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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM S-3  
REGISTRATION STATEMENT**  
*under*  
**THE SECURITIES ACT OF 1933**

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**AK STEEL HOLDING CORPORATION**  
(Exact name of registrant as specified in its charter)

**AK STEEL CORPORATION**  
(Exact name of registrant as specified in its charter)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

31-1401455  
(I.R.S. Employer  
Identification Number)

9227 Centre Pointe Drive  
West Chester, Ohio 45069  
(513) 425-5000

(Address, including zip code, and telephone number, including  
area code, of registrants' principal executive offices)

Delaware  
(State or other jurisdiction of  
incorporation or organization)

31-1267098  
(I.R.S. Employer  
Identification Number)

9227 Centre Pointe Drive  
West Chester, Ohio 45069  
(513) 425-5000

(Address, including zip code, and telephone number, including  
area code, of registrants' principal executive offices)

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Joseph C. Alter  
Vice President, General Counsel and Corporate Secretary  
AK Steel Holding Corporation  
9227 Centre Pointe Drive  
West Chester, Ohio 45069  
(513) 425-5000

(Name, address, including zip code, and telephone number, including area code, of agent for service)

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*Copies to:*  
Brian S. Duba  
Senior Corporate Counsel and Chief Compliance Officer  
AK Steel Holding Corporation  
9227 Centre Pointe Drive  
West Chester, Ohio  
(513) 425-5000

Faiza N. Rahman  
Weil, Gotshal & Manges LLP  
767 Fifth Avenue  
New York, New York 10153  
(212) 310-8000

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**Approximate date of commencement of proposed sale to the public:** From time to time after the effective date of this Registration Statement as determined by the Registrants.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

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If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting 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	<input checked="" type="checkbox"/>	Accelerated filer	<input type="checkbox"/>
Non-accelerated filer	<input type="checkbox"/>	Smaller reporting company	<input type="checkbox"/>
Emerging growth company	<input type="checkbox"/>		

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 7(a)(2)(B) of the Securities Act.

### CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered Proposed Maximum Offering Price Per Unit Proposed Maximum Aggregate Offering Price Amount of Registration Fee(1)
Common Stock, par value \$0.01 per share(2)	
Preferred Stock(3)	
Debt Securities(4)	
Secured Debt Securities(5)	
Guarantees(6)	
Warrants(7)	
Share Purchase Contracts(8)	
Units(9)	

- (1) An indeterminate aggregate offering price and number or amount of securities of each identified class is being registered as may from time to time be offered and sold at indeterminate prices. Separate consideration may or may not be received for securities that are issuable on exercise, conversion or exchange of other securities. In accordance with Rules 456(b) and 457(r) under the Securities Act of 1933 (the "Securities Act"), the registrants are deferring payment of all of the registration fee.
- (2) Represents common stock issued by AK Steel Holding Corporation.
- (3) Represents preferred stock issued by AK Steel Holding Corporation.
- (4) Represents debt securities issued by AK Steel Corporation.
- (5) Represents secured debt securities issued by AK Steel Corporation.
- (6) Pursuant to Rule 457(n) under the Securities Act, no separate registration fee is due for guarantees.
- (7) Represents warrants of AK Steel Holding Corporation, representing the right to purchase an indeterminate number of common stock or preferred stock or amount of debt securities, each of which are registered hereby.
- (8) Represents share purchase contracts of AK Steel Holding Corporation, representing the obligation to purchase an indeterminate number of common stock of AK Steel Holding Corporation, which are registered hereby.
- (9) Any securities registered hereunder may be sold separately or as units with other securities registered hereunder.

**Table of Additional Registrant Guarantors**

<b><u>Name</u></b>	<b><u>State of jurisdiction of incorporation or organization</u></b>	<b><u>IRS Employer Identification Number</u></b>
AK Tube LLC	Delaware	31-1781514
AK Steel Properties, Inc	Delaware	51-0390894
Mountain State Carbon, LLC	Delaware	20-2840611

The address, including zip code, and telephone number, including area code, of the principal executive office of each Additional Registrant Guarantor listed in the table above is the same as those of AK Steel Holding Corporation and AK Steel Corporation. The name, address, including zip code, and telephone number, including area code, of agent for service of each Additional Registrant Guarantor listed in the table above is the same as those of AK Steel Holding Corporation and AK Steel Corporation.

**EXPLANATORY NOTE**

We are filing this registration statement solely to replace our prior Registration Statement on Form S-3 (File No. 333-210785) that will be expiring pursuant to Rule 415(a)(5) under the Securities Act of 1933, as amended (the "Securities Act"). In accordance with Rule 415(a)(6), effectiveness of this registration statement will be deemed to terminate the expiring prior Registration Statement.

PROSPECTUS



**AK STEEL CORPORATION**  
**UNSECURED DEBT SECURITIES**  
**SECURED DEBT SECURITIES**  
**AK STEEL HOLDING CORPORATION**  
**COMMON STOCK**  
**PREFERRED STOCK**  
**GUARANTEES**  
**WARRANTS**  
**SHARE PURCHASE CONTRACTS**  
**UNITS**  
**AK TUBE LLC**  
**AK STEEL PROPERTIES, INC.**  
**MOUNTAIN STATE CARBON, LLC**  
**GUARANTEES**

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AK Steel Corporation (“AK Steel”) may from time to time offer to sell its debt securities, which may be secured or unsecured and may be fully and unconditionally guaranteed by any of AK Steel Holding Corporation (“AK Holding”), the parent of AK Steel, and AK Tube LLC (“AK Tube”), AK Steel Properties, Inc. (“AK Properties”) and Mountain State Carbon, LLC, each a 100%-owned subsidiary of AK Steel (“MSC” and, together with AK Tube and AK Properties, the “Additional Guarantors”). Such debt securities may be convertible or exchangeable for or exercisable into shares of common stock or preferred stock of AK Holding.

AK Holding may from time to time offer to sell shares of its common stock or preferred stock, or warrants, share purchase contracts or units. AK Holding’s common stock is listed on the New York Stock Exchange and trades under the ticker symbol “AKS.”

AK Steel, AK Holding, AK Tube, AK Properties and MSC may offer and sell these securities to or through one or more underwriters, dealers and agents, or directly to purchasers, on a continuous or delayed basis. AK Steel, AK Holding, AK Tube, AK Properties and MSC will provide the specific plan of distribution for any securities to be offered in supplements to this prospectus. AK Steel, AK Holding, AK Tube, AK Properties and MSC will provide specific terms of any securities to be offered in supplements to this prospectus. You should read this prospectus and the applicable prospectus supplement carefully before you invest.

The principal executive offices of AK Steel, AK Holding, AK Tube, AK Properties and MSC are located at 9227 Centre Pointe Drive, West Chester, Ohio, 45069, and their telephone number at that address is (513) 425-5000.

**Investing in the securities involves risks. See “[Risk Factors](#)” on page 3 of this prospectus, in any applicable prospectus supplement and in the documents incorporated by reference in this prospectus or any applicable prospectus supplement to read about factors you should consider before investing in the securities.**

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**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

This prospectus may not be used to sell securities unless accompanied by a prospectus supplement that contains a description of those securities.

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**The date of this prospectus is February 15, 2019**

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## ABOUT THIS PROSPECTUS

This prospectus is part of an automatic shelf registration statement on Form S-3 that we have filed with the Securities and Exchange Commission (the “SEC”) under the Securities Act. By using a shelf registration statement, we may sell, at any time and from time to time, in one or more offerings, the securities described in this prospectus. As allowed by the SEC rules, this prospectus does not contain all of the information included in the registration statement. For further information, we refer you to the registration statement, including its exhibits and documents incorporated by reference. Statements contained in this prospectus about the provisions or contents of any agreement or other document are not necessarily complete. If the SEC’s rules and regulations require that an agreement or document be filed as an exhibit to the registration statement, please see that agreement or document for a complete description of these matters.

