HALEU program, we can extend the facility lease and ownership of the equipment will be transferred to us, subject to mutual agreement regarding D&D and other issues.

On September 27, 2018, we entered into an agreement with DOE to D&D the K-1600 facility of DOE located at the East Tennessee Technology Park. Under the terms of the agreement, pursuant to a work authorization under our lease with DOE, we were required to remove and dispose of government owned materials and equipment in order to render the facility non-contaminated and unclassified. On October 9, 2019, we announced the successful completion of the D&D of the facility. In connection with the substantial completion of the work, we terminated our lease with DOE for the K-1600 facility on September 30, 2019.

Employees

A summary of our employees by location follows:

	No. of Employe at December 31		
Location	2019	2018	
Oak Ridge, TN	104	105	
Piketon, OH	69	65	
Bethesda, MD	53	51	
Other	4	5	
Total Employees	230	226	

On January 16, 2020, members of the United Steelworkers ("USW") Local 689-5 ratified a new collective bargaining agreement for the employees represented by the USW at the advanced technology facility in Piketon, Ohio. The contract term is through October 1, 2022.

Executive Officers

Executive officers are elected by and serve at the discretion of the Board of Directors. Executive officers at March 26, 2020, follow:

<u>Name</u>	<u>Age</u>	<u>Position</u>
Daniel B. Poneman	64	President and Chief Executive Officer
Larry B. Cutlip	60	Senior Vice President, Field Operations
Elmer W. Dyke	56	Senior Vice President, Business Operations and Chief Commercial Officer
Dennis J. Scott	60	Senior Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary
Philip O. Strawbridge	65	Senior Vice President, Chief Financial Officer, Chief Administrative Officer and Treasurer
John M.A. Donelson	55	Senior Vice President, Sales and Chief Marketing Officer

Daniel B. Poneman has been President and Chief Executive Officer since April 2015 and was Chief Strategic Officer in March 2015. Prior to joining the Company, Mr. Poneman was Deputy Secretary of Energy from May 2009 to October 2014, in which capacity he also served as Chief Operating Officer of the U.S. Department of Energy.

Larry B. Cutlip has been Senior Vice President, Field Operations since January 2018, was Vice President, Field Operations from May 2016 through December 2017, was Deputy Director of the American Centrifuge Project from January 2015 to May 2016, was Director, Centrifuge Manufacturing from April 2008 to December 2014, was Director, Program Management and Strategic Planning from December 2005 to April 2008, was Manager, Engineering from May 1999 to December 2005, and held positions in operations management and engineering at the Company and its predecessors since 1981.

Elmer W. Dyke has been Senior Vice President, Business Operations and Chief Commercial Officer since January 2018 and was Senior Vice President, Business Operations from September 2015 through December 2017. Prior to joining the Company, Mr. Dyke was a Senior Vice President of NAC International's global consulting business and Vice President of International Sales from August 2010 to September 2015.

Dennis J. Scott has been Senior Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary since January 2018 and was Vice President, General Counsel, Chief Compliance Officer and Corporate Secretary from May 2016 through December 2017. Mr. Scott was Deputy General Counsel and Director, Corporate Compliance from April 2011 to May 2016, Acting Deputy General Counsel from August 2010 to April 2011, Assistant General Counsel and Director, Corporate Compliance from April 2005 to August 2010 and Assistant General Counsel from January 1994 to April 2005.

Philip O. Strawbridge has been Senior Vice President, Chief Financial Officer, Chief Administrative Officer and Treasurer since September 2019. Prior to joining the Company, Mr. Strawbridge served as an executive adviser at Court Square Capital from 2010 to 2013. Mr. Strawbridge served in various executive positions including Chief Financial Officer at EnergySolutions, a nuclear services and technology company, from 2006 to 2010. He was Chief Executive Officer and Chief Operating Officer of BNG America, which provided nuclear waste management services and technology to U.S. Government and commercial clients, from 1999 until BNG America was acquired by EnergySolutions in early 2006.

John M.A. Donelson has been Senior Vice President, Sales and Chief Marketing Officer since October 2019 and was Vice President, Sales and Chief Marketing Officer from January 2018 through October 2019. Mr. Donelson was Vice President, Marketing, Sales and Power from April 2011 through December 2017, Vice President, Marketing and Sales from December 2005 to April 2011, Director, North American and European Sales from June 2004 to December 2005, Director, North American Sales from August 2000 to June 2004 and Senior Sales Executive from July 1999 to August 2000.

Available Information

Our website is www.centrusenergy.com. We make available on our website, or upon request, without charge, access to our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports filed with, or furnished to, the Securities and Exchange Commission, pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the Securities and Exchange Commission.

Our code of business conduct provides a brief summary of the standards of conduct that are at the foundation of our business operations. The code of business conduct states that we conduct our business in strict compliance with all applicable laws. Each employee must read the code of business conduct and sign a form stating that he or she has read, understands and agrees to comply with the code of business conduct. A copy of the code of business conduct is available on our website or upon request without charge. We will disclose on the website any amendments to, or waivers from, the code of business conduct that are required to be publicly disclosed.

We also make available on our website or upon request, free of charge, our code of business conduct, Board of Directors Governance Guidelines, and our Board committee charters.

Item 1A. Risk Factors

The following discussion sets forth the material risk factors that could affect our financial condition and operations. Readers should not consider any descriptions of such factors to be a complete set of all potential risks that could affect us. Below, we describe certain important operational, financial, strategic and legal and compliance risks.

Operational Risks

Operational risks relate to risks arising from systems, processes, people and external events that affect the operation of our business, including supply chain and business disruption and data protection and security, including cyber security.

Restrictions on imports or sales of LEU or SWU that we buy could adversely affect profitability and the viability of our business.

Our ability to place LEU we purchase into existing and future contracts with customers is subject to U.S. import limitations and, in some cases, the terms of contracts with customers that preclude us from delivering SWU or LEU produced in specific countries. Further, in the case of Russian LEU, sales of Russian LEU or SWU are more challenging than sales of non-Russian material because some of our customers are unable or unwilling to accept Russian LEU.

Imports of LEU under the Russian Supply Agreement are subject to quotas imposed under legislation enacted into law in September 2008 and under the 1992 Russian Suspension Agreement, as amended in 2008 (the "RSA"). We are dependent upon TENEX to grant us the right to use a portion of these quotas under the terms of the Russian Supply Agreement in order to import Russian LEU for sale in the United States. The RSA is scheduled to expire at the end of 2020, and the Russian Supply Agreement does not include any provisions addressing what would happen if additional or other restrictions on imports of Russian LEU or SWU are imposed after 2020.

The RSA is subject to periodic review by the Department of Commerce ("DOC"). The DOC is currently conducting a review that is scheduled to be completed in June 2020. As result of the review, the DOC may find that the RSA has not been complied with or does not meet certain statutory requirements, which, in either case, could cause the DOC to terminate the RSA. If the RSA is terminated, duties or other restrictions could be applied to imports of LEU or other uranium products. These duties, at least initially, would exceed 115% of the value of the imported LEU.

Since 2019, the DOC, Rosatom and TENEX have been engaged in negotiations to extend the RSA. In connection with these negotiations, the DOC is seeking a significant extension of the RSA. We are working with industry stakeholders and others to ensure that the extension will include sufficient quota to allow all existing contracts with TENEX, including the Russian Supply Agreement, to be fully implemented, but it is possible that the terms of the extension will not expressly protect our ability to import LEU under the Russian Supply Agreement or require that available quota be allocated to those imports. Because the Russian Supply Agreement does not stipulate what would happen if quotas or other restrictions are imposed post-2020, there is no assurance that the Company will be permitted to use any future quotas to import LEU under the Russian Supply Agreement post-2020. Further, even if TENEX were willing to grant the Company the right to use all or a portion of the new quotas, there is no assurance that the new quotas would be sufficient to cover all the LEU that the Company is required to order under the Russian Supply Agreement after 2020. Finally, while the Company has asked that the DOC to provide sufficient quota for the Russian Supply Agreement, the DOC has yet to adopt that position. Further, even if sufficient quota is granted to TENEX for the Russian Supply Agreement, TENEX may elect not to use that quota for the Russian Supply Agreement.

It also is possible that, in lieu of agreeing to extend the RSA, the DOC or the Russian Federation may elect to allow the RSA to expire and for the antidumping investigation that was suspended by the RSA to restart. Under such circumstances, any imports of Russian LEU, including by the Company, would be required to be accompanied by a deposit of funds to cover potential duties owed to the U.S. government of over 115% of the value of the imported LEU, pending the outcome of the investigation. If the investigation resulted in an antidumping order imposing duties, the deposits would be kept by the U.S. government, up to the amount of duties owed for imports entering the United States during the restarted investigation, and duties would have to be paid to the U.S. government, on a going-forward basis, on all imports entering the United States after the order is imposed.

In addition to the potential for quotas, duty deposits or duties that might apply as results of an extended or terminated RSA, other duties, sanctions and other trade restrictions could be applied to LEU and other forms of foreign uranium as a result of trade actions by the United States. For example, sanctions on Rosatom, TENEX or other Rosatom subsidiaries and affiliates could be imposed through legislation or as a result of sanctions imposed by the U.S. government, and these sanctions would prevent or limit the ability of the Company to do business with these companies.

Regardless of the reason for which they are imposed, quotas, duties, sanctions or other trade restrictions would affect Centrus' sales of non-U.S. natural uranium, SWU or LEU containing non-U.S. uranium or SWU, which would adversely affect Centrus' revenues and financial results.

If we cannot purchase the LEU, SWU or uranium that we are committed to purchase from our foreign suppliers, including TENEX, or we cannot sell such LEU, SWU or uranium for consumption in the United States due to quotas, duties, sanctions or other trade restrictions, we will have to sell the LEU, SWU or uranium for consumption outside the United States. Our ability to sell outside the United States may be limited by policies of foreign governments or regional institutions that seek to restrict the origin of LEU, SWU or uranium purchased by utilities and other entities under their jurisdiction. In addition, foreign companies who take delivery of imported LEU, SWU or uranium from us in the United States may be unwilling to cooperate with us in meeting requirements under U.S. law that provide that the imported material be re-exported within a fixed period of time. Further, geopolitical events, including domestic or international reactions or responses to such events, as well as concerns about U.S. national security or other issues, could lead to U.S. or foreign government or international actions, including the imposition of sanctions, that could disrupt our ability to purchase, sell or make deliveries to customers of LEU or other uranium products from Russia or other countries, or even to continue to do business with one or more of our suppliers. Any of these quotas, duties, sanctions, or other trade restrictions could threaten our ability to fulfill our purchase commitments to our suppliers and our delivery commitments to customers, with adverse effects on our reputation, costs, results of operations, cash flows and long-term viability. Even in the absence of quotas, duties, sanctions, or other trade restrictions, customers may be unwilling to agree to purchase or amend contracts to permit delivery of foreign LEU, SWU or uranium. Accordingly, there is no assurance that we will be successful in our efforts to sell or deliver, in or outside of the United States, the LEU, SWU or uranium we are obligated to purchase under the Russian Supply Agreement, the Orano Supply Agreement and other supply agreements. Inability to purchase, sell or deliver LEU, SWU or uranium for any reason, could adversely impact our business, profitability and long-term viability.

We may be unable to sell all of the LEU we are required to purchase under supply agreements for prices that cover our costs, which could adversely affect profitability and the viability of our business.

We may not achieve the anticipated benefits from supply agreements we enter into. For example, the price we are charged for the SWU component under some of our supply agreements is determined by a formula that uses a combination of market-related price points and other factors at the time of delivery, which may result in prices that are not aligned with the prevailing market prices at the time we enter into contracts with customers. Other existing or new supply agreements may have pricing mechanisms that may not be aligned with market prices. The pricing mechanisms of our supply agreements may not align with pricing provided in our new or existing sales contracts and could result in sales prices that do not cover our purchase costs and may limit our ability to make new sales at prices that exceed the purchase price we pay for the LEU.

We are dependent on existing inventory and other sources to meet our obligations to customers.

We are currently dependent on existing inventory, purchases from TENEX, Orano and other sources to meet our obligations to customers. We are acquiring alternative sources of supply in the market. The availability, cost and terms of additional alternative sources of supply are subject to variables that are difficult to predict. A significant delay in, or stoppage or termination of, deliveries of material to us under our supply agreements could adversely affect our ability to make deliveries to customers and would adversely affect revenues and results of operations. A delay, stoppage or termination could occur due to a number of factors, including logistical problems with shipments, commercial or political disputes between the parties or their governments, imposition of quotas, duties, sanctions, or other restrictions or a failure or inability by either party to meet the terms of such agreements. An interruption of deliveries could adversely impact our business, results of operations, and prospects.

We face risks associated with reliance on third-party suppliers to meet customer commitments.

We rely on third-party suppliers to provide essential services to the Company, such as the storage and management of inventory, transportation and radiation protection. We face the risk that those service providers may not perform on time, with the desired quality or at all for a variety of reasons, many of which are outside our control. Alternative third-party suppliers may not be readily available or may be more costly. As a result of such risks, we may be unable to meet our customer commitments, our costs could be higher than planned, and/or our relationship with customers could be negatively affected, all of which could adversely affect our business, results of operations, and prospects. Customers place great value in the reliability of their supply of fuel for their reactors. Failure to make a delivery could have an adverse effect on our ability to make new sales and could have an adverse effect on our business, results of operations, and prospects.

Periodically, events or issues arise that may affect the performance of our suppliers. There can be no assurance that the steps we may take to address these events or issues will be successful in minimizing potential impacts to the Company and our customers. Unless adequately addressed, such events or issues could adversely affect our business, results of operations, and prospects.

Dependence on our largest customers could adversely affect us.

In 2019, our ten largest nuclear fuel customers represented approximately 72% of total revenue and our three largest customers represented approximately 56% of total revenue. Further, individual orders average roughly \$10 million. A reduction in purchases from our customers, whether due to their decision not to purchase optional quantities or for other reasons, including a disruption or change in their operations or financial condition that reduces purchases of LEU from us, could adversely affect our business, results of operations, and prospects.

We have seen increased price competition when competitors and secondary suppliers lowered their prices to sell excess supply created by prevailing market conditions. This has adversely affected our sales efforts. Because price is a significant factor in a customer's choice of a LEU supplier, when contracts come up for renewal, customers may reduce their purchases from us if we are not able to compete on price or for other reasons, resulting in the loss of new sales contracts. Once lost, customers may be difficult to regain because they typically purchase LEU under long-term contracts. Therefore, given the need to maintain existing customer relationships, our ability to raise prices to respond to increases in costs or other developments may be limited. In addition, because we have a commitment to acquire LEU from third parties, any reduction in purchases by the customers below the level required for us to resell the material we are obligated to buy could adversely affect our business, results of operations, and prospects.

The dollar amount of the sales order book, as stated at any given time, is not necessarily indicative of future sales revenues and is subject to uncertainty.

Our order book of sales is the estimated aggregate dollar amount of SWU and uranium sales that we expect to recognize as revenue in future periods under existing contracts with customers. There is no assurance that the revenues projected will be realized, or, if realized, will result in profits. Most of our contracts provide for fixed purchases of SWU during a given year. Our estimate of the order book is partially based on customers' estimates of the timing and size of their fuel requirements and other assumptions that may prove to be inaccurate. The order book is also based on estimates of selling prices, which are subject to change. For example, depending on the terms of specific contracts, prices may be adjusted based on escalation using a general inflation index, published SWU or uranium market price indicators prevailing at the time of delivery, and other factors, all of which are unpredictable, particularly in light of general uncertainty in the nuclear market. We use external composite forecasts of future market prices and inflation rates in our pricing estimates. These forecasts may not be accurate, and therefore estimates of future prices could be over or understated. Any inaccuracy in estimates of future prices would add to the imprecision of the order book estimate.

For a variety of reasons, the amounts of SWU and uranium that we will sell in the future under existing contracts, and the timing of customer purchases under those contracts, may differ from estimates. Customers may not purchase as much as we predict, nor at the times we anticipate, as a result of operational or financial difficulties, changes in fuel requirements, reactor shutdowns, natural or other disasters, changes in law or other reasons. Reduced purchases would reduce the revenues we actually receive from contracts included in the order book. Customers could also seek to modify or cancel orders in response to concerns regarding our financial strength or future business prospects. Further, financial and operational issues, including possibility for bankruptcies, facing our customers could affect the order book.

The order book includes a number of contracts with sales prices that are significantly above current market prices. Customers may seek to limit their obligations under these existing contracts or may be unwilling to continue those contracts. Further, some of our customers are facing financial difficulties and may seek modifications to their contracts or seek bankruptcy protection.

From time to time, we have worked with customers to modify contracts that have delivery, scheduling, origin or other terms that may require modifications to address our anticipated supply sources. If we were to initiate such discussions in the future, we have no assurance that our customers would agree to revise existing contracts or would not require concessions, which could adversely affect the value of our order book and our prospects.

Our technical solutions segment conducts business under various types of contracts, including fixed-price and cost-share contracts, which subjects us to risks associated with cost over-runs.

The technical solutions segment conducts business under various types of contracts, including fixed-price contracts and cost-share contracts, where costs must be estimated in advance of our performance. These types of contracts are priced, in part, on cost and scheduling estimates that are based on assumptions including prices and availability of experienced labor, equipment and materials. If, for example, these estimates prove inaccurate, if there are errors or ambiguities as to contract specifications or if circumstances change due to, among other things, unanticipated technical problems, poor project execution, changes in the costs of equipment and materials or our suppliers' or subcontractors' inability to perform, then cost overruns may occur. We may not be able to obtain compensation for additional work performed or expenses incurred. For example, the Company entered in a cost share agreement with the U.S. Department of Energy ("DOE") for the licensing, construction, assembly and operation of our AC100M centrifuge machines and related infrastructure in a cascade formation to produce high assay low enriched uranium ("HALEU"). Under the Agreement, DOE will reimburse us for up to 80% of the total program costs up to a maximum amount of \$115 million. Any costs incurred above these amounts would increase the Company's cost share. Our failure to accurately estimate the resources and time required for fixed-price or cost-share contracts or our failure to complete our contractual obligations within the time frame and costs committed could result in reduced profits, greater costs or a loss for that contract. If the cost overrun on a contract is

significant, or we encounter issues that affect multiple contracts, the cost overrun could have a material adverse effect on our business, financial condition and results of operations.

Our ability to expand our technical solutions segment is dependent on developing new business opportunities, meeting the requirements of new customers and timely performance of work in different market sectors.

Our technical solutions segment is focusing on new customers and new industries with which we do not currently do business as part of our business development efforts. As we develop these opportunities, we may face greater costs and we may need to devote more resources to obtain contract work. There can be no assurance that we will successfully identify new business opportunities, accurately estimate the time, cost and complexity of the work, achieve market acceptance of our services or that services provided by others will not render our services obsolete or noncompetitive or we will be able to timely complete the work or avoid cost overruns.

The U.S. government awards contracts through a rigorous competitive process and our efforts to obtain future federal contracts may not be successful.

The U.S. government conducts a rigorous competitive bidding and award process for most federal contracts. We face strong competition and pricing pressures for any additional contract awards from the U.S. government, and we may be required to qualify or continue to qualify under the various multiple award task order contract criteria. It may be difficult for us to win future awards from the U.S. government and we may have other contractors sharing in any U.S. government awards that we win. In addition, negative publicity regarding findings stemming from audits, congressional opposition, and litigation may adversely affect our ability to obtain future awards.

Our U.S. government contract work is regularly reviewed and audited by the U.S. government and these reviews can lead to withholding or delay of payments to us, non-receipt of award fees, legal actions, fines, penalties and liabilities and other remedies against us.

U.S. government contracts are subject to specific regulations such as the Federal Acquisition Regulation ("FAR"), the Truth in Negotiations Act, Cost Accounting Standards rules and regulations ("CAS"), the Service Contract Act and DOE regulations. Failure to comply with any of these regulations, requirements or statutes may result in contract price adjustments, financial penalties or contract termination. Our U.S. government contracts are subject to audits, cost reviews and investigations by U.S. government contracting oversight agencies such as the Defense Contract Audit Agency ("DCAA"). The DCAA reviews the adequacy of, and our compliance with, our internal control systems and policies, including our labor, billing, accounting, purchasing, property, estimating, compensation and management information systems. The DCAA has the authority to conduct audits and reviews to determine if we are complying with the requirements under the FAR and CAS, pertaining to the allocation, period assignment and allowability of costs assigned to U.S. government contracts. The DCAA presents its report findings to the contracting agency. Should the contracting agency determine that we have not complied with the terms of our contract and applicable statutes and regulations, payments to us may be disallowed, which could result in adjustments to previously reported revenues and refunding of previously collected cash proceeds. Additionally, we may be subject to litigation brought by private individuals on behalf of the U.S. government under the Federal False Claims Act, which could include claims for treble damages. If we experience performance issues under any of our U.S. government contracts, the U.S. government retains the right to pursue remedies, which could include termination under any affected contract. If any contract were so terminated, our ability to secure future contracts could be adversely affected and may also have a material adverse effect on our business, financial condition, results of operations and cash flows.

Our U.S. government contracts and subcontracts are dependent on continued U.S. government funding and government appropriations, which may not be made on a timely basis or at all, and could have an adverse effect on our business.

Current and future U.S. government contracts and subcontracts are dependent on government funding, which is generally subject to Congressional appropriations. Our ability to perform under these federal contracts and subcontracts is dependent upon sufficient funding for, and timely payment by, the entities with which we have contracted. There could be reductions or terminations of, or delays in, the required funding. If the contracting governmental agency, or the prime contractor, does not receive sufficient appropriations to cover its contractual obligations, it may terminate our contract or delay or reduce payment to us. Any inability to award a contract or subcontract, delay in payment, or the termination of a contract due to a lapse in funding, could adversely affect our business, financial condition or results of operations or cash flow.

Failures to protect classified or other sensitive information or security breaches of information technology ("IT") systems could result in significant liability or otherwise have an adverse effect on our business.

Our business requires us to use and protect classified, sensitive and other protected information as well as business proprietary information and intellectual property. Our computer networks and other information technology ("IT") systems are designed to protect this information through the use of classified networks and other procedures. We routinely experience various cybersecurity threats, threats to our information technology infrastructure, unauthorized attempts to gain access to our Company sensitive information, and denial-of-service attacks as do our customers, suppliers, subcontractors and other business partners. The threats we face vary from attacks common to most industries to more advanced and persistent, highly organized adversaries, including nation states, which target us and other government contractors because we protect national security information. If we are unable to protect sensitive information, our customers or governmental authorities could question the adequacy of our threat mitigation and detection processes and procedures, and depending on the severity of the incident, our Company data, customers' data, our employees' data, our intellectual property, and other third party data could be compromised. As a consequence of the persistence, sophistication and volume of these attacks, we may not be successful in defending against all such attacks. Due to the evolving nature of these security threats and the national security aspects of much of the data we protect, the impact of any future incident cannot be predicted.

We have a number of suppliers and indirect suppliers with a wide variety of systems and cybersecurity capabilities and we may not be successful in preventing adversaries from exploiting possible weak links in our supply chain. We also must rely on this supply chain for detecting and reporting cyber incidents, which could affect our ability to report or respond to cybersecurity incidents in a timely manner. The costs related to cyber or other security threats or disruptions may not be fully insured or indemnified by other means.

A material network breach in the security of the IT systems of the Company or third parties for any reasons, including, but not limited to, human error, could include the theft of our business proprietary and intellectual property. To the extent any security breach or human error results in a loss or damage to data, or in inappropriate disclosure of classified or other protected information, the breach could cause grave damage to the country's national security and to our business. Threats to our IT systems are constantly evolving and there is no assurance that our efforts to maintain and improve our IT systems will be sufficient to meet current or future threats. One of the biggest threats to the information we protect comes from the insider threat — an employee with legitimate access who engages in misconduct and/or negligence. Transitions in the business, in particular the potential for employee layoffs and other transitions, can increase the risk that an insider with access could steal Company intellectual property. Any event leading to a security breach or loss of, or damage to, data, whether by our employees or third parties, could result in negative publicity, significant remediation costs, legal liability, and damage to our reputation and could have a material adverse effect on our business, financial condition, results of operations and cash flows. In an extreme case, DOE could terminate our permit to access classified information resulting in elimination of our ability to continue American Centrifuge work.

Financial Risks

Financial risks relate to our financial condition, capital structure and ability to meet financial obligations and the price, volatility and ownership concentration of our Class A Common Stock.

We have significant long-term liabilities.

We continue to have significant long-term liabilities, including the indebtedness under our 8.25% Notes, which mature in February 2027. We also still have substantial pension and postretirement health and life benefit obligations and other long-term liabilities. In addition, the terms of the indenture governing our 8.25% Notes will not restrict Centrus or any of its subsidiaries from incurring substantial additional indebtedness in the future.

Our significant long-term liabilities (and other third-party financial obligations) could have important consequences, including:

- the terms and conditions imposed by the documents governing our indebtedness could make it more difficult for us to satisfy our obligations to lenders and other creditors, resulting in possible defaults on and acceleration of such indebtedness or breaches of such other commitments;
- we may be more vulnerable to adverse economic conditions and have less flexibility to plan for, or react
 to, changes in the nuclear industry, which could place us at a competitive disadvantage compared to
 industry competitors that have less debt or comparable debt at more favorable interest rates and that, as a
 result, may be better positioned to withstand economic downturns;
- we may find it more difficult to obtain additional financing for future working capital, and other general corporate requirements;
- we will be required to dedicate a substantial portion of our cash resources to payments on the 8.25% Notes, due in February 2027, thereby reducing the availability of our cash to fund our operations, capital expenditures and future business opportunities; and,
- the indenture governing our 8.25% Notes, subject to certain exceptions, places certain restrictions on the ability of our subsidiary, United States Enrichment Corporation ("Enrichment Corp."), to transfer cash and other assets to us, which could constrain our ability to pay dividends on our Common Stock or to fund our commitments or the commitments of our other subsidiaries.

If we incur substantial additional indebtedness, the foregoing risks would intensify. Additional information concerning the 8.25% Notes including the terms and conditions of the 8.25% Notes are described in *Note 9*, *Debt* of the consolidated financial statements.

The Company has material unfunded defined benefit pension plans obligations and postretirement health and life benefit obligations. These liabilities are anticipated to require material contributions in future periods, which may divert funds from other uses and could adversely impact the Company's liquidity and prospects.

Centrus and its subsidiary, Enrichment Corp., maintain qualified defined benefit pension plans that are guaranteed by the Pension Benefit Guaranty Corporation ("PBGC"), a wholly owned U.S. government corporation that was created by the Employee Retirement Income Security Act of 1974, as amended ("ERISA"). Centrus also maintains non-qualified defined benefit pension plans for certain executive officers. Effective August 2013, accrued benefits under the defined benefit pension plans are fixed and no longer increase to reflect changes in compensation or Company service. In addition, Enrichment Corp. maintains postretirement health and life benefit plans. The aforementioned pension and health and life benefit plans are closed to new participants. These plans are anticipated to require material cash contributions in the future, which may divert funds from other uses and could adversely impact our liquidity depending on the timing of any required contributions or payments in relation to our sources of cash and other payment obligations. See also the Risk Factor, *Levels of returns on pension and postretirement*

benefit plan assets, changes in interest rates and other factors affecting the amounts to be contributed to fund future pension and postretirement benefit liabilities could adversely affect earnings and cash flows in future periods, below.

Levels of returns on pension and postretirement benefit plan assets, changes in interest rates and other factors affecting the amounts to be contributed to fund future pension and postretirement benefit liabilities could adversely affect earnings and cash flows in future periods.

Earnings may be positively or negatively impacted by the amount of expense we record for employee benefit plans. This is particularly true with expense for the pension and postretirement benefit plans. Generally accepted accounting principles in the United States ("U.S. GAAP") require a company to calculate expense for these plans using actuarial valuations. These valuations are based on assumptions relating to financial markets and other economic conditions. Changes in key economic indicators can result in changes in the assumptions used. The key year-end assumptions used to estimate pension and postretirement benefit expenses for the following year are the discount rate, the expected rate of return on plan assets and healthcare cost trend rates. The rate of return on pension assets and changes in interest rates affect funding requirements for defined benefit pension plans. The IRS and the Pension Protection Act of 2006 regulate the minimum amount we contribute to our pension plans. The amount required to contribute to pension plans can have an adverse effect on our cash flows.

Our revenues and operating results may fluctuate significantly from quarter to quarter and year to year, which could have an adverse effect on our cash flows.

Revenue is recognized when or as we transfer control of the promised LEU or uranium to the customer. Customer demand is affected by, among other things, electricity markets, reactor operations, maintenance and the timing of refueling outages. Customer payments for the SWU component of LEU typically average roughly \$10 million per order. Further, some customers are facing challenging market and financial conditions, including seeking protection under bankruptcy laws. Accordingly, they may seek modification of or relief from their obligations either informally or under bankruptcy laws. As a result, a relatively small change in the timing, amount or other terms of customer orders for LEU due to a change in a customer's refueling schedule or other reasons may cause operating results to be substantially above or below expectations, which could have an adverse effect on our cash flows.

Results of operations could be negatively impacted if adverse conditions or changes in circumstances indicate a possible impairment loss related to our intangible assets.

Intangible assets originated from our reorganization and application of fresh start accounting as of September 30, 2014. The intangible assets represented the fair value adjustment to the assets and liabilities for our LEU segment. The intangible assets remaining on our balance sheet relate to our sales order book and customer relationships. The order book intangible asset is amortized to expense as the order book valued at emergence is reduced, principally as a result of deliveries to customers. The customer relationships intangible asset is amortized to expense using the straight-line method over the estimated average useful life of 15 years.

The carrying values of the intangible assets are subject to impairment tests whenever adverse conditions or changes in circumstances indicate a possible impairment loss. If impairment is indicated, the asset carrying value will be reduced to its fair value. Inherent in our fair value determinations are certain judgments and estimates, including projections of future cash flows, the discount rate reflecting the risk inherent in future cash flows, the interpretation of current economic indicators and market valuations, and strategic plans with regard to operations. A change in these underlying assumptions would cause a change in the results of the tests, which could cause the fair value of the intangible asset to be less than its respective carrying amount.

Centrus is dependent on intercompany support from Enrichment Corp.

Substantially all of our revenue-generating operations are conducted at our subsidiary, Enrichment Corp. The financing obtained from Enrichment Corp. funds our general corporate expenses, including interest payments on the 8.25% Notes, which are guaranteed on a limited and subordinated basis by Enrichment Corp. As a wholly owned subsidiary of Centrus, Enrichment Corp. has its own set of creditors and a separate board of directors (the "Enrichment Board"), who are elected by Centrus. Current and future funding and support are conditional and dependent on Enrichment Corp.'s own financial condition and a determination by the Enrichment Board that such funding is in the interest of Enrichment Corp.

There is a limited trading market for our securities and the market price of our securities is subject to volatility.

The price of our Class A Common Stock remains subject to volatility. The market price and level of trading of our Class A Common Stock could be subject to wide fluctuations in response to numerous factors, many of which are beyond our control. These factors include, among other things, our limited trading history, our limited trading volume, the concentration of holdings of our Class A Common Stock, actual or anticipated variations in our operating results and cash flow, the nature and content of our earnings releases, announcements or events that impact our products, customers, competitors or markets, business conditions in our markets and the general state of the securities markets and the market for energy-related stocks, as well as general economic and market conditions and other factors that may affect our future results.

One of our Class B stockholders has sold shares of Class B Common Stock to a third-party, which resulted in the automatic conversion of the sold shares into Class A Common Stock. Our Class B stockholders may make decisions regarding their investment in the Company based upon factors that are unrelated to the Company's performance. Any further sales by such stockholder or a decision by the other Class B stockholder to sell shares would also result in automatic conversion (with limited exceptions) of Class B Common Stock into Class A Common Stock upon the sale of Class B Common Stock, which in turn could significantly adversely impact the trading price of the Class A Common Stock.

Our 8.25% Notes and the Series B Preferred Stock are not listed on any securities exchange. No assurance can be given as to the liquidity of the trading market for 8.25% Notes or the Series B Preferred Stock. The 8.25% Notes and the Series B Preferred Stock may be traded only infrequently in transactions arranged through brokers or otherwise, and reliable market quotations for the 8.25% Notes and the Series B Preferred Stock may not be available. In addition, the trading prices of the 8.25% Notes and the Series B Preferred Stock will depend on many factors, including prevailing interest rates, the limited trading volumes, and the other factors discussed above with respect to the Class A Common Stock.

A small number of Class A stockholders may exert significant influence over the direction of the Company.

As of December 31, 2019, based solely on amounts reported in Schedule 13D and 13G filings with the SEC, two principal stockholders (those stockholders with beneficial ownership of more than 10% of our Class A Common Stock) collectively beneficially own approximately 30% of our Class A Common Stock. As a result, these stockholders may be able to exert significant influence over all matters requiring stockholder approval, including the election of directors and approval of significant corporate transactions, such as a merger of the Company or sale of substantially all of the Company's assets. These stockholders may have interests that differ from, and may vote in a way adverse to, other holders of Class A Common Stock or adverse to the recommendations of the Company's management. This concentration of ownership may make it more difficult for other stockholders to effect substantial changes in the Company, may limit the ability of the Company to pass certain initiatives or other items that require stockholder approval, and may also have the effect of delaying, preventing or expediting, as the case may be, a change in control of the Company.

A small number of Class A stockholders who also have significant holdings of the Company's Series B Preferred Stock and 8.25% Notes may be motivated by interests that are not aligned with the Company's other Class A stockholders.

