OHIO E.P.A.

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ENTERED DIRECTOR'S JOURNAL

BEFORE THE
OHIO ENVIRONMENTAL PROTECTION AGENCY

In the Matter of:	
AK Steel Corporation Middletown Works 1801 Crawford Street Middletown, Ohio 45043	**Variance from Classification as a Waste**
Applicant	

PREAMBLE

It is agreed by the parties hereto as follows:

I. JURISDICTION

This Variance from Classification as a Waste (Variance) is issued to AK Steel Corporation Middletown Works (Applicant) pursuant to the authority vested in the Director of the Ohio Environmental Protection Agency (Ohio EPA) under Ohio Revised Code (ORC) §§ 3734.02, 3734.14, 3745.01 and Ohio Administrative Code (OAC) rule 3745-50-23.

II. PARTIES BOUND

This Variance shall apply only to the Applicant. No change in ownership of the Applicant or of the Facility shall in any way alter the Applicant's obligations under this Variance.

III. DEFINITIONS

Unless otherwise stated, all terms used in the Variance shall have the same meaning as defined in ORC Chapter 3734. and the rules promulgated thereunder. Whenever the terms listed below are used in this Variance, the following definitions shall apply:

1. "Acceptance by a Reclaimer" means when the FCS is loaded onto Reclaimer's transport vehicle or, if the Reclaimer is not the owner or operator of the transport vehicle, when the FCS is unloaded from the transport vehicle and placed into Reclaimer's storage unit.

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

By: Zona L Clements **Date:** Sept 20, 2013

2. "Application" means the responses to the criteria listed in OAC rule 3745-50-24(B) for a Variance submitted by the Applicant on April 1, 2013 which is attached hereto and incorporated herein.

3. "Facility" means the AK Steel Middletown Works facility, located at 1801 Crawford Street in Middletown Ohio.

4. "Ferrous chloride solution" or "FCS" means Spent Pickle Liquor as defined in OAC rule 3745-51-32(A) generated by Applicant and shipped to a Reclaimer.

5. "Spent Pickle Liquor" or "SPL" means hydrochloric acid that has been used in the surface treatment or pickling of steel by Applicant, and has become depleted or contaminated to the point that it is no longer usable for this production process. SPL includes hazardous waste classified as D002 as defined in OAC rule 3745-51-22 or as K062 as defined in OAC rule 3745-51-32(A).

6. "Regenerated Acid" means hydrochloric acid reclaimed by a Reclaimer from FCS or SPL. Regenerated Acid has a hydrochloric acid concentration of approximately 18%.

7. "Reclaimer" is a person who processes SPL to Regenerated Acid and iron oxide product.

IV. FINDINGS

The Director of Ohio EPA has determined the following findings:

1. Applicant is a person as defined in ORC section 3734.01(G) and OAC rule 3745-50-10(A).

2. On April 1, 2013, Applicant submitted an Application to the Director for a variance from classification as a waste for FCS transported by Applicant to a Reclaimer; in particular, Applicant is seeking relief from compliance with the manifest requirements of OAC rule 3745-52-20.

3. Applicant uses SPL in its own wastewater treatment processes and excess is disposed via permitted deep well injection. The volume of SPL being disposed of by deep well injection in on-site permitted wells has been reduced, as injection capabilities have declined over time.

4. Applicant has identified American Iron Oxide Company (AMROX) Rockport and Portage facilities in Indiana as potential Reclaimers for the FCS. AK Steel

Corporation will continue to identify and evaluate Reclaimers for excess FCS generated by Applicant.

5. Applicant addresses the standards and criteria set forth in OAC rule 3745-50-24(B) for issuing a variance from classification as a waste in the following manner:

   a. **How economically viable the production process would be if it were to use virgin materials, rather than reclaimed materials;**

      Applicant can use fresh hydrochloric acid or Regenerated Acid to pickle steel. Fresh hydrochloric acid is more expensive and has to be diluted prior to use. Regenerated Acid has the proper concentration of hydrochloric acid for direct use and costs less. AK Steel facilities purchase tens of thousands of tons of Regenerated Acid. Should AK Steel facilities have to replace a portion of Regenerated Acid with fresh hydrochloric acid, it will have a major impact on AK Steel's ability to produce steel at market competitive rates.

      In addition, with recent development of the Marcellus and Utica shale oil and gas production industry, the demand for hydrochloric acid has increased. Such demand has become a supply issue for AK Steel production and is expected to result in price increases for fresh hydrochloric acid.

   b. **The extent to which the material is handled before reclamation to minimize loss;**

      Applicant currently manages SPL produced during the steel process in accordance with all applicable Ohio hazardous waste requirements including: storage in tank systems specifically designed, constructed and independently certified by a professional engineer for this material; provision for secondary containment for storage and handling systems, including loading facilities; use of direct piping from pickling lines to the storage tank system; provisions for regular documented inspections; spill and contingency planning; employee training; and other relevant standards.