You should read this prospectus, any prospectus supplement and any free writing prospectus, including in each case any information incorporated by reference herein or therein, together with any additional information you may need to make your investment decision. You should also read and carefully consider the information in the documents we have referred you to in “Where You Can Find More Information” below. Information incorporated by reference after the date of this prospectus is considered a part of this prospectus and may add, update or change information contained in this prospectus. Any information in such subsequent filings that is inconsistent with this prospectus will supersede the information in this prospectus and any earlier prospectus supplement.

**We have not authorized anyone else to provide you with other information. We take no responsibility for, and can provide no assurance as to the reliability of, any other information that others may give you. We are not making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted. You should not assume that the information in this prospectus, any prospectus supplement, any free writing prospectus or any document incorporated herein by reference is accurate as of any date other than the date of the applicable document. Our business, financial condition, results of operations and prospects may have changed since that date.**

Unless otherwise stated, or the context otherwise requires, references in this prospectus to “we,” “us” and “our” are to AK Holding and its consolidated subsidiaries, including AK Steel, AK Tube, AK Properties and MSC.

## WHERE YOU CAN FIND MORE INFORMATION

AK Holding is subject to the informational requirements of the Securities Exchange Act of 1934 (the “Exchange Act”) and, in accordance with these requirements, AK Holding files reports and other information relating to its business, financial condition and other matters with the SEC. AK Holding is required to disclose in such reports certain information, as of particular dates, concerning its operating results and financial condition, officers and directors, principal holders of shares, any material interests of such persons in transactions with us and other matters.

The SEC maintains a website that contains reports and other information regarding registrants that file electronically with the SEC. The address of such site is: [www.sec.gov](http://www.sec.gov). Reports, proxy statements and other information concerning AK Holding’s business may also be inspected at the offices of the New York Stock Exchange at 20 Broad Street, New York, NY 10005.

Our website is [www.aksteel.com](http://www.aksteel.com). We make available free of charge on our website AK Holding’s Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, reports filed pursuant to Section 16 and amendments to those reports as soon as reasonably practicable after such materials are electronically filed with or furnished to the SEC. Other than any documents expressly incorporated by reference, the information on our website and any other website that is referred to in this prospectus is not part of this prospectus.

## INCORPORATION BY REFERENCE

The SEC allows us to “incorporate by reference” information into this prospectus, which means that we can disclose important information to you by referring to that information. We hereby “incorporate by reference” the documents listed below. The information that we file later with the SEC will automatically update and in some cases supersede the information in this prospectus and the documents listed below.

- AK Holding’s Annual Report on Form 10-K for the year ended December 31, 2018;
- AK Holding’s Definitive Proxy Statement on schedule 14A filed on April 9, 2018, but only to the extent that such information was incorporated by reference into AK Holding’s Annual Report on Form 10-K for the year ended December 31, 2017;
- AK Holding’s Current Report on Form 8-K filed on January 28, 2019 (only with respect to Item 2.05); and
- future filings made by AK Holding and AK Steel with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus; provided that this prospectus will not incorporate any information that we may furnish to the SEC under Item 2.02 or Item 7.01 (including any financial statements or exhibits relating thereto furnished pursuant to Item 9.01) of Form 8-K unless specifically provided in such Form 8-K.

Upon your oral or written request, we will provide you with a copy of any of these filings at no cost. Requests should be directed to Secretary, AK Steel Holding Corporation, 9227 Centre Pointe Drive, West Chester, Ohio 45069, Telephone No. (513) 425-5000.

## BUSINESS

We are a leading producer of flat-rolled carbon, stainless and electrical steel products, primarily for the automotive, infrastructure and manufacturing, and distributors and converters markets. We also provide customer solutions with carbon and stainless steel tubing products, advanced-engineered solutions, tool design and build, hot- and cold-stamped steel components and complex assemblies.

Our mission is to create innovative, high-quality steel solutions for our customers and our key values of safety, quality, productivity and innovation, along with environmental responsibility and sustainability, are its foundation. We have approximately 9,500 employees in North America and Europe, as well as manufacturing operations across seven states in the eastern U.S., Canada and Mexico.

Our corporate strategy is comprised of three pillars:

- commercializing our innovative new products and services;
- transforming our operations to significantly improve our competitive position; and
- driving future growth into new markets and downstream businesses.

The registered and principal executive offices of AK Holding and AK Steel are located at 9227 Centre Pointe Drive, West Chester, Ohio 45069, and their telephone number at that address is (513) 425-5000. For administrative convenience, each of the Additional Guarantors utilizes the offices of AK Holding and AK Steel as their principal executive offices.

## RISK FACTORS

Investing in our securities involves risks. Before deciding to purchase any of our securities, you should carefully consider the discussion of risks and uncertainties included in any prospectus supplement or free writing prospectus and under “Item 1A—Risk Factors” in AK Holding’s Annual Report on Form 10-K for the year ended December 31, 2018, which is incorporated by reference in this prospectus, and under similar headings in AK Holding’s subsequently-filed quarterly reports on Form 10-Q and annual reports on Form 10-K, as well as the other risks and uncertainties described in any other documents incorporated by reference in this prospectus or in any applicable prospectus supplement or free writing prospectus. See the section entitled “Where You Can Find More Information” in this prospectus. The risks and uncertainties discussed in the documents incorporated by reference in this prospectus are those we currently believe may materially affect us. Additional risks and uncertainties not presently known to us or that we currently believe are immaterial also may materially and adversely affect our business, financial condition and results of operations.

## FORWARD-LOOKING STATEMENTS

We have made forward-looking statements in this prospectus and the documents that are incorporated by reference herein that are based on our management’s beliefs and assumptions and on information available to our management at the time such statements were made. Forward-looking statements include information concerning our possible or assumed future results of operations, business strategies, financing plans, competitive position, potential growth opportunities, potential operating performance improvements, the effects of competition and the effects of future legislation or regulations. Forward-looking statements include all statements that are not historical facts and can be identified by the use of forward-looking terminology such as the words “believe,” “expect,” “plan,” “intend,” “anticipate,” “estimate,” “predict,” “potential,” “continue,” “may,” “should” or the negative of these terms or similar expressions.

Forward-looking statements involve risks, uncertainties and assumptions. Actual results may differ materially from those expressed in our forward-looking statements. You should not rely on any forward-looking statements. Factors that could cause our actual results to differ materially from the results contemplated by such forward-looking statements include:

- reduced selling prices, shipments and profits associated with a highly competitive and cyclical industry;
- domestic and global steel overcapacity;
- risks related to U.S. government actions on trade agreements and treaties, laws, regulations or policies affecting trade;
- changes in the cost of raw materials, supplies and energy;
- our significant amount of debt and other obligations;
- severe financial hardship or bankruptcy of one or more of our major customers or key suppliers;
- our significant proportion of sales to the automotive market;
- reduced demand in key product markets due to competition from aluminum or other alternatives to steel;
- excess inventory of raw materials;
- supply chain disruptions or poor quality of raw materials or supplies;
- production disruption or reduced production levels;
- our healthcare and pension obligations;
- not reaching new labor agreements on a timely basis;
- major litigation, arbitrations, environmental issues and other contingencies;
- regulatory compliance and changes;

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- climate change and greenhouse gas emissions;
- conditions in the financial, credit, capital and banking markets;
- our use of derivative contracts to hedge commodity pricing volatility;
- potential permanent idling of facilities;
- inability to fully realize benefits of margin enhancement initiatives;
- information technology security threats, cybercrime and exposure of private information;
- our failure to achieve expected benefits of the acquisition of PPHC Holdings, LLC; and
- changes in tax laws and regulations.