Currently, a small number of persons collectively own greater than 50% of our Series B Preferred Stock and 25% of our 8.25% Notes. As a result, these stockholders may have interests that differ from the remainder of the Class A stockholders, and, as a result, may vote or take other actions in a way adverse to other holders of Class A Common Stock.

Our outstanding Series B Preferred Shares rank senior to Common Stock with respect to amounts payable in the event of our liquidation, dissolution or winding-up and we may not pay dividends on our Common Stock while Series B Preferred Shares remain outstanding.

As of December 31, 2019, we had outstanding Series B Preferred Shares with an aggregate liquidation preference of \$127.2 million, including accrued but unpaid dividends of \$22.3 million. Accrued preferred dividends must be paid upon certain conditions such as the achievement of certain financial thresholds, which could limit our flexibility to use cash for other purposes if those thresholds are met. In the event of our liquidation, dissolution or winding-up and there are amounts available for distribution to equity holders after satisfaction of our existing indebtedness and other liabilities, we would be required to make distributions in the amount of the aggregate liquidation preference, including accrued but unpaid dividends at that time, to the holders of the Series B Preferred Shares prior to making any distributions to holders of our Common Stock, which may mean there are insufficient amounts remaining to make a distribution to holders of our Common Stock. The terms of our Series B Preferred Shares also provide that we may not pay dividends on our Common Stock (other than dividends payable in Common Stock) so long as any shares of our Series B Preferred Stock are outstanding. In addition, our Series B Preferred Shares accrue preferred dividends at a rate of 7.5% per annum of the liquidation amount at origination, or \$104.6 million, and we do not anticipate paying dividends for the foreseeable future. As a result, the amount of dividends and distributions in a liquidation event, which are senior to the Common Stock, will continue to increase and could adversely affect the value of our Common Stock as long as the Series B Preferred Shares remain outstanding. Redemption of our Series B Preferred Shares pursuant to their terms would require us to pay the aggregate liquidation preference including all accrued but unpaid dividends. If we were to otherwise seek to repurchase or retire the Series B Preferred Shares, we may not be able to do so on favorable terms or at all and we could be required to use existing cash, issue additional debt, preferred shares and/or another class of common stock, which may also be senior to our Class A and Class B Common Stock, place additional restrictions on our use of cash or our operations or otherwise dilute the interests of the holders of our Common Stock.

Our ability to utilize our net operating loss carryforwards to offset future taxable income may be limited.

Our ability to fully utilize our existing net operating losses ("NOLs") or net unrealized built-in losses could be limited or eliminated in the event (i) we undergo an "ownership change" as described under Section 382 of the Code, (ii) we do not reach profitability or are only marginally profitable, or (iii) there are changes in U.S. government laws and regulations. An "ownership change" is generally defined as a greater than 50% change in equity ownership by value over a rolling three-year period. Past or future ownership changes, some of which may be beyond our control, as well as differences and fluctuations in the value of our equity securities may adversely affect our ability to utilize our NOLs and could reduce our flexibility to raise capital in future equity financings or other transactions, or we may determine to pursue transactions even if they would result in an ownership change and impair our ability to use our NOLs. In addition, the Section 382 Rights Agreement we have adopted with respect to our common stock and the transfer restrictions in the Series B Preferred Stock contain limitations on transferability intended to prevent the possibility of experiencing an "ownership change," but we cannot assure you that these measures will be effective or we may determine to pursue transactions even if they would result in an ownership change and impair our ability to use our NOLs. In addition, any changes to tax rules and regulations or the interpretation of tax rules and regulations (including recent tax legislation) could negatively impact our ability to recognize any potential benefits from our NOLs or net unrealized built-in losses.

Strategic Risks

Strategic risks relate to the Company's future business plans and strategies, including the risks associated with: the global macro environment in which we operate, the demand for our products and services, competitive threats and technology innovation.

Our future prospects are tied directly to the nuclear energy industry worldwide, and the financial difficulties experienced by, and operating conditions of our customers could adversely affect our results of operations and financial condition.

Potential events that could affect either nuclear reactors under current or future contracts with us or the nuclear industry as a whole, include:

- natural or other disasters (such as the 2011 Fukushima disaster) impacting nuclear facilities or involving shipments of nuclear materials;
- regulatory actions or changes in regulations by nuclear regulatory bodies applicable to us, our suppliers or our customers;
- decisions by agencies, courts or other bodies under applicable trade and other laws applicable to us, our suppliers or our customers;
- disruptions in other areas of the nuclear fuel cycle, such as uranium supplies or conversion;
- civic opposition to, or changes in government policies regarding, nuclear operations;
- business decisions concerning reactors or reactor operations;
- the financial condition of reactor owners and operations;
- the need for generating capacity; or
- consolidation within the electric power industry.

These events could adversely affect us to the extent they result in a reduction or elimination of customers' contractual requirements to purchase from us, the suspension or reduction of nuclear reactor operations, the reduction of supplies of raw materials, lower demand, burdensome regulation, disruptions of shipments or production, increased competition from third parties, increased costs or difficulties or increased liability for actual or threatened property damage or personal injury.

Additionally, customers may face financial difficulties, including from factors unrelated to the nuclear industry, that could affect their willingness or ability to make purchases. We are exposed to the risk of loss in the event of nonperformance or a default by customers on their contracts. We cannot provide any assurance that our customers will not default on their obligations to us or file for bankruptcy protection. If a customer files for bankruptcy protection, we likely would be unable to collect all, or even a significant portion, of amounts that are owed to us. A customer default and bankruptcy filing could have a material adverse effect on our business, financial position, results of operations or cash flows.

The continued excess supply of LEU in the market could adversely affect market prices and our business results.

Approximately 60 reactors in Japan and Germany were taken offline following the March 2011 earthquake and tsunami that caused irreparable damage to four reactors in Fukushima, Japan. Since that time, many reactors worldwide have closed, or are scheduled to close, years ahead of the end of their projected operating lifespan. Events related to Fukushima created an over-supply of nuclear fuel that continues to heavily influence market prices. In addition, U.S. reactor operators face aggressive price competition from natural gas and subsidized renewable generation like wind and solar. As a result, since 2013, United States utilities have closed or have announced plans to close 19 reactors with additional reactors at risk for early closure. In 2018, market prices for uranium enrichment hit an all-time low, but as of December 31, 2019, have recovered by 38%. Market uncertainty, including the possibility of additional future quotas, duties, sanctions or other trade restrictions on imported Russian

LEU or Russian suppliers of LEU, and reduced demand has adversely affected our ability to sell LEU. See also the Risk Factor, *Restrictions on imports or sales of LEU or SWU that we buy could adversely affect profitability and the viability of our business* above.

We have long been a leading supplier of LEU to Japanese and U.S. utilities. To maintain our order book with Japanese and U.S. utilities with reduced demand for fuel, we have restructured some contracts to give customers greater flexibility to meet their obligations without a material loss in value to Centrus. If deliveries under contracts included in our order book are significantly delayed, modified or canceled because customers enter bankruptcy or seek to limit their obligations, our revenues and cash flows may be adversely impacted, with a corresponding impact on our financial condition. In addition, China has emerged as a significant enriched uranium producer. Although primarily focused on supplying domestic requirements in China, Chinese government-owned enrichment plants also supply LEU to international markets, which may further contribute to the excess supply of LEU.

The ability to attract and retain key personnel is critical to the success of our business.

The success of our business depends on key executives, managers, scientists, engineers and other skilled personnel. The ability to attract and retain these key personnel may be difficult in light of the uncertainties currently facing the business and changes we may make to the organizational structure to adjust to changing circumstances. Changes in senior management could create uncertainty among our employees, customers and other third parties with which we do business. The inability to retain appropriately qualified and experienced senior executives could negatively affect our operations, strategic planning and performance.

The potential for DOE to seek to terminate or exercise its remedies under the 2002 DOE-USEC Agreement and our other agreements with DOE, or to require modifications to such agreements that are adverse to our interests, may have adverse consequences on the Company.

The Company and DOE signed an agreement dated June 17, 2002, as amended (the "2002 DOE-USEC Agreement"), pursuant to which the parties made long-term commitments directed at resolving issues related to the stability and security of the domestic uranium enrichment industry. The 2002 DOE-USEC Agreement requires the Company to develop, demonstrate and deploy advanced enrichment technology in accordance with milestones and provides for remedies in the event of a failure to meet a milestone under certain circumstances.

DOE has specific remedies under the 2002 DOE-USEC Agreement if we fail to meet a milestone that would adversely impact our ability to begin commercial operations of the American Centrifuge Plant on schedule, and such delay was within our control or was due to our fault or negligence or if we abandon or constructively abandon the commercial deployment of an advanced enrichment technology. These remedies include terminating the 2002 DOE-USEC Agreement, revoking our access to DOE's centrifuge technology that is required for the success of the American Centrifuge project, requiring us to transfer certain rights in the American Centrifuge technology and facilities to DOE, and requiring us to reimburse DOE for certain costs associated with the American Centrifuge project.

We also granted to DOE an irrevocable, non-exclusive right to use or permit third parties on behalf of DOE to use all centrifuge technology intellectual property ("Centrifuge IP") royalty free for U.S. government purposes (which includes national defense purposes, including providing nuclear material to operate commercial nuclear power reactors for tritium production). We also granted an irrevocable, non-exclusive license to DOE to use such Centrifuge IP developed at our expense for commercial purposes (including a right to sublicense), which may be exercised only if we miss any of the milestones under the 2002 DOE-USEC Agreement or if we (or our affiliate or entity acting through us) are no longer willing or able to proceed with, or have determined to abandon or have constructively abandoned, the commercial deployment of the centrifuge technology. Such a commercial purposes license is subject to payment of an agreed upon royalty to us, which will not exceed \$665 million in the aggregate. While our long-term objective is to commercially deploy the American Centrifuge technology when it is commercially feasible to do so, DOE may take the position that we are no longer willing or able to proceed with commercial deployment or have actually or constructively abandoned commercially deployment. On that basis, the

DOE might invoke its rights under the commercial purposes license described above. Any of these actions could have an adverse impact on our business and prospects.

DOE may seek to exercise remedies under this agreement and there is no assurance that the parties will be able to reach agreement on appropriate modifications to the agreements in the future. Moreover, even if the parties reach agreement on modifications to such agreements, there is no assurance that such modifications will not impose material additional requirements, provide DOE with material additional rights or remedies or otherwise affect the overall economics of the American Centrifuge technology and the ability to finance and successfully deploy the technology. Any of these actions could have an adverse impact on our business and prospects.

We face significant competition from four major producers who may be less cost sensitive or may be favored due to national loyalties.

We compete with four major producers of LEU, all of which are wholly or substantially owned by governments: Orano (France), Rosatom/TENEX (Russia), Urenco (the Netherlands, the United Kingdom and two German utilities), and CNEIC (China). Our competitors have greater financial resources than we do. Foreign competitors enjoy financial and other support from their government owners, which may enable them to be less cost- or profit-sensitive than we are. In addition, decisions by foreign competitors may be influenced by political and economic policy considerations rather than commercial considerations. For example, foreign competitors may elect to increase their production or exports of LEU, even when not justified by market conditions, thereby depressing prices and reducing demand for LEU, which could adversely affect our business, results of operations, and prospects. Similarly, the elimination or weakening of existing restrictions on imports from foreign competitors could adversely affect our business, results of operations, and prospects. Moreover, our competitors may be better positioned to take advantage of improved market conditions and increase capacity to meet any future market expansion.

The ability to compete in certain foreign markets may be limited for political, legal and economic reasons.

Agreements for cooperation between the United States government and various foreign governments or governmental agencies control the export of nuclear materials from the United States. If any of the agreements governing exports to countries in which customers are located were to lapse, terminate or be amended, it is possible our sales could be curtailed or terminated or LEU could no longer be delivered to customers in those countries. This could adversely affect our business, results of operations, and prospects.

Purchases of LEU by customers in the European Union are subject to a policy of the Euratom Supply Agency that seeks to limit foreign enriched uranium to no more than 20% of European Union consumption per year. Application of this policy to consumption in the European Union of the LEU that we supply or purchase can significantly limit our ability to make sales to European customers. Additionally, the decision by the United Kingdom to withdraw from the Euratom Supply Agency as a result of its decision to exit the European Union may have an impact on the nuclear industry.

Further, geopolitical events, including domestic or international reactions or responses to such events and subsequent government or international actions including the imposition of sanctions, could also impact our ability to purchase, sell or make deliveries of LEU to customers.

Certain emerging markets lack a comprehensive nuclear liability law that protects suppliers by channeling liability for injury and property damage suffered by third persons from nuclear incidents at a nuclear facility to the facility's operator. To the extent a country does not have such a law and has not otherwise provided nuclear liability protection for suppliers to the projects to which we supply SWU, we intend to negotiate terms in customer contracts that we believe will adequately protect us in a manner consistent with this channeling principle. However, if a customer is unwilling to agree to such contract terms, the lack of clear protection for suppliers in the national laws of these countries could adversely affect our ability to compete for sales to meet the growing demand for LEU in these markets and our prospects for future revenue from such sales.

Changes to, or termination of, any agreements with the U.S. government, or deterioration in our relationship with the U.S. government, could adversely affect results of operations.

We are a party to a number of agreements and arrangements with the U.S. government that are important to our business, including:

- the HALEU contract;
- the lease for the Piketon, Ohio centrifuge facility; and
- the 2002 DOE-USEC Agreement and other agreements that address issues relating to the domestic uranium enrichment industry and centrifuge technology,

Termination, expiration or modification of one or more of these agreements could adversely affect our business and prospects. In addition, deterioration in our relationship with the U.S. agencies that are parties to these agreements could impair or impede our ability to successfully implement these agreements, which could adversely affect our results of operations.

Our success depends on our ability to adapt to a rapidly changing competitive environment in the nuclear industry.

The nuclear industry in general, and the nuclear fuel industry in particular, is in a period of significant change, which could significantly transform the competitive landscape we face. The uranium enrichment sector of the nuclear fuel cycle industry remains oversupplied, creating downward pressures on commodity pricing, with uncertainty regarding nuclear power generation. Changes in the competitive landscape may adversely affect pricing trends, change customer spending patterns, or create uncertainty. To address these changes, we may seek to adjust our cost structure and operations and evaluate opportunities to grow our business organically or through acquisitions and other strategic transactions. We are actively considering, and expect to consider from time to time in the future, potential strategic transactions, which could involve, without limitation, changes in our capital structure, acquisitions and/or dispositions of businesses or assets, joint ventures or investments in businesses, products or technologies. In connection with any such transaction, we may seek additional debt or equity financing, contribute or dispose of assets, assume additional indebtedness, or partner with other parties to consummate a transaction. Any such transaction may not result in the intended benefits and could involve significant commitments of our financial and other resources. Legal and consulting costs incurred in connection with debt or equity financing transactions in development are deferred and subject to immediate expensing if such a transaction becomes less likely to occur. If the actions we take in response to industry changes are not successful, our business, results of operations and financial condition may be adversely affected.

Our business, financial and operating performance could be adversely affected by epidemics and other health related issues but not limited to the novel coronavirus ("COVID-19") pandemic.

Pandemics and other health crises, such as the global COVID-19 outbreak, may disrupt global supply chains and day-to-day operations of the Company, our suppliers and our customers, which could materially adversely affect our operations. In this regard, global supply chains and the timely availability of products or product components imported from other nations, including SWU contained in LEU we purchase, could be materially disrupted by quarantines, slowdowns or shutdowns, border closings, and travel restrictions resulting from the global COVID-19 pandemic or other global pandemic or health crises. Further, impacts on our management and workforce could adversely impact our business. While we have contingency plans to carry on essential operations, these may not be able to mitigate all of the potential impacts. For example, since much of the work required under the HALEU Contract must be performed at our site, our progress under the HALEU Contract could be impacted in the event employees that are unable to work in-person at our site. These events may result in delays and increased costs in the performance of the HALEU Contract, delays in receiving imports of supplies or other business interruptions and delays which could adversely affect our business, results of operations, and prospects.

Legal and Compliance Risks

Legal and compliance risks relate to risks arising from the government and regulatory environment and action, legal proceedings and compliance with policies and procedures, including those relating to integrity, financial reporting and environmental health and safety. Government and regulatory risk includes the risk that government or regulatory actions will impose additional costs on us or cause us to have to change our business models or practices.

Our operations are highly regulated by the U.S. government, including the NRC and the DOE as well as the States of Ohio and Tennessee.

Our operations, including the facilities we lease in Piketon, Ohio, are subject to regulation by the U.S Nuclear Regulatory Commission ("NRC"). The NRC has granted two licenses for the Piketon facility, i.e. a license for the test facility was granted in February 2004 and a separate license to construct and operate a commercial plant was granted in April 2007. We are currently performing work under contract with DOE for the construction and operations of a cascade to produce HALEU. Prior to the award of the contract we were in process of terminating our licenses and had demobilized programs and processes which are necessary to perform the work. To successfully complete the work in connection with the HALEU project, we withdrew the termination and are pursuing modifications to our NRC license for our commercial plant. There is no assurance that we will be able to re-instate the programs and processes necessary to perform the work in a timely and cost efficient manner. Further we may be unable to gain NRC approval of the necessary license modifications, or gaining such approval may take longer and increase costs.

The NRC also could refuse to renew our license to construct and operate a commercial plant if it determines that: (1) we are foreign owned, controlled or dominated; (2) the issuance of a renewed license would be inimical to the maintenance of a reliable and economic domestic source of enrichment; (3) the issuance of a renewed license would be adverse to U.S. defense or security objectives; or (4) the issuance of a renewed license is otherwise not consistent with applicable laws or regulations in effect at the time of renewal.

The NRC has the authority to issue notices of violation for violations of the Atomic Energy Act of 1954, as amended (the "Atomic Energy Act"), the NRC regulations and conditions of licenses, certificates of compliance, or orders. The NRC has the authority to impose civil penalties or additional requirements and to order cessation of operations for violations of its regulations. Penalties under the NRC regulations could include substantial fines, imposition of additional requirements or withdrawal or suspension of licenses or certificates. Any penalties imposed on us could adversely affect our results of operations and liquidity. The NRC also has the authority to issue new regulatory requirements or to change existing requirements. Changes to the regulatory requirements could also adversely affect our results of operations.

In addition, certain operations at our centrifuge technology development and manufacturing facility in Oak Ridge, Tennessee are subject to regulation by DOE. Our facility in Oak Ridge is also regulated by the State of Tennessee under NRC's agreement state program. DOE and the State of Tennessee have the authority to impose civil penalties and additional requirements, which could adversely affect our results of operations.

In addition to regulation by the NRC, our operations at the facility in Piketon are subject to regulation by various agencies of the Ohio state government. These state and federal agencies may have the authority to impose civil penalties and additional requirements, which could adversely affect our results of operations.

Our operations involve the use, transportation and disposal of toxic, hazardous and/or radioactive materials and could result in liability without regard to fault or negligence.

Our operations involve the use, transportation and disposal of toxic, hazardous and radioactive materials. A release of these materials could pose a health risk to humans or animals. If an accident were to occur, its severity would depend on the volume of the release and the speed of corrective action taken by emergency response personnel, as well as other factors beyond our control, such as weather and wind conditions. Actions taken in response to an actual or suspected release of these materials, including a precautionary evacuation, could result in significant costs for which we could be legally responsible. In addition to health risks, a release of these materials may cause damage to, or the loss of, property and may adversely affect property values.

We lease facilities from DOE in Piketon, Ohio. Pursuant to the Price-Anderson Act, DOE has indemnified the Company against claims for public liability (as defined in the Atomic Energy Act) arising out of or in connection with activities under those leases resulting from a nuclear incident or precautionary evacuation. If an incident or evacuation is not covered under DOE indemnification, we could be financially liable for damages arising from such incident or evacuation, which could have an adverse effect on our results of operations and financial condition. The DOE indemnification does not apply to incidents outside the United States, including in connection with international transportation of uranium products.

While DOE has provided indemnification pursuant to the Price-Anderson Act, there could be delays in obtaining reimbursement for costs from DOE and DOE may determine that some or all costs are not reimbursable under the indemnification. In addition, the Price-Anderson Act indemnification does not cover loss or damage to property located on the leased facilities due to a nuclear incident. For example, Centrus and Enrichment Corp. have been named as defendants in class action lawsuits alleging damages resulting from releases at the facilities we leased in the past at the Portsmouth Gaseous Diffusion Plant, and the centrifuge facilities we still lease in Piketon, Ohio. These claims include allegations of damages that the plaintiffs assert are not covered by the Price-Anderson Act, which claims we and the other defendants have challenged. If DOE were to determine that the Price-Anderson Act did not apply, we would have to pay all or part of any damages awarded as a result of such claims, the cost to us, including legal fees, could adversely affect our results of operations and financial condition.

In our contracts, we seek to protect ourselves from liability, but there is no assurance that such contractual limitations on liability will be effective in all cases. The costs of defending against a claim arising out of a nuclear incident or precautionary evacuation, and any damages awarded as a result of such a claim, could adversely affect our results of operations and financial condition.

Our failure to maintain compliance with the listing requirements of the NYSE American could result in a delisting of our Class A Common Stock and would impair stockholders' ability to sell or purchase our Class A Common Stock.

On November 17, 2015, we received notice from the NYSE American indicating that the Company was not in compliance with Sections 1003(a)(i) and (ii) of the NYSE American's Company Guide since it reported a stockholders' deficit as of September 30, 2015, and net losses in its fiscal years ended December 31, 2011, 2012 and 2013. On April 28, 2017, the NYSE American informed Centrus that it had regained compliance with the NYSE American's continued listing standards because it had resolved the continued listing deficiency. If the Company falls below any of the NYSE American's continued listing standards in the future, the NYSE American may initiate delisting procedures as appropriate. A delisting of our Class A Common Stock by the NYSE American and the failure of our Class A Common Stock to be listed on another national exchange could have significant adverse consequences. A delisting would likely have a negative effect on the price of our Class A Common Stock and would impair stockholders' ability to sell or purchase our Class A Common Stock. A delisting could also affect our access to capital resources.

Our certificate of incorporation gives us certain rights with respect to equity securities held (beneficially or of record) by foreign persons. If levels of foreign ownership set forth in our certificate of incorporation are exceeded, we have the right, among other things, to redeem or exchange common stock held by foreign persons, and in certain cases, the applicable redemption price or exchange value may be equal to the lower of fair market value or a foreign person's purchase price.

Our certificate of incorporation gives us certain rights with respect to shares of our common stock held (beneficially or of record) by foreign persons. Foreign persons are defined in our certificate of incorporation to include, among others, an individual who is not a U.S. citizen, an entity that is organized under the laws of a non-U.S. jurisdiction and an entity that is controlled by individuals who are not U.S. citizens or by entities that are organized under the laws of non-U.S. jurisdictions.

The occurrence of any one or more of the following events is a "foreign ownership review event" and triggers the board of directors' right to take various actions under our certificate of incorporation: (1) the beneficial ownership by a foreign person of (a) 5% or more of the issued and outstanding shares of any class of our equity securities, (b) 5% or more in voting power of the issued and outstanding shares of all classes of our equity securities, or (c) less than 5% of the issued and outstanding shares of any class of our equity securities or less than 5% of the voting power of the issued and outstanding shares of all classes of our equity securities, if such foreign person is entitled to control the appointment and tenure of any of our management positions or any director; (2) the beneficial ownership of any shares of any class of our equity securities by or for the account of a foreign uranium enrichment provider or a foreign competitor (defined in our certificate of incorporation as a "Contravening Person"); or (3) any ownership of, or exercise of rights with respect to, shares of any class of our equity securities or other exercise or attempt to exercise control of us that is inconsistent with, or in violation of, any regulatory restrictions, or that could jeopardize the continued operations of our facilities (defined in our certificate of incorporation as an "Adverse Regulatory Occurrence"). These rights include requesting information from holders (or proposed holders) of our securities, refusing to permit the transfer of securities by such holders, suspending or limiting voting rights of such holders, redeeming or exchanging shares of our stock owned by such holders on terms set forth in our certificate of incorporation, and taking other actions that we deem necessary or appropriate to ensure compliance with the foreign ownership restrictions.

The terms and conditions of our rights with respect to our redemption or exchange right in respect of shares held by foreign persons or Contravening Persons are as follows:

- Redemption price or exchange value: Generally, the redemption price or exchange value for any shares of our common stock redeemed or exchanged would be their fair market value. However, if we redeem or exchange shares held by foreign persons or Contravening Persons and our Board in good faith determines that such person knew or should have known that its ownership would constitute a foreign ownership review event (other than shares for which our Board determined at the time of the person's purchase that the ownership of, or exercise of rights with respect to, such shares did not at such time constitute an Adverse Regulatory Occurrence), the redemption price or exchange value is required to be the lesser of fair market value and the person's purchase price for the shares redeemed or exchanged.
- Form of payment: Cash, securities or a combination, valued by our board of directors in good faith.
- *Notice:* At least 30 days written notice of redemption is required; however, if we have deposited the cash or securities for the redemption or exchange in trust for the benefit of the relevant holders, we may redeem shares held by such holders on the same day that we provide notice.

Accordingly, there are situations in which a foreign stockholder or Contravening Person could lose the right to vote its shares or in which we may redeem or exchange shares held by a foreign person or Contravening Person and in which such redemption or exchange could be at the lesser of fair market value and the person's purchase price for the shares redeemed or exchanged, which could result in a significant loss for that person.

Anti-takeover provisions could delay or prevent an acquisition of us.

We are a Delaware corporation, and the anti-takeover provisions of Delaware law impose various impediments to the ability of a third-party to acquire control of our Company, even if a change of control would be beneficial to our existing stockholders. In particular, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, or DGCL, which generally prohibits a Delaware corporation from engaging in a broad range of business combinations with any "interested" stockholder for a period of three years following the date on which the stockholder becomes an "interested" stockholder. Our certificate of incorporation, or charter, establishes restrictions on foreign ownership of our securities. Other provisions of our charter and bylaws may make it more difficult for a third-party to acquire control of us without the consent of our board of directors. These provisions include:

- authorizing "blank check" preferred stock that our board of directors could issue to increase the number of outstanding shares to discourage a takeover attempt;
- not providing for cumulative voting in the election of directors, which limits the ability of minority stockholders to elect director candidates;
- limiting the ability of stockholders to call a special stockholder meeting;
- establishing advance notice requirements for nominations for election to our board of directors or for proposing matters that can be acted upon by stockholders at stockholder meetings; and
- providing that our board of directors is expressly authorized to amend, alter, rescind or repeal our by-laws.

These various restrictions could deprive shareholders of the opportunity to realize takeover premiums for their shares.

Also, on April 6, 2016, we adopted a Rights Agreement between the Company and Computershare Trust Company, N.A. and Computershare Inc., as rights agent, as amended by the First Amendment to the Section 382 Rights Agreement dated as of February 14, 2017 (the "Rights Agreement") in an effort to protect shareholder value by, among other things, attempting to protect against a possible limitation on our ability to use our net operating loss carryforwards and other tax benefits, which may be used to reduce potential future income tax obligations. Pursuant to the terms of the Rights Agreement, if certain persons or groups acquire more than a certain amount of the outstanding shares of our Class A Common Stock, then, subject to certain exceptions, the Rights Agreement would be triggered.

On April 3, 2019, the Company's Board of Directors approved, and the Company entered into, a Second Amendment to the Rights Agreement (the "Second Amendment"). The Second Amendment, among other things, (i) decreased the purchase price for each one one-thousandth (1/1000th) of a share of the Company's Series A Participating Cumulative Preferred Stock, par value \$1.00 per share, from \$26.00 to \$18.00 and (ii) extended the Final Expiration Date (as defined in the Rights Agreement) from April 5, 2019 to April 5, 2022.

In addition, the indenture governing our 8.25% Notes includes restrictions on our ability to engage in certain mergers or acquisitions. The indenture governing our 8.25% Notes also requires us to offer to repurchase all such outstanding notes at 101% of their outstanding principal amount in the event of certain change of control events.

These and other provisions could prevent, deter, or make it more difficult for a third party from acquiring us even where the acquisition could be beneficial to stockholders.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

Our corporate headquarters is located at 6901 Rockledge Drive, Suite 800, Bethesda, Maryland 20817, where we lease 24,000 square feet of office space through October 2027. We own a 440,000 square foot manufacturing facility, including supporting office space, on 72 acres at 400 Centrifuge Way, Oak Ridge, Tennessee 37830. We also lease industrial buildings and 110,000 square feet of supporting office space from DOE at 3930 U.S. Route 23, Piketon, Ohio 45661. The industrial buildings encompass more than 14 acres under roof and were built to contain uranium enrichment operations using centrifuge technology. In May 2017, we entered into a lease through July 2021 for 6,000 square feet of office space at 14074 U.S. Highway 23, Waverly, Ohio. We also have short-term leases for small areas of office space in Washington, DC and Tokyo, Japan.

Item 3. Legal Proceedings

From time to time, we are involved in various pending legal proceedings, including the pending legal proceedings described below.

On August 30, 2013, the Company submitted a claim to DOE under the Contract Disputes Act for payment of \$42.8 million, representing DOE's share of pension and postretirement benefits costs related to the transition of Portsmouth site employees to DOE's D&D contractor. On August 27, 2014, the DOE contracting officer denied the Company's claim. As a result, the Company filed an appeal of the decision in the U.S. Court of Federal Claims in January 2015. Centrus believes that DOE is responsible for a significant portion of any pension and postretirement benefit costs associated with the transition of employees at Portsmouth. The receivable for DOE's share of pension and postretirement benefits costs has a full valuation allowance due to the lack of a resolution with DOE and uncertainty regarding the amounts owed and the timing of collection. While proceeding with litigation, the Company is still pursuing settlement.

On May 26, 2019, the Company, its subsidiary United States Enrichment Corp. ("Enrichment Corp."), and five other DOE contractors who have operated facilities at the Portsmouth, Ohio, Gaseous Diffusion Plant site (including, in the case of the Company, the American Centrifuge Plant site located on the premises (the "Portsmouth GDP" site) were named as defendants in a class action complaint filed by Ursula McGlone, Jason McGlone, Julia Dunham, and K.D. and C.D., minor children by and through their parent and natural guardian Julia Dunham (collectively, the "McGlone Plaintiffs") in the U.S. District Court in the Southern District of Ohio, Eastern Division. The complaint seeks damages for alleged off-site contamination allegedly resulting from activities on the Portsmouth GDP site. The McGlone Plaintiffs are seeking to represent a class of (i) all current or former residents within a seven-mile radius of the Portsmouth GDP site and (ii) all students and their parents at the Zahn's Corner Middle School from 1993-present. The Company believes that its operations at the Portsmouth GDP site were fully in compliance with the Nuclear Regulatory Commission's regulations. Further the Company believes that any such liability should be covered by indemnification under the Price-Anderson Act. The Company and Enrichment Corp. have provided notifications to DOE required to invoke indemnification under the Price-Anderson Act and other contractual provisions.

On June 28, 2019, the Company, Enrichment Corp. and four other DOE contractors who have operated facilities at the Portsmouth GDP site were named as defendants in a class action complaint filed by Ray Pritchard and Sharon Melick (collectively, the "Pritchard Plaintiffs") in the U.S. District Court in the Southern District of Ohio, Eastern Division. The complaint seeks damages for alleged off-site contamination allegedly resulting from activities on the Portsmouth GDP site. The Pritchard Plaintiffs are seeking to represent a class of all current or former residents within a seven-mile radius of the Portsmouth GDP site. The Company believes that its operations at the Portsmouth GDP site were fully in compliance with the Nuclear Regulatory Commission's regulations. Further the Company believes that any such liability should be covered by indemnification under the Price-Anderson Act. The Company

and Enrichment Corp. have provided notifications to DOE required to invoke indemnification under the Price-Anderson Act and other contractual provisions.

On November 27, 2019, the Company, Enrichment Corp. and six other DOE contractors who have operated facilities at the Portsmouth GDP site were named as defendants in a class action complaint filed by James Matthews, Jennifer Brownfield Clark, Joanne Ross, the Estate of A.R., and others similarly situated (the "Matthews Plaintiffs"), in the Common Pleas Court of Pike County, Ohio. The complaint seeks injunctive relief, compensatory damages, statutory damages, and any other relief allowed by law for alleged off-site contamination allegedly resulting from activities on the Portsmouth GDP site. The Matthews Plaintiffs expressly contend that the ongoing and continuous releases that injured the Plaintiffs and Class Members are not "nuclear incidents" as that term is defined in the Price-Anderson Act, but rather "freestanding state law claims concerning traditional-style state regulation." The Company believes that its operations at the Portsmouth GDP site were fully in compliance with the Nuclear Regulatory Commission's regulations. Further the Company believes that any such liability should be covered by indemnification under the Price-Anderson Act. The Company and Enrichment Corp. have provided notifications to DOE required to invoke indemnification under the Price-Anderson Act and other contractual provisions.

On October 11, 2018, the Company's subsidiaries, Enrichment Corp. and American Centrifuge Enrichment, LLC ("ACE", together with Enrichment Corp., the "Company Subsidiaries") filed proofs of claim in the U.S. Bankruptcy Court for the Northern District of Ohio (the "Bankruptcy Court") against each of FirstEnergy Nuclear Operating Company ("FENOC"), FirstEnergy Nuclear Generation, LLC ("FENG," and together with FENOC, the "FirstEnergy Contract Parties"), FirstEnergy Solutions Corp. ("FES") and FirstEnergy Generation, LLC ("FG"). The claims relate to damages arising from the rejection and breach of a long-term contract between the Company Subsidiaries and the FirstEnergy Contract Parties that was approved by the Bankruptcy Court and made effective as of July 26, 2018. The proofs of claim filed by the Company Subsidiaries include claims against the FirstEnergy Contract Parties based on their liability as parties to the contract that was rejected and breached. The proofs of claim filed by the Company Subsidiaries also include claims against FES and FG based on their liability under guaranties they issued that may obligate FES and FG to satisfy the rejection and breach of contract damages claims.

