Statement of Basis for Corrective Measures at

Superior Forge & Steel

Lima, Ohio
Allen County
OHD 987 033 131

prepared by

The Ohio Environmental Protection Agency
Division of Environmental Response and Revitalization

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Table of Contents

1.0 Introduction....Page 1

2.0 Public Participation....Page 1

3.0 Facility Background....Page 2

4.0 Corrective Action Process....Page 5

5.0 Corrective Measures....Page 8

6.0 Ohio EPA Selected Remedies....Page 12

7.0 References....Page 16

8.0 Acronyms and Abbreviations....Page 16

9.0 Glossary....Page 16

List of Tables

Table 1: Summary of Contaminated Media Exceeding Screening Criteria in the RFI....Page 7

Table 2: Ground Water Remedy Compliance Criteria....Page 13

List of Figures

Figure 1: Facility Location

Figure 2: Areas of Interest (AOIs)

Figure 3: RFI Sample Locations

**STATEMENT OF BASIS FOR
SUPERIOR FORGE & STEEL
LIMA, OHIO**

1.0 INTRODUCTION

The Statement of Basis presents a summary of investigation findings and interim corrective actions that have been completed at the Superior Forge & Steel (SFS) facility located at 1820 McClain Road, Lima, Ohio (Facility). An interim action was conducted in 2020 to remediate soil contamination at the facility as part of the Resource Conservation and Recovery Act (RCRA) Facility Investigation. Approximately 9 cubic yards of soil were removed and disposed of at Republic Services in Carey, Ohio as non-hazardous waste. After the interim action was completed, SFS conducted a human health risk assessment (HHRA) that concluded no additional corrective measures were required. The Ohio Environmental Protection Agency (Ohio EPA) will make a final determination as to the status of the RCRA Facility Investigation and the need for corrective measures after the public comment period has ended and those comments, if any, have been considered.

This SB is being issued by Ohio EPA as part of its public participation responsibilities under RCRA. This document summarizes information that can be found in greater detail in the final RCRA Facility Investigation (RFI) Report, and other pertinent documents and records contained in the Ohio EPA files. Ohio EPA encourages the public to review these documents to gain a more comprehensive understanding of the RCRA activities conducted at the Facility.

Ohio EPA prepared this Statement of Basis (SB) for SFS facility in Lima, Ohio. The purpose of this SB is to provide the public with information on the RCRA Corrective Action remedy Ohio EPA is proposing to select prior to taking a final action. An opportunity will be provided to the public for commenting on Ohio EPA's proposed remedy. During this period, Ohio EPA will accept written comments on the proposed remedial alternatives and offer a public meeting to receive public comments.

As summarized in Section 6 of the RFI Report, the risk estimates existing at the site do not indicate that further Interim or Corrective Measures are warranted (other than institutional controls to maintain industrial/commercial land use at the Facility and to prohibit use or extraction of ground water on the Facility for any purpose, including, but not limited to: human or animal consumption, gardening, industrial processes, or agriculture, except that ground water may be extracted in conjunction with environmental investigation, remediation activities, dewatering wells, and/or water extracted for purposes of building construction and maintenance of infrastructure). Institutional controls are proposed to be implemented through a Restrictive Covenant. It should be noted that there is no plan to alter the Facility use in the foreseeable future and the Facility currently uses municipal water.

Ohio EPA will select a specific remedy for the waste management units identified in the RCRA Corrective Action process only after the public comment period has ended and the comments received during this time have been reviewed and considered. Therefore, the public is encouraged to review and comment.

2.0 PUBLIC PARTICIPATION

Ohio EPA is soliciting community input on the proposed remedy for the Facility. Ohio EPA comments during a 45-day comment period to encourage public participation in the remedy selection process. Written comments may be submitted before the end of the comment period. The comment period may be extended by Ohio EPA if a specific request for a comment period extension is received within the original comment period. All persons, including SFS, may submit comments relating to this matter. Written comments are to be submitted by email to Ohio EPA at Publiccomment@epa.ohio.gov or directly to Brian Patterson at brian.patterson@epa.ohio.gov. When submitting written comments, please indicate the comments concern the Superior Forge Statement of Basis.

During the public comment period, Ohio EPA will accept written comments on the proposed remedy and may modify the proposed remedy or select another remedy based on new information or public comments.

The administrative record, which contains documents relevant to the proposed remedy, is available online at the following web address:

http://edocpub.epa.ohio.gov/publicportal/ViewDocument.aspx?docid=773318

http://edocpub.epa.ohio.gov/publicportal/ViewDocument.aspx?docid=1449496

http://edocpub.epa.ohio.gov/publicportal/ViewDocument.aspx?docid=1538112

Clicking the link will open and display the document. After clicking the link, the document will be displayed in your web browser.

After Ohio EPA consideration of the public comments received, the comments will be summarized, and responses will be provided in a response to comments document. The response to comments document will be drafted at the conclusion of the public comment period and will be incorporated into the administrative record. The public is encouraged to send written comments to Ohio EPA and to request further information.