The risk factors discussed under “Risk Factors” in this prospectus, any prospectus supplement, any free writing prospectus and under “Item 1A.—Risk Factors” in AK Holding’s Annual Report on Form 10-K for the year ended December 31, 2018 and under similar headings in AK Holding’s subsequently-filed quarterly reports on Form 10-Q and annual reports on Form 10-K, as well as the other risks and uncertainties described in the other documents incorporated by reference into this prospectus, in any applicable prospectus supplement or any applicable free writing prospectus, could cause our results to differ materially from those expressed in forward-looking statements. There may be other risks and uncertainties that we are unable to predict at this time or that we currently do not expect to have a material adverse effect on our business. We expressly disclaim any obligation to update our forward-looking statements other than as required by law.

### **USE OF PROCEEDS**

Unless otherwise stated in the prospectus supplement accompanying this prospectus or any applicable free writing prospectus, we will use the net proceeds from the sale of any common stock, preferred stock, secured or unsecured debt securities, warrants, share purchase contracts or units that may be offered hereby for general corporate purposes. Such general corporate purposes may include, but are not limited to, reducing or refinancing our indebtedness or the indebtedness of our subsidiaries, financing possible acquisitions and redeeming outstanding securities. The prospectus supplement relating to an offering will contain a more detailed description of the use of proceeds of any specific offering of securities.

### **DESCRIPTION OF SECURITIES**

We will set forth in the applicable prospectus supplement a description of the common stock, preferred stock, secured or unsecured debt securities, warrants, share purchase contracts, units and/or guarantees that may be offered under this prospectus.

### **PLAN OF DISTRIBUTION**

We may offer and sell these securities to or through one or more underwriters, dealers and agents, or directly to purchasers, on a continuous or delayed basis. We will provide the specific plan of distribution for any securities to be offered in supplements to this prospectus.

**LEGAL MATTERS**

Unless otherwise indicated in the applicable prospectus supplement, the validity of the securities offered hereby will be passed upon by Weil, Gotshal & Manges LLP.

**EXPERTS**

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2018, and the effectiveness of our internal controls over financial reporting as of December 31, 2018, as set forth in their reports, which are incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Ernst & Young LLP's reports, given on their authority as experts in accounting and auditing.

**PART II**

**INFORMATION NOT REQUIRED IN PROSPECTUS**

**Item 14. Other Expenses of Issuance and Distribution**

The following statement sets forth the expenses of AK Steel Holding Corporation (“AK Holding”), AK Steel Corporation (“AK Steel”), AK Tube LLC (“AK Tube”), AK Steel Properties, Inc. (“AK Properties”) and Mountain State Carbon, LLC (“MSC” and, together with AK Holding, AK Steel, AK Tube and AK Properties, the “Registrants”) in connection with the offering described in this Registration Statement (all of which will be borne by the Registrants). All amounts shown are estimated.

SEC registration fee	\$	*
Printing expenses		+
Legal fees and expenses		+
Audit fees and expenses		+
Trustee fees and expenses		+
Miscellaneous expenses		+
Total	\$	

\* In accordance with Rules 456(b) and 457(r), the Registrants are deferring payment of the registration fee for the securities offered by this prospectus.

+ Estimated expenses are not presently known.

The foregoing sets forth the general categories of expenses (other than underwriting discounts and commissions) that the Registrants anticipate they will incur in connection with the offering of securities under this registration statement. Information regarding estimated expenses of issuance and distribution of each identified class of securities being registered will be provided at the time information as to such class is included in a prospectus supplement in accordance with Rule 430B.

**Item 15. Indemnification of Directors and Officers**

**AK Steel Corporation**

**AK Steel Holding Corporation**

**AK Steel Properties, Inc.**

AK Holding, AK Steel and AK Properties are each Delaware corporations. Subsection (b)(7) of Section 102 of the Delaware General Corporation Law (the “DGCL”), enables a corporation in its original certificate of incorporation or an amendment thereto to eliminate or limit the personal liability of a director to the corporation or its stockholders for monetary damages for violations of the director’s fiduciary duty, except (i) for any breach of the director’s duty of loyalty to the corporation or its stockholders, (ii) for acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law, (iii) pursuant to Section 174 of the DGCL (providing for liability of directors for unlawful payment of dividends or unlawful stock purchases or redemptions) or (iv) for any transaction from which a director derived an improper personal benefit. The Certificate of Incorporation of each of AK Holding, AK Steel and AK Properties has eliminated the personal liability of its directors to the fullest extent permitted by law.

Subsection (a) of Section 145 of the DGCL empowers a corporation to indemnify any director or officer, or former director or officer, who was or is a party or is threatened to be made a party to any threatened, pending or completed action, suit or proceeding, whether civil, criminal, administrative or investigative (other than an action by or in the right of the corporation) by reason of the fact that such person is or was a director or officer of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of

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another corporation, partnership, joint venture, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with such action, suit or proceeding provided that such director or officer acted in good faith in a manner reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, provided further that such director or officer had no reasonable cause to believe his conduct was unlawful.

Subsection (b) of Section 145 empowers a corporation to indemnify any current or former director, officer, employee or agent of the corporation, who was or is a party or is threatened to be made a party to any threatened, pending or completed action or suit by or in the right of the corporation to procure a judgment in its favor by reason of the fact that such person acted in any of the capacities set forth above, against expenses (including attorneys' fees) actually and reasonably incurred in connection with the defense or settlement of such action or suit provided that such director or officer acted in good faith and in a manner he reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification may be made in respect of any claim, issue or matter as to which such director or officer shall have been adjudged to be liable to the corporation unless and only to the extent that the Court of Chancery or the court in which such action or suit was brought shall determine upon application that, despite the adjudication of liability but in view of all of the circumstances of the case, such director or officer is fairly and reasonably entitled to indemnity for such expenses which the Court of Chancery or such other court shall deem proper.

Section 145 further provides that to the extent a director or officer of a corporation has been successful in the defense of any action, suit or proceeding referred to in subsections (a) or (b) or in the defense of any claim, issue or matter therein, he or she shall be indemnified against expenses (including attorneys' fees) actually and reasonably incurred by him in connection therewith; that indemnification and advancement of expenses provided by, or granted pursuant to, Section 145 shall not be deemed exclusive of any other rights to which the indemnified party may be entitled; and empowers the corporation to purchase and maintain insurance on behalf of any person who is or was a director, officer, employee or agent of the corporation, or is or was serving at the request of the corporation as a director, officer, employee or agent of another corporation, partnership, joint venture, trust or other enterprise against any liability asserted against him or incurred by him in any such capacity, or arising out of his status as such, whether or not the corporation would have the power to indemnify him against such liabilities under Section 145.

Article Seven of the Certificate of Incorporation of AK Holding, Article Seven of the Certificate of Incorporation of AK Steel and Article Six of the Certificate of Incorporation of AK Properties each state that the corporation shall indemnify any person who was or is a party or is threatened to be made a party to, or testifies in, any threatened, pending, or completed action, suit or proceeding, whether civil, criminal, administrative or investigative in nature, by reason of the fact that such person is or was a director, officer or employee of the corporation, or is or was serving at the request of the corporation as a director, officer or employee of another corporation, partnership, joint venture, employee benefit plan, trust or other enterprise, against expenses (including attorneys' fees), judgments, fines, penalties, amounts paid in settlement and other liabilities actually and reasonably incurred by such person in connection with such action, suit or proceeding to the fullest extent permitted by law, and the corporation may adopt by-laws or enter into agreements with any such person for the purpose of providing such indemnification.