On November 15, 2019, FENOC, FENG, FES and FG (collectively, the "FirstEnergy Debtors") filed objections to the Company Subsidiaries' claims in the Bankruptcy Court. No decision on the claims has yet been reached by the Bankruptcy Court. The Company Subsidiaries and the FirstEnergy Debtors have submitted cross motions for summary judgment on the issue of whether the guaranties apply. On March 13, 2020, the Bankruptcy Court ruled in favor of the FirstEnergy Debtors on their motion, finding that the guaranties did not apply to the Company Subsidiaries' claims. The Company is considering its appeal rights. The ruling does not apply to the Company Subsidiaries' claims against the FirstEnergy Contract Parties.

We are subject to various legal proceedings and claims, either asserted or unasserted, which arise in the ordinary course of business. While the outcome of these claims cannot be predicted with certainty, other than the above, we do not believe that the outcome of any of these legal matters, individually or in the aggregate, will have a material adverse effect on our cash flows, results of operations or consolidated financial condition.

Item 4. Mine Safety Disclosures

None.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

The Company's certificate of incorporation authorizes 100,000,000 shares of common stock, consisting of 70,000,000 shares of Class A common stock, \$0.10 par value per share (the "Class A Common Stock") and 30,000,000 shares of Class B common stock, \$0.10 par value per share (the "Class B Common Stock," and together with the Class A Common Stock, the "Common Stock"). As of March 2, 2020, the Company has issued 9,472,389 shares of Common Stock, consisting of 8,673,976 shares of Class A Common Stock and 798,413 shares of Class B Common Stock. The Class B Common Stock was issued to Toshiba America Nuclear Energy Corporation ("Toshiba") and Babcock & Wilcox Investment Company ("B&W") and has the same rights, powers, preferences and restrictions and ranks equally in all matters with the Class A Common Stock, except voting. Holders of Class B Common Stock are entitled to elect, in the aggregate, two members of the Board of Directors of the Company, subject to certain holding requirements. Additionally, the Company has reserved 1,200,000 shares of Class A Common Stock under its management incentive plan, of which approximately 422,000 shares were available for future awards as of December 31, 2019, including approximately 120,000 shares associated with awards which terminated or were cancelled without being exercised.

The Class A Common Stock trades on the NYSE American under the symbol "LEU".

As of March 2, 2020, there were 8,673,976 shares of Class A Common Stock outstanding. As of March 2, 2020, there were approximately 930 holders of record and approximately 6,986 beneficial owners of the Company's Class A Common Stock. As of March 2, 2020, there were two holders of record of the Company's Class B Common Stock.

No cash dividends were paid in 2018 or 2019, and we have no intention to pay cash dividends in the foreseeable future. Our Series B Preferred Stock provides that so long as any shares of our Series B Preferred Stock are outstanding, we may not pay dividends on our Class A Common Stock (other than dividends payable in shares of Class A Common Stock). In addition, the indenture governing our 8.25% Notes, subject to certain exceptions, places certain restrictions on the ability of Enrichment Corp. to transfer cash and other assets to us. This could act as an additional constraint on our ability to pay dividends on our Class A Common Stock.

In addition, we are obligated to pay cash dividends on our Series B Preferred Stock to the extent that (1) our pension plans and Enrichment Corp.'s pension plans are at least 90% funded on a variable rate premium calculation in the current plan year, (2) our net income calculated in accordance with U.S. GAAP (excluding the effect of pension remeasurement) for the immediately preceding fiscal quarter exceeds \$7.5 million, (3) our free cash flow (defined as the sum of cash provided by (used in) operating activities and cash provided by (used in) investing activities) for the immediately preceding four fiscal quarters exceeds \$35.0 million, (4) the balance of cash and cash equivalents calculated in accordance with U.S. GAAP on the last day of the immediately preceding quarter would exceed \$150.0 million after pro forma application of the dividend payment, and (5) dividends may be legally payable under Delaware law. We did not meet the criteria for a dividend payment obligation for the year ended December 31, 2019, and we have not declared, accrued or paid dividends on the Series B Preferred Stock since issuance on February 14, 2017.

There were no unregistered sales of equity securities by the Company during the years ended December 31, 2019 or 2018.

Fourth Quarter 2019 Issuer Repurchases of Equity Securities

None.

Matters Affecting our Foreign Stockholders

In order to aid in our compliance with our NRC license, our certificate of incorporation gives us certain rights with respect to shares of our Common Stock held (beneficially or of record) by foreign persons. Foreign persons are defined in our certificate of incorporation to include, among others, an individual who is not a U.S. citizen, an entity that is organized under the laws of a non-U.S. jurisdiction and an entity that is controlled by individuals who are not U.S. citizens or by entities that are organized under the laws of non-U.S. jurisdictions.

The occurrence of any one or more of the following events is a "foreign ownership review event" and triggers the board of directors' right to take various actions under our certificate of incorporation: (1) the beneficial ownership by a foreign person of (a) 5% or more of the issued and outstanding shares of any class of our equity securities, (b) 5% or more in voting power of the issued and outstanding shares of all classes of our equity securities, or (c) less than 5% of the issued and outstanding shares of any class of our equity securities or less than 5% of the voting power of the issued and outstanding shares of all classes of our equity securities, if such foreign person is entitled to control the appointment and tenure of any of our management positions or any director; (2) the beneficial ownership of any shares of any class of our equity securities by or for the account of a foreign uranium enrichment provider or a foreign competitor (referred to as "contravening persons"); or (3) any ownership of, or exercise of rights with respect to, shares of any class of our equity securities or other exercise or attempt to exercise control of us that is inconsistent with, or in violation of, any regulatory restrictions, or that could jeopardize the continued operations of our facilities (an "adverse regulatory occurrence"). These rights include requesting information from holders (or proposed holders) of our securities, refusing to permit the transfer of securities by such holders, suspending or limiting voting rights of such holders, redeeming or exchanging shares of our stock owned by such holders on terms set forth in our certificate of incorporation, and taking other actions that we deem necessary or appropriate to ensure compliance with the foreign ownership restrictions.

For information regarding the foreign ownership restrictions set forth in our certificate of incorporation, please refer to — Part I, Item 1A, Risk Factors - Our certificate of incorporation gives us certain rights with respect to equity securities held (beneficially or of record) by foreign persons. If levels of foreign ownership set forth in our certificate of incorporation are exceeded, we have the right, among other things, to redeem or exchange common stock held by foreign persons, and in certain cases, the applicable redemption price or exchange value may be equal to the lower of fair market value or a foreign person's purchase price.

Item 6. Selected Financial Data

Not provided as a smaller reporting company as defined in Rule 12b-2 of the Exchange Act.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations

The following discussion should be read in conjunction with, and is qualified in its entirety by reference to, the consolidated financial statements and related notes appearing elsewhere in this report. See also the section titled "Forward-Looking Statements."

Overview

Centrus Energy Corp., a Delaware corporation ("Centrus" or the "Company"), is a trusted supplier of nuclear fuel and services for the nuclear power industry. References to "Centrus", the "Company", "our", or "we" include Centrus Energy Corp. and its wholly owned subsidiaries as well as the predecessor to Centrus, unless the context otherwise indicates.

Centrus operates two business segments: (a) low-enriched uranium ("LEU"), which supplies various components of nuclear fuel to utilities, and (b) technical solutions, which provides advanced engineering, design, and manufacturing services to government and private sector customers. The technical solutions segment was formerly our contract services segment. The segment was renamed the technical solutions segment on December 31, 2019, to better reflect the nature of work performed and is consistent with our marketing of service offerings as Centrus Technical Solutions. There was no change to the composition of the segment as a result of the re-naming.

Our LEU segment provides most of the Company's revenue and involves the sale of LEU, its components, and natural uranium to utilities operating commercial nuclear power plants. LEU is a critical component in the production of nuclear fuel for reactors that produce electricity. We supply LEU to both domestic and international utilities for use in nuclear reactors worldwide. We provide LEU from multiple sources including our inventory, medium- and long- term supply contracts and spot purchases. As a long-term supplier of LEU to our customers, our objective is to provide value through the reliability and diversity of our supply sources. Our long-term goal is to resume commercial enrichment production, and we are exploring approaches to that end.

Our technical solutions segment utilizes the unique technical expertise, operational experience and specialized facilities that we developed over nearly two decades as part of our uranium enrichment technology program. We are leveraging these capabilities to expand and diversify our business beyond uranium enrichment, offering new services to existing and new customers in complementary markets.

With the specialized capabilities and workforce at our Technology and Manufacturing Center in Oak Ridge, Tennessee, we are performing technical, engineering and manufacturing services for a range of commercial and government customers and actively working to secure new customers. Our experience developing, licensing, manufacturing and operating advanced nuclear components and systems positions us to provide critical design, engineering, manufacturing and other services to a broad range of potential clients, including those involving sensitive or classified technologies. This work includes design, engineering, manufacturing and licensing services support for advanced reactor and fuel fabrication projects as well as decontamination and decommissioning ("D&D") work.

With several decades of experience in enrichment, we continue to be a leader in the development of an advanced U.S. uranium enrichment technology, which we believe could play a critical role in supplying fuel for advanced reactors, meeting U.S. national and energy security needs, and achieving our nation's nonproliferation objectives.

On October 31, 2019, we signed a three-year cost-share contract (the "HALEU Contract") with DOE to deploy a cascade of centrifuges to demonstrate production of high-assay, low-enriched uranium ("HALEU") fuel with existing United States origin enrichment technology and provide DOE with HALEU for near term use in its research and development for the advancement of civilian nuclear energy and national security, as well as other programmatic missions. The program has been under way since May 31, 2019, when the Company and DOE signed a preliminary agreement that allowed work to begin while the HALEU Contract was being finalized.

Under the HALEU Contract, DOE agreed to reimburse the Company for 80% of its costs incurred in performing the contract, up to a maximum of \$115 million. The Company's cost share is the corresponding 20% and any costs incurred above these amounts. Costs under the HALEU Contract include *program costs*, including direct labor and materials and associated indirect costs that are classified as *Cost of Sales*, and an allocation of corporate costs supporting the program that are classified as *Selling, General and Administrative Expenses*. Services to be provided over the three-year contract include constructing and assembling centrifuge machines and related infrastructure in a cascade formation. When estimates of remaining program costs to be incurred for such an integrated, construction-type contract exceed estimates of total revenue to be earned, a provision for the remaining loss on the contract is recorded to *Cost of Sales* in the period the loss is determined. Our corporate costs supporting the program are recognized as expense as incurred over the duration of the contract term. As of December 31, 2019, the portion of our anticipated cost share under the HALEU Contract representing our share of remaining projected program costs was recognized in *Cost of Sales* as an accrued loss of \$18.3 million. The accrued loss on the contract will be adjusted over the remaining contract term based on actual results and remaining program cost projections.

HALEU is a component of an advanced nuclear reactor fuel that is not commercially available today and may be required for a number of advanced reactor designs currently under development in both the commercial and government sectors. Existing reactors typically operate on LEU with the uranium-235 isotope concentration below 5%. HALEU has a uranium-235 concentration ranging from 5% to 20%, giving it several potential technical and economic advantages. For example, the higher concentration of uranium-235 means that fuel assemblies and reactors can be smaller and reactors will require less frequent refueling. Reactors can also achieve higher "burnup" rates, meaning a smaller volume of fuel will be required overall and less waste will be produced. HALEU may also be used in the future to fabricate next-generation fuel forms for the existing fleet of reactors in the United States and around the world. These new HALEU-based fuels could improve the economics of nuclear reactors and inherent safety features while increasing the amount of electricity that can be generated at existing reactors. HALEU fuel may also ultimately be used in new commercial and government applications in the future, such as reactors for the military.

We believe our investment in the HALEU technology will position the Company to meet the needs of our customers in the future as they deploy advanced reactors and next generation fuels. By investing in HALEU technology now, and as the only domestically-owned company with HALEU enrichment capability, we believe the Company could be well positioned to capitalize on a potential new market as the demand for HALEU-based fuels increases with the development of advanced reactors. There are no guarantees about whether or when government or commercial demand for HALEU will materialize, and there are a number of technical, regulatory and economic hurdles that must be overcome for these fuels and reactors to come to the market.

The nuclear industry in general, and the nuclear fuel industry in particular, is in a period of significant change, which continues to affect the competitive landscape. In the years following the 2011 Fukushima accident, the published market prices for uranium enrichment declined more than 75%. While the monthly price indicators have gradually started to increase beginning in 2018, the uranium enrichment segment of the nuclear fuel market remains oversupplied and faces uncertainty about future demand for nuclear power generation. Changes in the competitive landscape affect pricing trends, change customer spending patterns, and create uncertainty. To address these changes, we have taken steps to adjust our cost structure and may seek further adjustments to our cost structure and operations and to evaluate opportunities to grow our business organically or through acquisitions and other strategic transactions.

We are also actively considering, and expect to consider from time to time in the future, potential strategic transactions, which could involve, without limitation, acquisitions and/or dispositions of businesses or assets, joint ventures or investments in businesses, products or technologies or changes to our capital structure. In connection with any such transaction, we may seek additional debt or equity financing, contribute or dispose of assets, assume additional indebtedness, or partner with other parties to consummate a transaction.

Refer to Part I, Item 1, Business, for additional information.

Market Conditions and Outlook

The global nuclear industry outlook has begun to improve after many years of decline or stagnation. The development of advanced small and large-scale reactors, innovative advanced fuel types, and the commitment of nations to begin deploying or to increase the share of nuclear power in their nations has created optimism in the market. Part of the momentum has resulted from efforts to lower greenhouse gas emissions to combat climate change and improve health and safety. The industry continues to face headwinds, however, as low cost electricity generation sources, resistance to nuclear power, and the high costs of deploying nuclear power impede expansion of the nuclear industry. Threats of trade actions that could impact the nuclear fuel supply chain is an overhang on the industry.

While a majority of the growth of nuclear power remains centered in China, India and Russia, the United States, with 96 commercial reactors in operation, remains the world's largest market for nuclear fuel, but the U.S. industry remains under some duress due to low cost natural gas prices and an increase in the expansion of renewable sources, all of which have put financial pressure on some reactor operators. Eight reactors have been shut down in the U.S. in recent years and several more face the prospect of premature shut down in the near-term.

The industry continues to attempt to recover from the March 2011 incident in Fukushima, Japan, that occurred from an earthquake and tsunami that caused irreparable damage to four reactors in Fukushima. As a consequence, approximately 60 reactors in Japan and Germany were taken offline, and other countries curtailed or slowed their construction of new reactors or accelerated their retirement of existing plants. While some reactors in Japan have restarted and many are expected to restart during the next five years, supply and demand dynamics for nuclear fuel continue to be somewhat depressed.

While the market for uranium enrichment for nuclear fuel is expected to remain oversupplied into the 2020s, the market is expected to grow as the nuclear power industry expands around the world. During 2019, prices for nuclear fuel, especially conversion and enrichment, have risen significantly. According to the World Nuclear Association, around 10% of the world's electricity is generated by about 440 nuclear reactors, and an additional 50 or so reactors are under construction. During 2020, two nuclear new build nations are expected to start their first commercial reactors. The new reactor builds will have the potential to improve market conditions in the long-term.

Revenue

We have two reportable segments: the LEU segment and the technical solutions segment.

Revenue from our LEU segment is derived primarily from:

- sales of the SWU component of LEU;
- sales of both the SWU and uranium components of LEU; and
- sales of natural uranium.

Our technical solutions segment reflects our technical, manufacturing, engineering and operations services offered to public and private sector customers, including engineering and testing activities as well as technical and resource support currently being performed by the Company. This includes our agreement with DOE to demonstrate HALEU production and a variety of other contracts with public and private sector customers.

SWU and Uranium Sales

Revenue from our LEU segment accounted for approximately 81% of our total revenue in 2019. The majority of our customers are domestic and international utilities that operate nuclear power plants, with international sales constituting approximately one-third of revenue from our LEU segment in recent years. Our agreements with electric utilities are primarily long-term, fixed-commitment contracts under which our customers are obligated to purchase a specified quantity of the SWU component of LEU from us. Our agreements for natural uranium and

enriched uranium product sales, where we sell both the SWU and uranium component of LEU, are generally shorter-term, fixed-commitment contracts.

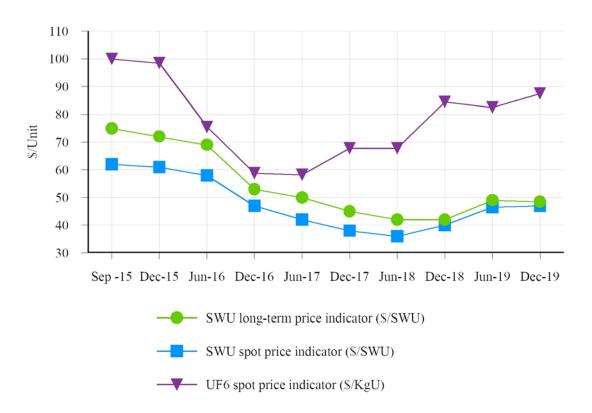
Our revenues, operating results and cash flows can fluctuate significantly from quarter to quarter and year to year. Revenue is recognized at the time LEU or uranium is delivered under the terms of our contracts. The timing of customer deliveries is affected by, among other things, electricity markets, reactor operations, maintenance and refueling outages, and customer inventories. In the current market environment, some customers are building inventories and may choose to take deliveries under annual purchase obligations later in the year. Customer payments for the SWU component of LEU average roughly \$10 million per order. As a result, a relatively small change in the timing of customer orders for LEU may cause significant variability in operating results.

Utility customers in general have the option to defer receipt of uranium products purchased from Centrus beyond the contractual sale period, resulting in the deferral of costs and revenue recognition. Refer to *Note 2*, *Revenue and Contracts with Customers*, in the consolidated financial statements for further details.

Our financial performance over time can be significantly affected by changes in prices for SWU and uranium. Since 2011, market prices for SWU and uranium have significantly declined. Since our sales order book includes contracts awarded to us in previous years, the average SWU price billed to customers typically lags behind published price indicators by several years. While newer sales reflect the low prices prevalent in recent years, certain contracts included in our order book have sales prices that are significantly above current market prices.

The long-term SWU price indicator, as published by TradeTech, LLC in *Nuclear Market Review*, is an indication of base-year prices under new long-term enrichment contracts in our primary markets. The following chart summarizes TradeTech's long-term and spot SWU price indicators, and TradeTech's spot price indicator for natural uranium hexafluoride ("UF6"):

SWU and Uranium Market Price Indicators*



^{*} Source: Nuclear Market Review, a TradeTech publication, www.uranium.info

Our contracts with customers are primarily denominated in U.S. dollars, and although revenue has not been directly affected by changes in the foreign exchange rate of the U.S. dollar, we may have a competitive price advantage or disadvantage obtaining new contracts in a competitive bidding process depending upon the weakness or strength of the U.S. dollar. Costs of our primary competitors are denominated in other currencies. Our contracts with suppliers have historically been denominated in U.S. dollars. In 2018, however, we entered into an agreement with Orano Cycle ("Orano") for the long-term supply of SWU. We may elect to begin deliveries as early as 2021. Purchases under the contract with Orano will be payable in a combination of U.S dollars and euros and we may be subject to exchange rate risk for the portion of purchases payable in euros.

On occasion, we will accept payment in the form of uranium. Revenue from the sale of SWU under such contracts is recognized at the time LEU is delivered and is based on the fair value of the uranium at contract inception, or as the quantity of uranium is finalized, if variable.

Cost of sales for SWU and uranium is based on the amount of SWU and uranium sold and delivered during the period and unit inventory costs. Unit inventory costs are determined using the average cost method. Changes in purchase costs have an effect on inventory costs and cost of sales over current and future periods. Cost of sales includes costs for inventory management at off-site licensed locations. Cost of sales also includes certain legacy costs related to former employees of the Portsmouth and Paducah gaseous diffusion plants.

Market Uncertainties

Imports into the United States of LEU and other uranium products produced in the Russian Federation, including LEU imported by Centrus under the Russian Supply Agreement, are subject, through December 31, 2020, to quotas imposed under legislation enacted into law in September 2008 and under the 1992 Russian Suspension Agreement ("RSA"), as amended in 2008. These quotas limit the amount of Russian LEU that can be imported into the United States for U.S. consumption.

The U.S. Department of Commerce ("DOC") is currently conducting an administrative review of the current status of, and compliance with, the RSA during the period October 2017 through September 2018 (the "Second Administrative Review") and in December 2019, initiated another review of the period October 2018 through September 2019 (the "Third Administrative Review"). In an earlier review (the "First Administrative Review"), which covered the period October 2016 through September 2017 and was completed in December 2017, the DOC found that TENEX, Centrus and others had complied with the terms of the RSA during the period of review, but deferred until the Second Administrative Review any decision on whether the RSA continues to meet the statutory requirements that the RSA (i) prevent the suppression or undercutting of price levels of domestic uranium products and (ii) continue to be in the public interest. In a preliminary determination in the Second Administrative Review, issued in December 2019, the DOC again found that Centrus and others had complied with the RSA, but again deferred making a determination on the statutory requirements, which it said would be addressed in a post-preliminary analysis, which has yet to be issued. A final determination in the Second Administrative Review is expected to be issued in June 2020.

If, in the final determination of the Second Administrative Review, the DOC finds evidence either of non-compliance with the RSA, or that the statutory requirements are no longer being met, it could terminate the RSA, reinitiate the antidumping investigation that the RSA suspended, and begin collecting duties in excess of 115% of the value of imports of Russian uranium products, including the LEU that the Company imports under the Russian Supply Agreement.

In February 2019, the DOC formally opened negotiations with the Russian Federation State Atomic Energy Corporation (Rosatom) with respect to a possible extension of the term of the RSA. In connection with these negotiations, the DOC is seeking a significant extension of the RSA. We are working with industry stakeholders and others to ensure that the extension will include sufficient quota to allow all existing contracts with TENEX, including the Russian Supply Agreement, to be fully implemented, but it is possible that the terms of the extension will not expressly protect our ability to import LEU under the Russian Supply Agreement or require that available quota be allocated to those imports.

An extension of the RSA would continue the existing suspension of the antidumping investigation and therefore not require payment of the duties or duty deposits described above, as long as the suspension remained in place. Centrus does not currently have in place any agreement with TENEX to share quotas that may apply after 2020, when the existing quotas terminate. Unless the RSA extension provides for sufficient quota or other relief that would allow Centrus to deliver in the United States all the Russian LEU that we procure under the Russian Supply Agreement, (i) our ability to meet our commitments under our order book and to obtain new sales commitments would be substantially jeopardized, and (ii) our ability to earn revenues with the Russian LEU we are required to procure under the Russian Supply Agreement would be substantially reduced. As a result, we would lose both revenue and market share to our competitors.

Similarly, if, instead of an extension of the RSA, the DOC reached adverse final determination in the Second Administrative Review and elected to restart the antidumping investigation of Russian uranium products, including LEU, we would be obligated to deposit funds with the U.S. government to cover potential duties (and potentially pay antidumping duties on a going-forward basis if the antidumping investigation resulted in an antidumping order) that would render the LEU containing the SWU that we purchase under the Russian Supply Agreement too expensive to place into the market. Such an outcome would cause us to incur significant losses in fulfilling our existing contracts, and make it commercially challenging to win new contracts using the Russian LEU.

As a result of the uncertainty regarding the outcome the pending trade matter, customers may be reluctant to contract long-term for material from the Company and the Company may not be able to secure adequate alternative supplies. Further, the outcome of the pending trade matter could materially impact future demand and market prices. For further details, refer to Part I, Item 1A, Risk Factors - Restrictions on imports or sales of LEU or SWU that we buy could adversely affect profitability and the viability of our business.

Technical Solutions

Our technical solutions segment reflects our technical, manufacturing, engineering and operations services offered to public and private sector customers, including the American Centrifuge engineering and testing activities we have performed as a contractor for UT-Battelle and the engineering, procurement, construction, manufacturing and operations services being performed under the HALEU Contract. With our private sector customers, we seek to leverage our domestic enrichment experience, engineering know-how, and precision manufacturing facility to assist customers with a range of engineering, design, and advanced manufacturing projects including the production of fuel for next-generation nuclear reactors and the development of related facilities.

Government Contracting

On October 31, 2019, we signed the three-year cost-share HALEU Contract with DOE to deploy a cascade of centrifuges to demonstrate production of HALEU for advanced reactors. The program has been under way since May 31, 2019, when the Company and DOE signed an interim HALEU letter agreement that allowed work to begin while the full contract was being finalized.

Under the HALEU Contract, DOE agreed to reimburse the Company for 80% of its costs incurred in performing the contract, up to a maximum of \$115 million. The Company's cost share is the corresponding 20% and any costs incurred above these amounts. As described in *Overview* above, the portion of our anticipated cost share under the HALEU Contract representing our share of remaining projected program costs was recognized in *Cost of Sales* as an accrued loss of \$18.3 million as of December 31, 2019. The accrued loss on the contract will be adjusted over the remaining contract term based on actual results and remaining program cost projections. The HALEU Contract is incrementally funded and DOE is currently obligated for costs up to approximately \$53.2 million of the \$115 million. The Company received cash payments of \$10.7 million through December 31, 2019.

Costs under the HALEU Contract include program costs, including direct labor and materials and associated indirect costs that are classified as *Cost of Sales*, and an allocation of corporate costs supporting the program that are classified as *Selling*, *General and Administrative Expenses*. Services to be provided over the three-year contract include constructing and assembling centrifuge machines and related infrastructure in a cascade formation. When estimates of total program costs to be incurred for such an integrated, construction-type contract exceed estimates of total revenue to be earned, a provision for the entire loss on the contract is recorded to *Cost of Sales* in the period the loss is determined, and is reflected in *Current Liabilities*. Provisions for contract losses are reviewed regularly based on actual results and remaining cost projections. Our corporate costs supporting the program are recognized as expense as incurred over the duration of the contract term.

Effective June 1, 2019 with the commencement of the HALEU work, ongoing costs of the Piketon facility that are included in *Advanced Technology Costs* on the consolidated statement of operations prior to June 1, 2019, are included in *Cost of Sales* of the technical solutions segment.

Over the past five years, our government contracts with UT-Battelle have provided for engineering and testing work on the American Centrifuge technology at our facilities in Oak Ridge, Tennessee. Our completed fixed-price contract with UT-Battelle for the period from October 1, 2017, through September 30, 2018, generated revenue of approximately \$16.0 million upon completion of defined milestones. Although the contract expired September 30, 2018, we continued to perform work towards the expected milestones as the parties worked toward a successor agreement. Costs for work performed in the first quarter of 2019 were classified as *Cost of Sales*. As the scope of work became viewed as more limited than originally anticipated, costs for work performed in the second quarter and most of the third quarter of 2019 were classified as *Advanced Technology Costs*. A successor fixed-price agreement was entered into with UT-Battelle in September 2019 and was completed in 2019 resulting in revenue of \$1.2 million. In February 2020, an additional \$4.4 million fixed-price agreement was entered into with UT-Battelle with a milestone deliverable in the second quarter of 2020.

We continue to invest in advanced technology because of the potential for future growth into new areas of business for the Company, while also preserving our unique workforce at our Technology and Manufacturing Center in Oak Ridge, Tennessee.

On September 27, 2018, we leveraged our D&D experience and entered into an agreement with DOE to decontaminate and decommission the K-1600 facility located at the East Tennessee Technology Park. Under the terms of the agreement, pursuant to a work authorization under our lease with DOE, we were required to remove and dispose of government owned materials and equipment in order to render the facility radiologically uncontaminated and unclassified. The contract was a cost-plus fixed fee contract totaling approximately \$15 million. The Company announced that it had successfully completed D&D of the facility on October 9, 2019. In connection with the substantial completion of the work, we terminated our lease with DOE for the K-1600 facility on September 30, 2019.

In addition, we have entered into other contracts with DOE, other agencies and their contractors to provide engineering, design and manufacturing services.

Commercial Contracting

In March 2018, we entered into a services agreement with X Energy, LLC ("X-energy") to provide X-energy with technical and resource support for criticality safety evaluation of processing equipment, design of fresh fuel transport packages, and conceptual mock-up of a nuclear fuel production facility. In November 2018, we entered into a second services agreement with X-energy to provide technical and resource support to the design and license application development of its nuclear fuel production facility. Under both agreements, we provide X-energy with non-cash in-kind contributions subject to a cooperative agreement between X-energy and the United States government. In November 2019, the parties extended the period of performance through June 30, 2020.

Under the X-energy agreements, services are performed pursuant to separate task orders issued and provide for time-and-materials based pricing. The cumulative value of task orders issued calls for payments to us of \$11.9 million and in-kind contributions to be provided by us of \$6.5 million. Revenue in 2018-2019 for payments received or pending totaled \$9.5 million, and in-kind contributions provided by us totaled \$5.0 million.

In addition, we have entered into other contracts for the engineering, design, and advanced manufacturing services with other commercial entities.

Prior Site Services Work

We formerly performed sites services work under contracts with DOE and its contractors at the former Portsmouth (Ohio) and Paducah (Kentucky) Gaseous Diffusion Plants. In January 2018, we entered into a settlement agreement with DOE and the U.S. government regarding breach of contract claims brought by the Company relating to this work. In connection with the settlement, the Company (a) received \$4.7 million from the U.S. government, (b) applied approximately \$19.3 million of advances from the U.S. government received in prior years against the receivables balance, and (c) recorded additional revenue of \$9.5 million in the first quarter of 2018.

The Company and DOE have yet to fully settle the Company's claims for reimbursements for certain pension and postretirement benefits costs related to past contract work performed at the Portsmouth and Paducah plant sites. There is the potential for additional income to be recognized for this work pending the outcome of legal proceedings related to the Company's claims for payment and the potential release of previously established valuation allowances on receivables. Refer to Part II, Item 1, *Legal Proceedings*, for additional information.

2020 Outlook

On March 11, 2020, the World Health Organization declared the novel strain of coronavirus (COVID-19) a global pandemic and recommended containment and mitigation measures worldwide. The Company is taking actions to protect its workforce and maintain critical operations. Travel, operational and other restrictions imposed by the U.S. and foreign governments may impact our ability to make future sales and may impact the ability of our suppliers, including our suppliers of low enriched uranium, to perform their contracts. As of the date of this filing, our LEU segment operations have not been affected and we are working with our suppliers, fabricators and customers to monitor the situation closely.

Further, on March 22, 2020, Ohio Governor Mike DeWine issued a "Stay at Home" order (the "Ohio Order") effective at 11:59 pm on March 23, 2020. The Order prohibits holding gatherings of any size and closes all nonessential Ohio businesses. Other states and counties, including Maryland, have issued similar versions of the stay at home order and we expect other states and counties to do so in the coming days. As a result, the Company has instituted measures such as expanded telework to protect our workforce, to comply with government orders, and to maintain critical operations. Not all work, however, can be performed remotely. Consequently, we have instituted limited operations for personnel working on the HALEU program at Piketon, Ohio, to maintain critical systems and security. Further, the actions taken by government regulatory agencies to protect their workforce may impact our ability to obtain the necessary reviews and approvals to complete the project. At this time, other than the restrictions

on a limited number of our employees at the Piketon, Ohio facility, our Technical Solutions segment operations, has not been significantly affected. We are working closely with the Department of Energy and we are continuing to work to make progress while implementing measures to protect our workforce.

Since we cannot reasonably estimate the length or severity of this pandemic, or the extent to which the disruption may materially impact our consolidated financial position, consolidated results of operations, and consolidated cash flows in fiscal 2020, we are not providing guidance on the Company's financial results for 2020 at this time.

Critical Accounting Policies and Estimates

Our significant accounting policies are summarized in *Note 1, Summary of Significant Accounting Policies*, of our consolidated financial statements, which were prepared in accordance with generally accepted accounting principles. Generally accepted accounting principles and related accounting pronouncements, implementation guidelines and interpretations with regard to a wide range of matters that are relevant to our business are complex and involve many subjective assumptions, estimates and judgments that are, by their nature, subject to substantial risks and uncertainties. Critical accounting estimates are those that require management to make assumptions about matters that are uncertain at the time the estimate is made and for which different estimates, often based on complex judgments, probabilities and assumptions that we believe to be reasonable, but are inherently uncertain and unpredictable, could have a material impact on our operating results and financial condition. It is also possible that other professionals, applying their own judgment to the same facts and circumstances, could develop and support a range of alternative estimated amounts. We are also subject to risks and uncertainties that may cause actual results to differ from estimated amounts, such as the healthcare environment, legislation and regulation. Additionally, changes in accounting rules or their interpretation could significantly affect our results of operations and financial condition.

The sensitivity analyses used below are not intended to provide a reader with our predictions of the variability of the estimates used. Rather, the sensitivities used are included to allow the reader to understand a general cause and effect of changes in estimates.

We have identified the following to be our critical accounting estimates:

Revenue Recognition - Technical Solutions

Revenue for the technical solutions segment, principally representing technical, manufacturing, engineering, procurement, construction and operations services offered to public and private sector customers, is recognized over the contractual period as services are rendered. The Company recognizes revenue over time as it performs on these contracts because of the continuous transfer of control to the customer. For public sector contracts, this continuous transfer of control to the customer is supported by clauses in the contract that allow the customer to unilaterally terminate the contract for convenience, pay the Company for costs incurred plus a reasonable profit and assume control of any work in progress. The Company's private sector contracts generally contain contractual termination clauses or entitle the Company to payments for work performed to date for goods and services that do not have an alternative use. With control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. A contract may contain one or more performance obligations. Two or more promises to transfer goods or services to a customer may be considered a single performance obligation if the goods or services are highly interdependent or highly interrelated such that utility of the promised goods or services to the customer includes integration services provided by the Company.