      Applicant transfers SPL to a tank storage system via hard piping which is maintained and inspected regularly. FCS from Applicant is transported by rail or truck to the Reclaimer. Both railcar loading and truck loading areas are constructed to control and contain any spilled material. All

loading/unloading operations are monitored transfers. Should any liquid be released during transfer at Applicant's Facility, it is collected and returned to the SPL holding tank system, used as a water or wastewater treatment aid, or disposed as SPL.

Applicant maintains records and documentation related to volumes of SPL generated, used on site and transferred off-site for use, disposal, or reclamation. All FCS managed and transported under this variance will be documented and records maintained.

c. **The time periods between generating the material and its reclamation, and between reclamation and return to the original primary production process;**

Using AMROX as an example, the time period between generation of FCS and Acceptance by a Reclaimer is expected to average four days. Time period between FCS reclamation and return to AK Steel facilities and other steel producers for use in the pickling process is estimated at approximately 5.5 days.

d. **The location of the reclamation operation in relation to the production process;**

AK Steel Corporation is a manufacturer of coiled steel products at plants located in Middletown, Ohio and Rockport, Indiana. The AK Steel Rockport Works property is immediately adjacent to the AMROX Rockport facility which is located approximately 230 miles from Applicant's Facility. The AMROX Portage facility is located approximately 260 miles from Applicant's Facility.

Regenerated Acid is returned to AK Steel's Rockport Works for use as feedstock in steel pickling processes as well as other steel production facilities, including other AK Steel mills.

e. **Whether the reclaimed material is used for the purpose for which it was originally produced when it is returned to the original process, and whether it is returned to the process in substantially its original form;**

AK Steel Corporation currently utilizes AMROX, an independent business with facilities located in Rockport and Portage, Indiana, for off-site reclamation of FCS. The AMROX Rockport facility and the AMROX Portage facility receive FCS from steel manufacturers and use it for the

production of iron oxide and Regenerated Acid. In addition AMROX may distribute FCS as a commercial chemical substitute without processing or reclaiming in accordance with OAC rule 3745-51-02(E)(1). Applicant has identified AMROX Rockport and Portage facilities as potential Reclaimers for Applicant's FCS.

The AK Steel Rockport Works property is immediately adjacent to the AMROX Rockport facility. The FCS generated at AK Steel Rockport Works is directly pumped to the AMROX Rockport facility. Regenerated Acid is returned to AK Steel's Rockport Works for use as feedstock in steel pickling processes. AMROX also supplies Regenerated Acid to other steel production facilities, including other AK Steel mills, where it is used as an effective substitute for fresh hydrochloric acid in the steel pickling process.

As Applicant identifies, evaluates, and utilizes other Reclaimers for excess FCS, irrespective of the location of the Reclaimer, Regenerated Acid will be returned to AK Steel production plants and other steel producers, where it will be used as an effective substitute for fresh hydrochloric acid in the steel pickling process.

f. **Whether the person who generates the material also reclaims it; and**

Reclamation of FCS will be conducted by an independent and physically separate business. AK Steel, the generator of the FCS, does not and will not perform reclamation of FCS.

g. **Other relevant factors.**

Direct use of FCS as a substitute for a commercial chemical product for water or wastewater treatment is allowed pursuant to OAC rule 3735-51-02(E)(1) and does not require a manifest. The material Applicant will ship for reclamation is identical in nature, chemical composition, and hazards to those shipped for direct use as a commercial chemical substitute.

Applicant states that the reclamation and reuse of FCS will avoid disposing of excess FCS as a waste.

6. Based upon the information submitted by the Applicant in the Application, the Director finds that SPL is not a waste when loaded into a transport container to be shipped to a Reclaimer provided the conditions of the Variance are met. Because FCS transported to a Reclaimer would not be considered a waste, Applicant is not required to comply with the manifest requirements of OAC rule

3745-52-20.

V. GENERAL CONDITIONS

1. All activities undertaken by Applicant pursuant to this Variance shall be performed in accordance with the requirements of all applicable federal, state, and local laws, regulations, and ordinances. Applicant shall continue to treat, store, and dispose of SPL at their Facility in accordance with all other applicable hazardous waste rules, including but not limited to the applicable standards for tanks in OAC rules 3745-66-90 to 3745-66-97. Applicant shall transport FCS to a Reclaimer in compliance with applicable DOT, PUCO and other applicable federal and state transportation requirements.