Written comments may be submitted by email before the end of the comment period to:

Ohio EPA at Publiccomment@epa.ohio.gov or directly to Brian Patterson at brian.patterson@epa.ohio.gov. When submitting written comments, please indicate the

comments concern the Superior Forge Statement of Basis.

3.0 FACILITY BACKGROUND

This section discusses the Facility description and operational history, environmental setting, geology and hydrogeology, and summary of environmental investigations of the SFS facility.

3.1 Facility Description and Operational History

The Facility covers approximately 36.68 acres of land located at 1820 McClain Road, Lima, Allen County, Ohio (see Figures 1 and 2). The Facility is located on two noncontiguous parcels (Parcel IDs 46120001015000 and 4612001014000). Operations mainly take place on the main 34.27-acre parcel which contains the boiler house, steel casting area and machine shop, forge, and storage buildings. The western parcel is 2.41 acres and contains the Induction Hardening Building.

The Facility is located on the west side of McClain Road in a mixed industrial, commercial, and residential area. The facility is bordered on the north by WHEMCO. WHEMCO's property splits the two parcels (large Main Facility and smaller Induction Building) of the facility.

The Main Facility parcel is bordered to the east by McClain Road followed by residential and small commercial properties; to the south by Buckeye Road followed by Marathon bulk oil storage tank farm; to the west by railroad tracks followed by WHEMCO, the SFS Induction Building, and industrial properties (Allied Environmental and GEM, Inc.); and to the north by WHEMCO and an access road to WHEMCO's property.

The Induction Building parcel is bordered to the east by WHEMCO's property followed by railroad tracks, and the Main Facility parcel; to the south by industrial properties (Allied Environmental and GEM, Inc.); to the west by Liberty Commons Parkway followed by commercial and industrial properties; and to the north by WHEMCO.

3.1.1 Facility Operational History

From 1907 to 1968, the Galvin family owned and operated the Ohio Steel Foundry in the area. The Galvin family owned the Facility property along with adjoining property, which is currently operated by WHEMCO. The original building on the Facility was constructed in the southern portion of the large parcel circa 1957 (Forge Shop). In the 1960s, additions were made to the Facility, which included the Steel Foundry, in 1961, and the Induction Hardening Building (located on the small parcel) in 1963. Over the years, additional outbuildings were constructed to the north and west of the Steel Foundry, including the former Storage Warehouse Building in the 1970s.

In 1968, Teledyne Industries, Inc. purchased the property and operated the plant site as Teledyne Ohio Steel until 1990. Teledyne operated the steel casting area and forge to

produce high quality steel rolls from steel scrap and various alloy additives. Facility areas include: casting operations (Electric Arc Furnaces, sand molding, and ingot casting); sand handling and treatment; Pangborn shot blast equipment; air treatment equipment (two baghouses, a Venturi Scrubber, and wet collection system); gas fired heat treating ovens; forging operations where ingots were forged into rolls; Induction Hardening Building operations (rolls hardened with quench and temper techniques to form finished products); and support facilities (cooling water pond, utility building containing air compressors, oil house, electric substations and load centers, and various storage areas).

During Teledyne's operations at the facility, wastes generated included: Electric Arc Furnace (EAF,KO61) dust, waste oils (hydraulic and lubricating oils), molding sand, slag, and scale. EAF dust, sand, and slag were reported to have been disposed of off-site at various disposal locations. Based on information provided by the Facility, waste oils were reported to have been collected into drums and recycled by approved vendors. Scale was reportedly recycled through scrap dealers.

Teledyne was issued a National Pollutant Discharge Elimination System (NPDES) permit from Ohio EPA's Division of Surface Water for discharging non-contact cooling water associated with the steel mill and stormwater runoff. Based on information provided by the Facility, there were three reported outfalls for Teledyne. One was located at the South Pond overflow, which discharged non-contact cooling water and surface runoff. The other two outfalls are reported to have discharged uncontaminated storm water runoff only.

Teledyne utilized two contained water recycle systems to support the manufacture of steel rolls; one located in the Induction Hardening Building and the other was associated with the sand system wet collectors in the steel foundry. Water for these systems was recycled through pits at both locations. Solids from these pits were reported to have been cleaned out annually. The sand was tested via the Toxicity Characteristic Leaching Procedure (TCLP) analysis and determined to be non-hazardous. Makeup water for these systems was provided through the City of Lima municipal water supply. Teledyne installed a production well at the south end of the property to provide additional cooling water for the Facility; however, due to low yield the well was discontinued prior to 1991.

In the mid-1980s, a release of approximately 3,000 gallons of No. 2 fuel oil occurred. The release was from piping associated with two 15,000-gallon ASTs located inside the oil house. The material settled in the South Pond, where residual hydrocarbons mixed with pond sediments. Facility-provided information indicated that hydrocarbon residue and metal levels observed in the sediment and water samples taken, were below the Ohio EPA standards or remediation levels required at the time. The information also indicates that facility removed the oil sludges. Information provided by Tim Brennan stated the facility, through its contractor, International Technology Corporation, drained the pond and solidified the sludge with quick lime, so that the solidified material could be removed and disposed of off-site. No other information was available concerning additional remediation activities or confirmation sampling.