The Company determines the transaction price for each contract based on the consideration it expects to receive for the products or services being provided under the contract. If transaction prices are not stated in the contract for each performance obligation, contractual prices are allocated to performance obligations based on estimated relative standalone selling prices of the promised services.

The Company generally uses the cost-to-cost input method of progress for performance obligations to deliver products with continual transfer of control to the customer, because it best depicts the transfer of control to the

customer that occurs as the Company incurs costs. Under the cost-to-cost method, the extent of progress towards completion is measured based on the proportion of direct costs incurred to date to the total estimated direct costs at completion of the performance obligation. Revenues are recorded proportionally as costs are incurred. For performance obligations to provide services to the customer, revenue is recognized over time based on direct costs incurred or the right to invoice method (in situations where the value transferred matches the Company's billing rights) as the customer receives and consumes the benefits.

Use of the cost-to-cost method requires the Company to make reasonably dependable estimates regarding the revenue and costs associated with the design, manufacture and delivery of products and services. Significant judgment is used to estimate total revenue and costs at completion. As a significant change in one or more estimates could affect the profitability of the Company's contracts, the Company reviews and updates its contract-related estimates regularly. Adjustments in estimated profits/losses are recognized under the cumulative catch-up method. Under this method, the impact of the adjustments is recognized in the period the adjustment is recognized. When estimates of total costs to be incurred exceed total estimates of revenue to be earned on a performance obligation related to complex equipment or related services, a provision for the entire loss on the performance obligation is recognized in the period the loss is identified.

Asset Valuations

The accounting for SWU and uranium inventories includes estimates and judgments. SWU and uranium inventory costs are determined using the average cost method. Inventories of SWU and uranium are valued at the lower of cost or net realizable value ("NRV"). NRV is the estimated selling price in the ordinary course of business less reasonably predictable costs of completion, disposal, and transportation. The estimated selling price for SWU and uranium is based on the pricing terms of contracts in our sales order book, and, for uranium not under contract, the estimated selling price is based primarily on published price indicators at the balance sheet date.

Intangible assets originated from our reorganization and application of fresh start accounting as of September 30, 2014. The intangible assets represented the fair value adjustment to the assets and liabilities for our LEU segment. The identifiable intangible assets relate to our order book and customer relationships. The order book intangible asset is amortized as the order book valued at emergence is reduced, principally as a result of deliveries to customers. The customer relationships intangible asset is amortized using the straight-line method over the estimated average useful life of 15 years, with 9 ¾ years of scheduled amortization remaining. The aggregate net balance of identifiable intangible assets was \$69.5 million as of December 31, 2019.

The carrying values of the intangible assets are subject to impairment tests whenever events or changes in business circumstances indicate that the carrying amount of the intangible assets may not be fully recoverable. The carrying amount of a long-lived asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. An impairment loss is measured as the amount by which the carrying amount of a long-lived asset, or asset group exceeds its fair value.

Inherent in our fair value determinations are certain judgments and estimates, including projections of future cash flows, the discount rate reflecting the risk inherent in future cash flows, the interpretation of current economic indicators and market valuations, and strategic plans with regard to operations. A change in these underlying assumptions would cause a change in the results of the tests, which could cause the fair value of the intangible asset to be less than its respective carrying amount.

Pension and Postretirement Health and Life Benefit Costs and Obligations

We provide retirement benefits to certain employees and retirees under defined benefit pension plans and postretirement health and life benefit plans. The valuation of benefit obligations and costs is based on provisions of the plans and actuarial assumptions that involve judgments and estimates.

Assets and obligations related to our retiree benefit plans are remeasured each year as of the balance sheet date resulting in differences between actual and projected results for the year. The Company has elected the accounting option to recognize these actuarial gains and losses in the statement of operations in the fourth quarter. The alternative would be to amortize gains and losses into operating results over time. The Company's treatment of recognizing actuarial gains and losses immediately is intended to increase transparency into how movements in plan assets and benefit obligations impact financial results. Immediate recognition of such gains and losses in the statement of operations may cause significant fluctuations in our results of operations. In addition, an interim remeasurement and recognition of gains or losses may be required for a plan during the year if lump sum payments exceed certain levels.

Effective January 1, 2018, a new accounting standard required components of retirement benefit expense/income other than service cost to be presented below the subtotal for operating income (loss), and are presented in our consolidated statement of operations as *Nonoperating Components of Net Periodic Benefit Expense (Income)*. Service cost continues to be recognized in *Cost of Sales* for the LEU segment and to *Selling, General and Administrative* expense.

We recognized \$4.0 million of net actuarial gains in 2019 compared to net actuarial losses of \$17.3 million in 2018 related to our retiree benefit plans. The net gain in 2019 reflects favorable investment returns relative to the expected return assumption, changes in mortality and healthcare claim assumptions, and favorable claims experience, partially offset by declines in market interest rates. In 2018, the net loss reflects unfavorable investment returns relative to the expected return assumption, partially offset by increases in market interest rates, changes in mortality and healthcare claim assumptions, and favorable claims experience.

Changes in actuarial assumptions could impact the measurement of benefit obligations and benefit costs, as follows:

- The expected return on benefit plan assets is approximately 6.5% for 2020. The expected return is based on historical returns and expectations of future returns for the composition of the plans' equity and debt securities. A one-half percentage point decrease in the expected return on plan assets would increase annual pension costs by \$3.0 million in 2020. However, the net impact of any changes in the expected return on benefit plan assets on the final benefit cost recognized for fiscal year 2020 would be \$0 since the actual return on assets would effectively be reflected at December 31, 2020, under our mark-to-market accounting methodology.
- The present value of pension obligations is calculated by discounting long-term obligations using a market interest rate. This discount rate is the estimated rate at which the benefit obligations could be effectively settled on the measurement date and is based on yields of high quality fixed income investments whose cash flows match the timing and amount of expected benefit payments of the plan. Discount rates of approximately 3.3% were used as of December 31, 2019. A one-half percentage point reduction in the discount rate would increase the valuation of pension benefit obligations by \$39.9 million and postretirement health and life benefit obligations by \$7.7 million, and the resulting changes in the valuations would decrease the service cost and interest cost components of annual pension costs and postretirement health and life benefit costs by \$2.5 million and \$0.5 million, respectively.
- The healthcare costs trend rates are 6.0% projected in 2020 reducing to a final trend rate of 5% by 2022. The healthcare costs trend rate represents our estimate of the annual rate of increase in the gross cost of providing benefits. The trend rate is a reflection of health care inflation assumptions, changes in healthcare utilization and delivery patterns, technological advances, and changes in the health status of our plan participants. A one-percentage point increase in the healthcare cost trend rates would increase postretirement health benefit obligations by about \$3.5 million and would increase the service cost and interest cost components of annual benefit costs by about \$0.1 million.

In December 2012, we invoiced DOE for \$42.8 million, representing its share of pension and postretirement benefits costs related to the transition of Portsmouth site employees to DOE's D&D contractor, as permitted by CAS and based on CAS calculation methodology. DOE has denied our claim. As a result, the Company filed an appeal of the decision in the U.S. Court of Federal Claims in January 2015. There is no assurance we will be successful in our appeal, and we have not recognized income or a receivable due to uncertainty regarding the amounts owed and the timing of collection. The parties are engaged in settlement discussions, and further action on the case is stayed pending the outcome of such discussions. Refer to Part I, Item 3, *Legal Proceedings*, for additional information.

Income Taxes

During the ordinary course of business, there are transactions and calculations for which the ultimate tax determination is uncertain. As a result, we recognize tax liabilities based on estimates of whether additional taxes and interest will be due. To the extent that the final tax outcome of these matters is different than the amounts that were initially recorded, such differences will impact the income tax provision in the period in which such determination is made.

Accounting standards prescribe a minimum recognition threshold that a tax position is required to meet before the related tax benefit may be recognized in the financial statements. As of December 31, 2019, the liability for unrecognized tax benefits, included in *Other Long-Term Liabilities*, was \$0.4 million and accrued interest and penalties totaled less than \$0.1 million.

Accounting for income taxes involves estimates and judgments relating to the tax bases of assets and liabilities and the future recoverability of deferred tax assets. In assessing the realization of deferred tax assets, we determine whether it is more likely than not that the deferred tax assets will be realized. The ultimate realization of deferred tax assets is dependent upon generating sufficient taxable income in future years when deferred tax assets are recoverable or are expected to reverse. Factors that may affect estimates of future taxable income include, but are not limited to, competition, changes in revenue, costs or profit margins, market share and developments related to the American Centrifuge technology. In practice, positive and negative evidence is reviewed with objective evidence receiving greater weight. If, based on the weight of available evidence, it is more likely than not that all, or some portion, of the deferred tax assets will not be realized, we record a valuation allowance. The more negative evidence that exists, the more positive evidence is necessary and the more difficult it is to support a conclusion that a valuation allowance is not needed for all, or some portion, of the deferred tax assets. A cumulative loss in recent years is a significant piece of negative evidence and one of the most difficult forms of negative evidence to overcome. We have incurred cumulative operating losses since 2011.

Our inability to overcome the strong negative objective evidence of a cumulative loss in recent years with sufficient objective positive evidence of future taxable income to realize our deferred tax assets required us to record a valuation allowance. To determine the amount of the valuation allowance, all sources of taxable income, including tax planning strategies, were analyzed. We determined that it is more likely than not that our net deferred tax assets will not be realized in the immediate future. A full valuation allowance was first recorded in the fourth quarter of 2011 for the net deferred tax asset created by the expensing of previously capitalized costs related to a number of earlier centrifuge machines used in the demonstration cascade test program, as well as all other previously recorded net deferred tax assets, including state deferred taxes. As of December 31, 2019, the valuation allowance against net deferred taxes was \$459.5 million.

The valuation allowance results in our inability to record tax benefits on future losses until we generate sufficient taxable income to support the elimination of the valuation allowance. However, the valuation allowance will not affect the Company's ability to use its deferred tax assets when it generates taxable income. In connection with the 2014 bankruptcy plan, tax attributes, such as net operating losses ("NOLs"), tax credits, and tax basis in property have been reduced. When tax attributes are reduced, deferred taxes related to the tax attributes and the corresponding valuation allowance are adjusted. Management reassesses the realization of the deferred tax assets each reporting period. As financial results improve and the deferred tax assets become realizable, we will reduce the valuation allowance accordingly.

Results of Operations

Segment Information

The following table presents elements of the accompanying consolidated statements of operations that are categorized by segment (dollar amounts in millions):

Voor Ended

	Year Ended December 31,					
	2019		2018	5	\$ Change	% Change
LEU segment			_			
Revenue:						
SWU revenue\$	123.7	\$	130.6	\$	(6.9)	(5)%
Uranium revenue	45.7		33.8		11.9	35 %
Total	169.4		164.4		5.0	3 %
Cost of sales	118.6		187.7		69.1	37 %
Gross profit (loss)	50.8	\$	(23.3)	\$	74.1	
Technical solutions segment						
Revenue\$	40.3	\$	28.6	\$	11.7	41 %
Cost of sales	58.6		23.2		(35.4)	(153)%
Gross profit (loss)\$	(18.3)	\$	5.4	\$	(23.7)	
Total						
Revenue\$	209.7	\$	193.0	\$	16.7	9 %
Cost of sales	177.2		210.9		33.7	16 %
Gross profit (loss)\$	32.5	\$	(17.9)	\$	50.4	

Revenue

Revenue from the LEU segment increased \$5.0 million (or 3%) in 2019 compared to 2018. SWU revenue declined \$6.9 million (or 5%) in 2019 compared to 2018. The volume of SWU sales declined 24% and the average SWU price billed to customers increased 24%, reflecting the particular contracts under which SWU were sold during the periods. Uranium revenue increased \$11.9 million (or 35%) in 2019 compared to 2018. The volume of uranium sales increased 29% and the average uranium price billed to customers increased 5%.

Revenue from the technical solutions segment increased \$11.7 million (or 41%) in 2019 compared to 2018, primarily the result of work performed under the HALEU contract and the K-1600 D&D contract, partially offset by a decrease in work performed under the UT-Battelle contract. Revenue in 2018 included \$9.5 million related to the January 2018 settlement with DOE related to past work performed.

Cost of Sales

Cost of sales for the LEU segment declined \$69.1 million (or 37%) in 2019 compared to 2018, primarily reflecting a decline in the average cost of sales per SWU and the changes in SWU and uranium sales volumes. In 2019, the average cost of sales per SWU declined 38%, primarily due to lower pricing under the Russian Supply Agreement. Cost of sales includes legacy costs related to former employees of the Portsmouth and Paducah Gaseous Diffusion Plants of \$4.1 million in 2019 and \$3.4 million in 2018. Valuation adjustments for our uranium inventory to reflect declines in uranium market price indicators totaled \$2.3 million in 2019 and there were no valuation adjustments in 2018. The average uranium unit cost of sales increased 17% in 2019 compared to 2018.

Cost of sales for the technical solutions segment increased \$35.4 million (or 153%) in 2019 compared to 2018, reflecting the mix of technical solutions work performed in each of the periods. As of December 31, 2019, our share of remaining projected program costs under the HALEU Contract was recognized in *Cost of Sales* as an accrued loss of \$18.3 million. The accrued loss on the contract will be adjusted over the remaining contract term based on actual results and remaining program cost projections.

Gross Profit (Loss)

We recognized a gross profit of \$32.5 million in 2019, an increase of \$50.4 million compared to the gross loss of \$17.9 million in 2018.

The gross profit for the LEU segment was \$50.8 million in 2019 compared to a gross loss of \$23.3 million in 2018. The improvement for the LEU segment of \$74.1 million was primarily due to the decline in the average cost of sales per SWU and the increase in the average SWU price billed to customers, partially offset by the decline in SWU volume sold. The gross profit from uranium sales in 2019 was relatively minor, with the impact of the increase in uranium volume sold and the increase in the average unit sales price largely offset by the increase in the average uranium unit cost of sales.

For the technical solutions segment, we recognized a gross loss of \$18.3 million in 2019, compared to gross profit of \$5.4 million in 2018. The gross profit for 2019 was break even excluding the accrued contract loss of \$18.3 million related to projected costs for the HALEU program. In 2018, there was a gross loss of \$4.1 million excluding the \$9.5 million of revenue in the January 2018 settlement with DOE related to past work performed.

Non-Segment Information

The following table presents elements of the accompanying consolidated statements of operations that are not categorized by segment (dollar amounts in millions):

	Year Ended December 31,			
	2019	2018	\$ Change	% Change
Gross profit (loss)\$	32.5	(17.9)	\$ 50.4	282 %
Advanced technology costs	14.6	26.1	11.5	44 %
Selling, general and administrative	33.7	39.9	6.2	16 %
Amortization of intangible assets	6.5	6.6	0.1	2 %
Special charges (credits) for workforce reductions and advisory costs	(1.9)	2.2	4.1	186 %
Gain on sales of assets	(0.7)	(0.3)	0.4	133 %
Operating loss	(19.7)	(92.4)	72.7	79 %
Gain on early extinguishment of debt	_	(0.5)	(0.5)	(100)%
Nonoperating components of net periodic benefit expense (income)	(4.3)	10.6	14.9	141 %
Interest expense	3.0	4.1	1.1	27 %
Investment income	(2.2)	(2.5)	(0.3)	(12)%
Loss before income taxes	(16.2)	(104.1)	87.9	84 %
Income tax expense	0.3	_	(0.3)	-
Net loss	(16.5)	(104.1)	87.6	84 %
Preferred stock dividends - undeclared and cumulative	7.8	7.8		— %
Net loss allocable to common stockholders\$	(24.3)	\$ (111.9)	\$ 87.6	78 %

Advanced Technology Costs

Advanced technology costs consist of American Centrifuge and related expenses that are outside of our customer contracts in the technical solutions segment. Costs declined \$11.5 million (or 44%) in 2019 compared to 2018, primarily due to a reduction in our license and facility caretaker costs at Piketon following the commencement of work under the HALEU contract in June 2019.

Selling, General and Administrative

Selling, general and administrative expenses declined \$6.2 million (or 16%) in 2019 compared to 2018. Compensation and benefits declined \$4.0 million, information technology costs declined \$0.8 million, consulting expenses declined \$0.4 million, travel costs declined \$0.4 million in 2019, and other costs declined by a net \$0.6 million.

Amortization of Intangible Assets

Amortization of intangible assets declined \$0.1 million (or 2%) in 2019 compared to 2018. Amortization expense for the intangible asset related to the September 2014 sales order book is a function of SWU sales volume under that order book, and amortization expense for the intangible asset related to customer relationships is amortized on a straight-line basis.

Special Charges (Credits) for Workforce Reductions and Advisory Costs

Special charges declined \$4.1 million (or 186%) in 2019, compared to 2018. Special charges in 2019 included a credit of \$2.9 million for the reversal of accrued termination benefits for employees who were retained with the signing of the HALEU letter agreement in May 2019. Special charges in 2018 consisted of estimated employee termination benefits of \$2.1 million and advisory costs related to updating the Company's information technology systems of \$0.1 million.

Gain on Early Extinguishment of Debt

In 2018, we recognized a gain of \$0.5 million related to the exchange of securities and cash on December 6, 2018 related to the early extinguishment of \$6.3 million of Company's 8% paid-in-kind ("PIK") toggle notes (the "8% PIK Toggle Notes) due in 2019.

Nonoperating Components of Net Periodic Benefit Expense (Income)

Nonoperating components of net periodic benefit expense (income) netted to income of \$4.3 million in 2019, compared to expense of \$10.6 million in 2018. Nonoperating components of net periodic benefit expense (income) consist primarily of the expected return on plan assets, offset by interest cost as the discounted present value of benefit obligations nears payment.

In 2019, the net gain reflects favorable investment returns relative to the expected return assumption, changes in mortality and healthcare claim assumptions, and favorable claims experience, partially offset by declines in market interest rates.

In 2018, major U.S. stock indices posted their largest annual losses since 2008. The net expense in 2018 reflected unfavorable investment returns relative to the expected return assumption, partially offset by increases in market interest rates, changes in mortality and healthcare claim assumptions, and favorable claims experience.

Interest Expense

Interest expense declined \$1.1 million (or 27%) in 2019, compared to 2018, primarily as a result of the repayment the outstanding 8% PIK Toggle Notes that matured on September 30, 2019.

Income Tax Expense (Benefit)

The income tax expense was \$0.3 million in 2019 and the income tax benefit was less than \$0.1 million in 2018. The income tax expense in 2019 primarily relates to an accrual for a current unrecognized tax benefit offset by the reversal of a previously accrued unrecognized tax benefit. The income tax benefit in 2018 primarily relates to a reversal like the one in 2019.

Net Loss

Our net loss was \$16.5 million in 2019, compared to a net loss of \$104.1 million in 2018. The favorable variance of \$87.6 million was primarily a result of a \$50.4 million favorable variance in gross profit, a \$14.9 million favorable variance in nonoperating components of net periodic benefit expense, a \$11.5 million decline in advanced technology costs, a \$6.2 million decline in selling, general and administrative expenses, and a \$4.1 million decline in special charges.

Preferred Stock Dividends - Undeclared and Cumulative

Holders of the Series B Preferred Stock are entitled to cumulative dividends of 7.5% per annum of the liquidation preference at origination of \$104.6 million. We did not meet the criteria for a dividend payment obligation for the years ended December 31, 2019 and 2018 and we have not declared, accrued or paid dividends on the Series B Preferred Stock since issuance on February 14, 2017. Dividends on the Series B Preferred Stock are cumulative to the extent not paid at any quarter-end, whether or not declared and whether or not there are assets of the Company legally available for the payment of such dividends in whole or in part. Refer to *Note 16*, *Stockholders' Equity*, of the consolidated financial statements.

Liquidity and Capital Resources

We ended 2019 with a consolidated cash balance of \$130.7 million. We anticipate having adequate liquidity to support our business operations for at least the next 12 months from the date of this report. Our view of liquidity is dependent on, among other things, conditions affecting our operations, including market, international trade, COVID-19 and other conditions and the level of expenditures and government funding for our services contracts and the timing of customer payments. Liquidity requirements for our existing operations are affected primarily by the timing and amount of customer sales and our inventory purchases.

We believe our sales order book in our LEU segment is a source of stability for our liquidity position. Our sales order book extends to 2030. Although based on current market conditions, we see limited uncommitted demand for LEU for the next few years before an anticipated rise in uncommitted demand later in the 2020s, we continue to seek and make additional sales, including sales for delivery through the late 2020s.

Cash resources and net sales proceeds from our LEU segment fund technology costs that are outside of our customer contracts in the technical solutions segment and general corporate expenses, including cash interest payments on our debt. We believe our investment in advanced U.S. uranium enrichment technology will position the Company to meet the needs of our customers as they deploy advanced reactors and next generation fuels. We signed the three-year HALEU Contract with DOE in October 2019 to deploy a cascade of centrifuges to demonstrate production of HALEU for advanced reactors. Under the agreement, the Company is contributing a portion of the program costs. The program has been under way since May 31, 2019, when Centrus and DOE signed a preliminary letter agreement that allowed work to begin while the full contract was being finalized.

Under the HALEU Contract, DOE agreed to reimburse the Company for 80% of its costs incurred in performing the contract, up to a maximum of \$115 million. The Company's cost share is the corresponding 20% and any costs incurred above these amounts. As described in *Overview* above, the portion of our anticipated cost share under the HALEU Contract representing our share of remaining projected program costs was recognized in *Cost of Sales* as an accrued loss of \$18.3 million as of December 31, 2019. The accrued loss on the contract will be adjusted over the remaining contract term based on actual results and remaining program cost projections. The HALEU Contract is incrementally funded and DOE is currently obligated for costs up to approximately \$53.2 million of the \$115 million. The Company received cash payments of \$10.7 million through December 31, 2019.

There are no guarantees about whether or when government or commercial demand for HALEU will materialize, and there are a number of technical, regulatory and economic hurdles that must be overcome for these fuels and reactors to come to the market.

We lease facilities and related personal property in Piketon, Ohio from DOE. We previously provided financial assurance in the form of surety bonds to DOE for lease turnover obligations and to the NRC for D&D obligations related to the facility. These surety bonds were fully cash collateralized by us. We completed our obligations and, in 2019, the financial assurance instruments were cancelled and we received the cash collateral totaling \$30.5 million including interest.

In connection with the HALEU program, DOE and Centrus renewed the lease agreement and extended the lease term through May 31, 2022. Any facilities or equipment constructed or installed under contract with DOE will be owned by DOE, may be returned to DOE in an "as is" condition at the end of the lease term, and DOE would be responsible for its decontamination and decommissioning. If we determine the equipment and facilities may benefit Centrus after completion of the HALEU program, we can extend the facility lease and ownership of the equipment will be transferred to us, subject to mutual agreement regarding D&D and other issues.

In the event that funding by the U.S. government for research, development and demonstration of gas centrifuge technology is reduced or discontinued, such actions may have a material adverse impact on our ability to deploy the American Centrifuge technology and on our liquidity.

Capital expenditures of approximately \$2-3 million are anticipated over the next 12 months.

The change in cash, cash equivalents and restricted cash from our consolidated statements of cash flows are as follows on a summarized basis (in millions):

	Year Ended December 31,		
	2019		2018
Cash provided by (used in) operating activities\$	11.3	\$	(74.4)
Cash provided by investing activities	0.6		0.4
Cash used in financing activities	(35.0)		(11.1)
Decrease in cash, cash equivalents and restricted cash\$	(23.1)	\$	(85.1)

Operating Activities

During 2019, net cash provided by operating activities was \$11.3 million. Sources of cash included the \$44.0 million increase in deferred revenue and advances from customers, net of deferred costs and the \$29.3 million reduction in accounts receivable. The net reduction of \$37.9 million in the SWU purchase payables balance, due to the timing of purchase deliveries, was a significant use of cash in the period. Uses of cash also included the \$19.5 million increase in pension and postretirement benefits and the net loss of \$16.5 million.

During 2018, net cash used in operating activities was \$74.4 million. Sources of cash included the monetization of inventory purchased in prior periods, with inventories declining \$61.0 million in 2018. The net reduction of \$33.4 million in the SWU purchase payables balance, due to the timing of purchase deliveries, was a significant use of cash in 2018. Uses of cash also included the net loss of \$104.1 million in 2018, net of non-cash expenses, and the increase in receivables from utility customers of \$15.8 million.

Investing Activities

There were no significant capital expenditures in 2019 and 2018. Sales of unneeded assets and property yielded net proceeds of \$0.7 million and \$0.5 million in 2019 and 2018, respectively.

Financing Activities

In 2019, net cash used for financing included the repayment of \$27.5 million of principal due on maturity of the 8% PIK Toggle Notes.

In 2019 and 2018, payments of \$6.1 million of interest classified as debt related to the 8.25% Notes were classified as a financing activity. Refer to *Note 9*, *Debt*, of the consolidated financial statements regarding the accounting for the 8.25% Notes.

On December 6, 2018, Centrus entered into Exchange Agreements (the "Exchange Agreements") with certain holders of the Company's outstanding 8% PIK Toggle Notes. Under the terms of the Exchange Agreements, the Company exchanged \$6.3 million aggregate principal amount of 8% PIK Toggle Notes for 398,638 shares of Class A Common Stock and approximately \$5.1 million in cash, which includes accrued and unpaid interest on the 8% PIK Toggle Notes. The Company recognized a gain on extinguishment of \$0.5 million, which is net of transaction costs of less than \$0.1 million. Refer to *Note 16*, *Stockholders' Equity* for details related to the Common Stock.

The following table summarizes the Company's working capital (in millions):

	December 31,		
	2019		2018
Cash and cash equivalents	130.7	\$	123.1
Accounts receivable	21.1		60.2
Inventories, net	58.9		26.7
Deposits for financial assurance	0.2		30.3
Current debt	(6.1)		(32.8)
Deferred revenue, net of deferred costs	(98.9)		(69.6)
Other current assets and liabilities, net	(73.1)		(92.1)
Working capital	32.8	\$	45.8

Capital Structure and Financial Resources

On September 30, 2019, the Company repaid the outstanding 8% PIK Toggle Notes that matured on September 30, 2019. The Company paid a total of \$28.5 million, including \$1.0 million in accrued interest. The payment was made in accordance with the terms of the Indenture dated September 30, 2014 (as amended, supplanted, or otherwise modified from time to time) among the Company, the Company's subsidiary, United States Enrichment Corp., as the note guarantor, and Delaware Trust Company, as trustee and collateral agent. The payment constituted full satisfaction and discharge of the Indenture and the Notes.

Interest on the 8.25% Notes is payable semi-annually in arrears as of February 28 and August 31 based on a 360-day year consisting of twelve 30-day months. The 8.25% Notes are guaranteed on a subordinated and limited basis by, and secured by substantially all assets of, Enrichment Corp. The 8.25% Notes mature on February 28, 2027. Additional terms and conditions of the 8.25% Notes are described in *Note 9, Debt*, of the consolidated financial statements.

Holders of the Series B Preferred Stock are entitled to cumulative dividends of 7.5% per annum of the liquidation preference at origination of \$104.6 million. We are obligated to pay cash dividends on our Series B Preferred Stock to the extent dividends are declared by the Board of Directors and certain criteria are met. We have not met these criteria for the periods from issuance through December 31, 2019, and have not declared, accrued or paid dividends on the Series B Preferred Stock as of December 31, 2019. Additional terms and conditions of the Series B Preferred Stock, including the criteria that must be met for the payment of dividends, are described in *Note 16, Stockholders' Equity*, of the consolidated financial statements.

The nuclear industry in general, and the nuclear fuel industry in particular, are in a period of significant change. We are actively considering, and expect to consider from time to time in the future, potential strategic transactions, which at any given time may be in various stages of discussions, diligence or negotiation. If we pursue opportunities that require capital, we believe we would seek to satisfy these needs through a combination of working capital, cash generated from operations or additional debt or equity financing.

We are managing our working capital to seek to improve the long-term value of our LEU and technical solutions businesses and are planning to continue funding the Company's qualified pension plans in the ordinary course because we believe that is in the best interest of all stakeholders. We expect that any other uses of working capital will be undertaken in light of these strategic priorities and will be based on the Company's determination as to the relative strength of its operating performance and prospects, financial position and expected liquidity requirements. In addition, we expect that any such other uses of working capital will be subject to compliance with contractual restrictions to which the Company and its subsidiaries are subject, including the terms and conditions of their debt securities and credit facilities. We continually evaluate alternatives to manage our capital structure, and may opportunistically repurchase, exchange or redeem Company securities from time to time.

Commitments under Long-Term SWU Purchase Agreements

The Company purchases SWU contained in LEU from Russia supplied to us under a long-term agreement, as amended, signed in 2011 with the Russian government owned entity TENEX. Under a 2018 agreement, the Company will purchase SWU contained in LEU from Orano with deliveries starting as early as 2021. Refer to *Note 17, Commitments and Contingencies*, of the consolidated financial statements for additional information.

DOE Technology License

We have a non-exclusive license in DOE inventions that pertain to enriching uranium using gas centrifuge technology. The license agreement with DOE provides for annual royalty payments based on a varying percentage (1% up to 2%) of our annual revenues from sales of the SWU component of LEU produced by us using DOE centrifuge technology. There is a minimum annual royalty payment of \$100,000 and the maximum cumulative royalty over the life of the license is \$100 million. There is currently no commercial enrichment facility producing LEU using DOE centrifuge technology. We are continuing to advance our U.S. centrifuge technology that has evolved from DOE inventions at specialized facilities in Oak Ridge, Tennessee, with a view to deploying a commercial enrichment facility over the long term once market conditions recover.

Off-Balance Sheet Arrangements

Other than outstanding surety bonds, our SWU purchase commitments and the license agreement with DOE relating to the American Centrifuge technology, there were no material off-balance sheet arrangements at December 31, 2019 or December 31, 2018.

New Accounting Standards

Reference is made to *New Accounting Standards* in *Note 1, Summary of Significant Accounting Policies*, of the consolidated financial statements for information on new accounting standards.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Not provided as a smaller reporting company as defined in Rule 12b-2 of the Exchange Act.

Item 8. Financial Statements and Supplementary Data

Our consolidated financial statements, together with related notes and the report of PricewaterhouseCoopers LLP, our independent registered public accounting firm, are set forth in Part IV, Item 15.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

None.

Item 9A. Controls and Procedures

Evaluation of Disclosure Controls and Procedures

Centrus maintains disclosure controls and procedures that are designed to ensure that information required to be disclosed by Centrus in reports it files or submits under the Securities Exchange Act of 1934, as amended, (the "Exchange Act") is recorded, processed, summarized and reported in the time periods specified in the SEC's rules and forms and that such information is accumulated and communicated to management, including the Chief Executive Officer and the Chief Financial Officer, as appropriate to allow for timely decisions regarding required disclosures.

As of December 31, 2019, the end of the period covered by this report, our management performed an evaluation, under the supervision and with the participation of the Chief Executive Officer and the Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Exchange Act). Based on this evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective.

Management's Annual Report on Internal Control Over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting, as defined in Rules 13a-15(f) and 15d-15(f) of the Exchange Act. Our internal control over financial reporting is a process designed by, and under the supervision of the Chief Executive Officer and the Chief Financial Officer and effected by the Board of Directors, management and other personnel, 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. Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements.

Our management conducted an evaluation of the effectiveness of our internal control over financial reporting as of December 31, 2019. This evaluation was based on the framework set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control - Integrated Framework* (2013). Based on this assessment, our management concluded that our internal control over financial reporting was effective as of December 31, 2019.

This annual report does not include an audit report of the Company's registered public accounting firm regarding internal control over financial reporting. Management's report was not subject to audit by the Company's registered public accounting firm pursuant to Securities and Exchange Commission rules that permit the Company to provide only management's report in this annual report.

Remediation of Previously Identified Material Weakness

As previously disclosed in *Part II, Item 9A, Controls and Procedures* of our Annual Report on Form 10-K for the fiscal year ended December 31, 2018, management identified a material weakness in the Company's internal control over financial reporting. Specifically, we did not maintain effective controls over the determination and assessment of accounting impacts for arrangements with customers that could result in modification accounting or other impacts when executed. Because of this material weakness, our Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures and internal control over financial reporting were not effective as of December 31, 2018.

In 2019, management implemented new controls related to the determination and assessment of accounting impacts for arrangements with customers that could result in modification accounting or other impacts when executed. The controls include expanded monthly reviews and additional approvals of these arrangements.

During the quarter ended December 31, 2019, we completed the testing and evaluation of the operating effectiveness of the controls, and concluded that the previously reported material weakness has been remediated as of December 31, 2019.

Changes in Internal Control Over Financial Reporting

Other than the steps taken to work towards the remediation of the material weakness identified above, there were no changes in our internal control over financial reporting during the quarter ended December 31, 2019, that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 9B. Other Information

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance

Information regarding executive officers is included in Part I of this Annual Report. Additional information concerning directors, executive officers and corporate governance appearing under the captions *Proposal 1. Election of Directors, Governance Information, Delinquent Section 16(a) Reports*, and *Board and Committee Membership* in the Company's Proxy Statement for the 2020 annual meeting of stockholders, which will be filed no later than 120 days after December 31, 2019 (the "2020 Proxy Statement"), is incorporated herein by reference.