**AK Tube LLC Mountain State Carbon, LLC**

AK Tube and MSC are Delaware limited liability companies. Section 18-108 of the Limited Liability Company Act of Delaware (the "Act") empowers a limited liability company, subject to such standards and restrictions, if any, as are set forth in its limited liability company agreement, to indemnify and hold harmless any member or manager or other person from and against any and all claims and demands whatsoever. The Limited Liability Company Agreement (the "LLCA") of each of AK Tube and MSC provide that AK Tube and MSC will indemnify their respective members to the full extent permitted by the Act and that it may, to such extent and in

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such manner as determined by its members, but to no extent greater than is permitted by the Act, indemnify its employees and other agents and the LLCA of MSC provides that it shall indemnify its officers, affiliates and their respective agents and/or their legal representatives to the full extent permitted by the Act.

### Item 16. Exhibits

<u>Exhibit Number</u>	<u>Description</u>
1.1	Form of Underwriting Agreement.**
4.1	<a href="#"><u>Indenture, dated as of May 11, 2010, among AK Steel Corporation, as issuer, AK Steel Holding Corporation, as guarantor, and U.S. Bank, National Association, as trustee (incorporated herein by reference to Exhibit 4.1 to AK Steel Holding Corporation's Current Report on Form 8-K, as filed with the Commission on May 11, 2010).*</u></a>
4.2	<a href="#"><u>Third Supplemental Indenture, dated as of November 20, 2012, among AK Steel Corporation, as issuer, AK Steel Holding Corporation, as guarantor, and U.S. Bank, National Association, as trustee (incorporated herein by reference to Exhibit 4.1 to AK Steel Holding Corporation's Current Report on Form 8-K, as filed with the Commission on November 20, 2012).*</u></a>
4.3	<a href="#"><u>Fourth Supplemental Indenture, dated as of April 29, 2014, among AK Steel Corporation, as issuer, AK Steel Holding Corporation, as parent guarantor, AK Tube LLC and AK Steel Properties, Inc., as subsidiary guarantors, and U.S. Bank National Association, as trustee (incorporated herein by reference to Exhibit 4.2 to AK Steel Holding Corporation's Quarterly Report on Form 10-Q, as filed with the Commission on May 2, 2014).*</u></a>
4.4	<a href="#"><u>Fifth Supplemental Indenture, dated as of September 16, 2014, among AK Steel Corporation, as issuer, AK Steel Holding Corporation, as parent guarantor, AK Steel Properties, Inc. and AK Tube LLC, as subsidiary guarantors, and U.S. Bank National Association, as trustee (incorporated herein by reference to Exhibit 4.1 to AK Steel Holding Corporation's Current Report on Form 8-K, as filed with the Commission on September 16, 2014).*</u></a>
4.5	<a href="#"><u>Sixth Supplemental Indenture, dated as of July 27, 2016, among AK Steel Corporation, as issuer, AK Steel Holding Corporation, as parent guarantor, Mountain State Carbon, LLC, as subsidiary guarantor, and U.S. Bank National Association, as trustee (incorporated herein by reference to Exhibit 4.3 to AK Steel Holding Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, as filed with the Commission on July 29, 2016).*</u></a>
4.6	<a href="#"><u>Seventh Supplemental Indenture, dated as of March 23, 2017, among AK Steel Corporation, as issuer, the guarantors named therein and U.S. Bank National Association, as trustee (incorporated herein by reference to Exhibit 4.1 to AK Steel Holding Corporation's Current Report on Form 8-K, as filed with the Commission on March 23, 2017).*</u></a>
4.7	<a href="#"><u>Eighth Supplemental Indenture, dated as of August 9, 2017, among AK Steel Corporation, as issuer, the guarantors named therein and U.S. Bank National Association, as trustee (incorporated herein by reference to Exhibit 4.1 to AK Steel Holding Corporation's Current Report on Form 8-K, as filed with the Commission on August 9, 2017).*</u></a>
4.8	<a href="#"><u>Indenture, dated as of June 20, 2016, among AK Steel Corporation, as issuer, the guarantors named therein and U.S. Bank National Association, as trustee and collateral agent (incorporated herein by reference to Exhibit 4.1 to AK Steel Holding Corporation's Current Report on Form 8-K, as filed with the Commission on June 20, 2016).*</u></a>
4.9	<a href="#"><u>First Supplemental Indenture dated as of July 27, 2016, among AK Steel Corporation, as issuer, Mountain State Carbon, LLC, as subsidiary guarantor and U.S. Bank National Association, as trustee and collateral agent (incorporated herein by reference to Exhibit 4.2 to AK Steel Holding Corporation's Quarterly Report on Form 10-Q for the quarter ended June 30, 2016, as filed with the Commission on July 29, 2016).*</u></a>

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<u>Exhibit Number</u>	<u>Description</u>
4.10	<a href="#"><u>Form of Certificate of Common Stock (incorporated herein by reference to Exhibit 4.2 to Post-Effective Amendment No. 1 to Registration Statement on Form S-3, as filed by AK Steel Holding Corporation and AK Steel Corporation with the Commission on November 13, 2012).</u>*</a>
4.11	Form of Warrant Agreement (including Form of Warrant Certificate) for AK Steel Holding Corporation.**
4.12	Form of Share Purchase Contract Agreement for AK Steel Holding Corporation.**
4.13	Form of Unit Agreement (including Form of Unit Certificate) for AK Steel Holding Corporation.**
5.1	<a href="#"><u>Opinion of Weil, Gotshal &amp; Manges LLP.</u></a> +
23.1	<a href="#"><u>Consent of Weil, Gotshal &amp; Manges LLP (included in Exhibit 5.1).</u></a>
23.2	<a href="#"><u>Consent of Ernst &amp; Young LLP.</u></a> +
24.1	<a href="#"><u>Power of Attorney with respect to AK Steel Corporation and AK Steel Holding Corporation signatories (included on signature page).</u></a>
24.2	<a href="#"><u>Power of Attorney with respect to AK Tube LLC signatories (included on signature page).</u></a>
24.3	<a href="#"><u>Power of Attorney with respect to AK Steel Properties, Inc. signatories (included on signature page).</u></a>
24.4	<a href="#"><u>Power of Attorney with respect to Mountain State Carbon, LLC signatories (included on signature page).</u></a>
25.1	<a href="#"><u>Form T-1 Statement of Eligibility of U.S. Bank, National Association, with respect to senior unsecured debt securities.</u></a> +
25.2	<a href="#"><u>Form T-1 Statement of Eligibility of U.S. Bank, National Association, with respect to senior secured debt securities.</u></a> +

(\*) Previously filed.  
(\*\*) To be filed by amendment or as an exhibit to a report filed by AK Holding under the Securities Exchange Act of 1934 and incorporated herein by reference.  
(+) Filed herewith.

### **Item 17. Undertakings**

The undersigned Registrants hereby undertake:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in the volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

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(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

*provided, however,* that paragraphs (i), (ii) and (iii) above do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein and the offering of such securities in the post-effective amendment at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and

(ii) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date;

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities, the undersigned Registrants undertake that in a primary offering of securities of the undersigned Registrants pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, each of the undersigned Registrants will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned Registrants relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned Registrants or used or referred to by the undersigned Registrants;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned Registrants or its securities provided by or on behalf of the undersigned Registrants; and

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(iv) Any other communication that is an offer in the offering made by the undersigned Registrants to the purchaser.