According to information provided by the Facility, prior to August of 1988, Teledyne had managed most of its EAF dust as a nonhazardous waste, which was shipped offsite for disposal. In August of 1988, Teledyne reportedly was involved in a dispute regarding the proper characterization of the EAF dust (apparently regarding whether or not the EAF dust was a listed hazardous waste–K061). During the period of dispute resolution between August of 1988 and May 1990, Teledyne temporarily stored the EAF dust onsite in an area adjacent to the railroad tracks and to the northwest of the main manufacturing building. No information regarding how the material was stored (liner, cover, etc.) was available. The EAF dust was tested by Teledyne and determined to not exhibit the characteristic of toxicity. Following this testing, Teledyne received a letter from the Ohio EPA indicating that it did not consider the EAF dust to be a listed hazardous waste and, since the EAF dust also did not exhibit a hazardous characteristic, it was therefore a nonhazardous waste and could be managed as such. The accumulated dust was removed from the site in June 1990 and sent to a nonhazardous waste disposal facility. This temporary storage of nonhazardous EAF dust appears to be evident in the 1989 aerial photograph in the location identified as the “small dark oblong area” (see Section 2.3.1). In December of 1990, the facility collected a sample of soil in this area for TCLP testing (metals) and Total Petroleum Hydrocarbons (TPH) testing. The results did not indicate elevated levels of contamination for either metals or TPH.

In 1990, the Park Corporation purchased the Facility and surrounding property. A portion of the property purchased by Park Corporation began operations as WHEMCO, which is currently the adjoining property to the north/northwest.

In 1991, SFS purchased the Facility and began operations at the plant site as a manufacturer of steel rollers for the aluminum, steel, and brass industry. The SFS Facility is divided into two manufacturing areas, a northern Induction Building Area and a southern Main Facility Area. The Induction Building Area operations consist of Induction Hardening building where metal is reheated for heat treatment. This area is surrounded by WHEMCO facility and is accessed through WHEMCO’s main gate along the eastern edge of the property.

The Main Facility Area is the primary manufacturing area, which includes a steel casting area, machine shop, north bay, sweep storage, forge shop, meeting area, pattern shop, steel scrap yard, cooling water pond, and former container storage building.

Waste currently generated by SFS is reported as baghouse dust, forging scale, slag, refractory sand and waste oils. Two 300-gallon above ground storage tanks (ASTs) containing gasoline and diesel fuel are reported to exist at the site. Polychlorinated Biphenyl (PCB) containing transformers and capacitors were reportedly located on the subject site.

3.2 Topography and Surface Hydrology

The topography in the area of the Facility is generally flat and slopes gently to the northwest in the direction of the Ottawa River. The average surface elevation at the site is about 900 feet above mean sea level (MSL). The Ottawa River is the closest surface water body (located approximately 1.3 miles northwest) and is approximately 830 feet above MSL.

Surface water in the facility drains towards the five outfalls associated with the facility. Storm water from the western portion of the facility, from the Main Production Building westward, flows toward the west and into the facility's cooling water pond and is discharged through Outfall 001, as needed. Outfall 001 is located on the south end of the cooling water pond. Stormwater flows from outfall 001 into an unnamed tributary of the Ottawa River. Outfall 001 is a permitted outfall through Ohio EPA DSW for storm water and wastewater through NPDES permit number 2ID00012*GD, effective September 1, 2015.

The facility also has an NPDES Industrial Storm Water General Permit (2GR00181*FG, issued by Ohio EPA June 25, 2018) for industrial storm water discharge from the facility. Storm water in a small area within the western portion of the facility and the eastern portion of the facility (east of the Main Production Building), flows south into catch basins and then offsite via storm sewer lines located on the southern property line immediately north of Buckeye Road. Storm water along the eastern fence line (McClain Road) will exit the facility via sheet flow to the east. Storm water from the Induction Hardening Building will run into catch basins that flow offsite through subgrade storm sewer lines to the north into the adjacent WHEMCO facility.

3.3 Site Geology

According to the Allen County Soil Survey, the property is located in an area comprised of Urban land and Urban Land complexes of silty loam, silty clay, clay loam, silty loam, and silty clay loam. The facility is underlain by 10 to 70 feet of glacial till consisting of clay, sandy-clay and lenses of sand and gravel. Bedrock underlying the glacial material is Silurian Age Limestone and Dolomite of the Bass Island and Lockport groups.

Field activities identified fill material in the upper 2 feet, followed by stiff brown clay to a depth of 10 to 15 feet, followed by gray clay to a depth 26 feet. Glacial till containing clay with traces of sand and gravel typically underlies the gray clay and extends to top of bedrock which was encountered between a depth of 44 and 53 feet below ground surface.

3.4 Ground Water Use

The bedrock formation serves as the principal aquifer for the area, with the overburden providing insufficient water for production purposes. Ground water yields in excess of 300 gallons per minute (gpm) may be developed from various solution cavities in the bedrock. Yields of 10 to 20 gpm may be obtained at depths of less than 100 feet. Regionally, ground water flow is expected to be to the northwest towards the Ottawa River.