We have adopted a code of business conduct that applies to our employees, including our principal executive officer, principal financial officer and principal accounting officer, as well as to members of our board of directors. Our code of business conduct provides a brief summary of the standards of conduct that are at the foundation of our business operations. The code of business conduct states that we conduct our business in strict compliance with all applicable laws. Each employee must read the code of business conduct and sign a form stating that he or she has read, understands and agrees to comply with the code of business conduct. A copy of the code of business conduct is available in the Corporate Governance section of our website at www.centrusenergy.com or upon request without charge. We will disclose on the website any amendments to, or waivers from, the code of business conduct that are required to be publicly disclosed.

Item 11. Executive Compensation

Information concerning executive and director compensation appearing under the captions *Executive Compensation* and *Compensation of Directors* in the 2020 Proxy Statement is incorporated herein by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

Information concerning security ownership of certain beneficial owners and management appearing under the caption *Security Ownership of Certain Beneficial Owners and Management* in the 2020 Proxy Statement is incorporated herein by reference.

Information concerning the common stock that may be issued under the 2014 Equity Incentive Plan appearing under the caption *Equity Compensation Plan Information* in the 2020 Proxy Statement is incorporated herein by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence

Information concerning certain relationships and related transactions and director independence appearing under the captions *Transactions with Related Persons*, and *Director Independence* in the 2020 Proxy Statement is incorporated herein by reference.

Item 14. Principal Accounting Fees and Services

Information concerning principal accounting fees and services appearing under the caption *Audit and Non-Audit Fees* in the 2020 Proxy Statement is incorporated herein by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

(a) (1) Consolidated Financial Statements

Reference is made to the consolidated financial statements appearing elsewhere in this Annual Report.

(2) Financial Statement Schedules

No financial statement schedules are required to be filed as part of this Annual Report.

(3) Exhibits

The exhibits listed on the accompanying Exhibit Index are filed or incorporated by reference as part of this report and such Exhibit Index is incorporated herein by reference. The accompanying Exhibit Index identifies each management contract or compensatory plan or arrangement required to be filed as an exhibit to this report.

Item 16. Form 10-K Summary

None.

EXHIBIT INDEX

Exhibit No. Description

- 3.1 Amended and Restated Certificate of Incorporation of Centrus Energy Corp. (incorporated by reference to Exhibit 3.1 of the Company's Registration Statement on Form 8-A, filed with the SEC on September 30, 2014).
- 3.2 Third Amended and Restated Bylaws of Centrus Energy Corp. (incorporated by reference to Exhibit 3.2 of the Company's Annual Report on Form 10-K for the year ended December 31, 2016, filed with the SEC on March 31, 2017)
- 3.3 Certificate of the Voting Powers, Designations, Preferences and Relative Participating, Optional and Other Special Rights and Qualifications, Limitations or Restrictions of Series A Participating Cumulative Preferred Stock of Centrus Energy Corp. (filed as Exhibit 3.1 to the Company's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on April 7, 2016).
- 3.4 Certificate of Designation of Rights, Powers, Preferences, Qualifications, Limitations and Restrictions of Series B Senior Preferred Stock (incorporated by reference to Exhibit 3.1 of the Company's Current Report on Form 8-K, filed with the SEC on February 15, 2017).
- 4.1 Indenture by and among Centrus Energy Corp., as Issuer, United States Enrichment Corporation, as Note Guarantor and Delaware Trust Company, as Trustee and Collateral Agent, dated as of September 30, 2014 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the SEC on September 30, 2014).
- 4.2 Supplemental Indenture by and among Centrus Energy Corp., as Issuer, United States Enrichment Corporation, as Note Guarantor and Delaware Trust Company, as Trustee and Collateral Agent (filed as Exhibit 4.5 to the Company's Current Report on Form 8-K filed with the Securities and Exchange Commission on February 15, 2017).
- 4.3 Pledge and Security Agreement by and among Delaware Trust Company, as Collateral Agent, and United States Enrichment Corporation, dated as of September 30, 2014 (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K, filed with the SEC on September 30, 2014).
- 4.4 Note Subordination Agreement by and among United States Enrichment Corporation and Delaware Trust Company, as Trustee, dated as of September 30, 2014 (incorporated by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K, filed with the SEC on September 30, 2014).
- 4.5 Outstanding Notes Note Subordination Agreement by and among United States Enrichment Corporation and Delaware Trust Company, as Trustee, dated as of February 14, 2017 (incorporated by reference to Exhibit 4.6 of the Company's Current Report on Form 8-K, filed with the SEC on February 15, 2017).
- 4.6 Rights Agreement dated as of April 6, 2016, among Centrus Energy Corp., Computershare Inc.

 ("Computershare") and Computershare Trust Company, N.A., together with Computershare, as Rights Agent

 (incorporated by reference to Exhibit 4.1 to the Company's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on April 7, 2016).
- 4.7 Form of Rights Certificate (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form 8-A filed with the Securities and Exchange Commission on April 7, 2016).
- Form of First Amendment to Section 382 Rights Agreement by and between Centrus Energy Corp.,
 Computershare Trust Company, N.A. and Computershare Inc., to be dated on or about February 7, 2017
 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed with the SEC on January 5, 2017).
- 4.9 Indenture by and among Centrus Energy Corp., as Issuer, United States Enrichment Corporation, as Note Guarantor and Delaware Trust Company, as Trustee and Collateral Agent, dated as of February 14, 2017 (incorporated by reference to Exhibit 4.1 of the Company's Current Report on Form 8-K, filed with the SEC on February 15, 2017).
- 4.10 Pledge and Security Agreement, dated as of February 14, 2017 by and among Delaware Trust Company, as Collateral Agent, and United States Enrichment Corporation dated as of February 14, 2017 (incorporated by reference to Exhibit 4.2 of the Company's Current Report on Form 8-K, filed with the SEC on February 15, 2017).

- 4.11 New Notes Note Subordination Agreement by and among United States Enrichment Corporation and Delaware Trust Company, as Trustee, dated as of February 14, 2017 (incorporated by reference to Exhibit 4.3 of the Company's Current Report on Form 8-K, filed with the SEC on February 15, 2017).
- 4.12 Pari Passu Intercreditor Agreement by and among United States Enrichment Corporation and Delaware Trust Company, as Trustee, dated as of February 14, 2017 (incorporated by reference to Exhibit 4.4 of the Company's Current Report on Form 8-K, filed with the SEC on February 15, 2017).
- 4.13 Second Amendment to Section 382 Rights Agreement by and between Centrus Energy Corp., Computershare Trust Company, N.A. and Computershare Inc., dated April 3, 2019 (incorporated by reference to Exhibit 4.1 to the Company's Current Report on Form 8-K, filed with the SEC on April 4, 2019).
- 4.14 Description of the Securities of the Company. (a)
- 10.1 Lease Agreement between the United States Department of Energy ("DOE") and United States Enrichment Corporation, dated as of July 1, 1993, including notice of exercise of option to renew (incorporated by reference to Exhibit 10.1 of the Company's Registration Statement on Form S-1, filed with the SEC on June 29, 1998).
- Supplemental Agreement No. 1 to the Lease Agreement between DOE and United States Enrichment Corporation, dated as of December 7, 2006 (incorporated by reference to Exhibit 10.2 of the Company's Annual Report on Form 10-K for the year ended December 31, 2006, filed with the SEC on February 27, 2007). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- Memorandum of Agreement, dated April 6, 1998, between the Office of Management and Budget and United States Enrichment Corporation relating to post-privatization liabilities (incorporated by reference to Exhibit 10.18 of the Company's Registration Statement on Form S-1, filed with the SEC on June 29, 1998).
- 10.4 Agreement, dated June 17, 2002, between DOE and USEC Inc. ("2002 DOE-USEC Agreement") (incorporated by reference to Exhibit 99.3 of the Company's Current Report on Form 8-K, filed with the SEC on June 21, 2002).
- Modification 1 to 2002 DOE-USEC Agreement, dated August 20, 2002 (incorporated by reference to Exhibit 10.15 of the Company's Annual Report on Form 10-K for the year ended December 31, 2005, filed with the SEC on February 24, 2006).
- 10.6 Modification No. 2 dated January 12, 2009, to 2002 DOE-USEC Agreement (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on January 13, 2009).
- Modification No. 3 dated January 28, 2010, to 2002 DOE-USEC Agreement (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on February 2, 2010).
- Modification No. 4 dated February 11, 2011, to 2002 DOE-USEC Agreement (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on February 16, 2011).
- Modification No. 5 dated June 12, 2012, to the Agreement dated June 17, 2002, between DOE and USEC Inc. (incorporated by reference to Exhibit 10.10 to the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2012, filed with the SEC on August 1, 2012).
- License dated December 7, 2006 between the United States of America, as represented by DOE, as licensor, and USEC Inc., as licensee (incorporated by reference to Exhibit 10.34 of the Company's Annual Report on Form 10-K for the year ended December 31, 2006, filed with the SEC on February 27, 2007).
- Enriched Product Transitional Supply Contract dated March 23, 2011 between United States Enrichment Corporation and Joint Stock Company "Techsnabexport" ("TENEX") (incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2011, filed with the SEC on May 4, 2011). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- Amendment No. 001 dated April 22, 2013 to the Enriched Product Transitional Supply Contract dated March 23, 2011 between United States Enrichment Corporation and TENEX (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2013, filed with the SEC on August 6, 2013). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).

- Amendment No. 002 dated July 29, 2013 to the Enriched Product Transitional Supply Contract dated March 23, 2011 between United States Enrichment Corporation and TENEX (incorporated by reference to Exhibit 10.4 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2013, filed with the SEC on November 5, 2013). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- Amendment No. 003 dated July 23, 2014 to the Enriched Product Transitional Supply Contract dated March 23, 2011 between United States Enrichment Corporation and TENEX (incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014, filed with the SEC on November 14, 2014). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- Amendment No. 004 dated September 10, 2014 to the Enriched Product Transitional Supply Contract dated March 23, 2011 between United States Enrichment Corporation and TENEX (incorporated by reference to Exhibit 10.6 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2014, filed with the SEC on November 14, 2014). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- Letter Agreement, dated June 22, 2015, supplementing the Enriched Product Transitional Supply Contract dated March 23, 2011 between United States Enrichment Corporation and TENEX. (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015, filed with the SEC on August 7, 2015). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- Amendment No. 005 dated July 7, 2015, to the Enriched Product Transitional Supply Contract dated March 23, 2011 between United States Enrichment Corporation and TENEX (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015, filed with the SEC on November 12, 2015). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- Amendment No. 006 dated September 4, 2015, to the Enriched Product Transitional Supply Contract dated March 23, 2011 between United States Enrichment Corporation and TENEX (incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015, filed with the SEC on November 12, 2015). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- Amendment No. 007 dated October 19, 2015, to the Enriched Product Transitional Supply Contract dated March 23, 2011 between United States Enrichment Corporation and TENEX (incorporated by reference to Exhibit 10.19 of the Company's Annual Report on Form 10-K for the year ended December 31, 2015 filed with the SEC on March 23, 2016). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- Amendment No. 008 dated December 22, 2015, to the Enriched Product Transitional Supply Contract dated March 23, 2011 between United States Enrichment Corporation and TENEX (incorporated by reference to Exhibit 10.20 of the Company's Annual Report on Form 10-K for the year ended December 31, 2015 filed with the SEC on March 23, 2016). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- 10.21 Letter Agreement, dated August 1, 2016, by and between Joint Stock Company "TENEX" and United States Enrichment Corporation (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2016, filed with the SEC on November 10, 2016). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- 10.22 Form of Plan Support Agreement dated December 13, 2013 between USEC Inc. and certain holders of USEC Inc.'s 3.0% convertible senior notes due October 1, 2014, incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed on December 16, 2013.
- Plan Support Agreement dated December 13, 2013 between USEC Inc. and certain holders of USEC Inc.'s 3.0% convertible senior notes due October 1, 2014, as amended through February 28, 2014 (incorporated by reference to Exhibit 10.3 of the Current Report on Form 8-K filed on March 5, 2014).
- 10.24 Plan Support Agreement dated March 4, 2014 between USEC Inc. and Toshiba America Nuclear Energy Company (incorporated by reference to Exhibit 10.1 of the Current Report on Form 8-K filed on March 5, 2014).

10.25 Plan Support Agreement dated March 4, 2014 between USEC Inc. and Babcock & Wilcox Investment Company (incorporated by reference to Exhibit 10.2 of the Current Report on Form 8-K filed on March 5, <u>2014).</u> 10.26 Director and Officer Indemnification Agreement (incorporated by reference to Exhibit 10.77 of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 16, 2015). 10.27 Form of Change in Control Agreement with executive officers (incorporated by reference to Exhibit 10.3 of the Company's Current Report on Form 8-K, filed with the SEC on January 16, 2013). (b) 10.28 Employment Agreement, dated March 6, 2015, by and between Centrus Energy Corp. and Daniel B. Poneman (incorporated by reference to Exhibit 10.7 of the Company's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, filed with the SEC on May 7, 2015), (b) 10.29 Amended Employment Agreement, dated November 28, 2018, by and between Centrus Energy Corp. and Daniel B. Poneman. (a) (b) 10.30 2016 Executive Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-O, filed with the SEC on August 12, 2016) (b) 10.31 2015 Executive Incentive Plan (incorporated by reference to Exhibit 10.8 of the Company's Quarterly Report on Form 10-Q, filed with the SEC on May 7, 2015). (b) 10.32 Centrus Energy Corp. 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on September 30, 2014). (b) Form of Employee Nonqualified Stock Option Award Agreement under the Centrus Energy Corp. 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.80 of the Company's Annual Report on Form 10-K for 10.33 the year ended December 31, 2014, filed with the SEC on March 16, 2015). (b) 10.34 Form of Non-Employee Director Restricted Stock Unit Award Agreement (Annual Retainers and Meeting Fees) under the Centrus Energy Corp. 2014 Equity Incentive Plan (incorporated by reference to Exhibit 10.81 of the Company's Annual Report on Form 10-K for the year ended December 31, 2014, filed with the SEC on March 16, 2015). (b) 10.35 Centrus Energy Corp. 2014 Post-Restructuring Incentive Plan (incorporated by reference to Exhibit 10.2 of the Company's Current Report on Form 8-K, filed with the SEC on September 30, 2014). (b) Amended and Restated Centrus Energy Corp. Executive Severance Plan (incorporated by reference to Exhibit 10.36 10.3 of the Company's Current Report on Form 8-K, filed with the SEC on September 30, 2014), (b) 10.37 USEC Inc. Pension Restoration Plan, as amended and restated, dated November 1, 2007 (incorporated by reference to Exhibit 10.55 of the Company's Annual Report on Form 10-K/A for the year ended December 31, 2007, filed with the SEC on February 29, 2008). (b) 10.38 First Amendment, dated August 1, 2008, to USEC Inc. Pension Restoration Plan, as amended and restated, dated November 1, 2007 (incorporated by reference to Exhibit 10.3 of the Company's Quarterly Report on Form 10-O for the quarter ended September 30, 2008, filed with the SEC on November 5, 2008), (b) 10.39 Second Amendment dated July 25, 2013 to the USEC Inc. Pension Restoration Plan, as amended and restated effective January 1, 2008 (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on July 26, 2013). (b) 10.40 USEC Inc. 1999 Supplemental Executive Retirement Plan, as amended and restated, dated November 1, 2010 (incorporated by reference to Exhibit 10.65 of the Company's Annual Report on Form 10-K for the year ended December 31, 2010, filed with the SEC on February 24, 2011). (b) 10.41 USEC Inc. 2006 Supplemental Executive Retirement Plan, as amended and restated, dated November 1, 2007 (incorporated by reference to Exhibit 10.64 of the Company's Annual Report on Form 10-K/A for the year ended December 31, 2007, filed with the SEC on February 29, 2008). (b) First Amendment dated October 28, 2009 to the USEC Inc. 2006 Supplemental Executive Retirement Plan, as 10.42 amended and restated (incorporated by reference to Exhibit 10.71 of the Company's Annual Report on Form 10-K for the year ended December 31, 2009, filed with the SEC on March 1, 2010). (b) 10.43 Centrus Energy Corp. Executive Deferred Compensation Plan, as amended and restated (incorporated by reference to Exhibit 10.5 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2015, filed with the SEC on August 7, 2015). (b)

- Form of Support Agreement (including the Term Sheet) between Centrus Energy Corp. and the Support Parties, dated January 5, 2017 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the SEC on January 5, 2017).
- Agreement between Centrus Energy Corp. and UT-Battelle, LLC dated October 1, 2017 (incorporated by reference to Exhibit 10.44 of the Company's Annual Report on Form 10-K for the year ended December 31, 2017, filed with the SEC on March 15, 2018).
- 10.46 Settlement Agreement between United States Enrichment Corporation and the United States, dated January 11, 2018 (incorporated by reference to Exhibit 10.1 to the Company's Current Report on Form 8-K, filed with the SEC on January 17, 2018).
- Services Agreement to Provide Technical and Resource Support effective March 26, 2018, by and between Centrus Energy Corp., American Centrifuge Operating, LLC and X-Energy, LLC (incorporated by reference to Exhibit 10.46 of the Company's Quarterly Report on Form 10-Q, for the quarter ended March 31, 2018, filed with the SEC on May 10, 2018). (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2).
- Purchase and Sale Agreement dated April 27, 2018 between Orano Cycle and United States Enrichment
 Corporation (incorporated by reference to Exhibit 10.47 of the Company's Quarterly Report on Form 10-Q for
 the quarter ended June 30, 2018, filed with the SEC on August 9, 2018). (Certain information has been omitted
 and filed separately, pursuant to confidential treatment under Rule 24.b2)
- 10.49 Centrus Energy Corp. 2014 Equity Incentive Plan (as amended and restated in May 2017) (incorporated by reference to Exhibit 10.48 of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018, filed with the SEC on November 8, 2018). (b)
- Work Authorization dated September 27, 2018 under the Supply of Service Agreement Between United States

 Department of Energy and Centrus Energy Corp., Exhibit J to the Centrifuge Deployment Project Lease

 Agreement between the Department of Energy and USEC Inc. (incorporated by reference to Exhibit 10.49 of
 the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2018, filed with the SEC
 on November 8, 2018).
- 10.51 Form of Exchange Agreement, dated December 6, 2018, by and among Centrus Energy Corp. and certain noteholders (incorporated by reference to Exhibit 10.1 of the Company's Current Report on Form 8-K, filed with the SEC on December 6, 2018).
- Services Agreement to Provide Technical and Resource Support, dated November 29, 2018, by and between American Centrifuge Operating, LLC and X Energy, LLC (Certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2) (incorporated by reference to Exhibit 10.52 of the Company's Annual Report on Form 10-K for the year ended December 31, 2018, filed with the SEC on April 1, 2019).
- 10.53 Letter Agreement dated May 31, 2019 between Centrus Energy Corp. and the U.S. Department of Energy (certain information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2) (incorporated by reference to Exhibit 10.1 of the Company's Quarterly Report on Form 10-Q for the quarter ended June 30, 2019, filed with the SEC on August 12, 2019).
- Amendment to Appendix 1 Lease Agreement between the U.S. Department of Energy and United States
 Enrichment Corporation for the Gas Centrifuge Enrichment Plant, dated as of May 31, 2019 (certain
 information has been omitted and filed separately pursuant to confidential treatment under Rule 24b-2)
 (incorporated by reference to Exhibit 10.2 of the Company's Quarterly Report on Form 10-Q for the quarter
 ended June 30, 2019, filed with the SEC on August 12, 2019).
- Letter Agreement, dated September 23, 2019, by and between Joint Stock Company "TENEX" and United States Enrichment Corporation (certain information has been omitted because the identified confidential portions (i) are not material and (ii) would be competitively harmful if publicly disclosed) (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, filed with the SEC on November 8, 2019).
- Amendment No. 009, dated September 23, 2019, to the Enriched Product Transitional Supply Contract dated March 23, 2011, between United States Enrichment Corporation and TENEX (certain information has been omitted because the identified confidential portions (i) are not material and (ii) would be competitively harmful if publicly disclosed) (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, filed with the SEC on November 8, 2019).

- 10.57 Letter Agreement, dated June 12, 2018, by and between Joint Stock Company "TENEX" and United States Enrichment Corporation (certain information has been omitted because the identified confidential portions (i) are not material and (ii) would be competitively harmful if publicly disclosed) (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019, filed with the SEC on November 8, 2019). 10.58 Letter Agreement, dated September 28, 2019, by and between Joint Stock Company "TENEX" and United States Enrichment Corporation (certain information has been omitted because the identified confidential portions (i) are not material and (ii) would be competitively harmful if publicly disclosed) (incorporated by reference to Exhibit 10.4 to the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019 filed with the SEC on November 8, 2019). 10.59 Agreement, dated October 31, 2019, by and between American Centrifuge Operating, LLC and the United States Department of Energy. (a) 10.60 2019 Executive Incentive Plan. (a) (b) 10.61 Separation Agreement dated October 10, 2019 between the Company and Marian K. Davis. (a) (b) 10.62 Consulting Agreement dated January 2, 2020 between the Company and Stephen S. Greene (certain personally identifiable information has been omitted). (a) (b) 21 Subsidiaries of Centrus Energy Corp. (a) 23.1 Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm. (a) Certification of the Chief Executive Officer pursuant to Rule 13a-14(a)/15d-14(a). (a) 31.1 31.2 Certification of the Chief Financial Officer pursuant to Rule 13a-14(a)/15d-14(a). (a) Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350. (a) 32.1 101 Consolidated financial statements from the Annual Report on Form 10-K for the fiscal year ended December 31, 2019, filed in interactive data file (XBRL) format. (a)
- (a) Filed herewith.
- (b) Management contracts and compensatory plans and arrangements required to be filed as exhibits pursuant to Item 15(b) of this report.

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.

	Centrus Energy Corp.
March 26, 2020	/s/ Daniel B. Poneman
	Daniel B. Poneman
	President and Chief Executive Officer

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 indicated on March 26, 2020:

<u>Signature</u>	<u>Title</u>
/s/ Daniel B. Poneman	President and Chief Executive Officer
Daniel B. Poneman	(Principal Executive Officer) and Director
/s/ Philip O. Strawbridge	Senior Vice President, Chief Financial Officer, Chief
Philip O. Strawbridge	Administrative Officer and Treasurer (Principal Financial Officer)
/s/ John C. Dorrian	Controller and Chief Accounting Officer
John C. Dorrian	(Principal Accounting Officer)
/s/ Mikel H. Williams	Chairman of the Board and Director
Mikel H. Williams	Chairman of the Board and Director
//M:1 1B:	
/s/ Michael Diament Michael Diament	Director
wichael Diament	
/s/ Tetsuo Iguchi	Director
Tetsuo Iguchi	
/s/ W. Thomas Jagodinski	Director
W. Thomas Jagodinski	
/s/ Patricia J. Jamieson	Director
Patricia J. Jamieson	
/s/ William J. Madia	Director
William J. Madia	Bilector
.,	
/s/ Neil S. Subin	Director
Neil S. Subin	

CENTRUS ENERGY CORP.

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Report of Independent Registered Public Accounting Firm

To the Board of Directors and Stockholders of Centrus Energy Corp.

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Centrus Energy Corp. and its subsidiaries (the "Company") as of December 31, 2019 and 2018, and the related consolidated statements of operations and comprehensive income (loss), of stockholders' deficit and of cash flows for the years then ended, including the related notes (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 as of December 31, 2019 and 2018, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America.

Change in Accounting Principle

As discussed in Note 1 to the consolidated financial statements, the Company changed the manner in which it accounts for leases in 2019.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (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 of these consolidated financial statements in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits we are required to obtain an understanding of internal control over financial reporting but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ PricewaterhouseCoopers LLP

Baltimore, Maryland March 26, 2020

We have served as the Company's auditor since 2002.

CENTRUS ENERGY CORP. CONSOLIDATED BALANCE SHEETS

(in millions, except share and per share data)

	Decen	iber 3	ber 31,		
	2019		2018		
ASSETS					
Current assets:					
Cash and cash equivalents\$	130.7	\$	123.1		
Accounts receivable	21.1		60.2		
Inventories	64.5		129.7		
Deferred costs associated with deferred revenue	144.1		134.9		
Deposits for financial assurance	0.2		30.3		
Other current assets	9.0		6.3		
Total current assets	369.6		484.5		
Property, plant and equipment, net	3.7		4.2		
Deposits for financial assurance	5.7		6.3		
Intangible assets, net	69.5		76.0		
Other long-term assets	7.4		0.7		
Total assets\$	455.9	\$	571.7		
LIABILITIES AND STOCKHOLDERS' DEFICIT	_		_		
Current liabilities:					
Accounts payable and accrued liabilities\$	50.7	\$	52.4		
Payables under SWU purchase agreements	8.1	·	46.0		
Inventories owed to customers and suppliers	5.6		103.0		
Deferred revenue and advances from customers.	266.3		204.5		
Current debt	6.1		32.8		
Total current liabilities	336.8		438.7		
Long-term debt	114.1		120.2		
Postretirement health and life benefit obligations	138.6		136.2		
Pension benefit liabilities.	141.8		168.9		
Advances from customers	29.4		15.0		
Other long-term liabilities	32.1		14.6		
Total liabilities	792.8		893.6		
Commitments and contingencies (Note 17)					
Stockholders' deficit:					
Preferred stock, par value \$1.00 per share, 20,000,000 shares authorized					
Series A Participating Cumulative Preferred Stock, none issued			_		
Series B Senior Preferred Stock, 7.5% cumulative, 104,574 shares issued and outstanding and					
an aggregate liquidation preference of \$127.2 as of December 31, 2019 and \$119.3 as of	1.6		1.6		
December 31, 2018	4.6		4.6		
Class A Common Stock, par value \$0.10 per share, 70,000,000 shares authorized, 8,347,427 and 8,031,307 shares issued and outstanding as of December 31, 2019 and December 31, 2018,	0.0		0.0		
respectively	0.8		0.8		
Class B Common Stock, par value \$0.10 per share, 30,000,000 shares authorized, 1,117,462 and 1,406,082 shares issued and outstanding as of December 31, 2019 and December 31, 2018,	0.1		0.4		
respectively	0.1		0.1		
Excess of capital over par value	61.5		61.2		
Accumulated deficit	(405.0)		(388.5)		
Accumulated other comprehensive income, net of tax	1.1		(0.1)		
Total stockholders' deficit	(336.9)		(321.9)		
Total liabilities and stockholders' deficit	455.9	\$	571.7		

CENTRUS ENERGY CORP. CONSOLIDATED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS) (in millions, except share and per share data)

	Year E Decem	
	2019	2018
Revenue:		
Separative work units\$	123.7	\$ 130.6
Uranium	45.7	33.8
Technical solutions	40.3	28.6
Total revenue	209.7	193.0
Cost of Sales:		
Separative work units and uranium	118.6	187.7
Technical solutions	58.6	23.2
Total cost of sales	177.2	210.9
Gross profit (loss)	32.5	(17.9)
Advanced technology costs	14.6	26.1
Selling, general and administrative	33.7	39.9
Amortization of intangible assets	6.5	6.6
Special charges (credits) for workforce reductions and advisory costs	(1.9)	2.2
Gain on sales of assets	(0.7)	(0.3)
Operating loss	(19.7)	(92.4)
Gain on early extinguishment of debt		(0.5)
Nonoperating components of net periodic benefit expense (income)	(4.3)	10.6
Interest expense	3.0	4.1
Investment income	(2.2)	(2.5)
Loss before income taxes	(16.2)	(104.1)
Income tax expense	0.3	_
Net loss and comprehensive loss	(16.5)	(104.1)
Preferred stock dividends - undeclared and cumulative	7.8	7.8
Net loss allocable to common stockholders	(24.3)	\$ (111.9)
Net loss per common share - basic and diluted\$	(2.54)	\$ (12.23)
Average number of common shares outstanding - basic and diluted (in thousands)	9,566	9,151

CENTRUS ENERGY CORP. CONSOLIDATED STATEMENTS OF CASH FLOWS (in millions)

	Year Ended December 31,				
		2019		2018	
OPERATING					
Net loss	\$	(16.5)	\$	(104.1)	
Adjustments to reconcile net loss to cash used in operating activities:					
Depreciation and amortization	•••	7.0		7.4	
Accrued loss on long-term contract	•••	18.3		_	
Immediate recognition of retirement benefit plans (gains) losses, net	•••	(4.0)		17.3	
PIK interest on paid-in-kind toggle notes	•••	1.1		1.7	
Gain on early extinguishment of debt	•••	_		(0.5)	
Gain on sales of assets	•••	(0.7)		(0.4)	
Inventory valuation adjustments	•••	2.3		_	
Changes in operating assets and liabilities:					
Accounts receivable		29.3		9.7	
Inventories, net	•••	0.1		61.0	
Payables under SWU purchase agreements		(37.9)		(33.4)	
Deferred revenue and advances from customers, net of deferred costs		44.0		0.1	
Accounts payable and other liabilities		(12.3)		3.7	
Pension and postretirement liabilities		(19.5)		(28.0)	
Other, net		0.1		(8.9)	
Cash provided by (used in) operating activities		11.3		(74.4)	
INVESTING					
Capital expenditures	•••	(0.1)		(0.1)	
Proceeds from sales of assets	•••	0.7		0.5	
Cash provided by investing activities		0.6		0.4	
FINANCING					
Principal payments on debt	•••	(27.5)		(5.0)	
Payments for deferred financing costs	••	(1.4)		_	
Payment of interest classified as debt	•••	(6.1)		(6.1)	
Cash used in financing activities		(35.0)		(11.1)	
Decrease in cash, cash equivalents and restricted cash		(23.1)		(85.1)	
Cash, cash equivalents and restricted cash, beginning of period (Note 4)		159.7		244.8	
Cash, cash equivalents and restricted cash, end of period (Note 4)	\$	136.6	\$	159.7	
Supplemental cash flow information:					
Interest paid in cash	\$	1.5	\$	7.1	
Non-cash activities:					
Conversion of interest payable-in-kind to debt	\$	0.7	\$	1.7	
Deferred financing costs included in accounts payable and accrued liabilities		0.8	\$	_	
Additional right of use operating lease assets recorded		5.2	\$	_	
Disposal of right of use operating lease assets for early termination		0.4	\$	_	
Exchange of debt for Class A common stock		_	\$	0.9	

CENTRUS ENERGY CORP. CONSOLIDATED STATEMENTS OF STOCKHOLDERS' DEFICIT (in millions, except per share data)

	Preferred Stock, Series B	Common Stock, Class A, Par Value \$.10 per Share	Common Stock, Class B, Par Value \$.10 per Share	Excess of Capital Over Par Value	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total
Balance at December 31, 2017	\$ 4.6	\$ 0.8	\$ 0.1	\$ 60.0	\$ (284.5)	\$ 0.1 \$	(218.9)
Adoption of ASC 606 as of January 1, 2018 (Note 1)	. —	_	_	_	0.1	_	0.1
Net loss	. —	_	_	_	(104.1)	_	(104.1)
Issuance of common stock	. —	_	_	0.8	_	_	0.8
Other comprehensive loss, net of tax benefit	. —	_	_	_	_	(0.2)	(0.2)
Issuance and amortization of restricted stock units and stock options	. –	_	_	0.4	_	_	0.4
Balance at December 31, 2018	\$ 4.6	\$ 0.8	\$ 0.1	\$ 61.2	\$ (388.5)	\$ (0.1) \$	(321.9)
Net loss	. –	_	_	_	(16.5)	_	(16.5)
Other comprehensive income, net of tax expense	. –	_	_	_	_	1.2	1.2
Issuance and amortization of restricted stock units and stock options				0.3			0.3
Balance at December 31, 2019	\$ 4.6	\$ 0.8	\$ 0.1	\$ 61.5	\$ (405.0)	\$ 1.1	(336.9)

CENTRUS ENERGY CORP. NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Basis of Presentation and Principles of Consolidation

The consolidated financial statements of Centrus Energy Corp. ("Centrus" or the "Company"), which include the accounts of the Company, its principal subsidiary United States Enrichment Corporation ("Enrichment Corp.") and its other subsidiaries, were prepared in conformity with generally accepted accounting principles in the U.S. ("U.S. GAAP"). Certain prior year amounts have been reclassified for consistency with the current year presentation. All material intercompany transactions have been eliminated.

Use of Estimates

The preparation of consolidated financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect reported amounts presented and disclosed in the consolidated financial statements. Significant estimates and judgments include, but are not limited to, revenue and related costs, asset valuations, pension and postretirement health and life benefit costs and obligations, the tax bases of assets and liabilities, the future recoverability of deferred tax assets, and determination of the valuation allowance for deferred tax assets. Actual results may differ from such estimates, and estimates may change if the underlying conditions or assumptions change.

Cash and Cash Equivalents

Cash and cash equivalents include short-term or highly liquid assets with original maturities of three months or less.

Inventories and Inventories Owed to Customers and Suppliers

Low-enriched uranium ("LEU") consists of two components: separative work units ("SWU") and uranium. SWU is a standard unit of measurement that represents the effort required to transform a given amount of natural uranium into two components: enriched uranium having a higher percentage of U²³⁵ and depleted uranium having a lower percentage of U²³⁵. The SWU contained in LEU is calculated using an industry standard formula based on the physics of enrichment. The amount of enrichment deemed to be contained in LEU under this formula is commonly referred to as its SWU component and the quantity of natural uranium deemed to be used in the production of LEU under this formula is referred to as its uranium or "feed" component.

SWU and uranium inventory costs are determined using the average cost method. SWU and uranium purchase costs include shipping costs when applicable. Inventories of SWU and uranium are valued at the lower of cost or net realizable value ("NRV"). NRV is the estimated selling price in the ordinary course of business less reasonably predictable costs of completion, disposal, and transportation. The estimated selling price for SWU and uranium is based on the pricing terms of contracts in the Company's sales order book, and, for uranium not under contract, the estimated selling price is based primarily on published price indicators at the balance sheet date.