(6) That, for purposes of determining any liability under the Securities Act of 1933, each filing of AK Holding's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(7) To supplement the prospectus, after the expiration of any warrant or right subscription period, to set forth the results of any warrant or right subscription offer, the transactions by the underwriters during the subscription period, the amount of unsubscribed securities to be purchased by the underwriters, and the terms of any subsequent reoffering thereof. If any public offering by the underwriters is to be made on terms differing from those set forth on the cover page of the prospectus, a post-effective amendment will be filed to set forth the terms of such offering.

(8) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrants pursuant to the foregoing provisions, or otherwise, the Registrants have been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act of 1933 and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by a registrant of expenses incurred or paid by a director, officer or controlling person of such registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrants will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities and Exchange Act and will be governed by the final adjudication of such issue.

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the undersigned registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of West Chester, State of Ohio, on the 15th day of February, 2019.

AK STEEL HOLDING CORPORATION  
AK STEEL CORPORATION

By: /s/ Jaime Vasquez  
Jaime Vasquez  
*Vice President, Finance and Chief Financial Officer*

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that each person whose name appears below hereby constitutes and appoints Roger K. Newport, Kirk W. Reich, Joseph C. Alter and Jaime Vasquez such person's true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign for such person and in such person's name and capacity indicated below, any and all amendments to this Registration Statement, including post-effective amendments and any related registration statements filed pursuant to Rule 462 under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing required and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or any of he or his substitutes, could lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons as of the dates and in the capacities indicated with respect to AK Steel Holding Corporation and AK Steel Corporation.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Roger K. Newport</u> Roger K. Newport	Chief Executive Officer and Director (Principal Executive Officer)	February 15, 2019
<u>/s/ Jaime Vasquez</u> Jaime Vasquez	Vice President, Finance and Chief Financial Officer (Principal Financial Officer)	February 15, 2019
<u>/s/ Gregory A. Hoffbauer</u> Gregory A. Hoffbauer	Vice President, Controller and Chief Accounting Officer (Principal Accounting Officer)	February 15, 2019
<u>/s/ Dr. James A. Thomson</u> Dr. James A. Thomson	Chairman of the Board	February 15, 2019

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<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Dennis C. Cuneo</u> Dennis C. Cuneo	Director	February 15, 2019
<u>/s/ Sheri H. Edison</u> Sheri H. Edison	Director	February 15, 2019
<u>/s/ Mark G. Essig</u> Mark G. Essig	Director	February 15, 2019
<u>/s/ William K. Gerber</u> William K. Gerber	Director	February 15, 2019
<u>/s/ Gregory B. Kenny</u> Gregory B. Kenny	Director	February 15, 2019
<u>/s/ Ralph S. Michael, III</u> Ralph S. Michael, III	Director	February 15, 2019
<u>/s/ Dwayne A. Wilson</u> Dwayne A. Wilson	Director	February 15, 2019
<u>/s/ Vicente Wright</u> Vicente Wright	Director	February 15, 2019
<u>/s/ Arlene M. Yocum</u> Arlene M. Yocum	Director	February 15, 2019

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the undersigned registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of West Chester, State of Ohio, on the 15th day of February, 2019.

AK TUBE LLC

By: /s/ Edward J. Urbaniak  
Edward J. Urbaniak  
*President*

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that each person whose name appears below hereby constitutes and appoints Roger K. Newport, Kirk W. Reich, Joseph C. Alter and Jaime Vasquez such person's true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign for such person and in such person's name and capacity indicated below, any and all amendments to this Registration Statement, including post-effective amendments and any related registration statements filed pursuant to Rule 462 under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing required and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or any of he or his substitutes, could lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons as of the dates and in the capacities indicated with respect to AK Tube LLC.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Edward J. Urbaniak</u> Edward J. Urbaniak	President (Principal Executive Officer)	February 15, 2019
<u>/s/ Michael C. Tuomey</u> Michael C. Tuomey	Vice President, Finance (Principal Financial Officer and Principal Accounting Officer)	February 15, 2019
<u>/s/ Andrew M. Lichter</u> Andrew M. Lichter	Director	February 15, 2019
<u>/s/ Phil D. Fultz</u> Phil D. Fultz	Director	February 15, 2019
<u>/s/ David G. Miracle</u> David G. Miracle	Director	February 15, 2019

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the undersigned registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of West Chester, State of Ohio, on the 15th day of February, 2019.

AK STEEL PROPERTIES, INC.

By: /s/ Joseph C. Alter

Joseph C. Alter  
*President*

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that each person whose name appears below hereby constitutes and appoints Roger K. Newport, Kirk W. Reich, Joseph C. Alter and Jaime Vasquez such person's true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign for such person and in such person's name and capacity indicated below, any and all amendments to this Registration Statement, including post-effective amendments and any related registration statements filed pursuant to Rule 462 under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing required and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or any of he or his substitutes, could lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons as of the dates and in the capacities indicated with respect to AK Steel Properties, Inc.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Joseph C. Alter</u> Joseph C. Alter	President and Director (Principal Executive Officer)	February 15, 2019
<u>/s/ Christopher J. Ross</u> Christopher J. Ross	Treasurer (Principal Financial Officer and Principal Accounting Officer)	February 15, 2019
<u>/s/ Scott M. Lauschke</u> Scott M. Lauschke	Director	February 15, 2019
<u>/s/ Kamini D. Patel</u> Kamini D. Patel	Director	February 15, 2019
<u>/s/ Jaime Vasquez</u> Jaime Vasquez	Director	February 15, 2019

**SIGNATURES**

Pursuant to the requirements of the Securities Act of 1933, the undersigned registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of West Chester, State of Ohio, on the 15th day of February, 2019.

MOUNTAIN STATE CARBON, LLC

By: /s/ Michael A. Kerksmar  
Michael A. Kerksmar  
*Chief Executive Officer, Chief Operating Officer and President*

**POWER OF ATTORNEY**

KNOW ALL MEN BY THESE PRESENTS, that each person whose name appears below hereby constitutes and appoints Roger K. Newport, Kirk W. Reich, Joseph C. Alter and Jaime Vasquez such person's true and lawful attorney-in-fact and agent, with full power of substitution and resubstitution, for him and in his name, place and stead, in any and all capacities, to sign for such person and in such person's name and capacity indicated below, any and all amendments to this Registration Statement, including post-effective amendments and any related registration statements filed pursuant to Rule 462 under the Securities Act of 1933, as amended, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, full power and authority to do and perform each and every act and thing required and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent, or any of he or his substitutes, could lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons as of the dates and in the capacities indicated with respect to Mountain State Carbon, LLC.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Michael A. Kerksmar</u> Michael A. Kerksmar	Chief Executive Officer, Chief Operating Officer, President and Manager (Principal Executive Officer)	February 15, 2019
<u>/s/ Christopher J. Ross</u> Christopher J. Ross	Vice President, Controller and Treasurer (Principal Financial Officer and Principal Accounting Officer)	February 15, 2019
<u>/s/ Maurice A. Reed</u> Maurice A. Reed	Manager	February 15, 2019

**Weil, Gotshal & Manges LLP**

767 Fifth Avenue  
New York, NY 10153-0119  
+1 212 310 8000 tel  
+1 212 310 8007 fax

February 15, 2019

AK Steel Holding Corporation  
AK Steel Corporation  
9227 Centre Pointe Drive  
West Chester, OH 45069

Ladies and Gentlemen:

We have acted as counsel to AK Steel Corporation, a Delaware corporation (the "Company"), AK Steel Holding Corporation, a Delaware corporation ("Parent"), AK Tube LLC, a Delaware limited liability company ("AK Tube"), AK Steel Properties, Inc., a Delaware corporation ("AK Steel Properties") and Mountain State Carbon, LLC, a Delaware limited liability company ("MSC" and, together with the Company, Parent, AK Tube and AK Steel Properties, the "Companies"), in connection with the preparation and filing with the Securities and Exchange Commission (the "Commission") of the Companies' Registration Statement on Form S-3 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act"), relating to the issuance and sale from time to time of an indeterminate amount of (i) secured or unsecured debt securities by the Company (the "Debt Securities"); (ii) common stock by Parent (the "Common Stock"); (iii) preferred stock by Parent (the "Preferred Stock"), (iv) warrants by Parent (the "Warrants"), (v) share purchase contracts by Parent (the "Share Purchase Contracts"), (vi) units by Parent (the "Units") and (vii) guarantees of the Debt Securities by Parent, AK Tube, AK Steel Properties and MSC (the "Guarantees" and, together with the Debt Securities, Common Stock, Preferred Stock, Warrants, Share Purchase Contracts and Units, the "Securities").

In so acting, we have examined originals or copies (certified or otherwise identified to our satisfaction) of (i) the Registration Statement on Form S-3, filed by the Companies on February 15, 2019 (the "Registration Statement"), including the prospectus, dated February 15, 2019, which forms a part of the Registration Statement; (ii) the Restated Certificate of Incorporation of Parent; (iii) the Indenture, dated as of June 20, 2016 (as amended and supplemented from time to time, the "Secured Indenture"), among the Companies and U.S. Bank, National Association, as trustee and collateral agent; (iv) the Indenture, dated as of May 11, 2010, among the Companies and U.S. Bank, National Association, as trustee (as amended and supplemented from time to time, the "Base Indenture" and together with the Secured Indenture, the "Indentures"); and (v) such corporate records, agreements, documents and other instruments, and such certificates or comparable documents of public officials and of officers and representatives of each of the Companies, and have made such inquiries of such officers and representatives, as we have deemed relevant and necessary as a basis for the opinion hereinafter set forth.

In such examination, we have assumed the genuineness of all signatures, the legal capacity of all natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified, conformed or photostatic copies and the authenticity of the originals of such latter documents. As to all questions of fact material to this opinion

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that have not been independently established, we have relied upon certificates or comparable documents of officers and representatives of each of the Companies. We have also assumed that New York law is the governing law of any Warrants, Share Purchase Contracts and Units.

Based on and subject to the foregoing, we advise you that in our opinion:

1. Debt Securities. Assuming (i) the Registration Statement and any amendments thereto (including any post-effective amendments) will have become effective and no stop order suspending the Registration Statement's effectiveness will have been issued and remain in effect, in each case, at the time the Debt Securities are offered or issued as contemplated by the Registration Statement; (ii) the applicable Indenture, including any applicable supplemental indenture thereto, will have been qualified under the Trust Indenture Act of 1939, as amended; (iii) the issuance (including the execution, delivery and performance thereof) and terms of the Debt Securities and the terms of the offering and sale thereof have been duly authorized; (iv) the terms of the Debt Securities and their issuance and sale will have been duly established in conformity with the applicable Indenture and any supplemental indenture thereto and so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding on the Company and so as to comply with any requirements or restrictions imposed by any court or governmental body having jurisdiction over the Company; (v) the Debt Securities have been duly executed and authenticated in accordance with the applicable Indenture and supplemental indenture and issued and sold as contemplated in the Registration Statement or any applicable underwriting or purchase agreement relating thereto; and (vi) the Company has received the consideration therefor, then such Debt Securities (including any Debt Securities issuable upon conversion, exercise or exchange of any Securities) will constitute valid and binding obligations of the Company, enforceable against the Company in accordance with their terms.

2. Common Stock. Assuming (i) the Registration Statement and any amendments thereto (including any post-effective amendments) will have become effective and no stop order suspending the Registration Statement's effectiveness will have been issued and remain in effect, in each case, at the time the Common Stock is offered or issued as contemplated by the Registration Statement; (ii) the issuance (including the execution, delivery and performance thereof) and terms of the Common Stock and the terms of the offering and sale thereof have been duly authorized; (iii) the terms of the Common Stock and its issuance and sale will have been duly established in conformity with the Restated Certificate of Incorporation of Parent and so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding on Parent and so as to comply with any requirements or restrictions imposed by any court or governmental body having jurisdiction over Parent; (iv) the Common Stock has been issued and sold as contemplated in the Registration Statement or any applicable underwriting or purchase agreement relating thereto; and (v) Parent has received the consideration therefor, then such Common Stock (including any Common Stock issuable upon conversion, exercise or exchange of any Securities) will be validly issued, fully paid and nonassessable.

3. Preferred Stock. Assuming (i) the Registration Statement and any amendments thereto (including any post-effective amendments) will have become effective and no stop order suspending the Registration Statement's effectiveness will have been issued and remain in effect, in each case, at the time the Preferred Stock is offered or issued as contemplated by the Registration Statement; (ii) the issuance (including the execution, delivery and performance thereof) and terms of the

Preferred Stock and the terms of the offering and sale thereof have been duly authorized; (iii) a certificate of designations with respect to the Preferred Stock has been duly filed with the Secretary of State of the State of Delaware; (iv) the terms of the Preferred Stock and its issuance and sale will have been duly established in conformity with the Restated Certificate of Incorporation of Parent and the applicable certificate of designations and so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding on Parent and so as to comply with any requirements or restrictions imposed by any court or governmental body having jurisdiction over Parent; (v) the Preferred Stock has been issued and sold as contemplated in the Registration Statement or any applicable underwriting or purchase agreement relating thereto; and (vi) Parent has received the consideration therefor, then such Preferred Stock (including any Preferred Stock issuable upon conversion, exercise or exchange of any Securities) will be validly issued, fully paid and nonassessable.

4. Warrants. Assuming (i) the Registration Statement and any amendments thereto (including any post-effective amendments) will have become effective and no stop order suspending the Registration Statement's effectiveness will have been issued and remain in effect, in each case, at the time the Warrants are offered or issued as contemplated by the Registration Statement; (ii) the issuance (including the execution, delivery and performance thereof) and terms of any Warrants and the terms of the offering thereof have been duly authorized; (iii) the terms of such Warrants to be issued under any warrant agreement and/or warrant certificate, as applicable, and the terms of the offering and sale thereof have been duly authorized; (iv) the terms of such Warrants and their issuance and sale will have been duly established in conformity with such any warrant agreement and/or warrant certificate and so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding on Parent and so as to comply with any requirements or restrictions imposed by any court or governmental body having jurisdiction over Parent; and (v) such Warrants have been duly executed in accordance with such any warrant agreement and/or warrant certificate and issued and sold as contemplated in the Registration Statement or any applicable underwriting or purchase agreement relating thereto; and (vi) Parent has received the consideration therefor, then such Warrants (including any Warrants issuable upon conversion, exercise or exchange of any Securities) will constitute valid and binding obligations of Parent, enforceable against it in accordance with their terms.