Regulations have been promulgated in the Ohio Administrative Code (OAC) controlling the installation of private water systems, which would be applicable to individuals interested in developing a private water system in the vicinity of the Facility:

- "Any [well] used as a source of water for a private water system shall be located hydraulically up-gradient of any potential or known sources of contamination." (3701-28-10-B)
- "A water source shall not be located within a minimum of 50-feet of any known or possible source of contamination, except as specified in paragraph G." (3701-28-10-F) [see Paragraph G for specific minimum distance requirements for water sources.]
- "Casing shall not extend less than 25-feet below the natural ground surface." (3701-28-12-B4)
- "Wells completed in unconsolidated and consolidated aquifers may have less than 25-feet of casing where geologic and hydro-geologic conditions indicate potable water is not present at depths greater than 25-feet. Under no conditions shall casing extend to a depth less than 15-feet." (3701-28-121-A)

Consequently, these existing OAC regulations serve to prohibit installation of new shallow (overburden) wells for potable water supply purposes in the area of the Facility due to the geologic conditions.

4.0 CORRECTIVE ACTION PROCESS

The corrective action process is defined in Ohio EPA's Corrective Action Plan. The general steps in the corrective process are as follows:

- *FACILITY ASSESSMENT* - Updated or conducted by Ohio EPA. It answers the questions: Is there a current release and/or imminent threat?

- *INTERIM MEASURE(S)* - Undertaken by the facility, it addresses in the near term a release or potential release and/or an imminent threat or potential imminent threat.

- *RCRA FACILITY INVESTIGATION* - Undertaken by the facility. It answers the questions: How significant is the release or potential release and/or imminent threat or potential imminent threat?

- *CORRECTIVE MEASURE(S) STUDY AND DECISION* - Shared responsibility by both the facility and Ohio EPA. It determines how to best address the release or potential release and/or imminent threat or potential imminent threat.

- *CORRECTIVE MEASURE(S) IMPLEMENTATION* - Performed by the facility, it

designs the solution and addresses the release or potential release and/or imminent threat or potential imminent threat.

In February of 2018, Haley & Aldrich, INC. (HA), a contractor to SFS, prepared a RCRA Facility Current Conditions Report (CCR) as the product of the Facility Assessment (FA) for the Lima facility. From the CCR, HA identified 15 Areas of Interest (AOIs) on both properties. All 15 of these AOIs were located on the main manufacturing property. Of these 15 AOIs, HA determined that 13 needed further investigation under a RCRA Facility Investigation (RFI).

An initial step in every corrective action process for facilities regulated under RCRA is site characterization or investigation to define the nature and extent of contamination at the facility. The information collected during the site investigations supports selection and implementation of long-term cleanup remedies to address contaminated waste areas necessary to protect human health and the environment. The site investigation concludes with the facility's submission of the RCRA Facility Investigation Report (RFI Report) to Ohio EPA. Following the RFI Report, the facility also proposes remedies to Ohio EPA in a Corrective Measures Study (CMS) Report. At any time during this process, an interim measure may be implemented.

The CCR and RFI Report were prepared as part of RCRA Corrective Action activities being voluntarily initiated at the Facility by SFS in cooperation with the Ohio EPA.

4.1 RCRA Facility Investigation and Conclusions

The RFI was conducted in a phased approach, with two phases of investigation (Field Events #1 and #2) required to complete the investigation. The initial RFI Work Scope (Haley & Aldrich June 2018) was prepared to describe the investigation activities intended to evaluate Facility conditions and to attain the RFI objectives described above. After each phase, adequacy of the data was evaluated to determine whether additional data collection was warranted, and a supplemental work scope was prepared. Additional field events were necessary to collect supplemental soil and ground water data to achieve RFI objectives, as discussed above. When data of sufficient quality and quantity had been collected, the data were used to support decisions regarding the need for interim or corrective measures, if required, as discussed above.

4.1.1 Soil Contamination

As described in the CCR, the principal sources of Facility-related contamination are associated with raw materials and wastes generated by Facility operations and subsequent handling of those materials. The locations where the soil borings were drilled, and samples were collected are shown on **Figure 3**. Analytical data for compounds that screened above any of the above-identified screening criteria for soil are presented in **Table 1**. The RFI results indicated that, the majority of AOIs do not exhibit evidence of contamination (i.e., constituents were either not detected, or were detected at concentrations below risk-based screening levels used to delineate the nature and extent

of contamination), with a few exceptions, as detailed below. The other exception to this is AOI-08, where several metals were detected in surface soil at concentrations above the RFI screening levels. In AOI-08, soil boring SB08-04 had exceedances of the screening criteria for arsenic (much higher than other soil samples collected on-site), hexavalent chromium, lead, manganese and thallium in the 0 to 2 feet interval, and a soil sample from the boring to emplace monitoring well MW-06 had an exceedance for hexavalent chromium in the 0 to 2 feet interval. These results are shown in databoxes on Figure 6 of the RFI report. Soil boring SB08-04 and MW-06 are located roughly where the dark area was observed in the 1989 aerial photograph, which was suspected to be a temporary baghouse dust storage area from the late 1980's, prior to SFS ownership.