Inventories owed to customers and suppliers, included in current liabilities, consist primarily of SWU and uranium inventories owed to fabricators. Fabricators process LEU into fuel for use in nuclear reactors. Under inventory optimization arrangements between Centrus and domestic fabricators, fabricators order quantities of LEU from Centrus based on scheduled or anticipated orders from utility customers for deliveries in future periods. As delivery obligations under actual customer orders arise, Centrus satisfies these obligations by arranging for the transfer to the customer of title to the specified quantity of LEU at the fabricator. Centrus' balances of SWU and uranium vary over time based on the timing and size of the fabricator's LEU orders from Centrus and the fabricator's needs for working stock of LEU. Balances can be positive or negative at the discretion of the fabricator.

Fabricators have other inventory supplies and, where a fabricator has elected to order less material from Centrus than Centrus is required to deliver to its customers at the fabricator, the fabricator will use these other inventories to satisfy Centrus' customer order obligations on Centrus' behalf. In such cases, the transfer of title of LEU from Centrus to the customer results in quantities of SWU and uranium being owed by Centrus to the fabricator. The amounts of SWU and uranium owed to fabricators are satisfied as future deliveries of LEU to fabricators are made.

Deferred Taxes

Centrus follows the asset and liability approach to account for deferred taxes. Deferred tax assets and liabilities are recognized for the anticipated future tax consequences of temporary differences between the balance sheet carrying amounts of assets and liabilities and their respective tax bases. Deferred taxes are based on income tax rates in effect for the years in which temporary differences are expected to reverse. The effect on deferred taxes of a change in income tax rates is recognized in income when the change in rates is enacted in the law. A valuation allowance is provided if it is more likely than not that all, or some portion, of the deferred tax assets may not be realized.

Property, Plant and Equipment

Property, plant and equipment are recorded at acquisition cost. Leasehold improvements and machinery and equipment are depreciated on a straight-line basis over the shorter of the useful life of the assets or the lease term, if applicable. Refer also to *Carrying Value of Long-Lived Assets* below.

Intangible Assets

Centrus has intangible assets resulting from fresh start accounting as a result of emergence from Chapter 11 bankruptcy on September 30, 2014. The identifiable intangible assets relate to the sales order book and customer relationships. The order book intangible asset is amortized as the order book valued at emergence is reduced, principally as a result of deliveries to customers. The customer relationships intangible asset is amortized using the straight-line method over the estimated average useful life of 15 years. Refer also to *Carrying Value of Long-Lived Assets* below.

Carrying Value of Long-Lived Assets

The Company evaluates the carrying values of property, plant and equipment and identifiable intangible assets when events or changes in business circumstances indicate that the carrying amount of asset, or asset group, may not be fully recoverable. The carrying amount of a long-lived asset is not recoverable if it exceeds the sum of the undiscounted cash flows expected to result from the use and eventual disposition of the asset. An impairment loss is measured as the amount by which the carrying amount of a long-lived asset, or asset group exceeds its fair value.

Financial Instruments and Fair Value Measurement

Accounting standards define fair value as the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value measurements for assets and liabilities required or permitted to be recorded at fair value, consideration is given to the principal or most advantageous market and assumptions that market participants would use when pricing the asset or liability.

Pursuant to accounting standards, Centrus' 8.25% notes (the "8.25% Notes") and its former 8.0% paid-in-kind ("PIK") toggle notes (the "8% PIK Toggle Notes") are recorded at face value and the fair value is disclosed. The estimated fair value of each of the 8% PIK Toggle Notes and the 8.25% Notes is based on recent trading prices and bid/ask quotes as of or near the balance sheet date. Debt issuance costs are deferred and amortized over the life of the instrument.

The balance sheet carrying amounts for accounts receivable, accounts payable and accrued liabilities, and payables under SWU purchase agreements approximate fair value because of the short-term nature of the instruments.

Concentrations of Credit Risk

Credit risk could result from the possibility of a customer failing to perform or pay according to the terms of a contract. Extension of credit is based on an evaluation of each customer's financial condition. Centrus regularly monitors credit risk exposure and takes steps intended to mitigate the likelihood of such exposure resulting in a loss.

Segments

Centrus operates two business segments: LEU, which supplies various components of nuclear fuel to utilities, and technical solutions, which provides advanced engineering, design, and manufacturing services to government and private sector customers. The technical solutions segment was formerly the Company's contract services segment. The segment was renamed the technical solutions segment on December 31, 2019, to better reflect the nature of work performed and is consistent with the Company's marketing of service offerings as Centrus Technical Solutions. There was no change to the composition of the segment as a result of the re-naming.

Revenue

On January 1, 2018, the Company adopted Accounting Standards Codification ("ASC") Topic 606, *Revenue from Contracts with Customers*, using the modified retrospective method as applied to customer contracts that were not completed as of the adoption date. As a result, financial information for reporting periods beginning on or after January 1, 2018, are presented under ASC 606. There was no material impact of adopting ASC 606 for sales under the LEU segment. For sales under the technical solutions segment, revenue is now primarily recognized over time as control is transferred to the customer.

The Company accounts for a contract when it has approval and commitment from both parties, the rights of the parties are identified, payment terms are identified, the contract has commercial substance and collectability of consideration is probable. Revenue for product and service sales is recognized when or as the Company transfers control of the promised products or services to the customer. Revenue is measured at the transaction price, which is based on the amount of consideration that the Company expects to receive in exchange for transferring the promised goods or services to the customer. The transaction price will include estimates of variable consideration until is probable that a significant reversal of revenue recognized will not occur.

SWU and Uranium Revenue

Revenue for the Company's LEU segment is derived from sales of the SWU component of LEU, from sales of both the SWU and uranium components of LEU, and from sales of uranium. Contracts with customers are primarily long-term, fixed-commitment contracts under which its customers are obligated to purchase a specified quantity of the SWU component of LEU or the SWU and uranium components of LEU. The Company's contracts for natural uranium are generally shorter-term, fixed-commitment contracts.

Revenue is recognized at the time the customer obtains control of the LEU or uranium. Customers generally obtain control of LEU at nuclear fuel fabricators. Centrus ships LEU to nuclear fuel fabricators for scheduled or anticipated orders from utility customers. Based on customer orders, Centrus arranges for the transfer of title of LEU from Centrus to the customer for the specified quantity of LEU at the fuel fabricator. Each such delivery to a customer is accounted for as a distinct performance obligation under a contract, and a contract may call for multiple deliveries over a number of periods. The contract's transaction price is allocated to each performance obligation based on the observable standalone selling price of each distinct delivery of SWU or uranium.

Utility customers in general have the option to defer receipt of uranium products purchased from the Company beyond the contractual sale period. In such cases, title to SWU and/or uranium components are transferred to the customer and a performance obligation for Centrus is created and a receivable is recorded. Cash is collected for the receivable under normal credit terms. The performance obligation is represented as *Deferred Revenue* on the consolidated balance sheet and the customer-titled product is classified as *Deferred Costs Associated with Deferred Revenue* on the consolidated balance sheet. Risk of loss remains with Centrus until the customer obtains control of the uranium product. The recognition of revenue and related cost of sales occurs at the point in time at which the customer obtains control of SWU or uranium and risk of loss of the product transfers to the customer, which may occur beyond one year. The timing of the transfer of control, subject to notice period requirements, is at the option of the customer. As such, deferred costs and deferred revenue are classified within current assets and current liabilities, respectively.

On occasion, the Company will accept payment in the form of uranium. Revenue from the sale of SWU under such contracts is recognized at the time transfer of control of LEU occurs and is based on the fair value of the uranium at contract inception or as the quantity of uranium is finalized, if variable. The Company may also borrow SWU from customers, in which case the Company will record the SWU and the related liability for the borrowing using a projected average purchase price over the borrowing period.

Amounts billed to customers for handling costs are included in sales. Handling costs are accounted for as a fulfillment cost and are included in cost of sales. The Company does not have shipping costs associated with outbound freight after control over a product has transferred to a customer. The Company's contracts with customers do not provide for significant payment terms or financing components.

Technical Solutions Revenue

Revenue for the technical solutions segment, principally representing technical, manufacturing, engineering, procurement, construction and operations services offered to public and private sector customers, is recognized over the contractual period as services are rendered. The Company recognizes revenue over time as it performs on these contracts because of the continuous transfer of control to the customer. For public sector contracts, this continuous transfer of control to the customer is supported by clauses in the contract that allow the customer to unilaterally terminate the contract for convenience, pay the Company for costs incurred plus a reasonable profit and assume control of any work in progress. The Company's private sector contracts generally contain contractual termination clauses or entitle the Company to payments for work performed to date for goods and services that do not have an alternative use. With control transferring over time, revenue is recognized based on the extent of progress towards completion of the performance obligation. A contract may contain one or more performance obligations. Two or more promises to transfer goods or services to a customer may be considered a single performance obligation if the goods or services are highly interdependent or highly interrelated such that utility of the promised goods or services to the customer includes integration services provided by the Company.

The Company determines the transaction price for each contract based on the consideration it expects to receive for the products or services being provided under the contract. If transaction prices are not stated in the contract for each performance obligation, contractual prices are allocated to performance obligations based on estimated relative standalone selling prices of the promised services.

The Company generally uses the cost-to-cost input method of progress for performance obligations to deliver products with continual transfer of control to the customer, because it best depicts the transfer of control to the customer that occurs as the Company incurs costs. Under the cost-to-cost method, the extent of progress towards completion is measured based on the proportion of direct costs incurred to date to the total estimated direct costs at completion of the performance obligation. Revenues are recorded proportionally as costs are incurred. For performance obligations to provide services to the customer, revenue is recognized over time based on direct costs incurred or the right to invoice method (in situations where the value transferred matches the Company's billing rights) as the customer receives and consumes the benefits.

Under the cost-to-cost method, the Company is required to make reasonably dependable estimates to calculate revenue and costs associated with the design, manufacture and delivery of products and services. Significant judgment is used to estimate total revenue and costs at completion. As a significant change in one or more estimates could affect the profitability of the Company's contracts, the Company reviews and updates its contract-related estimates regularly. Adjustments in estimated profits/losses are recognized under the cumulative catch-up method. Under this method, the impact of the adjustments is recognized in the period the adjustment is recognized. When estimates of total costs to be incurred exceed total estimates of revenue to be earned on a performance obligation related to complex equipment or related services, a provision for the entire loss on the performance obligation is recognized in the period the loss is identified.

The Company has applied the practical expedient in paragraph ASC 606-10-50-14 and does not provide the value of remaining performance obligations under service contracts having original expected terms of one year or less.

The timing of revenue recognition may differ from the timing of invoicing to customers. Progress on satisfying performance obligations under contracts with customers and the related billings and cash collections are recorded on the consolidated balance sheet as contract assets or contract liabilities. Contract balances are classified as assets or liabilities on a contract-by-contract basis at the end of each reporting period.

Unbilled receivables are included in *Accounts Receivable* on the consolidated balance sheet and arise when the timing of cash collected from customers differs from the timing of revenue recognition, such as when contract provisions require specific milestones to be met before a customer can be billed. Those assets are recognized when the revenue associated with the contract is recognized prior to billing and derecognized when billed in accordance with the terms of the contract. To the extent billings to the customer precede the recognition of technical solutions revenue, the Company recognizes a liability included in *Deferred Revenue and Advances from Customers* on the consolidated balance sheet.

Advanced Technology Costs

American Centrifuge and related expenses that are outside of our customer contracts are included in *Advanced Technology Costs*, including caretaker costs at the Piketon facility prior to the commencement of work under the HALEU contract in June 2019.

Pension and Postretirement Health and Life Benefit Plans

The Company provides retirement benefits to certain employees and retirees under defined benefit pension plans and postretirement health and life benefit plans. The valuation of benefit obligations and costs is based on provisions of the plans and actuarial assumptions that involve judgments and estimates. Plan assets and benefit obligations are remeasured each year as of the balance sheet date, or when lump sum payments exceed certain levels, resulting in differences between actual and projected results. The Company has elected to recognize these actuarial gains and losses immediately in the statement of operations to provide transparency regarding the impacts of changes in plan assets and benefit obligations.

Stock-Based Compensation

Centrus has a stock-based compensation plan which authorizes the issuance of common stock to the Company's employees, officers, directors and other individuals providing services to the Company or its affiliates pursuant to options, stock appreciation rights, restricted stock units, restricted stock, performance awards, dividend equivalent rights and other stock based awards. Stock-based compensation cost is measured at the grant date based on the fair value of the award. The cost is recognized over the requisite service period on a straight-line basis over the vesting period.

New Accounting Standards

Recently Adopted Accounting Standards

In February 2016, the Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2016-02, *Leases (Topic 842*) ("Topic 842"), which requires lessees to recognize a right-of-use asset and lease liability on the balance sheet for all leases with a term longer than 12 months. The Company adopted this standard on January 1, 2019, using the modified transition method which provides for recognition of existing leases as of the adoption date without requiring comparable presentation for the prior period. Lease assets and liabilities are recognized based on the present value of lease payments over the lease term. The Company's leases do not provide an implicit interest rate. The Company uses an estimated incremental borrowing rate based on the term of the lease using information available at the adoption date or the lease commencement, if later, including the yield on the Company's collateralized debt. The Company has elected to adopt the package of practical expedients provided under Topic 842, which allowed the Company to not apply a reassessment of whether any existing or expired contracts contain leases, reassessment of lease classification for existing or expired leases and reassessment of initial direct costs for leases. The adoption of this standard had no impact on the Company's consolidated statement of operations or statement of cash flows. Refer to *Note 10*, *Leases*, for additional information.

In February 2018, the FASB issued ASU 2018-02, *Income Statement-Reporting Comprehensive Income* (*Topic 220*): *Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income*. The amendments in ASU 2018-02 allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cut and Jobs Act of 2017 (the "Tax Act"). However, because the amendments only relate to the reclassification of the income tax effects of the Tax Act, the underlying guidance that requires that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. The Company adopted the new standard effective January 1, 2019, and elected not to reclassify the stranded tax effect resulting from the 2017 Tax Act to retained earnings.

In December 2019, the FASB issued ASU 2019-12, *Income Taxes* (*Topic 740*): Simplifying the Accounting for Income Taxes, that is intended to simplify various aspects related to accounting for income taxes. ASU 2019-12 removes certain exceptions to the general principles in Topic 740 and also clarifies and amends existing guidance to improve consistent application. The Company has elected early adoption of ASU 2019-12. Early adoption on a prospective basis as of January 1, 2019 allows the Company to not be required to apply the exception to the incremental approach for intraperiod tax allocation when there is a loss from continuing operations and income or a gain from other items. As a result, the tax effect of pre-tax income or loss from continuing operations should be determined without considering the tax effects of items that are not included in continuing operations. Based on the Company's assessment, no other provisions of ASU 2019-12 impact the Company's consolidated financial statements for the period of adoption.

Accounting Standards Effective in Future Periods

In August 2018, the FASB issued ASU 2018-14, *Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715-20)*, which modifies the disclosure requirements for employers that sponsor defined benefit pension plans and other postretirement plans. ASU 2018-14 is effective for public companies for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2020. The standard is to be applied on a retrospective basis to all periods presented and early adoption is permitted. The Company is evaluating the effect that the provisions of ASU 2018-14 will have on its consolidated financial statements.

2. REVENUE AND CONTRACTS WITH CUSTOMERS

Disaggregation of Revenue

The following table presents revenue from SWU and uranium sales disaggregated by geographical region, including foreign countries representing 10% or more of revenue, based on the billing addresses of customers (in millions):

	Year Ended	Dece	mber 31,
	2019		2018
United States\$	112.1	\$	112.7
Foreign:			
Japan	23.4		*
Belgium	21.5		35.2
Other	12.4		16.5
Total foreign	57.3		51.7
Revenue - SWU and uranium\$	169.4	\$	164.4

^{*} less than 10%

Refer to *Note 19, Revenue by Geographic Area, Major Customers and Segment Information* for disaggregation of revenue by segment. Disaggregation by end-market is provided in Note 19 and the consolidated statements of operations. SWU and uranium sales are made primarily to electric utility customers. Technical solutions revenue resulted primarily from services provided to the U.S. government and its contractors. SWU and uranium revenue is recognized at point of sale and technical solutions revenue is generally recognized over time.

Accounts Receivable

	Decem	December 31,						
	2019		2018					
	(\$ millions)							
Accounts receivable:								
Billed	\$ 13.2	\$	50.4					
Unbilled *	7.9		_					
Uranium feed receivable	_		9.8					
Accounts receivable	\$ 21.1	\$	60.2					

^{*} Billings under certain contracts in the technical services segment are invoiced based on approved provisional billing rates. Unbilled revenue represents difference between actual costs incurred and invoiced amounts. The Company expects to invoice and collect the unbilled amounts after actual rates are submitted to the customer and approved. Unbilled revenue also includes unconditional rights to revenue that is not yet billable under applicable contracts pending the compilation of supporting documentation.

Contract Liabilities

The following table presents changes in contract liability balances (in millions):

	Decem			
	2019	2018		Change
Accrued loss on HALEU Contract:			'	
Current - Accounts payable and accrued liabilities	\$ 10.0	\$ _	\$	10.0
Noncurrent - Other long-term liabilities	\$ 8.3	\$ _	\$	8.3
Deferred revenue - current	\$ 243.0	\$ 204.5	\$	38.5
Advances from customers - current	\$ 23.3	\$ _	\$	23.3
Advances from customers - noncurrent	\$ 29.4	\$ 15.0	\$	14.4

Deferred revenue activity in the year ended December 31, 2019, follows (in millions):

		Previously Deferred Sales	
	Deferred Sales in the Period	Recognized in the Period	Change
Deferred revenue	49.2	(10.7)	38.5

LEU Segment

Under the terms of certain contracts with customers in the LEU segment, the Company will accept payment in the form of uranium. Revenue from the sale of SWU under such contracts is recognized at the time LEU is delivered and is based on the fair value of the uranium at contract inception, or as the quantity of uranium is finalized, if variable. In 2019, SWU revenue of \$23.4 million was recognized under such contracts based on the fair market value of uranium acquired in exchange for SWU delivered. Uranium received from customers as advance payments for the future sales of SWU totaled \$52.7 million as of December 31, 2019. The advance payments are included in either *Advances from Customers, Current* or *Advances from Customers, Noncurrent*, based on the anticipated SWU sales period.

In the third quarter of 2019, the Company borrowed SWU inventory valued at \$1.7 million from a customer under terms that require repayment within 48 months. The Company recorded the SWU and the related liability for the borrowings using an average purchase price over the borrowing period. The cumulative liability to the customer of \$9.0 million for borrowed inventory is included in *Other Liabilities*, which is included in noncurrent liabilities.

The SWU component of LEU is typically bought and sold under long-term contracts with deliveries over several years. The Company's agreements for natural uranium sales are generally shorter-term, fixed-commitment contracts. The Company's order book of sales under contract in the LEU segment ("order book") extends to 2030. As of December 31, 2019 and December 31, 2018, the order book was \$1.0 billion. The order book is the estimated aggregate dollar amount of revenue for future SWU and uranium deliveries under contract and includes the *Deferred Revenue* and *Advances from Customers* amounts in the Contract Balances table above. Approximately \$0.9 billion of the order book as of December 31, 2019 is anticipated to be recognized as revenue beyond 2020.

Most of the Company's contracts provide for fixed purchases of SWU during a given year. The Company's order book is partially based on customers' estimates of the timing and size of their fuel requirements and other assumptions that are subject to change. For example, depending on the terms of specific contracts, the customer may be able to increase or decrease the quantity delivered within an agreed range. The Company's order book estimate is also based on the Company's estimates of selling prices, which may be subject to change. For example, depending on the terms of specific contracts, prices may be adjusted based on escalation using a general inflation index, published SWU price indicators prevailing at the time of delivery, and other factors, all of which are variable. The Company uses external composite forecasts of future market prices and inflation rates in its pricing estimates.

Technical Solutions Segment

Revenue for the technical solutions segment, representing the Company's technical, manufacturing, engineering, procurement, construction and operations services offered to public and private sector customers, is recognized over the contractual period as services are rendered. For details, refer to Note 1, *Summary of Significant Accounting Policies — Revenue — Technical Solutions Revenue*.

On October 31, 2019, the Company signed a three-year cost-share contract with the U.S. Department of Energy ("DOE") ("the HALEU Contract") to deploy a cascade of centrifuges to demonstrate production of high-assay, low-enriched uranium ("HALEU") for advanced reactors. HALEU is a component of an advanced nuclear reactor fuel that is not commercially available today and may be required for a number of advanced reactor designs currently under development in both the commercial and government sectors. The program has been under way since May 31, 2019, when the Company and DOE signed a preliminary letter agreement that allowed work to begin while the full contract was being finalized.

Under the HALEU Contract, DOE agreed to reimburse the Company for 80% of its costs incurred in performing the contract, up to a maximum of \$115 million. The Company's cost share is the corresponding 20% and any costs incurred above these amounts. Costs under the HALEU Contract include program costs, including direct labor and materials and associated indirect costs that are classified as Cost of Sales, and an allocation of corporate costs supporting the program that are classified as Selling, General and Administrative Expenses. Services to be provided over the three-year contract include constructing and assembling centrifuge machines and related infrastructure in a cascade formation. When estimates of remaining program costs to be incurred for such an integrated, constructiontype contract exceed estimates of total revenue to be earned, a provision for the remaining loss on the contract is recorded to Cost of Sales in the period the loss is determined. The Company's corporate costs supporting the program are recognized as expense as incurred over the duration of the contract term. As of December 31, 2019, the portion of the Company's anticipated cost share under the HALEU Contract representing the Company's share of remaining projected program costs was recognized in Cost of Sales as an accrued loss of \$18.3 million, consisting of \$10.0 million included in Accounts Payable and Accrued Liabilities and \$8.3 million included in Other Long-Term Liabilities. The accrued loss on the contract will be adjusted over the remaining contract term based on actual results and remaining program cost projections. The HALEU Contract is incrementally funded and DOE is currently obligated for costs up to approximately \$53.2 million of the \$115 million. The Company received cash payments of \$10.7 million through December 31, 2019. Of the \$115 million of anticipated revenue over the threeyear contract term, approximately \$40 million is anticipated to be recognized as revenue in 2021-2022 (beyond twelve months from the fiscal year ended December 31, 2019).

On January 11, 2018, the Company entered into a settlement agreement with DOE and the U.S. government regarding breach of contract claims brought by the Company relating to work performed by the Company under contracts with DOE and subcontracts with DOE contractors. In connection with the settlement, the Company (a) received \$4.7 million from the U.S. government, (b) applied approximately \$19.3 million of advances from the U.S. government received in prior years against the receivables balance, and (c) recorded additional revenue of \$9.5 million.

Centrus and DOE have yet to fully settle the Company's claims for reimbursements for certain pension and postretirement benefits costs related to past contract work performed for DOE. There is the potential for additional income to be recognized for this work pending the outcome of legal proceedings related to the Company's claims for payment and the potential release of previously established valuation allowances on receivables. As a result of the application of fresh start accounting following the Company's emergence from Chapter 11 bankruptcy on September 30, 2014, the receivables related to the Company's claims for payment are carried at fair value as of September 30, 2014, which is net of the valuation allowances. Refer to *Note 17, Commitments and Contingencies*.

3. SPECIAL CHARGES

As a result of the HALEU letter agreement in the second quarter of 2019, special charges in 2019 included a credit of \$2.9 million for the reversal of accrued termination benefits for employees who were retained at the Company's facility in Piketon, Ohio. For 2018, special charges totaled \$2.2 million, consisting of estimated employee termination benefits related to corporate functions of \$2.1 million and advisory costs related to updating the Company's information technology systems of \$0.1 million. The remaining balance of termination benefits of \$1.4 million is expected to be paid within twelve months and is classified in *Accounts Payable and Accrued Liabilities* in the consolidated balance sheet.

A summary of termination benefit activity and the accrued liability follows (in millions):

				Year l Decembe						
	De	Liability ecember 31, 2018	ember 31,		Charges (Credits) for Termination Benefits		Paid/ Settled		D	Liability ecember 31, 2019
Workforce reductions:										
Corporate functions	\$	0.9	\$	1.0	\$	(0.7)	\$	1.2		
Piketon facility		3.2		(2.9)		(0.1)		0.2		
Total	\$	4.1	\$	(1.9)	\$	(0.8)	\$	1.4		

4. CASH, CASH EQUIVALENTS AND RESTRICTED CASH

The following table summarizes the Company's cash, cash equivalents and restricted cash as presented on the consolidated balance sheet to amounts on the consolidated statement of cash flows (in millions):

	Decem	ıber 3	51,
_	2019		2018
Cash and cash equivalents\$	130.7	\$	123.1
Deposits for financial assurance - current	0.2		30.3
Deposits for financial assurance - noncurrent	5.7		6.3
Total cash, cash equivalents and restricted cash\$	136.6	\$	159.7

The following table provides additional detail regarding the Company's deposits for financial assurance (in millions):

	Decembe	, 2019		Decembe	r 31	1, 2018	
_	Current		Long-Term		Current	I	Long-Term
Piketon facility obligations\$	_	\$		\$	30.1	\$	
Workers compensation	_		5.4		_		6.0
Other	0.2		0.3		0.2		0.3
Total deposits for financial assurance\$	0.2	\$	5.7	\$	30.3	\$	6.3

Piketon Facility Obligations and Surety Bonds

Centrus leases facilities and related personal property in Piketon, Ohio from DOE. Centrus previously provided financial assurance in the form of surety bonds to DOE for lease turnover obligations and to the U.S. Nuclear Regulatory Commission ("NRC") for decontamination and decommissioning ("D&D") obligations related to the facility. These surety bonds were fully cash collateralized by the Company. The Company completed its obligations and, in 2019, the financial assurance instruments were cancelled and the Company received the cash collateral totaling \$30.5 million including interest.

Financial Assurance for Workers' Compensation

The Company has provided financial assurance to states in which it was previously self-insured for workers' compensation in accordance with each state's requirements in the form of a surety bond or letters of credit that are fully cash collateralized by the Company. As each state determines that the likelihood of further workers' compensation obligations related to the period of self-insurance is reduced, the surety bond or letters of credit are subject to cancellation and the Company would receive the cash collateral. In 2019, the Company received \$0.6 million as return of cash collateral related to the cancellation of a letter of credit.

5. INVENTORIES

Centrus holds uranium at licensed locations in the form of natural uranium and as the uranium component of LEU. Centrus also holds SWU as the SWU component of LEU at licensed locations (e.g., fabricators) to meet book transfer requests by customers. Fabricators process LEU into fuel for use in nuclear reactors. Components of inventories are as follows (in millions):

_	December 31, 2019						Ι)ecer	nber 31, 20	018	
	Current Assets	-	Current Liabilities (a)		Inventories, Net		Current Assets		Current iabilities (a)	Inventories, Net	
Separative work units\$	7.8	\$		\$	7.8	\$	20.1	\$	3.6	\$	16.5
Uranium	56.7		5.6		51.1		109.6		99.4		10.2
Total\$	64.5	\$	5.6	\$	58.9	\$	129.7	\$	103.0	\$	26.7

(a) Inventories owed to customers and suppliers, included in current liabilities, include SWU and uranium inventories owed to fabricators.

Inventories are valued at the lower of cost or net realizable value. Valuation adjustments for uranium inventory to reflect declines in uranium market price indicators totaled \$2.3 million in 2019. There were no valuation adjustments in 2018.

In March 2019, the Company completed a one-time purchase of SWU and uranium from Nuclear Fuel Industries, Ltd. ("NFI") for \$7.1 million pursuant to an August 2018 agreement between Enrichment Corp. and NFI. Toshiba America Nuclear Energy Corporation ("TANE") holds 718,200 shares of the Company's Class B common stock and certain of the Company's 8.25% senior notes due 2027. Each of NFI and TANE are wholly-owned, indirect subsidiaries of Toshiba Corporation.

6. PROPERTY, PLANT AND EQUIPMENT

A summary of changes in property, plant and equipment follows (in millions):

	December 31, 2018	Additions / (Depreciation)	December 31, 2019
Land	\$ 1.2	\$	\$ 1.2
Leasehold improvements	2.5	_	2.5
Machinery and equipment	1.0	0.1	1.1
Other	1.1	_	1.1
Property, plant and equipment, gross	5.8	0.1	5.9
Accumulated depreciation	(1.6)	(0.6)	(2.2)
Property, plant and equipment, net	\$ 4.2	\$ (0.5)	\$ 3.7

Depreciation expense was \$0.6 million in 2019 and \$0.8 million in 2018.

The Company sold fully-depreciated property for \$0.7 million in 2019 and \$0.4 million in 2018. Cash proceeds received totaled \$0.7 million in 2019 and \$0.5 million in 2018, including \$0.1 million received in 2018 for sales occurring in 2017.

7. INTANGIBLE ASSETS

Intangible assets originated from the Company's reorganization and application of fresh start accounting as of September 30, 2014, the date the Company emerged from bankruptcy, and reflect the conditions at that time. The intangible asset related to the sales order book is amortized as the order book existing at emergence is reduced, principally as a result of deliveries to customers. The intangible asset related to customer relationships is amortized using the straight-line method over the estimated average useful life of 15 years. Amortization expense is presented below gross profit on the consolidated statements of operations. Intangible asset balances are as follows (in millions):

	December 31, 2019				December 31, 2018						
	Gross Carrying Amount		umulated ortization	Net	Amount		Gross Carrying Amount		umulated ortization	Net	Amount
Sales order book\$	54.6	\$	29.9	\$	24.7	\$	54.6	\$	28.0	\$	26.6
Customer relationships	68.9		24.1		44.8		68.9		19.5		49.4
Total\$	123.5	\$	54.0	\$	69.5	\$	123.5	\$	47.5	\$	76.0

The amount of amortization expense for intangible assets in each of the succeeding years is estimated to be as follows (in millions):

Total\$	69.5
Thereafter	29.2
2024	8.0
2023	7.2
2022	10.5
2021	7.6
2020\$	7.0

8. ACCOUNTS PAYABLE AND ACCRUED LIABILITIES

Components of accounts payable and accrued liabilities follow (in millions):

	Decem	ıber 3	31,
	2019		2018
Trade payables\$	7.0	\$	3.9
Postretirement health and life benefit obligations - current	14.2		15.4
Compensation and employee benefits	13.1		22.4
Accrued HALEU contract loss - current	10.0		_
Operating lease liability	2.5		_
Severance	1.4		4.1
Accrued interest on 8% PIK Toggle Notes	_		0.6
Other accrued liabilities	2.5		6.0
Total accounts payable and accrued liabilities\$	50.7	\$	52.4

9. DEBT

A summary of debt follows (in millions):

			December 31, 2019				Decembe	er 31, 2	31, 2018	
	Maturity	C	Current		Long-Term		urrent	Long-Term		
8.25% Notes:	Feb. 2027									
Principal		\$	_	\$	74.3	\$	_	\$	74.3	
Interest			6.1		39.8		6.1		45.9	
8.25% Notes		\$	6.1	\$	114.1	\$	6.1	\$	120.2	
8% PIK Toggle Notes	Sep. 2019	\$		\$		\$	26.7	\$		
Total		\$	6.1	\$	114.1	\$	32.8	\$	120.2	

Repayment of 8% PIK Toggle Notes

On September 30, 2019, the Company repaid the outstanding 8% PIK Toggle Notes that matured on September 30, 2019. The Company paid a total of \$28.5 million, including \$1.0 million in accrued interest. The payment was made in accordance with the terms of the Indenture dated September 30, 2014 (as amended, supplemented, or otherwise modified from time to time) among the Company, Enrichment Corp., as the note guarantor, and Delaware Trust Company, as trustee and collateral agent. The payment constituted full satisfaction and discharge of the Indenture and the Notes.

Interest on the 8% PIK Toggle Notes was payable semi-annually in arrears on March 31 and September 30 based on a 360-day year consisting of twelve 30-day months. The principal amount was increased by any payment of interest in the form of PIK payments. The Company had the option to pay up to 5.5% per annum of interest due on the 8% PIK Toggle Notes in the form of in-kind PIK payments. For the semi-annual interest periods in 2018 and 2019, the Company elected to pay interest in the form of PIK payments at 5.5% per annum. Financing costs for the issuance of the 8% PIK Toggle Notes were deferred and were amortized on a straight-line basis, which approximates the effective interest method, over the life of the 8% PIK Toggle Notes. The remaining financing costs were amortized with the final payment on September 30, 2019.

December 2018 Note Exchange

On December 6, 2018, Centrus entered into Exchange Agreements (the "Exchange Agreements") with certain holders of the Company's outstanding 8% PIK Toggle Notes. Under the terms of the Exchange Agreements, the Company exchanged \$6.3 million aggregate principal amount of 8% PIK Toggle Notes for 398,638 shares of Class A Common Stock and approximately \$5.1 million in cash, which included accrued and unpaid interest on the Notes. The Company recognized a gain on extinguishment of \$0.5 million, which is net of transaction costs and previously deferred costs related to the 8% PIK Toggle Notes of less than \$0.1 million. Refer to *Note 15, Stockholders' Equity* for details related to the Common Stock.

8.25% Notes

Interest on the 8.25% Notes is payable semi-annually in arrears as of February 28 and August 31 based on a 360-day year consisting of twelve 30-day months. The 8.25% Notes mature on February 28, 2027. As described above, all future interest payment obligations on the 8.25% Notes are included in the carrying value of the 8.25% Notes. As a result, the Company's reported interest expense will be less than its contractual interest payments throughout the term of the 8.25% Notes. As of December 31, 2019, and December 31, 2018, \$6.1 million of interest is recorded as current and classified as *Current Debt* in the consolidated balance sheet.

