COLLIS CORPORATION
(Clinton, Iowa)

GENERAL DESCRIPTION

The Collis Corporation is located within the limits of the city of Clinton, Iowa and is generally described as the SE 1/4 of the NW 1/4 of Section 14, T81N, R6E, Clinton County, Iowa. **Southern Steel and Wire Holding Co**. currently owns and operates Collis a manufacturing facility, which produces shelving, baskets, and accessories for refrigeration equipment. The facility was previously owned by Chamberlain Manufacturing Corporation. Steel wire is used to fabricate products and several metal finishing techniques are employed. These techniques include zinc plating followed by chromium conversion coating, lacquer dip and baking, and epoxy coating. The site is about 12.5 acres. The site was entered on the Registry in December 1984.

SITE CLASSIFICATION

In 2019 the site is re-classified to "d" in accordance with 455B.427.3.

TYPE AND QUANTITY OF HAZARDOUS WASTE

- **Groundwater monitoring has identified elevated levels of chromium, cyanide, nickel, lead, trichloroethylene, arsenic, trans-1,2-dichloroethylene, dichlorofluoromethane, zinc, and total organic halides.**
- **Soil sampling has identified elevated levels of TCE, benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, naphthalene, PCB-1254, PCB-1260, arsenic, hexavalent chromium, lead, and amendable cyanide.**

From 1970 to 1979, chrome plating wastewater treatment sludge was placed in six lagoons located on plant property. An estimated total of 1,090 cubic yards of sludge were disposed of in these lagoons. The lagoons were constructed without any type of liner or leachate collection system. The estimated depth of the sludge is approximately five feet. Also, before 1980, site contamination occurred through numerous spills and leaks from containers and equipment and overflows.

EPA regulates the lagoons under the RCRA program. All of the sludge surface impoundments/lagoons were addressed during remedial efforts from 1986 to 1989 by excavating soil and transporting it off-site for disposal. The area containing the original five-six sludge surface impoundments/lagoons is about 150 feet wide by 300 feet long and is located near the northernmost corner of the plant site. The excavated areas of the sludge surface impoundments/lagoons have been filled and the containment embankment graded level with surrounding ground. The sludge surface impoundments/lagoons also contained water-soluble oil that leached from metal shavings deposited about 50 yards from the sludge surface impoundments/lagoons in the late 1970s.

Eleven soil samples collected in the area of the lagoons showed PCBs and elevated levels of several metals in most of the samples. The PCB-Aroclor 1260 was found as high as 53 ppm. The metals included chromium (670 ppm), Copper (4,000 ppm), lead (878 ppm), and zinc (3020 ppm).

The EPA received a closure plan from Collis to remove all contaminated sludge and soil in the lagoon area. Collis began to remove the hazardous waste sludge in November 1986 and continued until February 1987. About 11,000 tons of sludge were removed and transported off-site as a hazardous waste. Prior to sludge removal, about 270,000 gallons of liquid were removed from the impoundments and treated for cyanide destruction in temporary treatment tank structures. The treated liquid was discharged to the sanitary sewer. After sludge removal, another 90,000 gallons of liquids were pumped from the area and removed for off-site treatment. **SUMMARY OF PUBLIC HEALTH AND ENVIRONMENTAL CONCERNS**

The Collis facility is located on the Mississippi River floodplain. The soils consist of alternating layers of clay and silts with varying layers of fine to coarse sand or silty sand. Depths to the limestone bedrock range from 6 to 118 feet. Past discharges of wastewater and sludge have caused water quality violations in Mill Creek. Surface water

samples indicate there is a significant increase in copper, zinc, and cyanide downstream of the plant's wastewater discharge point. Collis and EPA agree this contamination was caused by the plant's wastewater discharge rather than groundwater flow. Concern over this contamination has decreased due to a revision of the Collis NPDES permit.

STATUS OF ASSESSMENT, MONITORING OR REMEDIAL ACTION

A plan to close the surface lagoons was developed in 1998 through a Consent Agreement and Consent Order for sludge removal, back filling, and site grading. The EPA is regulating this site under RCRA authority. The state will continue to coordinate with EPA to assure proper cleanup. Collis is also conducting a RCRA Facility Investigation under an EPA order (VII-94-H-0001).

In 1998 the RCRA Facility Investigation (RFI) Report addressing soil, groundwater and sediment and surface water Manufacturer's Ditch was completed. In 2000 the Additional Investigation Activities: Interim Report (an additional assessment) of the extent of ground water contamination within bedrock and off site contamination was completed. In October 2002, a RCRA Facility Investigation: Interim Measures Work Plan (Aquifer Test) was submitted for aquifer characterization for purpose of evaluating corrective action alternatives. Also, RCRA Facility Investigation: Corrective Measures Work Plan Addendum submitted for the purpose of further characterization of extent of soil and ground water contamination.

2003: The U.S. Environmental Protection Agency (USEPA) provided technical review comments on a Draft RFI/CMS work plan. The purpose of the work plan was to provide a strategy for completing the investigation of soil and groundwater contamination at the facility. Facility representatives and USEPA are planning to meet early in 2004 to discuss USEPA comments on the draft work plan and the revisions that will be required in order for the work plan to be approved.

2004: The EPA met with Collis representatives in February 2004 to discuss the technical review comments prepared by the EPA after the EPA reviewed the RFI/CMS Work Plan. Collis subsequently submitted a revised RFI/CMS Work Plan in August 2004, which is currently being evaluated by EPA. The EPA anticipates having an approved RFI/CMS Work Plan in place in early 2005.