Pursuant to discussions with the Ohio EPA, as detailed in a letter dated 29 January 2020, supplemental soil samples were collected from four additional soil points immediately surrounding the SB08-04 location, where preliminary risk assessment indicated this small area posed a potential unacceptable future risk represented by an area of about 10-feet by 10-feet surrounding this point. Contingency samples from additional step-out borings representing a 20-feet by 20-feet square were also collected; only the two eastern-most of these needed to be analyzed to help delineate elevated detections of manganese and arsenic. Two samples were also re-collected from the original SB08-04 location to better define the depth of these elevated detections.

The new data were re-analyzed in the HHRA and identified that the shallow soil sample at SB08-04 was the only point that represented a potential unacceptable future risk. Given the small area of impacted soils around SB08-04, the facility conducted an interim remedial measure by soil excavation of an approximately 10-feet by 10-feet by 2-feet deep area. Remedial measures documentation is contained in Appendix D of the RFI report.

The following table summarizes contaminants of concern (COC) in soil that exceeded screening levels. RFI sampling locations are shown in Figure 3.

TABLE 1
SUMMARY OF CONTAMINATED MEDIA WHICH EXCEEDED SCREENING CRITERIA IN AOI-08

Media Exceeding Risk Based Standards	Contaminants of Concern (COC)
Soil	Arsenic, Lead, Manganese, and Thallium

4.1.2 Ground Water Contamination

As part of the investigation, ground water was evaluated on a Facility-wide basis to allow an understanding of the overall ground water flow directions and to determine potential impacts from any of the AOIs, if identified. Consequently, Facility-wide ground water was designated as a separate AOI. The investigation focused on shallow ground water, as it is the first indicator of any potential impact. As discussed in Section 3.10, the transition from stiff brown clay to soft gray clay in shallow soil was identified as the first water bearing unit. Monitoring wells installed across this interval yielded sufficient water for low

flow sampling, albeit very slowly. One temporary well at MW-03 and one permanent monitoring well at MW-01 were installed in the top of rock interval and did not exhibit appreciable quantities of water. During development, MW-01 went dry, and there was not sufficient water recovery for ground water sampling two weeks later. The results indicated that the deeper portion of the soil column does not yield sufficient water for sampling purposes. Given the well construction in the clayey soil interval, the ground water yield was low and typically quite turbid.

Similarly, there were detections of arsenic in ground water in both the upgradient and downgradient monitoring wells; and arsenic was predominantly present in suspended solid form (total analysis), based on the total and dissolved sampling results. This is consistent with the high turbidity observed in these shallow wells installed in the predominantly clayey overburden. Consequently, similar to soils, these arsenic detections are considered to be naturally occurring. Regardless, the arsenic detections in ground water were evaluated and risks were calculated as described in the HHRA (RFI report Appendix E).

Following the two phases of RFI data collection, SFS conducted a HHRA. The HHRA was completed following U.S. EPA guidance for risk assessment and characterized cancer and non-cancer risks associated with potential exposures to soil, sediment (at AOI-05), and ground water under current and possible future commercial/industrial land uses. An initial step in the assessment is to make assumptions about future land use. In this case, the facility is zoned for industrial use, has a long history of being used as an industrial facility and its reasonably anticipated future land use is industrial. Based on this land use scenario, potential receptors were further evaluated based on common exposure pathways.

Under current and anticipated future land use conditions as commercial/industrial, the results of the HHRA indicate that cancer risks are below Ohio EPA's statewide cancer risk goal of 10-5 (one in 100,000), and non-cancer HI values do not exceed 1 for commercial/industrial workers who may contact surface soil and sediment, and for construction workers who may contact subsurface soil and ground water.

5.0 CORRECTIVE MEASURES

As summarized in Section 6 of the RFI report, following completion of the AOI-08 remediation, the risk estimates do not indicate that further Interim or Corrective Measures are warranted (other than institutional controls to maintain industrial/commercial land use on Facility and to prohibit use or extraction of overburden ground water on the Facility for any purpose, including, but not limited to: human or animal consumption, gardening, industrial processes, or agriculture, except that ground water may be extracted in conjunction with environmental investigation, remediation activities, dewatering wells, and/or water extracted for purposes of building construction and maintenance of infrastructure). Institutional controls will be implemented through a Restrictive Covenant.

It should be noted that there is no plan to alter the Facility use in the foreseeable future and the Facility currently uses municipal water.

Ohio EPA concludes that the SFS RCRA Facility Investigation (2020) met the requirements of the RCRA process approved the findings and summaries documented in the report. While the normal sequence of corrective actions is initiated with a RCRA Facility Investigation and continue through a Corrective Measures Study, in some cases, evidence is presented as part of the RCRA Facility Investigation that determines that no environmental impacts remain or may define presumptive remedies that can be implemented without necessitating the completion of a CMS. Ohio EPA agrees that SFS has met that burden of evidence with regards to the data presented in the SFS RCRA Facility Investigation (2020).