The 8.25% Notes rank equally in right of payment with all of the Company's existing and future unsubordinated indebtedness other than its Issuer Senior Debt and our Limited Secured Acquisition Debt (each as defined below). The 8.25% Notes rank senior in right of payment to all of the Company's existing and future subordinated indebtedness and to certain limited secured acquisition indebtedness of the Company (the "Limited Secured Acquisition Debt"). The Limited Secured Acquisition Debt includes (i) any indebtedness, the proceeds of which are used to finance all or a portion of an acquisition or similar transaction if any lender's lien is solely limited to the assets acquired in such a transaction and (ii) any indebtedness, the proceeds of which are used to finance all or a portion of the American Centrifuge project or another next generation enrichment technology if any lender's lien is solely limited to such assets, *provided that* a lien securing the 8.25% Notes that is junior with respect to the lien securing such indebtedness will be limited to the assets acquired with such Limited Secured Acquisition Debt.

The 8.25% Notes are subordinated in right of payment to certain indebtedness and obligations of the Company, as described in the 8.25% Notes Indenture (the "Issuer Senior Debt"), including (i) any indebtedness of the Company (inclusive of any indebtedness of Enrichment Corp.) under a future credit facility up to \$50 million with a maximum net borrowing of \$40 million after taking into account any minimum cash balance (unless a higher amount is approved with the consent of the holders of a majority of the aggregate principal amount of the 8.25% Notes then outstanding), (ii) any revolving credit facility to finance inventory purchases and related working capital needs, and (iii) any indebtedness of the Company to Enrichment Corp. under the secured intercompany notes.

The 8.25% Notes are guaranteed on a subordinated and limited basis by, and secured by substantially all of the assets of, Enrichment Corp. The Enrichment Corp. guarantee is a secured obligation and ranks equally in right of payment with all existing and future unsubordinated indebtedness of Enrichment Corp. (other than Designated Senior Claims (as defined below) and Limited Secured Acquisition Debt) and senior in right of payment to all existing and future subordinated indebtedness of Enrichment Corp. and Limited Secured Acquisition Debt. The Enrichment Corp. guarantee is subordinated in right of payment to certain obligations of, and claims against, Enrichment Corp. described in the 8.25% Notes Indenture (collectively, the "Designated Senior Claims"), including obligations and claims:

- under a future credit facility up to \$50 million with a maximum net borrowing of \$40 million after taking into account any minimum cash balance;
- under any revolving credit facility to finance inventory purchases and related working capital needs;
- held by or for the benefit of the Pension Benefit Guaranty Corporation ("PBGC") pursuant to any settlement (including any required funding of pension plans); and
- under surety bonds or similar obligations held by or on behalf of the U.S. government pursuant to regulatory requirements.

The lien securing the Enrichment Corp. guarantee of the 8.25% Notes is junior in priority with respect to the lien securing Limited Secured Acquisition Debt, which is limited to the assets acquired with such Limited Secured Acquisition Debt.

10. LEASES

Centrus leases facilities and equipment under operating leases. Lease expense for operating leases is recognized on a straight-line basis over the lease term. The Company has facility leases with terms greater than 12 months, and the Company records the related asset and obligation at the present value of lease payments over the term. Leases with an initial term of 12 months or less are not recorded on the balance sheet. Refer to *Note 1, Summary of Significant Accounting Policies*, for information regarding the Company's adoption of Topic 842 on January 1, 2019.

Lease assets represent the right to use an underlying asset for the lease term, and lease liabilities represent the obligation to make lease payments arising from the lease. Lease assets exclude lease incentives. Lease terms reflect options to extend or terminate the lease when it is reasonably certain that those options will be exercised. The depreciable life of lease assets and leasehold improvements is limited by the expected lease term. The weighted-average remaining lease term was 3.6 years at December 31, 2019, with maturity dates ranging from July 2021 to September 2027, and the weighted-average discount rate was 12.1%. Lease expense amounted to \$2.7 million for the year ended December 31, 2019. Lease expense was \$3.1 million for the year ended December 31, 2018. Lease expense primarily related to operating leases and for the year ended December 31, 2019 includes a \$0.5 million credit from DOE for true up of prior year lease expense. Other amounts related to short-term lease expense were insignificant. Operating lease expense is included in Cost of Sales, Selling, General and Administrative Expenses and Advance Technology Costs on the Statement of Operations. Cash paid for amounts included in operating cash flows for operating leases was \$2.9 million for the year ended December 31, 2019.

The Company leases facilities and related personal property in Piketon, Ohio from DOE. On May 31, 2019, in connection with the HALEU letter agreement, DOE and the Company amended the lease agreement, which was scheduled to expire by its terms on June 30, 2019. The lease was renewed and extended until May 31, 2022, provided, however, that the lease may be terminated early upon completion of the work under the HALEU Contract. Any facilities, centrifuges or other equipment constructed or installed under contract with DOE will be owned by DOE and may be returned to DOE in an "as is" condition at the end of the lease term, and DOE would be responsible for its D&D. The Company accounted for the amendment as a modification and reassessed its classification. The Company classified the lease as an operating lease as the lease does not contain a transfer of ownership or purchase option, the fair value of the underlying asset cannot be practicably determined, and the economic life of the asset is indeterminate. The remeasurement of the remaining future lease payments through May 31, 2022 resulted in the recording of \$3.8 million of additional lease assets and liabilities related to the modification. The modification resulted in an insignificant impact on the consolidated statement of operations. On October 8, 2019 the DOE notified the Company of an increase in the monthly lease payment beginning with the October 2019 payment. The Company accounted for the amendment as a modification and reassessed its classification. The remeasurement of the remaining future lease payments through May 31, 2022 resulted in the recording of \$1.4 million additional lease assets and liabilities related to the modification.

Centrus had a lease with DOE for centrifuge testing facilities in Oak Ridge, Tennessee through December 2019. In connection with the completion of work performed for D&D of the facility, the Company terminated the lease on September 30, 2019. The Company derecognized the remaining lease asset and related liability of \$0.2 million. There was no gain or loss associated with the termination of the lease.

Operating Lease Assets and Liabilities

The table below presents the lease-related assets and liabilities recorded on the balance sheet (in millions).

_	December 31, 2019	Classification on the Balance Sheet
Lease assets	7.2	Other long-term assets
Lease liabilities:		
Current	2.5	Accounts payable and accrued liabilities
Noncurrent	7.0	Other long-term liabilities
Total lease liabilities\$	9.5	

Maturity of Operating Lease Liabilities

The table below reconciles undiscounted payments for operating leases with terms greater than 12 months to the operating lease liabilities recorded on the balance sheet (in millions).

2020	\$ 3.2
2021	3.2
2022	1.9
2023	1.0
2024	1.0
Thereafter	2.8
Total lease payments	13.1
Less imputed interest	3.6
Present value of lease payments	\$ 9.5

Minimum Lease Payments

Prior to the adoption of Topic 842, future estimated minimum lease payments as of December 31, 2018 for leases with remaining terms in excess of one year were as follows (in millions):

	\$	8.5
Thereafter		3.8
2023		1.0
2022	•	1.0
2021	•	0.9
2020	•	0.9
2019	.\$	0.9

11. FAIR VALUE

Fair value is the price that would be received from selling an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When determining the fair value of assets and liabilities, the following hierarchy is used in selecting inputs, with the highest priority given to Level 1, as these are the most transparent or reliable:

- Level 1 quoted prices for identical instruments in active markets.
- Level 2 quoted prices for similar instruments in active markets; quoted prices for identical or similar
 instruments in markets that are not active; and model-derived valuations in which all significant inputs are
 observable in active markets.
- Level 3 valuations derived using one or more significant inputs that are not observable.

Financial Instruments Recorded at Fair Value (in millions):

_		Decembe	er 31, 2019			December	r 31, 2018	
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets:								
Cash and cash equivalents\$	130.7	\$ —	\$ —	\$ 130.7	\$ 123.1	\$ —	\$ —	\$ 123.1
Deferred compensation asset (a)	1.8	_	_	1.8	1.4	_	_	1.4
Liabilities:								
Deferred compensation obligation (a)\$	1.8	\$ —	\$ —	\$ 1.8	\$ 1.4	\$ —	\$ —	\$ 1.4

(a) The deferred compensation obligation represents the balance of deferred compensation plus net investment earnings. The deferred compensation plan is funded through a rabbi trust. Trust funds are invested in mutual funds for which unit prices are quoted in active markets and are classified within Level 1 of the valuation hierarchy.

There were no transfers between Level 1, 2 or 3 during the periods presented.

Other Financial Instruments

As of December 31, 2019, and December 31, 2018, the balance sheet carrying amounts for *Accounts Receivable*, *Accounts Payable and Accrued Liabilities* (excluding the deferred compensation obligation described above), and *Payables under SWU Purchase Agreements* approximate fair value because of their short-term nature.

The carrying value and estimated fair value of long-term debt are as follows (in millions):

_	December	31, 2019		Decemb	r 31, 2018		
	Carrying Value	· •				Carrying Value	Estimated Fair Value ^(a)
8.25% Notes\$	120.2 (b)	\$ 61.5	_	\$ 126.3	(b) \$ 57.9		
8% PIK Toggle Notes	_	_		26.7	21.8		

⁽a) Based on recent trading prices and bid/ask quotes as of or near the balance sheet date, which are considered Level 2 inputs based on the frequency of trading.

⁽b) The carrying value of the 8.25% Notes consists of the principal balance of \$74.3 million and the sum of current and noncurrent interest payment obligations until maturity. Refer to *Note 9*, *Debt*.

12. PENSION AND POSTRETIREMENT HEALTH AND LIFE BENEFITS

There are approximately 5,000 employees and retirees covered by qualified defined benefit pension plans providing retirement benefits based on compensation and years of service, and approximately 3,100 employees and retirees covered by postretirement health and life benefit plans. DOE retained the obligation for postretirement health and life benefits for workers who retired prior to July 28, 1998. Pursuant to non-qualified supplemental pension plans, Centrus provides certain executive officers additional retirement benefits in excess of qualified plan limits imposed by tax law based on a targeted benefit objective. Employees hired on or after September 1, 2008, who are not covered by a collective bargaining agreement that provides for participation do not participate in a qualified defined benefit pension plan or postretirement health and life benefit plans.

Changes in the projected benefit obligations and plan assets and the funded status of the plans follow:

<u>.</u>	Defined Benef	it Pei	nsion Plans	Postretirement Health and Life Benefit Plans				
(\$ millions)		Dece	December 31,		Year Ended			
	2019	-	2018		2019		2018	
Changes in Benefit Obligations:	7.2.2 0	Φ.	0450	Φ.		Φ.	4505	
Obligations at beginning of period		\$	817.9	\$	151.6	\$	170.7	
Actuarial (gains) losses, net			(50.8)		9.1		(13.1)	
Service costs	3.3		3.4		_		_	
Interest costs	30.3		28.7		6.0		5.8	
Benefits paid	(55.9)		(57.5)		(13.9)		(11.8)	
Lump sum benefits paid	(3.2)		(4.8)		_		_	
Plan amendments	(1.3)		_		_		_	
Administrative expenses paid	(3.3)		(3.1)		_		_	
Obligations at end of period	763.5		733.8		152.8		151.6	
Changes in Plan Assets:								
Fair value of plan assets at beginning of period	563.5		654.6		_		1.8	
Actual return on plan assets	109.3		(40.2)		_		_	
Company contributions	10.8		14.5		13.9		10.0	
Benefits paid	(55.9)		(57.5)		(13.9)		(11.8)	
Lump sum benefits paid	(3.2)		(4.8)		_		_	
Administrative expenses paid	(3.3)		(3.1)		_			
Fair value of plan assets at end of period	621.2		563.5		_		_	
Unfunded status at end of period	\$ (142.3)	\$	(170.3)	\$	(152.8)	\$	(151.6)	
Amounts recognized in assets and liabilities:								
Current liabilities	\$ (0.5)	\$	(1.4)		(14.2)		(15.4)	
Noncurrent liabilities	(141.8)		(168.9)		(138.6)		(136.2)	
-	\$ (142.3)	\$	(170.3)	\$	(152.8)	\$	(151.6)	
Amounts in accumulated other comprehensive income (loss), pretax:								
Prior service cost (credit)	(1.3)	\$	_	\$	(2.3)	\$	(2.4)	
Discount rate used to determine benefit obligations at end of period:	3.3%		4.3%		3.3%		4.3%	

The current liabilities reflect expected contributions for benefit payments for the non-qualified plans and the postretirement health and life benefit plans in the following year.

The discount rates above, rounded to the nearest 0.1%, are the estimated rates at which the benefit obligations could be effectively settled on the measurement date and are based on yields of high quality fixed income investments whose cash flows match the timing and amount of expected benefit payments of the plans.

Plan assets and benefit obligations are remeasured each year as of the balance sheet date resulting in differences between actual and projected results for the year. These actuarial gains and losses are recognized in the statement of operations in the fourth quarter. In addition, an interim remeasurement and recognition of gains or losses may be required for a plan during the year when lump sum payments exceed, or are expected to exceed, the sum of the service cost and interest cost components of the annual net periodic benefit cost for that plan for the current year. There were no interim remeasurements in 2019 and 2018.

The defined benefit pension plans currently allow for a lump sum payment option to (a) active employees who are terminated as a result of Company reductions in force and (b) periodically to terminated vested participants. In March 2019, the lump sum payment option was made permanent to those terminated vested participants who have not yet begun receiving their benefits and have been terminated as a result of a reduction in force by the Company, or due to voluntary termination or involuntary termination, other than involuntary termination as a termination for cause.

Projected benefit obligations are based on actuarial assumptions including possible future increases in compensation. *Accumulated benefit obligations* are based on actuarial assumptions but do not include possible future increases in compensation. Effective August 2013, accrued benefits under the defined benefit pension plans are fixed and no longer increase to reflect changes in compensation or company service. Therefore, the accumulated benefit obligation equaled the projected benefit obligation of \$763.5 million and \$733.8 million as of December 31, 2019 and 2018, respectively. As of December 31, 2019 and 2018, none of Centrus' plans had fair value of plan assets in excess of accumulated benefit obligations.

Components of Net Periodic Benefit Costs and Other Amounts Recognized in Other Comprehensive Income (Loss)

The Company reports service costs for its defined benefit pension plans and its postretirement health and life benefit plans in *Cost of Sales* and *Selling*, *General and Administrative Expenses*. The remaining components of net periodic benefit credits (costs) are reported as *Nonoperating Components of Net Periodic Benefit Expense (Income)*.

_	Defined Benefi	t Pension Plans	 Postretirement Health and Life Benefit Plans					
(in millions)	Year Ended	December 31,	Year Ended December 31,					
-	2019	2018	 2019		2018			
Net Periodic Benefit (Credits) Costs								
Service costs	\$ 3.3	\$ 3.4	\$ _	\$	_			
Interest costs	30.3	28.7	6.0		5.8			
Expected return on plan assets (gains)	(36.4)	(41.0)	_		_			
Amortization of prior service costs (credits), net	_	_	(0.1)		(0.2)			
Actuarial (gains) losses, net	(13.1)	30.4	9.1		(13.1)			
Net periodic benefit (credits) costs	(15.9)	\$ 21.5	\$ 15.0	\$	(7.5)			
Other Changes in Plan Assets and Benefit Obligations Recognized in Other Comprehensive Income (Loss)								
Amortization of prior service (costs) credits, net	\$ —	\$ —	\$ 0.1	\$	0.2			
Prior service cost/(credit)	(1.3)		_					
Total recognized in other comprehensive income (loss), pre-tax	\$ (1.3)	<u> </u>	\$ 0.1	\$	0.2			
Total recognized in net periodic benefit costs (income) and other comprehensive income (loss), pre-tax	\$ (17.2)	\$ 21.5	\$ 15.1	\$	(7.3)			

Net periodic benefit costs include service and interest costs of providing pension benefits that are accrued over the years employees render service. Prior service costs or credits are amortized over the employees' average remaining years of service from age 40 until the date of full benefit eligibility or the average expected future lifetime of all plan participants, as applicable. Participants in the postretirement health and life benefit plans are generally eligible for benefits at retirement after age 50 with 10 years of continuous credited service at the time of retirement.

Effective January 1, 2014, or for certain plan participants formerly represented by a collective bargaining unit, January 1, 2015, plan participants age 65 or older ("post-65") have access to a range of medical plan choices with varying costs and benefits through a Medicare Exchange implemented by the Company. The Company provides an annual stipend for each of the post-65 retirees and post-65 spouses who enroll in the coverage through the exchange. Depending on the level of benefits elected by the participant, the participant may be required to make contributions in excess of the stipend amount.

The transition to the post-65 Medicare Exchange was reflected as a plan amendment that reduced plan obligations by \$6.8 million as of December 31, 2014. This reduction in obligation was recognized in other comprehensive income in 2014 as a prior service credit. The prior service credit is being amortized into net periodic benefit cost as a credit over time. The post-65 Medicare Exchange stipend amount was increased for 2017. This increase in obligation of \$3.6 million as of December 31, 2016, was recognized in other comprehensive income in 2016 as a prior service cost and is being amortized into net periodic benefit cost over time. The post-65 Medicare Exchange stipend amount was increased in 2018, as specified in a settlement agreement with the former collective bargaining unit. The settlement agreement also specifies the addition of catastrophic drug coverage effective January 1, 2019. The benefit enhancement for 2019 has been applied to all post-65 participants regardless of past representation by the collective bargaining agreement. The increase in obligation of \$10.0 million as a result of the settlement agreement was recognized in net periodic benefit costs in 2017 as a plan change resulting from a legal settlement and is reported in *Nonoperating Components of Net Periodic Benefit Expense (Income)*.

The defined benefits pension plans were amended in March 2019 making permanent the option for pensioneligible employees to receive a lump sum payment upon termination, regardless of benefit size, which decreased plan obligations by \$1.3 million. The effect of these plan changes have been added to accumulated other comprehensive income (loss) as an unrecognized prior service cost to be amortized over the average future service of active employees starting in 2020.

Assumptions Used to Determine Net Periodic Benefit Costs

_	Defined Benefit Pension Plans Year Ended December 31,		Postretirement and Life Benefit Pension Plans		
			Year Ended	December 31,	
•	2019	2018	2019	2018	
Discount rate	3.3%	4.3%	3.3%	4.3%	
Expected return on plan assets	6.8%	6.8%	_	_	

The expected return on plan assets is based on the weighted average of long-term return expectations for the composition of the plans' equity and debt securities. Expected returns on equity securities are based on historical long-term returns of equity markets. Expected returns on debt securities are based on the current interest rate environment.

Healthcare cost trend rates used to measure postretirement health benefit obligations follow:

	December 31,	
	2019	2018
Healthcare cost trend rate for the following year	6.0%	6.0%
Long-term rate that the healthcare cost trend rate gradually declines to	5%	5%
Year that the healthcare cost trend rate is expected to reach the long-term rate	2022	2021

A one-percentage-point change in the assumed healthcare cost trend rates would have an effect on the postretirement health benefit obligation and costs as follows:

(in millions)	One-Percentage Point			
		Increase		Decrease
Postretirement health benefit obligation	\$	3.5	\$	(3.0)
Net periodic benefit costs (service and interest cost components only)	\$	0.1	\$	(0.1)

Benefit Plan Assets

Independent advisors manage investment assets of Centrus' defined benefit pension plans and postretirement health and life benefit plans. Centrus has the fiduciary responsibility for reviewing performance of the various investment advisors. The goal of the investment policy of the plans is to maximize portfolio returns within reasonable and prudent levels of risk in order to meet projected liabilities and maintain sufficient cash to make timely payments of all participant benefits. Risk is reduced by diversifying plan assets and following a strategic asset allocation approach. Asset classes and target weights are adjusted periodically to optimize the long-term portfolio risk/return tradeoff, to provide liquidity for benefit payments, and to align portfolio risk with the underlying obligations. The investment policy of the plans prohibits the use of leverage, direct investments in tangible assets, or any investment prohibited by applicable laws or regulations.

The allocation of plan assets between equity and debt securities and the target allocation range by asset category for the defined benefit pension plans follows:

Decembe		
2019	2018	2020 Target
48%	48%	40 - 60%
49%	49%	40 - 60%
3%	3%	0 - 5%
100%	100%	
	48% 49% 3%	48% 48% 49% 49% 3% 3%

Prefunding for the postretirement health and life benefit plans was discontinued in 2012 and the remaining assets were expended in early 2018. Benefit costs of the postretirement health and life benefit plans are funded as costs are incurred.

Plan assets are measured at fair value. Following are the plan investments as of December 31, 2019 and 2018, categorized by the fair value hierarchy levels described in *Note 11, Fair Value Measurements*:

			De	fined Benef	it Pension Pla	ns			
(in millions)	Level 1		Level 2		Leve	13	Total		
_	2019	2018	2019	2018	2019	2018	2019	2018	
U.S. government securities\$	_	\$ —	\$ 32.7	\$ 34.6	\$ - \$	<u> </u>	\$ 32.7	\$ 34.6	
Corporate debt	_	_	121.1	104.7		_	121.1	104.7	
Municipal bonds and non-U.S. government securities	_	_	2.1	2.0	_	_	2.1	2.0	
Mortgage and asset backed securities	_	_	11.0	4.2	_	_	11.0	4.2	
Fair value of investments by hierarchy level\$	_	\$ —	\$ 166.9	\$ 145.5	\$ _ \$		\$ 166.9	\$ 145.5	
Investments measured at NAV (a)							453.5	416.1	
Accrued interest receivable							1.8	1.8	
Unsettled transactions						_	(1.0)	0.1	
Plan assets						<u> </u>	\$ 621.2	\$ 563.5	

(a) Equity, bond and money market investments held in collective trusts are valued based on the net asset value ("NAV") provided by the administrator of the funds. The NAV for each fund is based on the underlying assets owned by the fund, less any expenses accrued against the fund, divided by the number of fund shares outstanding. While the underlying investments are traded on an exchange, the funds are not. Fair values for the collective trust investments are measured using the NAVs as a practical expedient and are not categorized in the fair value hierarchy.

Level 1 assets consist of mutual funds and money market funds having a publicly available NAV.

Level 2 assets include investments in U.S. government agency securities, corporate and municipal debt that are valued based on estimated prices using observable, market-based inputs.

Benefit Plan Cash Flows

The Company expects to contribute \$16.1 million to the qualified defined benefit pension plans, \$0.5 million to the non-qualified defined benefit pension plans and \$14.2 million to the postretirement health and life benefit plans in 2020. There is no required contribution for the postretirement health and life benefit plans under Employee Retirement Income Security Act ("ERISA").

Estimated future benefit plan payments follow (in millions):

	Defined Benefit Pension Plans	Postretirement Health and Life Benefit Plans
2020\$	57.2	\$ 14.2
2021	55.8	13.0
2022	54.1	12.4
2023	52.8	11.9
2024	51.1	11.1
2025 to 2029	236.7	45.4

Other Plans

The Company sponsors a 401(k) defined contribution plan for employees. Employee contributions are matched at established rates. Amounts contributed are invested in a range of investment options available to participants and the funds are administered by an independent trustee. Matching cash contributions by the Company amounted to \$1.7 million in 2019 and \$1.8 million in 2018.

Under the Executive Deferred Compensation Plan, qualified employees may defer compensation on a tax-deferred basis subject to plan limitations. Any matching contributions under the Company's 401(k) plan that are foregone due to annual compensation limitations of the Internal Revenue Code of 1986, as amended (the "Code") are eligible to be received from the Company under the Executive Deferred Compensation Plan, provided that the employee deferred the maximum allowable pre-tax contribution in the 401(k) plan. The Company matching contributions amounted to less than \$0.1 million in 2019 and 2018.

13. STOCK-BASED COMPENSATION

The Company's 2014 Equity Incentive Plan authorizes the issuance of stock options, stock appreciation rights, restricted stock units, restricted stock, performance awards, dividend equivalent rights and other stock-based awards, as well as cash-based awards to employees, officers, directors and other individuals providing services to the Company or its affiliates. The plan authorizes the issuance of up to 1,200,000 shares of Class A Common Stock. As of December 31, 2019, there were approximately 422,000 shares available for future awards, including approximately 120,000 shares associated with awards that were terminated or cancelled without being exercised.

A summary of stock-based compensation costs (credits) follows (in millions):

	Year Ended December 31,			
	2019		2018	
Restricted stock units\$	0.2	\$	0.1	
Stock options	0.1		0.3	
Stock appreciation rights	1.1		_	
Total stock-based compensation costs (credits)\$	1.4	\$	0.4	
Total recognized tax benefit\$		\$	_	

The total recognized tax benefit is reported at the federal statutory rate net of the tax valuation allowance.

Compensation cost for restricted stock units and stock options is measured at the grant date, based on the fair value of the award, and is recognized on a straight-line basis over the requisite service period. As of December 31, 2019, there was \$0.3 million of unrecognized compensation cost, adjusted for actual forfeitures, related to non-vested stock-based payments granted, of which \$0.2 million relates to stock options and \$0.1 million relates to restricted stock units. That cost is expected to be recognized over a weighted-average period of 25 months. There were no stock options granted, exercised, or forfeited during the year ended December 31, 2018.

Stock appreciation rights for participating executives for the three-year period ended December 31, 2018, under the 2016 Executive Incentive Plan were paid in cash in 2019 totaling \$1.0 million. Stock appreciation rights are a component of the 2019 Executive Incentive Plan with incentive awards targeted following the two-year period ending December 31, 2020 and the three-year period ending December 31, 2021. The stock appreciation rights, if awarded, may be payable in common stock, cash or a combination of both at the discretion of the Board of Directors. Compensation cost for stock appreciation rights is re-measured each reporting period based on the trading price of the Company's common stock and is subject to adjustment based on the status of performance against performance goals.

Restricted Stock Units

Non-employee, independent directors are granted restricted stock units as part of their compensation for serving on the Board of Directors. Settlement of these restricted stock units is made in shares of Class A Common Stock only upon the director's retirement or other end of service. The restricted stock units generally vest over one year; however, vesting is accelerated upon (1) the director attaining eligibility for retirement, (2) termination of the director's service by reason of death or disability, or (3) a change in control. As of December 31, 2019, approximately 215,000 shares of restricted stock units could potentially be converted to Class A Common Stock once vested and settled.

The fair value of restricted stock units is determined based on the closing price of Class A Common Stock on the grant date. Compensation cost for restricted stock units is amortized to expense on a straight-line basis over the vesting period.

Stock Options

The intrinsic value of an option, if any, represents the excess of the fair value of the common stock over the exercise price. The fair value of stock option awards is estimated using the Black-Scholes option pricing model, which includes a number of assumptions including Centrus' estimates of stock price volatility, employee stock option exercise behaviors, future dividend payments, and risk-free interest rates.

The expected term of options granted is the estimated period of time from the beginning of the vesting period to the date of expected exercise or other settlement, based on historical exercises and post-vesting terminations. Centrus has estimated the expected term using the simplified method described in SEC Staff Accounting Bulletin No. 107/110, *Share-Based Payment*, due to the lack of historical exercise and post-vesting termination information available for the Company since its reorganization. Future stock price volatility is estimated based on the Company's historical volatility. The risk-free interest rate for the expected option term is based on the U.S. Treasury yield curve in effect at the time of grant. No cash dividends are expected in the foreseeable future and, therefore, an expected dividend yield of zero is used in the option valuation model. The Company recognizes forfeitures as they occur. Compensation expense is recognized for stock option awards that are expected to vest.

Assumptions used in the Black-Scholes option pricing model to value option grants follow. There were no option grants in the year ended December 31, 2018.

_	Year Ended December 31, 2019
Options granted (in thousands)	100
Risk-free interest rate	1.62%
Expected volatility	73%
Expected option life (years)	6.5
Weighted-average grant date fair value	\$2.44

Stock options vest and become exercisable in equal annual installments over a three or four year period and expire ten years from the date of grant. A summary of stock option activity follows:

	Stock Options (thousands)	Weighted Average Exercise Price	Weighted Average Remaining Contractual Life in Years	Aggregate Intrinsic Value (millions)
Outstanding at December 31, 2018	425	\$4.14	6.3	\$—
Granted	100	\$3.65		
Exercised	(7)	\$3.93		
Forfeited/Cancelled	_			
Outstanding at December 31, 2019	518	\$4.02	6.2	\$1.5
Exercisable at December 31, 2019	418	\$4.11	5.3	\$1.2

Stock options outstanding and options exercisable at December 31, 2019, follow:

Stock Exercise Price	Options Outstanding (thousands)	Remaining Contractual Life in Years	Options Exercisable (thousands)
\$5.62	15	4.9	15
\$4.37	300	5.2	300
\$3.90	23	5.6	23
\$3.93	15	5.6	15
\$2.71	50	5.8	50
\$2.68	15	6.4	15
\$3.65	100	9.8	_

14. INCOME TAXES

Income Tax Expense

The components of income tax expense follow (in millions):

	Year Ended December 31,			
_	2019	2018		
Current:				
Federal\$		\$ —		
State and local	0.2	_		
Foreign	0.1	_		
	0.3			
Deferred:				
Federal	_	_		
State and local	_	_		
Foreign	_	_		
Income tax expense\$	0.3	\$ —		

Deferred Taxes

Future tax consequences of temporary differences between the carrying amounts for financial reporting purposes and the Company's estimate of the tax bases of its assets and liabilities result in deferred tax assets and liabilities, as follows (in millions):

	Decem	December 31,			
_	2019		2018		
Deferred tax assets:					
Employee benefits costs\$	65.3	\$	73.6		
Inventory	17.8		11.1		
Property, plant and equipment	182.3		185.9		
Net operating loss and credit carryforwards	190.9		187.1		
Accrued expenses	4.2		0.9		
Long-term debt and financing costs	13.2		15.3		
Lease liability	2.0		_		
Other	0.2		0.2		
Deferred tax assets	475.9		474.1		
Valuation allowance	(459.5)		(456.6)		
Deferred tax assets, net of valuation allowance	16.4	\$	17.5		
Deferred tax liabilities:					
Intangible assets\$	14.7	\$	16.0		
Lease asset	1.5		_		
Prepaid expenses	0.2		1.5		
Deferred tax liabilities\$	16.4	\$	17.5		
<u>\$</u>	_	\$	_		

The valuation allowance reduces the net deferred tax assets to their net realizable value. There is a full valuation allowance against net deferred taxes due to annual operating losses since 2011 and substantial uncertainty to generate future taxable income that would lead to realization of the net deferred tax assets. When a change in the tax rate or tax law has an impact on deferred taxes, we apply the change based on the years in which the deferred taxes are expected to reverse. The Company records the impact of the change in its consolidated financial statements in the period of enactment. The ultimate realization of the net deferred tax assets is dependent upon generating sufficient taxable income in future years when deferred tax assets are recoverable or are expected to reverse.

The Company has federal net operating losses of \$783.3 million generated through December 31, 2017 that currently expire through 2037. In addition, the Company has federal net operating losses and business interest expense carry forwards of \$106.8 million and \$18.5 million, respectively, generated after December 31, 2017, that do not expire. The Company has concluded that a full valuation allowance is needed for all federal net operating losses. In 2014, the federal net operating losses as well as other tax attributes consisting primarily of tax basis in property of approximately \$15.3 million were reduced as a result of Centrus' cancellation of debt income of approximately \$340 million as prescribed by Code Section 108. Centrus also has state net operating losses of \$0.2 million that currently expire through 2038. The deferred tax assets for state net operating losses and state unrealized built-in loss deductions have been reduced as a result of Centrus' tax ownership change and cancellation of debt income in 2014.

Centrus experienced an ownership change as defined under Code Section 382 on September 30, 2014 when it emerged from bankruptcy. Generally, after an ownership change, the use of federal and state net operating loss carryforwards and tax credits generated prior to the ownership change are subject to an annual limitation. However, there is an exception available to qualifying corporations that eliminates the annual limitation. Centrus can utilize this exception for federal purposes, but not for state purposes. The pre-apportioned annual state limitation is \$2.9

million. Centrus also had an unrealized built-in loss as of the ownership change date. To the extent this built-in loss is recognized during the five-year post-ownership change period through certain depreciation and loss deductions, the same annual limitation for loss and tax credit carryforwards also applies generally to a built-in loss when it is recognized, unless the exception applies. Centrus can utilize the same exception for federal purposes when the built-in loss is recognized, but not for state purposes. To the extent the built-in loss is recognized during the five-year post-ownership change period, the same pre-apportioned state limitation will apply so that the combination of loss carryforwards and recognized built-in losses cannot exceed \$2.9 million annually.

Effective Tax Rate

A reconciliation of income taxes calculated based on the federal statutory income tax rate and the effective tax rate follows:

	Year Ended Dec	cember 31,
_	2019	2018
Federal statutory tax rate	21 %	21 %
Valuation allowance against net deferred tax assets	(18)	(15)
State rate changes	1	(6)
Executive compensation	(2)	(1)
State income tax expense, net of federal benefit	(1)	1
Uncertain tax positions	(1)	_
Other non-deductible expenses	(1)	_
Effective tax rate	(1)%	_%

The effective tax rate for the year ended December 31, 2019 includes an increase to the valuation allowance against net deferred tax assets of \$3.1 million, or a change to the effective tax rate of (18)%.

The effective tax rate for the year ended December 31, 2018 includes an increase to the valuation allowance against net deferred tax assets of \$15.9 million, or a change to the effective tax rate of (15)%, and a \$6.0 million decrease to the state deferred tax assets resulting from state rate changes, or a change to the effective tax rate of (6)%.