5. Share Purchase Contracts. Assuming (i) the Registration Statement and any amendments thereto (including any post-effective amendments) will have become effective and no stop order suspending the Registration Statement's effectiveness will have been issued and remain in effect, in each case, at the time the Share Purchase Contracts are offered or issued as contemplated by the Registration Statement; (ii) the issuance (including the execution, delivery and performance thereof) and terms of any Share Purchase Contracts and the terms of the offering thereof have been duly authorized; (iii) the terms of such Share Purchase Contracts to be issued under any agreements, relating thereto, and the terms of the offering and sale thereof have been duly authorized; (iv) the terms of such Share Purchase Contracts and their issuance and sale will have been duly established in conformity with any such agreement relating thereto and so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding on Parent and so as to comply with any requirements or restrictions imposed by any court or governmental body having jurisdiction over Parent; and (v) such Share Purchase Contracts have been duly executed in accordance with any agreement relating thereto and issued and sold as contemplated in the Registration Statement or any applicable underwriting or purchase agreement relating thereto; and (vi) Parent has received the consideration therefor, then such

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Share Purchase Contracts (including any Share Purchase Contracts issuable upon conversion, exercise or exchange of any Securities) will constitute valid and binding obligations of Parent, enforceable against it in accordance with their terms.

6. Units. Assuming (i) the Registration Statement and any amendments thereto (including any post-effective amendments) will have become effective and no stop order suspending the Registration Statement's effectiveness will have been issued and remain in effect, in each case, at the time the Units are offered or issued as contemplated by the Registration Statement; (ii) the issuance (including the execution, delivery and performance thereof) and terms of any Units and the terms of the offering thereof have been duly authorized; (iii) the terms of such Units to be issued under any unit agreement and/or unit certificate, as applicable, and the terms of the offering and sale thereof have been duly authorized; (iv) the terms of such Units and their issuance and sale will have been duly established in conformity with such any unit agreement and/or unit certificate and so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding on Parent and so as to comply with any requirements or restrictions imposed by any court or governmental body having jurisdiction over Parent; and (v) such Units have been duly executed in accordance with such any unit agreement and/or unit certificate and issued and sold as contemplated in the Registration Statement or any applicable underwriting or purchase agreement relating thereto; and (vi) Parent has received the consideration therefor, then such Units (including any Units issuable upon conversion, exercise or exchange of any Securities) will constitute valid and binding obligations of Parent, enforceable against it in accordance with their terms.

7. Guarantees. Assuming (i) the Registration Statement and any amendments thereto (including any post-effective amendments) will have become effective and no stop order suspending the Registration Statement's effectiveness will have been issued and remain in effect, in each case, at the time the Guarantees are offered or issued as contemplated by the Registration Statement; (ii) the applicable Indenture, including any applicable supplemental indenture thereto, will have been qualified under the Trust Indenture Act of 1939, as amended; (iii) the issuance (including the execution, delivery and performance thereof) and terms of the Debt Securities and the Guarantees and the terms of the offering and sale thereof have been duly authorized; (iv) the terms of the Debt Securities and the Guarantees and their issuance and sale will have been duly established in conformity with the applicable Indenture and any supplemental indenture thereto and so as not to violate any applicable law or result in a default under or breach of any agreement or instrument binding on any of Parent, AK Tube, AK Steel Properties and MSC (collectively, the "Guarantors") and so as to comply with any requirements or restrictions imposed by any court or governmental body having jurisdiction over any of the Guarantors; (v) the Debt Securities have been duly executed and authenticated, the applicable Indenture or supplemental indenture containing the Guarantee has been duly executed and delivered and the Debt Securities and Guarantees have been issued and sold as contemplated in the Registration Statement or any applicable underwriting or purchase agreement relating thereto; and (vi) the Company and/or the Guarantors has received the consideration therefor, then such Guarantees will constitute valid and binding obligations of the Guarantors, enforceable against them in accordance with their terms.

The opinions expressed above with respect to validity, binding effect and enforceability are subject to the effect of any applicable bankruptcy, insolvency, fraudulent conveyance, reorganization, moratorium and similar laws affecting creditors' rights and remedies generally and subject, as to enforceability, to

February 15, 2019  
Page 5

general principles of equity, including principles of commercial reasonableness, good faith and fair dealing (regardless of whether enforcement is sought in a proceeding at law or in equity) and except that rights to indemnification and contribution thereunder may be limited by federal or state securities laws or public policy relating thereto.

The opinions expressed herein are limited to the laws of the State of New York and the corporate laws of the State of Delaware, and we express no opinion as to the effect on the matters covered by this letter of the laws of any other jurisdiction.

We hereby consent to the incorporation by reference of this letter as an exhibit to the Registration Statement and to the reference to our firm under the caption "Legal Matters" in the Prospectus. In giving such consent we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

/s/ Weil, Gotshal & Manges LLP

**Consent of Independent Registered Public Accounting Firm**

We consent to the reference to our firm under the caption “Experts” in the Registration Statement (Form S-3) and related Prospectus of AK Steel Corporation for the registration of unsecured and secured debt securities, of AK Steel Holding Corporation for the registration of common stock, preferred stock, guarantees, warrants, share purchase contracts and units, of AK Tube LLC for the registration of guarantees, of AK Steel Properties, Inc. for the registration of guarantees and of Mountain State Carbon, LLC for the registration of guarantees, and to the incorporation by reference therein of our reports dated February 15, 2019, with respect to the consolidated financial statements of AK Steel Holding Corporation, and the effectiveness of internal control over financial reporting of AK Steel Holding Corporation, included in AK Steel Holding Corporation’s Annual Report (Form 10-K) for the year ended December 31, 2018, filed with the Securities and Exchange Commission.

/s/ ERNST & YOUNG LLP

Cincinnati, Ohio  
February 15, 2019

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**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM T-1**

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**STATEMENT OF ELIGIBILITY  
UNDER THE TRUST INDENTURE ACT OF 1939  
OF A CORPORATION DESIGNATED TO ACT AS TRUSTEE**

Check if an Application to Determine Eligibility of a Trustee Pursuant to Section 305(b)(2)

---

**U.S. BANK NATIONAL ASSOCIATION**

(Exact name of Trustee as specified in its charter)

---

**31-0841368**  
I.R.S. Employer  
Identification No.

**800 Nicollet Mall**  
**Minneapolis, Minnesota**  
(Address of principal executive offices)

**55402**  
(Zip Code)

**William Sicking**  
**U.S. Bank National Association**  
**425 Walnut Street**  
**Cincinnati, Ohio 45202**  
**(513) 632-4278**  
(Name, address and telephone number of agent for service)

---

**AK Steel Corporation**

(Issuer with respect to the Securities)

---

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**31-1267098**  
(I.R.S. Employer  
Identification No.)

**9227 Centre Pointe Drive**  
**West Chester, Ohio**  
(Address of Principal Executive Offices)

**45069**  
(Zip Code)

---

**AK Steel Holding Corporation**

(Parent Guarantor with respect to the Securities)

---

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**31-1401455**  
(I.R.S. Employer  
Identification No.)

9227 Centre Pointe Drive  
West Chester, Ohio  
(Address of Principal Executive Offices)

45069  
(Zip Code)

**Table of Additional Registrant Guarantors with respect to the Securities**

<u>Name</u>	<u>State of jurisdiction of incorporation or organization</u>	<u>IRS Employer Identification Number</u>
AK Tube LLC	Delaware	31-1781514
AK Steel Properties, Inc .	Delaware	51-0390894
Mountain State Carbon, LLC	Delaware	20-2840611

The address, including zip code of the principal executive office of each Additional Registrant Guarantor listed in the table above is the same as those of AK Steel Holding Corporation and AK Steel Corporation.