6.0 Ohio EPA Selected Remedy

6.1 Environmental Covenant

SFS must enter into an Environmental Covent to limit future use of the property to industrial use. The Environmental Covenant process is specified by the Ohio Revised Code (ORC) 5301.80 through 5301.92. The Covenant will declare the site as industrial use only, controlling human exposure to COCs in the soils and ground water. The Covenant will run with the land and attach to the property deed and cannot be changed without the written agreement of both the property and Ohio EPA, even if the property is sold at some point in the future. Ohio EPA will monitor the property owner's adherence to the Environmental Covenant to ensure continued protection of human health and the environment. An Environmental Covenant, which applies to future landowners, is a legal instrument used to minimize the potential for human exposure to residual contamination.

7.0 REFERENCES

Haley & Aldrich. (HA). *RCRA Current Conditions* Report *Superior Forge & Steel,* February 2018, Ohio EPA. https://edocpub.epa.ohio.gov/publicportal/ViewDocument.aspx?docid=773318

Haley & Aldrich. (HA). *RCRA Facility Investigation Report Superior Forge and Steel.* September 2020, Ohio EPA. https://edocpub.epa.ohio.gov/publicportal/ViewDocument.aspx?docid=1449446

Haley & Aldrich. (HA). Revised *RCRA Facility Investigation Report Superior Forge and Steel.* March 2021, Ohio EPA. https://edocpub.epa.ohio.gov/publicportal/ViewDocument.aspx?docid=1538112

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8.0 ACRONYMS AND ABBREVIATIONS

AOC	Area of concern
CFR	Code of Federal Regulations
CMS	Corrective measures study
COC	Contaminant of Concern
MNA	Monitored Natural Attenuation
Ohio EPA	Ohio Environmental Protection Agency
RCRA	Resource Conservation and Recovery Act
RFI	RCRA facility investigation
SAP	Sampling and Analysis Plan
SB	Statement of basis
SWMU	Solid waste management unit
U.S. EPA	U.S. Environmental Protection Agency
WMU	Waste Management Unit

9.0 GLOSSARY

Administrative record - A collection of all documents that the Ohio Environmental Protection Agency (Ohio EPA) considers when selecting corrective measures for a Resource Conservation and Recovery Act (RCRA) facility.

Aquifer - Bedrock or unconsolidated material that is saturated and sufficiently permeable to transmit ground water to wells or springs.

Area of Concern (AOC) - Any area where a nonroutine release of hazardous waste or constituents to the environment has occurred or is suspected to have occurred.

Background - Constituent concentrations in nearby environmental media that are unaffected by a RCRA unit or any other concentrated waste activities.

Bedrock - The solid rock that underlies gravel, soil, or other unconsolidated surficial material.

Corrective measures study (CMS) - An evaluation of alternatives for cleanup of a facility contaminated with hazardous waste or hazardous constituents.

Commercial Land Use - “commercial land use" as “land use with potential exposure of adult workers during a business day and potential exposure of adults and children who are customers, patrons, or visitors to commercial facilities during the business day. Commercial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil, ingestion of soil and inhalation of volatile compounds due to vapor intrusion to indoor air. Generic direct contact standards for commercial land use may not be appropriate for properties where a high frequency of

potential exposure to children may occur, such as at schools and day care facilities." Commercial land use includes, without limitation: warehouses, retail establishments, office buildings, hospitals and clinics, religious institutions, hotels, motels and public areas incidental to such use.

Facility - All contiguous land and structures, other appurtenances, and improvements at a site under a given owner's or operator's control. The facility includes any solid or hazardous waste management area present.

Ground water - Water found beneath the earth's surface in a saturated zone. Ground water fills pores between materials such as sand, soil, and gravel as well as cracks in bedrock.

Hazardous constituents - Constituents listed in Appendix to Ohio Administrative Code (OAC) Rule 3745-51-11 and in Appendix to OAC Rule 3745-54-98.

Hazardous waste - Waste as defined in OAC Rule 3745-51-03.

Hazardous waste management unit - A unit in which hazardous waste is disposed of, treated, or stored and which requires a RCRA Part A or Part B permit.

Hydraulic conductivity - The rate at which ground water can move through a subsurface soil unit.

Industrial Land Use - "industrial land use" as "land use with potential exposure of adult workers during a business day and potential exposures of adults and children who are visitors to industrial facilities during the business day. Industrial land use has potential exposure of adults to dermal contact with soil, inhalation of vapors and particles from soil and ingestion of soil and inhalation of volatile compounds due to vapor intrusion to indoor air." Industrial land use includes, without limitation: lumberyards, power plants; manufacturing facilities, assembly plants, non-public airport areas, railroad switching yards, marine port facilities, and public or employee areas incidental to such land use.

Inorganics - Chemical substances of mineral rather than organic origin (for example, barium).

Institutional Control - Controls that do not involve engineering or construction, such as land use restrictions, easements, covenants, zoning, deed notices, and advisories.

Lacustrine - Geologic deposits that have been accumulated in lake-water areas.

Organics - Chemicals that contain carbon (for example, methane or CH_4).