2. Applicant shall comply with the following specific conditions:

   a. **FCS Material Specifications:** FCS shall meet the FCS material specifications of the Reclaimer.

   b. **Acceptance by a Reclaimer:** FCS shall be Accepted by a Reclaimer.

   c. **Reclaimer meets Variance Criteria:** Reclaimer meets the following criteria:

      i. Time period between generation of FCS and processing to produce Regenerated Acid and iron oxide by the Reclaimer does not exceed ninety days.

      ii. Location of the Reclaimer does not exceed a distance of one thousand miles from the Applicant's Facility.

      iii. Regenerated Acid is used in the steelmaking process.

   d. **Notification of use of Reclaimer:** Applicant shall notify the Southwest District Office at the address in Section XIII upon the following occurrences:

      i. First Shipment to a Reclaimer. Within 30 days of sending the first shipment of FCS to a Reclaimer, Applicant shall include in the notification the following information:

         1. Reclaimer's name and address.

2. Distance from Applicant's Facility to Reclaimer's facility.

3. Time period between generation of FCS at Applicant's Facility and Acceptance by a Reclaimer.

4. A description of the reclamation process and products generated by the process.

5. Documentation that the Reclaimer is authorized by its state or tribal authority, or authorized by U.S. EPA, to receive SPL for processing to produce Regenerated Acid and iron oxide.

6. Reclaimer's material specifications for FCS.

ii. Change in time period between generation of FCS and Acceptance by a Reclaimer. Notice shall be made not later than 30 days after the change.

iii. Change by Reclaimer to material specification for FCS. Notice shall be made not later than 30 days after the change.

e. **Rejection by a Reclaimer:** If the Reclaimer rejects the FCS, the terms of the Variance no longer apply. The FCS shall be manifested under the state's hazardous waste rules as SPL and either returned to Applicant or sent to an alternate facility lawfully authorized to accept SPL. Alternatively, the rejected FCS can be used as an effective commercial chemical product for water or wastewater treatment. Within 15 days of rejection, Applicant shall notify the Southwest District Office at the address in Section XIII.

f. **Shipping Paper:** The shipping papers described in the Application must be maintained by Applicant for a period of three years.

If confirmation of Acceptance by a Reclaimer or rejection by a Reclaimer is not received, Applicant shall notify the Southwest District Office at the address in Section XIII of the status of the FCS within 45 days after the FCS left Applicant's Facility.

g. **Reporting:** By March 1st of each year, whether FCS is reclaimed or not, Applicant shall prepare an annual report for the previous calendar year; the first report will be due March 1st 2014. Applicant shall submit the report to the Southwest District Office at the address in Section XIII, in a

paper report format of Applicant's choice or an electronic format agreed upon by the Applicant and Ohio EPA. The report shall include the following information:

i. Total amount for the year of FCS shipped off-site for reclamation.

ii. Identification of each Reclaimer and total amount for the year of FCS Accepted by each Reclaimer.

iii. Identification of each supplier of Regenerated Acid and total amount for the year of Regenerated Acid received by Applicant.

h. **Renewal of Variance:** In the event that this Variance expires prior to a final action of the Director to renew or reissue this Variance, Applicant may continue to operate in accordance with the terms and conditions of the expired Variance until a new variance is issued or denied provided either of the following is applicable:

i. Applicant submits a complete application for a renewal variance at least one hundred eighty days before the expiration date of this Variance unless permission for a later submittal date has been authorized by the Director prior to the expiration date of this Variance.

ii. Through no fault of the Applicant a new variance has not been issued pursuant to OAC rule 3745-50-23 on or before the expiration date of this Variance.

i. **Notice Applicant no longer owns and/or operates the Facility:** Applicant shall provide a written notice to Ohio EPA, in accordance with Section XIII, within seven days after the date of the event described in Section XI, Paragraph 1. occurs.

VI. ACCESS TO INFORMATION

Applicant shall provide Ohio EPA, upon request and within 30 days unless an alternate time frame is agreed upon, in writing, by the Applicant and Ohio EPA, copies of all information relating to this Variance within its respective possession or control, or the possession or control of its respective contractors or agents, including but not limited to documents and information related to the issuance, use and implementation of this Variance.

Applicant may assert a claim that documents and other information submitted to Ohio EPA pursuant to this Variance are confidential under the provisions of OAC rules 3745-49-09 and 3745-50-30. If no such claim of confidentiality accompanies the documents and other information when submitted to Ohio EPA, the documents and other information may be made available to the public without notice to Applicant.