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**Unsecured Debt Securities**  
(Title of the Indenture Securities)

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**FORM T-1**

**Item 1. GENERAL INFORMATION.** Furnish the following information as to the Trustee.

a) *Name and address of each examining or supervising authority to which it is subject.*

Comptroller of the Currency  
Washington, D.C.

b) *Whether it is authorized to exercise corporate trust powers.*

Yes

**Item 2. AFFILIATIONS WITH OBLIGOR.** *If the obligor is an affiliate of the Trustee, describe each such affiliation.*

None

**Items 3-15** *Items 3-15 are not applicable because to the best of the Trustee's knowledge, the obligors are not in default under any Indenture for which the Trustee acts as Trustee.*

**Item 16. LIST OF EXHIBITS:** *List below all exhibits filed as a part of this statement of eligibility and qualification.*

1. A copy of the Articles of Association of the Trustee.\*
2. A copy of the certificate of authority of the Trustee to commence business, attached as Exhibit 2.
3. A copy of the certificate of authority of the Trustee to exercise corporate trust powers, attached as Exhibit 3.
4. A copy of the existing bylaws of the Trustee.\*\*
5. A copy of each Indenture referred to in Item 4. Not applicable.
6. The consent of the Trustee required by Section 321(b) of the Trust Indenture Act of 1939, attached as Exhibit 6.
7. Report of Condition of the Trustee as of September 30, 2018 published pursuant to law or the requirements of its supervising or examining authority, attached as Exhibit 7.

\* Incorporated by reference to Exhibit 25.1 to Amendment No. 2 to registration statement on S-4, Registration Number 333-128217 filed on November 15, 2005.

\*\* Incorporated by reference to Exhibit 25.1 to registration statement on form S-3ASR, Registration Number 333-199863 filed on November 5, 2014.

---

**SIGNATURE**

Pursuant to the requirements of the Trust Indenture Act of 1939, as amended, the Trustee, U.S. BANK NATIONAL ASSOCIATION, a national banking association organized and existing under the laws of the United States of America, has duly caused this statement of eligibility and qualification to be signed on its behalf by the undersigned, thereunto duly authorized, all in the City of Cincinnati, State of Ohio on the 15th of February, 2019.

BY: /s/ Bill Sicking  
William Sicking  
Vice President



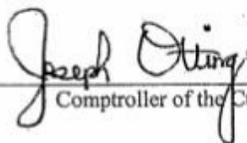
**CERTIFICATE OF CORPORATE EXISTENCE**

I, Joseph Otting, Comptroller of the Currency, do hereby certify that:

1. The Comptroller of the Currency, pursuant to Revised Statutes 324, et seq, as amended, and 12 USC 1, et seq, as amended, has possession, custody, and control of all records pertaining to the chartering, regulation, and supervision of all national banking associations.
2. "U.S. Bank National Association," Cincinnati, Ohio (Charter No. 24), is a national banking association formed under the laws of the United States and is authorized thereunder to transact the business of banking on the date of this certificate.

IN TESTIMONY WHEREOF, today,  
August 1, 2018, I have hereunto  
subscribed my name and caused my seal  
of office to be affixed to these presents at  
the U.S. Department of the Treasury, in  
the City of Washington, District of  
Columbia



  
Comptroller of the Currency



**CERTIFICATION OF FIDUCIARY POWERS**

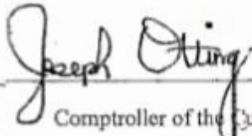
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2. "U.S. Bank National Association," Cincinnati, Ohio (Charter No. 24), was granted, under the hand and seal of the Comptroller, the right to act in all fiduciary capacities authorized under the provisions of the Act of Congress approved September 28, 1962, 76 Stat. 668, 12 USC 92a, and that the authority so granted remains in full force and effect on the date of this certificate.

IN TESTIMONY WHEREOF, today,  
May 8, 2018, I have hereunto subscribed my  
name and caused my seal of office to be  
affixed to these presents at the U.S.  
Department of the Treasury, in the City of  
Washington, District of Columbia.



  
Comptroller of the Currency

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**Exhibit 6**  
**CONSENT**

In accordance with Section 321(b) of the Trust Indenture Act of 1939, the undersigned, U.S. BANK NATIONAL ASSOCIATION hereby consents that reports of examination of the undersigned by Federal, State, Territorial or District authorities may be furnished by such authorities to the Securities and Exchange Commission upon its request therefor.

Dated: February 15, 2019

By: /s/ Bill Sicking  
William Sicking  
Vice President

**Exhibit 7**  
**U.S. Bank National Association**  
**Statement of Financial Condition**  
**As of 9/30/2018**

(\$000's)

	<u>9/30/2018</u>
<b>Assets</b>	
Cash and Balances Due From Depository Institutions	\$ 20,003,448
Securities	110,034,104
Federal Funds	31,434
Loans & Lease Financing Receivables	281,653,128
Fixed Assets	3,819,093
Intangible Assets	13,233,498
Other Assets	27,236,326
<b>Total Assets</b>	<b>\$456,011,031</b>
<b>Liabilities</b>	
Deposits	\$342,906,860
Fed Funds	6,964,321
Treasury Demand Notes	0
Trading Liabilities	977,478
Other Borrowed Money	38,881,574
Acceptances	0
Subordinated Notes and Debentures	3,800,000
Other Liabilities	14,600,333
<b>Total Liabilities</b>	<b>\$408,130,566</b>
<b>Equity</b>	
Common and Preferred Stock	18,200
Surplus	14,266,915
Undivided Profits	32,793,053
Minority Interest in Subsidiaries	802,297
<b>Total Equity Capital</b>	<b>\$ 47,880,465</b>
<b>Total Liabilities and Equity Capital</b>	<b>\$456,011,031</b>

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**SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM T-1**

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**STATEMENT OF ELIGIBILITY  
UNDER THE TRUST INDENTURE ACT OF 1939  
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Check if an Application to Determine Eligibility of a Trustee Pursuant to Section 305(b)(2)

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**U.S. BANK NATIONAL ASSOCIATION**

(Exact name of Trustee as specified in its charter)

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**31-0841368**  
I.R.S. Employer  
Identification No.

**800 Nicollet Mall**  
**Minneapolis, Minnesota**  
(Address of principal executive offices)

**55402**  
(Zip Code)

**William Sicking**  
**U.S. Bank National Association**  
**425 Walnut Street**  
**Cincinnati, Ohio 45202**  
**(513) 632-4278**  
(Name, address and telephone number of agent for service)

---

**AK Steel Corporation**

(Issuer with respect to the Securities)

---

**Delaware**  
(State or other jurisdiction of  
incorporation or organization)

**31-1267098**  
(I.R.S. Employer  
Identification No.)

**9227 Centre Pointe Drive**  
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(Parent Guarantor with respect to the Securities)

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**Secured Debt Securities**  
(Title of the Indenture Securities)

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a) *Name and address of each examining or supervising authority to which it is subject.*

Comptroller of the Currency  
Washington, D.C.

b) *Whether it is authorized to exercise corporate trust powers.*

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By: /s/ Bill Sicking  
William Sicking  
Vice President



Office of the Comptroller of the Currency

Washington, DC 20219

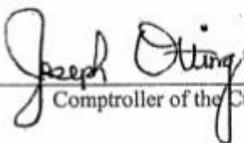
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IN TESTIMONY WHEREOF, today,  
August 1, 2018, I have hereunto  
subscribed my name and caused my seal  
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Comptroller of the Currency



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IN TESTIMONY WHEREOF, today,

May 8, 2018, I have hereunto subscribed my

name and caused my seal of office to be

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Department of the Treasury, in the City of

Washington, District of Columbia.



*Joseph Otting*

Comptroller of the Currency

---

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Dated: February 15, 2019

By: /s/ Bill Sicking  
William Sicking  
Vice President

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