Resource Conservation and Recovery Act (RCRA) - A law authorizing a regulatory

program for treatment, storage, and disposal of hazardous waste. The law includes corrective action provisions that authorize the federal government to respond directly to releases of hazardous waste that may pose a threat to public health or the environment. Ohio EPA is responsible for implementing RCRA corrective action activities in Ohio.

RCRA facility investigation (RFI) - An investigation to determine the nature and extent of contamination at a facility and the problems that the contamination may cause. The RFI is performed prior to a CMS, which identifies and analyzes cleanup alternatives for the facility.

Risk assessment - An evaluation of existing conditions at a facility with respect to protection of human health, the environment, or both. This evaluation estimates, either qualitatively or quantitatively, the potential for adverse human health or ecological effects associated with potential contamination at a facility. Examples of risk assessments include human health risk assessment (HHRA) and ecological risk assessment (ERA).

Statement of basis (SB) - A public document that explains the corrective measures proposed by Ohio EPA to remediate contamination at a RCRA corrective action facility. The SB is based on technical information generated during the RFI and CMS.

Till - Glacial drift composed of an unconsolidated, heterogeneous mixture of clay, sand, pebbles, cobbles and boulders.

Waste management unit (WMU) - Any discernible unit at which solid waste, hazardous waste, infectious waste (as those terms are defined in ORC Chapter 3734), construction and demolition debris (as defined in ORC Chapter 3714), industrial waste, or other waste (as those terms are defined in ORC Chapter 6111) has been placed at any time, irrespective of whether the unit was intended for the management of waste or hazardous waste. Such units include any area at a facility at which wastes have been routinely and systematically released. The term “waste management unit” is generally equivalent to the term “solid waste management unit.” Examples of WMUs include landfills, surface impoundments, waste piles, land treatment units, incinerators, injection wells, tanks (including 90-day accumulation tanks), container storage areas, transfer stations, and waste recycling operations.