Uncertain Tax Positions

Accounting standards require that a tax position meet a minimum recognition threshold in order for the related tax benefit to be recognized in the financial statements. The liability for unrecognized tax benefits, included in *Other Long-Term Liabilities*, was \$0.4 million as of December 31, 2019 and \$0.2 million as of December 31, 2018. If recognized, these tax benefits would impact the effective tax rate. As a result of changes to unrecognized tax benefits, the income tax provision (state tax, net of federal benefit) increased \$0.2 million during the year ended December 31, 2019 and decreased \$0.1 million during the year ended December 31, 2018. The liability for unrecognized tax benefits in the table below relates to unrecognized state income tax benefits. Centrus believes that the liability for unrecognized tax benefits will not change significantly in the next 12 months.

A reconciliation of the beginning and ending amount of unrecognized tax benefits follows (in millions):

	Year Ended	Dece	mber 31,
	2019		2018
Balance at beginning of the period	0.2	\$	0.3
Additions to tax positions of current period	0.3		_
Reductions to tax positions of prior years	(0.1)		(0.1)
Balance at end of the period\$	0.4	\$	0.2

Centrus and its subsidiaries file income tax returns with the U.S. government and various states and foreign jurisdictions. As of December 31, 2019, the federal and Maryland statutes of limitation are closed with respect to all tax years through 2015, and the Kentucky statute of limitations is closed with respect to all tax years through 2014.

Centrus recognizes accrued interest related to uncertain tax positions as a component of interest expense. Reversals of previously accrued interest for income taxes is typically offset against interest expense, but if the amount is significant, it is reclassified to interest income in the consolidated statement of operations. Centrus recognizes the increase or decrease of accrued penalties for income taxes as a component of selling, general and administrative expense in the consolidated statement of operations.

The impact of accrued interest and penalties for income taxes in the consolidated statement of operations was a reduction to expenses of less than \$0.1 million for the years ended December 31, 2019 and 2018. Accrued interest and penalties for income taxes, included as a component of *Other Long-Term Liabilities*, totaled less than \$0.1 million as of December 31, 2019 and 2018.

15. NET INCOME (LOSS) PER COMMON SHARE

Basic net income (loss) per common share is calculated by dividing income (loss) allocable to common stockholders by the weighted average number of shares of common stock outstanding during the period. In calculating diluted net income (loss) per common share, the number of shares is increased by the weighted average number of potential shares related to stock compensation awards. No dilutive effect is recognized in a period in which a net loss has occurred. The weighted average number of common and common equivalent shares used in the calculation of basic and diluted income (loss) per common share are as follows:

	Year I Decem		
	2019		2018
Numerator (in millions):			
Net loss\$	(16.5)	\$	(104.1)
Preferred stock dividends - undeclared and cumulative	7.8		7.8
Net loss allocable to common stockholders\$	(24.3)	\$	(111.9)
Denominator (in thousands):	0.566		0.151
Average common shares outstanding - basic	9,566		9,151
Potentially dilutive shares related to stock options and restricted stock units (a)		_	
Average common shares outstanding - diluted	9,566	_	9,151
Net loss per common share (in dollars) - basic and diluted:	(2.54)	\$	(12.23)
(a) Common stock equivalents excluded from the diluted calculation as a result of a net loss in the period (in thousands)	67		23
Options outstanding and considered anti-dilutive as their exercise price exceeded the average share market price (in thousands)	352		360

16. STOCKHOLDERS' EQUITY

Common Stock

The Company's certificate of incorporation authorizes 20,000,000 shares of preferred stock, par value \$1.00 per share, 70,000,000 shares of Class A common stock, \$0.10 par value per share (the "Class A Common Stock") and 30,000,000 shares of Class B common stock, \$0.10 par value per share (the "Class B Common Stock," and together with the Class A Common Stock, the "Common Stock"). The Company has issued 9,464,889 shares of Common Stock, consisting of 8,347,427 shares of Class A Common Stock and 1,117,462 shares of Class B Common Stock.

On December 6, 2018, Centrus issued 398,638 shares of Class A Common Stock with a \$0.10 par value, as part of the securities exchange described in *Note 9, Debt*. The Class A Common Stock is recorded on the consolidated balance sheet at fair value less transaction costs, or \$0.8 million, as of December 31, 2019.

Shares of Class B Common Stock that are sold in the market are automatically converted to shares of Class A Common Stock. In 2019, a total of 288,620 shares of Class B Common Stock were sold in the market and converted to shares of Class A Common Stock.

The Company has reserved 1,200,000 shares of Class A Common Stock under its management incentive plan, of which approximately 422,000 shares are available for future awards as of December 31, 2019. Refer to *Note 13*, *Stock-Based Compensation*, for additional information.

The Class A Common Stock trades under the symbol "LEU" on the NYSE American trading platform.

The Class B Common Stock was issued to Toshiba America Nuclear Energy Corporation ("Toshiba") and Babcock & Wilcox Investment Company ("B&W") and has the same rights, powers, preferences and restrictions and ranks equally in all matters with the Class A Common Stock, except voting. Holders of Class B Common Stock are entitled to elect, in the aggregate, two members of the Board of Directors of the Company, subject to certain holding requirements.

Series B Preferred Stock

On February 14, 2017, Centrus issued 104,574 shares of Series B Preferred Stock as part of the securities exchange described in *Note 9, Debt*. The issuance of the Series B Preferred Stock was a non-cash financing transaction. The Series B Preferred Stock has a par value of \$1.00 per share and a liquidation preference of \$1,000 per share (the "Liquidation Preference"). The Series B Preferred Stock is recorded on the consolidated balance sheet at fair value less transaction costs, or \$4.6 million, as of December 31, 2019, and December 31, 2018.

Holders of the Series B Preferred Stock are entitled to cumulative dividends of 7.5% per annum of the Liquidation Preference. Centrus is obligated to pay cash dividends on the Series B Preferred Stock in an amount equal to the Liquidation Preference to the extent that dividends are declared by the Board and:

- (a) its pension plans and Enrichment Corp.'s pension plans are at least 90% funded on a variable rate premium calculation in the current plan year;
- (b) its net income calculated in accordance with GAAP (excluding the effect of pension remeasurement) for the immediately preceding fiscal quarter exceeds \$7.5 million;
- (c) its free cash flow (defined as the sum of cash provided by (used in) operating activities and cash provided by (used in) investing activities) for the immediately preceding four fiscal quarters exceeds \$35 million;
- (d) the balance of cash and cash equivalents calculated in accordance with GAAP on the last day of the immediately preceding quarter would exceed \$150 million after pro forma application of the dividend payment; and
- (e) dividends may be legally paid under Delaware law.

Centrus has not met these criteria for the periods from issuance through December 31, 2019, and has not declared, accrued or paid dividends on the Series B Preferred Stock as of December 31, 2019. Dividends on the Series B Preferred Stock are cumulative to the extent not paid at any quarter-end, whether or not declared and whether or not there are assets of the Company legally available for the payment of such dividends in whole or in part. As of December 31, 2019, the Series B Preferred Stock has an aggregate liquidation preference of \$127.2 million including accumulated dividends of \$22.6 million. As of December 31, 2018, the Series B Preferred Stock had an aggregate liquidation preference of \$119.3 million, including accumulated dividends of \$14.7 million.

Outstanding shares of the Series B Senior Preferred Stock are redeemable at the Company's option, in whole or in part, for an amount of cash equal to the Liquidation Preference, plus an amount equal to the accrued and unpaid dividends, if any, whether or not declared, through date of redemption.

Rights Agreement

On April 6, 2016 (the "Effective Date"), the Company's Board of Directors (the "Board") adopted a Section 382 Rights Agreement, which was amended on February 14, 2017 to exclude acquisitions of the Series B Preferred Stock issued as part of the exchange offer and consent solicitation from the definition of "Common Shares" in connection with the settlement and completion of the exchange offer and consent solicitation (the "Rights Agreement"). The Board adopted the Rights Agreement in an effort to protect shareholder value by, among other things, attempting to protect against a possible limitation on the Company's ability to use its net operating loss carryforwards and other tax benefits, which may be used to reduce potential future income tax obligations.

In connection with the adoption of the Rights Agreement, the Board declared a dividend of one preferred-share-purchase-right for each share of the Company's Class A Common Stock and Class B Common Stock outstanding as of the Effective Date. The rights initially trade together with the common stock and are not exercisable. In the absence of further action by the Board, the rights would generally become exercisable and allow a holder to acquire shares of a new series of the Company's preferred stock if any person or group acquires 4.99% or more of the outstanding shares of the Company's common stock, or if a person or group that already owns 4.99% or more of the Company's Class A Common Stock acquires additional shares representing 0.5% or more of the outstanding shares of the Company's Class A Common Stock. The rights beneficially owned by the acquirer would become null and void, resulting in significant dilution in the ownership interest of such acquirer.

The Board may exempt any acquisition of the Company's common stock from the provisions of the Rights Agreement if it determines that doing so would not jeopardize or endanger the Company's use of its tax assets or is otherwise in the best interests of the Company. The Board also has the ability to amend or terminate the Rights Agreement prior to a triggering event.

On April 3, 2019, the Board approved and the Company entered into a Second Amendment to the Section 382 Rights Agreement (the "Second Amendment"), which amends the Rights Agreement. The Second Amendment, among other things, (i) decreased the purchase price for each one one-thousandth (1/1000th) of a share of the Company's Series A Participating Cumulative Preferred Stock, par value \$1.00 per share, from \$26.00 to \$18.00 and (ii) extended the Final Expiration Date (as defined in the Rights Agreement) from April 5, 2019 to April 5, 2022.

Shares Outstanding

Changes in the number of shares outstanding are as follows:

	Preferred Stock, Series B	Common Stock, Class A	Common Stock, Class B
Balance at December 31, 2017	104,574	7,632,669	1,406,082
Issuance of Class A Common Stock	_	398,638	_
Balance at December 31, 2018	104,574	8,031,307	1,406,082
Issuance of Class A Common Stock	_	27,500	_
Conversion of Common Stock from Class B to Class A	_	288,620	(288,620)
Balance at December 31, 2019	104,574	8,347,427	1,117,462

17. COMMITMENTS AND CONTINGENCIES

Commitments under SWU Purchase Agreements

TENEX

A major supplier of SWU to the Company is the Russian government entity TENEX, Joint-Stock Company ("TENEX"). Under a 2011 agreement with TENEX, as amended, (the "Russian Supply Agreement"), the Company purchases SWU contained in LEU received from TENEX, and the Company delivers natural uranium to TENEX for the LEU's uranium component. The LEU that the Company obtains from TENEX under the agreement is subject to quotas and other restrictions applicable to commercial Russian LEU.

The Russian Supply Agreement was originally signed with commitments through 2022 but was modified in 2015 to give the Company the right to reschedule certain quantities of SWU of the original commitments into the period 2023 and beyond, in return for the purchase of additional SWU in those years. The Company has exercised this right to reschedule in each year through December 31, 2018. If the Company exercises this right to reschedule in full during the remaining years of the contract's original term, the Company will have a rescheduled post-2022 purchase commitment through 2028.

The Russian Supply Agreement provides that the Company must pay for all SWU in its minimum purchase obligation each year, even if it fails to submit orders for such SWU. In such a case, the Company would pay for the SWU but have to take the unordered SWU in the following year.

Pricing terms for SWU under the Russian Supply Agreement are based on a combination of market-related price points and other factors. This formula was subject to an adjustment at the end of 2018 that reduced the unit costs of SWU under this contract in 2019 and for the duration of the contract.

Orano

On April 27, 2018, the Company entered into an agreement (the "Orano Supply Agreement") with Orano Cycle ("Orano") for the long-term supply to the Company of SWU contained in LEU, nominally commencing in 2023. Under the Orano Supply Agreement, the Company purchases SWU contained in LEU received from Orano, and the Company delivers natural uranium to Orano for the natural uranium feed material component of LEU. The Company may elect to begin to accept deliveries as early as 2021 or to defer the commencement of purchases until 2024 and has the option to extend the six-year purchase period for an additional two years. The Orano Supply Agreement provides significant flexibility to adjust purchase volumes, subject to annual minimums and maximums in fixed amounts that vary year by year. The pricing for the SWU purchased by the Company is determined by a

formula that uses a combination of market-related price points and other factors, and is subject to certain floors and ceilings. Prices are payable in a combination of U.S. dollars and euros.

Milestones Under the 2002 DOE-USEC Agreement

The Company and DOE signed an agreement dated June 17, 2002, as amended (the "2002 DOE-USEC Agreement"), pursuant to which the parties made long-term commitments directed at resolving issues related to the stability and security of the domestic uranium enrichment industry. DOE consented to the assumption by Centrus of the 2002 DOE-USEC Agreement and other agreements between the Company and DOE subject to an express reservation of all rights, remedies and defenses by DOE and the Company under those agreements. The 2002 DOE-USEC Agreement requires Centrus to develop, demonstrate and deploy advanced enrichment technology in accordance with milestones, including the deployment of a commercial American Centrifuge Plant, and provides for remedies in the event of a failure to meet a milestone under certain circumstances including terminating the 2002 DOE-USEC Agreement, revoking Centrus' access to DOE's centrifuge technology that is required for the success of the Company's ongoing work with the American Centrifuge technology, requiring Centrus to transfer certain rights in the American Centrifuge technology and facilities to DOE, and requiring Centrus to reimburse DOE for certain costs associated with the American Centrifuge technology. The 2002 DOE-USEC Agreement provides that if a delaying event beyond the control and without the fault or negligence of Centrus occurs that could affect Centrus' ability to meet the American Centrifuge Plant milestone under the 2002 DOE-USEC Agreement, DOE and the Company will jointly meet to discuss in good faith possible adjustments to the milestones as appropriate to accommodate the delaying event. The assumption of the 2002 DOE-USEC Agreement provided for in the plan of reorganization in the Company's 2014 Chapter 11 bankruptcy (now completed) did not affect the ability of either party to assert all rights, remedies and defenses under the agreement and all such rights, remedies and defenses are specifically preserved and all-time limits tolled expressly including all rights, remedies and defenses and time limits relating to any missed milestones. DOE and the Company have agreed that all rights, remedies and defenses of the parties with respect to any missed milestones and all other matters under the 2002 DOE-USEC Agreement continue to be preserved, and that the time limits for each party to respond to any missed milestones continue to be tolled.

Legal Matters

From time to time, the Company is involved in various pending legal proceedings, including the pending legal proceedings described below.

On August 30, 2013, the Company submitted a claim to DOE under the Contract Disputes Act for payment of \$42.8 million, representing DOE's share of pension and postretirement benefits costs related to the transition of Portsmouth site employees to DOE's D&D contractor. On August 27, 2014, the DOE contracting officer denied the Company's claim. As a result, the Company filed an appeal of the decision in the U.S. Court of Federal Claims in January 2015. Centrus believes that DOE is responsible for a significant portion of any pension and postretirement benefit costs associated with the transition of employees at Portsmouth. The receivable for DOE's share of pension and postretirement benefits costs has a full valuation allowance due to the lack of a resolution with DOE and uncertainty regarding the amounts owed and the timing of collection. While proceeding with litigation, the Company is still pursuing settlement.

On May 26, 2019, the Company, Enrichment Corp., and five other DOE contractors who have operated facilities at the Portsmouth, Ohio, Gaseous Diffusion Plant site (including, in the case of the Company, the American Centrifuge Plant site located on the premises (the "Portsmouth GDP" site) were named as defendants in a class action complaint filed by Ursula McGlone, Jason McGlone, Julia Dunham, and K.D. and C.D., minor children by and through their parent and natural guardian Julia Dunham (collectively, the "McGlone Plaintiffs") in the U.S. District Court in the Southern District of Ohio, Eastern Division. The complaint seeks damages for alleged off-site contamination allegedly resulting from activities on the Portsmouth GDP site. The McGlone Plaintiffs are seeking to represent a class of (i) all current or former residents within a seven-mile radius of the Portsmouth GDP site and (ii) all students and their parents at the Zahn's Corner Middle School from 1993-present. The Company believes that its operations at the Portsmouth GDP site were fully in compliance with the Nuclear Regulatory Commission's

regulations. Further the Company believes that any such liability should be covered by indemnification under the Price-Anderson Act. The Company and Enrichment Corp. have provided notifications to DOE required to invoke indemnification under the Price-Anderson Act and other contractual provisions.

On June 28, 2019, the Company, Enrichment Corp. and four other DOE contractors who have operated facilities at the Portsmouth GDP site were named as defendants in a class action complaint filed by Ray Pritchard and Sharon Melick (collectively, the "Pritchard Plaintiffs") in the U.S. District Court in the Southern District of Ohio, Eastern Division. The complaint seeks damages for alleged off-site contamination allegedly resulting from activities on the Portsmouth GDP site. The Pritchard Plaintiffs are seeking to represent a class of all current or former residents within a seven-mile radius of the Portsmouth GDP site. The Company believes that its operations at the Portsmouth GDP site were fully in compliance with the Nuclear Regulatory Commission's regulations. Further the Company believes that any such liability should be covered by indemnification under the Price-Anderson Act. The Company and Enrichment Corp. have provided notifications to DOE required to invoke indemnification under the Price-Anderson Act and other contractual provisions.

On November 27, 2019, the Company, Enrichment Corp. and six other DOE contractors who have operated facilities at the Portsmouth GDP site were named as defendants in a class action complaint filed by James Matthews, Jennifer Brownfield Clark, Joanne Ross, the Estate of A.R., and others similarly situated (the "Matthews Plaintiffs"), in the Common Pleas Court of Pike County, Ohio. The complaint seeks injunctive relief, compensatory damages, statutory damages, and any other relief allowed by law for alleged off-site contamination allegedly resulting from activities on the Portsmouth GDP site. The Matthews Plaintiffs expressly contend that the ongoing and continuous releases that injured the Plaintiffs and Class Members are not "nuclear incidents" as that term is defined in the Price-Anderson Act, but rather "freestanding state law claims concerning traditional-style state regulation." The Company believes that its operations at the Portsmouth GDP site were fully in compliance with the Nuclear Regulatory Commission's regulations. Further the Company believes that any such liability should be covered by indemnification under the Price-Anderson Act. The Company and Enrichment Corp. have provided notifications to DOE required to invoke indemnification under the Price-Anderson Act and other contractual provisions.

On October 11, 2018, the Company's subsidiaries, Enrichment Corp. and American Centrifuge Enrichment, LLC ("ACE", together with Enrichment Corp., the "Company Subsidiaries") filed proofs of claim in the U.S. Bankruptcy Court for the Northern District of Ohio (the "Bankruptcy Court") against each of FirstEnergy Nuclear Operating Company ("FENOC"), FirstEnergy Nuclear Generation, LLC ("FENG," and together with FENOC, the "FirstEnergy Contract Parties"), FirstEnergy Solutions Corp. ("FES") and FirstEnergy Generation, LLC ("FG"). The claims relate to damages arising from the rejection and breach of a long-term contract between the Company Subsidiaries and the FirstEnergy Contract Parties that was approved by the Bankruptcy Court and made effective as of July 26, 2018. The proofs of claim filed by the Company Subsidiaries include claims against the FirstEnergy Contract Parties based on their liability as parties to the contract that was rejected and breached. The proofs of claim filed by the Company Subsidiaries also include claims against FES and FG based on their liability under guaranties they issued that may obligate FES and FG to satisfy the rejection and breach of contract damages claims.

On November 15, 2019, FENOC, FENG, FES and FG (collectively, the "FirstEnergy Debtors") filed objections to the Company Subsidiaries' claims in the Bankruptcy Court. No decision on the claims has yet been reached by the Bankruptcy Court. The Company Subsidiaries and the FirstEnergy Debtors have submitted cross motions for summary judgment on the issue of whether the guaranties apply. On March 13, 2020, the Bankruptcy Court ruled in favor of the FirstEnergy Debtors on their motion, finding that the guaranties did not apply to the Company Subsidiaries' claims. The Company is considering its appeal rights. The ruling does not apply to the Company Subsidiaries' claims against the FirstEnergy Contract Parties.

Centrus is subject to various legal proceedings and claims, either asserted or unasserted, which arise in the ordinary course of business. While the outcome of these claims cannot be predicted with certainty, other than the above, Centrus does not believe that the outcome of any of these legal matters, individually and in the aggregate, will have a material adverse effect on its cash flows, results of operations or consolidated financial condition.

18. ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

The sole component of accumulated other comprehensive income (loss) ("AOCI") relates to activity in the accounting for pension and postretirement health and life benefit plans. The amortization of prior service costs (credits) are reclassified from AOCI and included in the computation of net periodic benefit cost. In 2019, the effect of pension plan changes related to lump sum payment options has been added to AOCI as an unrecognized prior service cost to be amortized over the average future service of active employees starting in 2020. For further details, refer to *Note 12, Pension and Postretirement Health and Life Benefits*.

19. REVENUE BY GEOGRAPHIC AREA, MAJOR CUSTOMERS AND SEGMENT INFORMATION

Revenue by customer location, including customers in a foreign country representing 10% or more of total revenue, follows (in millions):

	Year Ended December 31,					
	2019		2018			
United States	\$ 152.4	\$	141.3			
Foreign:						
Japan	23.4		*			
Belgium	21.5		35.2			
Other	12.4		16.5			
Total foreign	57.3		51.7			
Total revenue	\$ 209.7	\$	193.0			

^{*} less than 10%

In 2019, the Company's 10 largest customers represented approximately 95% of total revenue and its three largest customers represented approximately 56% of total revenue. In the Company's LEU segment, revenue from Florida Power and Light, Dominion Energy South Carolina, Tohoku Electric Power Company, Inc. and Synatom represented approximately 27%, 12%, 11%, 10%, respectively, of total revenue in 2019. In 2018, the Company's 10 largest customers represented approximately 85% of total revenue and its three largest customers represented approximately 52% of total revenue. In the Company's LEU segment, revenue from Florida Power and Light, Synatom, and South Carolina Electric & Gas represented approximately 21%, 18%, 13%, respectively, of total revenue in 2018. In the Company's technical solutions segment, the U.S. government and its contractors represented approximately 19% of total revenue in 2019 and 12% in 2018, respectively. No other customer represented more than 10% of total revenue in 2019 or 2018.

Centrus has two reportable segments: the LEU segment with two components, SWU and uranium, and the technical solutions segment. The LEU segment includes sales of the SWU component of LEU, sales of both the SWU and uranium components of LEU, and sales of uranium. The technical solutions segment includes revenue and cost of sales for work that Centrus performs under the HALEU Contract. The technical solutions segment also includes limited services provided by Centrus to DOE and its contractors at the Piketon facility. Gross profit is Centrus' measure for segment reporting. There were no intersegment sales in the periods presented.

The following table presents the Company's segment information (in millions):

	Year Ended December 31,					
	2019		2018			
Revenue						
LEU segment:						
Separative work units\$	123.7	\$	130.6			
Uranium	45.7		33.8			
Total	169.4		164.4			
Technical solutions segment	40.3		28.6			
Total revenue\$	209.7	\$	193.0			
Segment Gross Profit (Loss)						
LEU segment\$	50.8	\$	(23.3)			
Technical solutions segment	(18.3)		5.4			
Gross profit (loss)\$	32.5	\$	(17.9)			

The Company's total assets are not presented for each reportable segment as they are not reviewed by, nor otherwise regularly provided to, the chief operating decision maker. Centrus' long-term or long-lived assets, which include property, plant and equipment and other assets reported on the consolidated balance sheet, were located in the United States as of December 31, 2019, and December 31, 2018.

20. QUARTERLY RESULTS OF OPERATIONS (Unaudited)

(in millions, except per share data)

				2019				
	1st Qtr.	2nd Qtr.	3	rd Qtr.	4	th Qtr.		Year
Revenue	38.7	\$ 10.6	\$	104.7	\$	55.7	\$	209.7
Cost of sales	44.2	14.9		69.2		48.9		177.2
Gross profit (loss)	(5.5)	(4.3)		35.5		6.8		32.5
Advanced technology costs	6.6	5.1		1.3		1.6		14.6
Selling, general and administrative	8.1	7.7		8.7		9.2		33.7
Amortization of intangible assets	1.1	1.2		1.8		2.4		6.5
Special charges (credits) for workforce reductions	(0.1)	(2.9)		0.8		0.3		(1.9)
Gain on sales of assets	(0.4)	(0.1)		(0.2)	_		_	(0.7)
Operating income (loss)	(20.8)	(15.3)		23.1		(6.7)		(19.7)
Nonoperating components of net periodic benefit expense (income)	(0.1)	_		(0.1)		(4.1)		(4.3)
Interest expense	1.0	1.0		0.9		0.1		3.0
Investment income	(0.7)	(0.7)		(0.5)		(0.3)		(2.2)
Income tax (benefit) expense	(0.1)	_				0.4		0.3
Net income (loss)	(20.9)	\$ (15.6)	\$	22.8	\$	(2.8)	\$	(16.5)
Preferred stock dividends - undeclared and cumulative	2.0	2.0		1.9		1.9		7.8
Net income (loss) allocable to common stockholders	(22.9)	\$ (17.6)	\$	20.9	\$	(4.7)	\$	(24.3)
Basic	/			2.18 2.17	\$ \$	(0.49) (0.49)		(2.54) (2.54)
				2018				
	1st Qtr.	2nd Qtr.	3	2018 rd Qtr.	4	th Qtr.		Year
Revenue	1st Qtr. 35.7	2nd Qtr. \$ 39.4		2018 rd Qtr. 34.1	_	83.8	\$	Year 193.0
Revenue Cost of sales	\$ 35.7			rd Qtr.	_		\$	
	\$ 35.7	\$ 39.4	\$	rd Qtr. 34.1	_	83.8	\$	193.0
Cost of sales	35.7 41.3	\$ 39.4 49.8	\$	rd Qtr. 34.1 26.3	_	83.8 93.5	\$	193.0 210.9
Cost of sales	35.7 41.3 (5.6)	\$ 39.4 49.8 (10.4)	\$	7.8	_	83.8 93.5 (9.7)	\$	193.0 210.9 (17.9)
Cost of sales Gross profit (loss) Advanced technology costs	35.7 41.3 (5.6) 7.7	\$ 39.4 49.8 (10.4) 5.7	\$	34.1 26.3 7.8 5.8	_	83.8 93.5 (9.7) 6.9	\$	193.0 210.9 (17.9) 26.1
Cost of sales	\$ 35.7 41.3 (5.6) 7.7 11.2	\$ 39.4 49.8 (10.4) 5.7 9.7	\$	7.8 5.8 8.8	_	83.8 93.5 (9.7) 6.9 10.2	\$	193.0 210.9 (17.9) 26.1 39.9
Cost of sales Gross profit (loss) Advanced technology costs Selling, general and administrative Amortization of intangible assets	\$ 35.7 41.3 (5.6) 7.7 11.2 1.3	\$ 39.4 49.8 (10.4) 5.7 9.7 1.5	\$	34.1 26.3 7.8 5.8 8.8 1.7	_	83.8 93.5 (9.7) 6.9 10.2 2.1	\$	193.0 210.9 (17.9) 26.1 39.9 6.6
Cost of sales	\$ 35.7 41.3 (5.6) 7.7 11.2 1.3 0.6	\$ 39.4 49.8 (10.4) 5.7 9.7 1.5 0.3	\$	34.1 26.3 7.8 5.8 8.8 1.7	_	83.8 93.5 (9.7) 6.9 10.2 2.1	\$	193.0 210.9 (17.9) 26.1 39.9 6.6 2.2 (0.3)
Cost of sales	\$ 35.7 41.3 (5.6) 7.7 11.2 1.3 0.6 (0.1)	\$ 39.4 49.8 (10.4) 5.7 9.7 1.5 0.3 (0.2)	\$	7.8 5.8 8.8 1.7 0.6	_	83.8 93.5 (9.7) 6.9 10.2 2.1 0.7	\$	193.0 210.9 (17.9) 26.1 39.9 6.6 2.2 (0.3) (92.4)
Cost of sales	\$ 35.7 41.3 (5.6) 7.7 11.2 1.3 0.6 (0.1) (26.3)	\$ 39.4 49.8 (10.4) 5.7 9.7 1.5 0.3 (0.2) (27.4)	\$	7.8 5.8 8.8 1.7 0.6 — (9.1)	\$	83.8 93.5 (9.7) 6.9 10.2 2.1 0.7 — (29.6) (0.5)	\$	193.0 210.9 (17.9) 26.1 39.9 6.6 2.2 (0.3) (92.4) (0.5)
Cost of sales	\$ 35.7 41.3 (5.6) 7.7 11.2 1.3 0.6 (0.1) (26.3) — (1.6)	\$ 39.4 49.8 (10.4) 5.7 9.7 1.5 0.3 (0.2) (27.4) — (1.7)	\$	7.8 5.8 8.8 1.7 0.6 — (9.1) — (1.6)	\$	83.8 93.5 (9.7) 6.9 10.2 2.1 0.7 — (29.6) (0.5)	\$	193.0 210.9 (17.9) 26.1 39.9 6.6 2.2 (0.3) (92.4) (0.5)
Cost of sales	\$ 35.7 41.3 (5.6) 7.7 11.2 1.3 0.6 (0.1) (26.3) — (1.6) 1.0	\$ 39.4 49.8 (10.4) 5.7 9.7 1.5 0.3 (0.2) (27.4) — (1.7) 1.0	\$	7.8 5.8 8.8 1.7 0.6 — (9.1) — (1.6) 1.0	\$	83.8 93.5 (9.7) 6.9 10.2 2.1 0.7 — (29.6) (0.5) 15.5 1.1	\$	193.0 210.9 (17.9) 26.1 39.9 6.6 2.2 (0.3) (92.4) (0.5) 10.6 4.1
Cost of sales	\$ 35.7 41.3 (5.6) 7.7 11.2 1.3 0.6 (0.1) (26.3) — (1.6) 1.0 (0.6)	\$ 39.4 49.8 (10.4) 5.7 9.7 1.5 0.3 (0.2) (27.4) — (1.7) 1.0 (0.6)	\$	7.8 5.8 8.8 1.7 0.6 — (9.1) — (1.6)	\$	83.8 93.5 (9.7) 6.9 10.2 2.1 0.7 — (29.6) (0.5) 15.5 1.1 (0.6)	\$	193.0 210.9 (17.9) 26.1 39.9 6.6 2.2 (0.3) (92.4) (0.5)
Cost of sales	\$ 35.7 41.3 (5.6) 7.7 11.2 1.3 0.6 (0.1) (26.3) — (1.6) 1.0 (0.6) (0.1)	\$ 39.4 49.8 (10.4) 5.7 9.7 1.5 0.3 (0.2) (27.4) — (1.7) 1.0 (0.6) —	\$	7.8 5.8 8.8 1.7 0.6 — (9.1) — (1.6) 1.0 (0.7)	\$	83.8 93.5 (9.7) 6.9 10.2 2.1 0.7 — (29.6) (0.5) 15.5 1.1 (0.6) 0.1		193.0 210.9 (17.9) 26.1 39.9 6.6 2.2 (0.3) (92.4) (0.5) 10.6 4.1 (2.5)
Cost of sales	\$ 35.7 41.3 (5.6) 7.7 11.2 1.3 0.6 (0.1) (26.3) — (1.6) (0.6) (0.1) \$ (25.0)	\$ 39.4 49.8 (10.4) 5.7 9.7 1.5 0.3 (0.2) (27.4) — (1.7) 1.0 (0.6) — \$ (26.1)	\$	7.8 34.1 26.3 7.8 5.8 8.8 1.7 0.6 — (9.1) — (1.6) 1.0 (0.7) — (7.8)	\$	83.8 93.5 (9.7) 6.9 10.2 2.1 0.7 — (29.6) (0.5) 15.5 1.1 (0.6) 0.1 (45.2)		193.0 210.9 (17.9) 26.1 39.9 6.6 2.2 (0.3) (92.4) (0.5) 10.6 4.1 (2.5) —
Cost of sales	35.7 41.3 (5.6) 7.7 11.2 1.3 0.6 (0.1) (26.3) — (1.6) 1.0 (0.6) (0.1) \$\frac{1}{2}\$\$ (25.0) 1.9	\$ 39.4 49.8 (10.4) 5.7 9.7 1.5 0.3 (0.2) (27.4) — (1.7) 1.0 (0.6) — \$ (26.1) 2.0	\$	7.8 5.8 8.8 1.7 0.6 — (9.1) — (1.6) 1.0 (0.7)	\$ 	83.8 93.5 (9.7) 6.9 10.2 2.1 0.7 — (29.6) (0.5) 15.5 1.1 (0.6) 0.1	<u> </u>	193.0 210.9 (17.9) 26.1 39.9 6.6 2.2 (0.3) (92.4) (0.5) 10.6 4.1 (2.5)

The calculation of net income (loss) per share on a dilutive basis is provided in *Note 15*, *Net Income (Loss) Per Share*. No dilutive effect is recognized in periods in which a net loss has occurred or in which the assumed conversion effect of options or convertible securities is anti-dilutive.

21. SUBSEQUENT EVENT

On March 11, 2020, the World Health Organization declared the novel strain of coronavirus (COVID-19) a global pandemic and recommended containment and mitigation measures worldwide. As of the date of this filing, our LEU segment operations have not been affected and we are working with our suppliers, fabricators and customers to monitor the situation closely. Furthermore, other than restrictions on a limited number of our employees at the Piketon, Ohio facility, our Technical Solutions segment operations, including the HALEU contract, have not been significantly affected. However, we cannot reasonably estimate the length or severity of this pandemic, or the extent to which the disruption may materially impact our consolidated financial position, consolidated results of operations, and consolidated cash flows in fiscal 2020.