Nothing in this Section shall be construed as in any way limiting Ohio EPA's access, inspection and information gathering rights and authorities, including enforcement authorities related thereto, under any applicable statute or regulation.

VII. ACCESS TO SITE

Applicant shall provide Ohio EPA with access, at all reasonable times, including during normal business hours, to their Facility. Access under this Variance shall be for the purpose of conducting any activity related to this Variance or Ohio EPA's regulatory responsibilities, including but not limited to, the following:

1. Monitoring the implementation or use of this Variance.

2. Conducting sampling.

3. Inspecting and copying records, contracts, and other documents and information related to the implementation or use of this Variance.

4. Verifying any data and other information submitted to Ohio EPA.

Nothing in this Section shall be construed as in any way limiting Ohio EPA's access, inspection and information gathering rights and authorities, including enforcement authorities related thereto, under any applicable statute or regulation.

VIII. OTHER APPLICABLE LAWS

All actions taken pursuant to this Variance shall be undertaken in accordance with the requirements of all applicable local, state, and federal laws and regulations. This Variance does not waive or compromise the applicability and enforcement of any other statutes or regulations applicable to Applicant.

IX. OTHER CLAIMS

Nothing in this Variance shall constitute or be construed as a release from any claim, cause of action or demand in law or equity against any person, firm, partnership, or

corporation, not a party to this Variance, for any liability arising from, or related to, the operation of Applicant's Facility.

X. REVOCATION

The following are causes for revoking this Variance during its term:

1. Noncompliance by the Applicant with any condition of this Variance.

2. The Applicant's failure in the Application or during the Variance issuance process to disclose fully all relevant facts, or the Applicant's misrepresentation of any relevant facts at any time.

3. A determination that SPL or FCS is managed at the Facility in a manner that endangers human health or the environment.

XI. TERMINATION

Unless otherwise terminated by the Director, this Variance shall terminate ten years after the effective date of this Variance, or when either of the following events occurs:

1. Applicant no longer owns and/or operates the Facility.

2. Director revokes the Variance.

XII. MODIFICATIONS

This Variance may be modified by agreement of the parties hereto. Modifications shall be in writing and shall be effective on the date entered in the journal of the Director of Ohio EPA.

XIII. NOTICE

All documents required to be submitted by Applicant pursuant to this Variance shall be addressed to:

Ohio Environmental Protection Agency
Southwest District Office
Division of Materials and Waste Management
401 East Fifth Street
Dayton, Ohio 45402-2911

Attn: DMWM Manager

and Ohio EPA Central Office at the following address:

For mailings, use the post office box number:

Ohio Environmental Protection Agency
Lazarus Government Center
Division of Materials and Waste Management
P.O. Box 1049
Columbus, Ohio 43216-1049

For deliveries to the building:

Ohio Environmental Protection Agency
Lazarus Government Center
Division of Materials and Waste Management
50 West Town Street
Columbus, Ohio 43215

or to such persons and addresses as may hereafter be otherwise specified in writing by Ohio EPA.

XIV. RESERVATION OF RIGHTS

Ohio EPA and Applicant each reserve all rights, privileges and causes of action, except as specifically waived in Section XV. of these Orders.

XV. WAIVER

Without admission of any of the findings made under this Variance, Applicant agrees that this Variance is lawful and reasonable and agrees to comply with the terms and conditions of this Variance.

Applicant hereby waives the right to appeal the issuance, terms and conditions, and service of this Variance, and Applicant hereby waives any and all rights Applicant may have to seek administrative or judicial review of this Variance either in law or equity.

Notwithstanding the preceding, Ohio EPA and Applicant agree that if this Variance is appealed by any other party to the Environmental Review Appeals Commission, or any court, Applicant retains the right to intervene and participate in such appeal. In such an

event, Applicant shall continue to comply with the terms and conditions of this Variance notwithstanding such appeal and intervention unless this Variance is stayed, vacated or modified.

XVI. EFFECTIVE DATE

The effective date of this Variance is the date this Variance is entered into the Ohio EPA Director's journal.

XVII. SIGNATORY AUTHORITY

Each undersigned representative of a party to this Variance certifies that he or she is fully authorized to enter into this Variance and to legally bind such party to this Variance.

IT IS SO ORDERED AND AGREED:

Ohio Environmental Protection Agency

Scott J. Nally, Director

9/18/13
Date

IT IS SO AGREED:

AK Steel Corporation, Middletown Works

By: Signature

August 22, 2013
Date

David C. Horn
Printed or Typed Name

Exec V.P., G.C., & Sec
Title