Figures

Figure 1 - Site Location

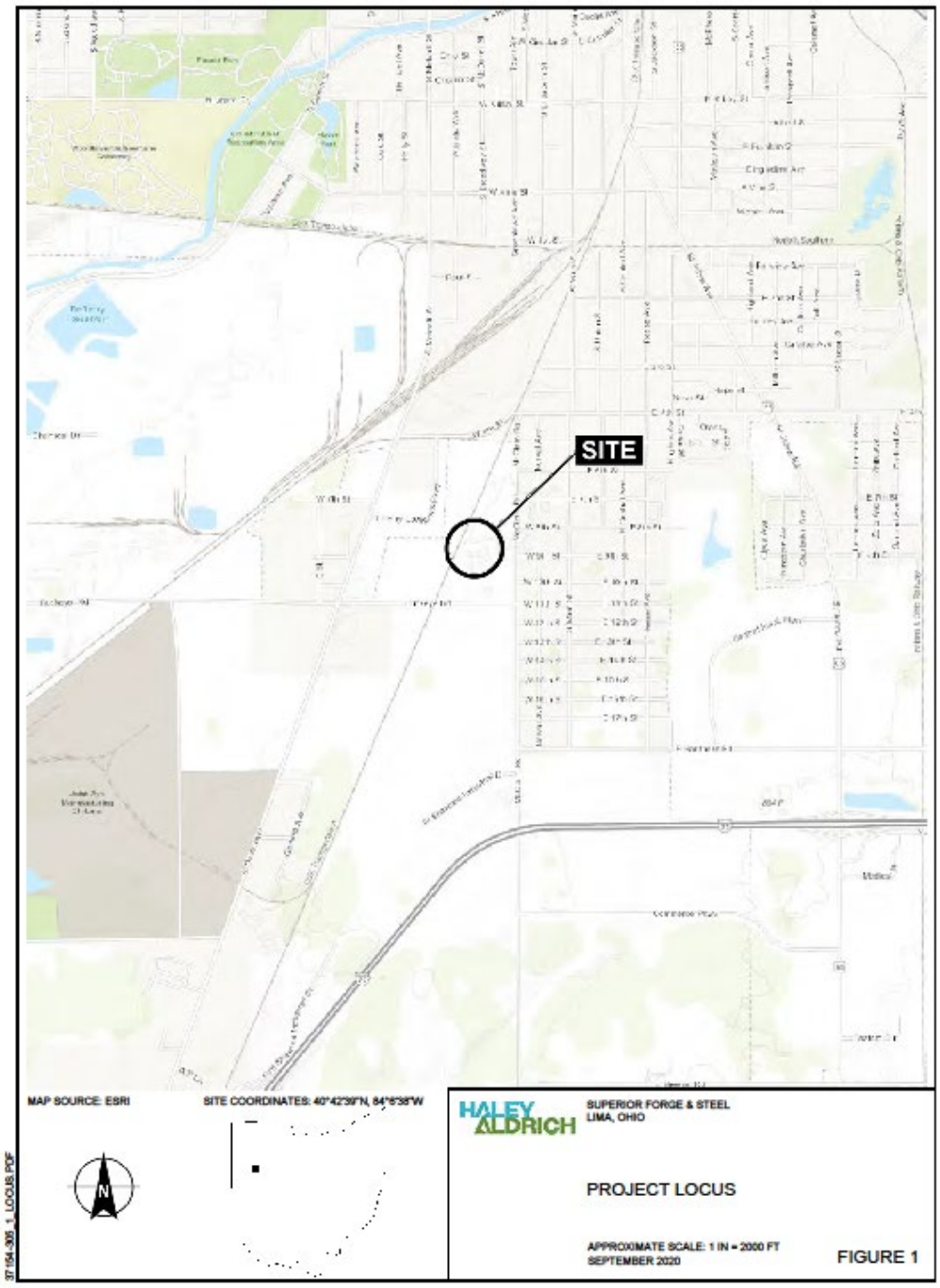

SITE
MAP SOURCE: ESRI
SITE COORDINATES: 40°42'39"N, 84°5'38"W
N
HALEY ALDRICH
SUPERIOR FORGE & STEEL
LIMA, OHIO
PROJECT LOCUS
APPROXIMATE SCALE: 1 IN = 2000 FT
SEPTEMBER 2020
FIGURE 1
37154-305_1_LOCUS.PDF

Figure 2 – Areas of Interest

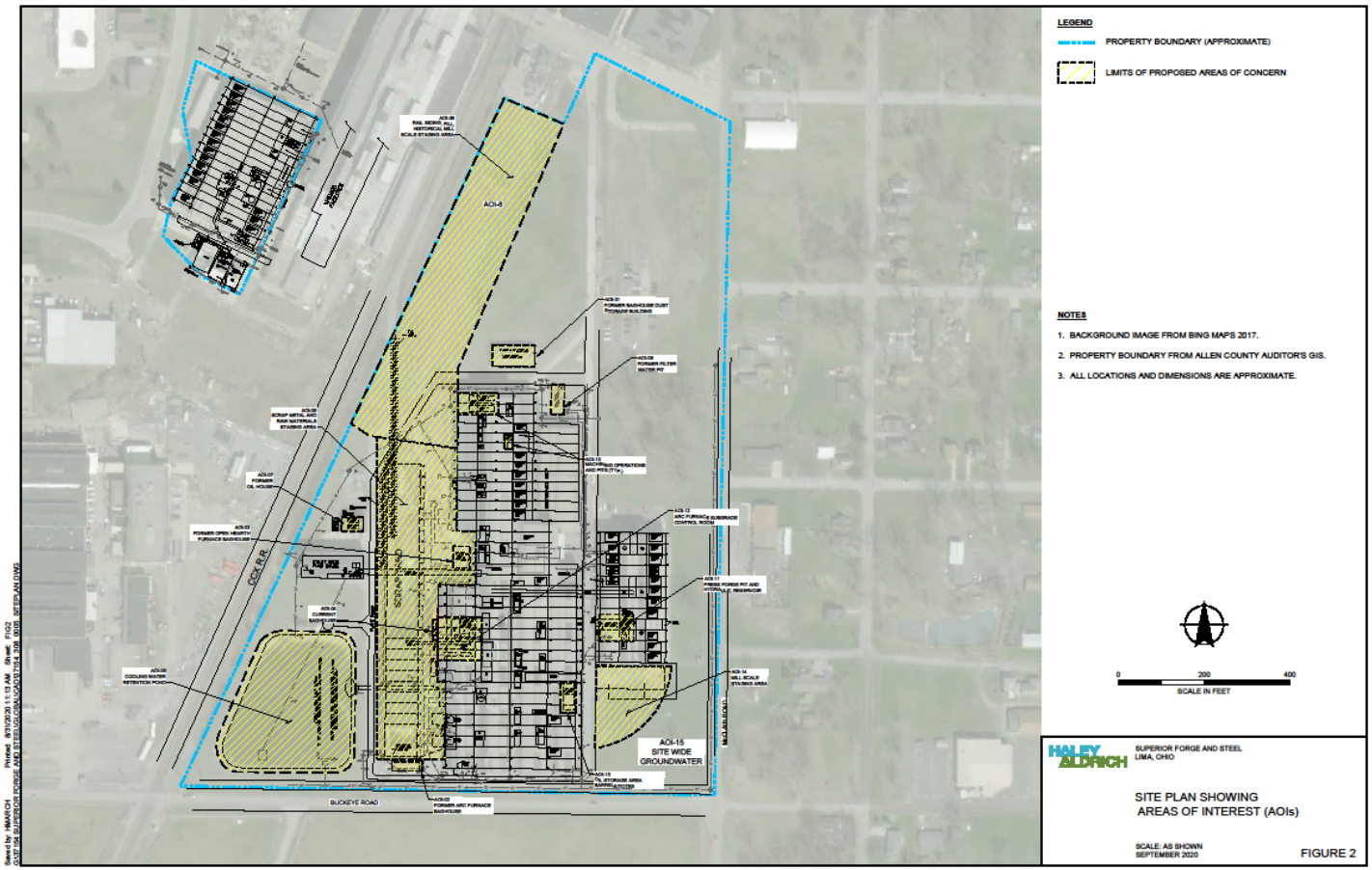


Figure 3 – RFI Sample Locations