2005: An RFI/CMS work plan was reviewed and approved by the EPA in April 2005. Environmental fieldwork consisting of soil sampling and the installation and sampling of additional new monitoring wells was completed during the summer of 2005. As of December 2005 Collis is in the process of preparing a report on the results of this fieldwork. Upon receipt of this report, the EPA will review it to determine whether the extent of soil and groundwater contamination has been characterized sufficiently to support performing a baseline risk assessment, which is the next step in the corrective action process.

2007: An RFI site assessment report was completed and reviewed by EPA. EPA identified deficiencies in the RFI report, and requested that Collis conduct additional sampling to determine vertical and lateral extent of contamination in soil and groundwater. This additional sampling work will occur in 2008.

2008: Collis submitted a Draft Supplemental Remedial Facility Investigation Work Plan and Quality Assurance Project Plan (QAPP) in February 2008. A Revised Supplemental RFI Work Plan and QAPP submitted in May. The EPA met with Collis representatives in October 2008 to discuss completion of the RFI.

2009: EPA granted a 6-month extension for initiation of RFI field activities. Collis submitted Final RFI Supplemental Work Plan in March 2009. EPA met with Collis representative to discuss comments on Final RFI Work Plan.

2010: RCRA Facility Investigation was conducted and received EPA review and comment

2011: Corrective Measures Work Plan, Groundwater Sampling Plan and Vapor Intrusion work plan were approved by EPA.

2012: Quarterly monitoring of groundwater, surface water sampling, and soil vapor sampling were conducted. This information was submitted to EPA in Quarterly Groundwater Monitoring Reports.

2013: A Consent Agreement and Final Order (CAFO) filed on March 27, 2013 (EPA Docket No. RCRA-07-2012-0014) required a Focused Soil Sampling (FSS) project in two areas where hazardous waste storage occurred to determine whether there were releases and to determine whether any further remedial action was warranted. The CAFO also required Collis, Inc. to perform supplemental Environmental Projects (SEP) to conform to RCRA requirements. As a result of the enforcement action, Collis, Inc. has reduced its RCRA generator status from a large quantity generator (LQG) to a conditionally exempt small quantity generator (CESQG). The EPA is currently reviewing the Focused Soil Sampling Final Report and SEP Completion Report.

A site visit was conducted by EPA personnel in July, 2013. The purpose of the site visit was to observe field soil sampling activities being performed under the Consent Agreement and Final Order (CAFO) in the matter of Collis, Inc. – Docket No. RCRA-07-2012-0014. Other activities included meeting facility personnel, conducting meetings at the beginning and end of the visit; touring the buildings, observing the manufacturing processes, touring the property, locating the solid waste management areas (SWMUs), and locating the groundwater monitoring wells.

2014: the following actions were completed this year.

- EPA review and comment of Quality Assurance Project Plan.
- EPA terminated Consent Agreement upon full implementation of required actions in the agreement.
- EPA completed review of Draft 2012 Sampling Summary Report.
- EPA conditional approval of RCRA Corrective Action Report
- EPA approval of Final 2012 Sampling Summary Report
- Conditional approval of Phase II Groundwater Monitoring Work Plan

2015: The following actions were completed this year.

- Approval of Corrective Measures Activities October-December 2014 - Phase II Groundwater Monitoring Report (1st Quarter Phase II GMP Report)
- Approval of Final Corrective Measures Study Work Plan Final Vapor Intrusion Work Plan

2016: The following actions were completed this year

- EPA approval of Addendum to Final Sampling and Analysis Plan for Filter Building & Retention Basin (SWMU #3) Demolition Confirmation Soil Sampling dated December 7, 2015.
- EPA approval with comments on Collis, Inc. - Corrective Measures Study Phase III Long Term Monitoring Work Plan (Phase III LTM WP) dated July 13,2016
- The Revised Corrective Measures Study Work Plan Final 2014-2015 Groundwater Sampling Summary Report dated May 4, 2016
- The Revised Corrective Measures Study Work Plan Final Phase III Groundwater Monitoring Work Plan dated August 17,2016
- EPA approval-Collis Early Implementation Request-SWMU#3-SAP 10-15-15
- EPA approval of Collis deviations from SAP-SWMU#3 10-27-15
- EPA conducted a Data Review meeting with Collis on September 8, 2016.

2017: The following actions were completed this year

In 2015-2016, Solid Waste Management Unit (SWMU) 3 – Sludge Management Area was investigated as documented and approved by EPA in the "*Filter Building & Retention Basin (SWMU #3) Final Demolition Confirmation Soil Sampling Report*" (BB&E, 2017).

EPA approval of the Collis Revised PCB work plan for Manufacturer's Ditch, SWMU#8.

An investigation was conducted in December 2016 at SWMU 8 – Manufacturer's Ditch Area for PCBs in soil, sediment, and surface water, and is documented and approved by EPA dated 3/7/17 in the "*Final Manufacturer's Ditch PCB Sampling Report*" (BB&E 2017).

EPA approval dated 4/26/17 of Collis's Revised PCB Delineation and Removal Work Plan for SWMU#4-Surface Impoundment Area.

In April 2017, an investigation was completed to determine the extent of PCBs above 25 mg/kg in SWMU #4-Surface Impoundment Area.

In May 2017, soils with PCB concentrations in SWMU#4 above 25 mg/kg were excavated and disposed of as documented and approved by EPA in the "*Collis, Inc. – PCB Removal Action – SWMU No. 4 Summary Report*" (BB&E 2017).

EPA approval of Collis's Zinc Electroplating Solution Release Investigation work plan; 6/9/17

Collis completed an onsite and offsite investigation of Zinc Electroplating Solution Release.

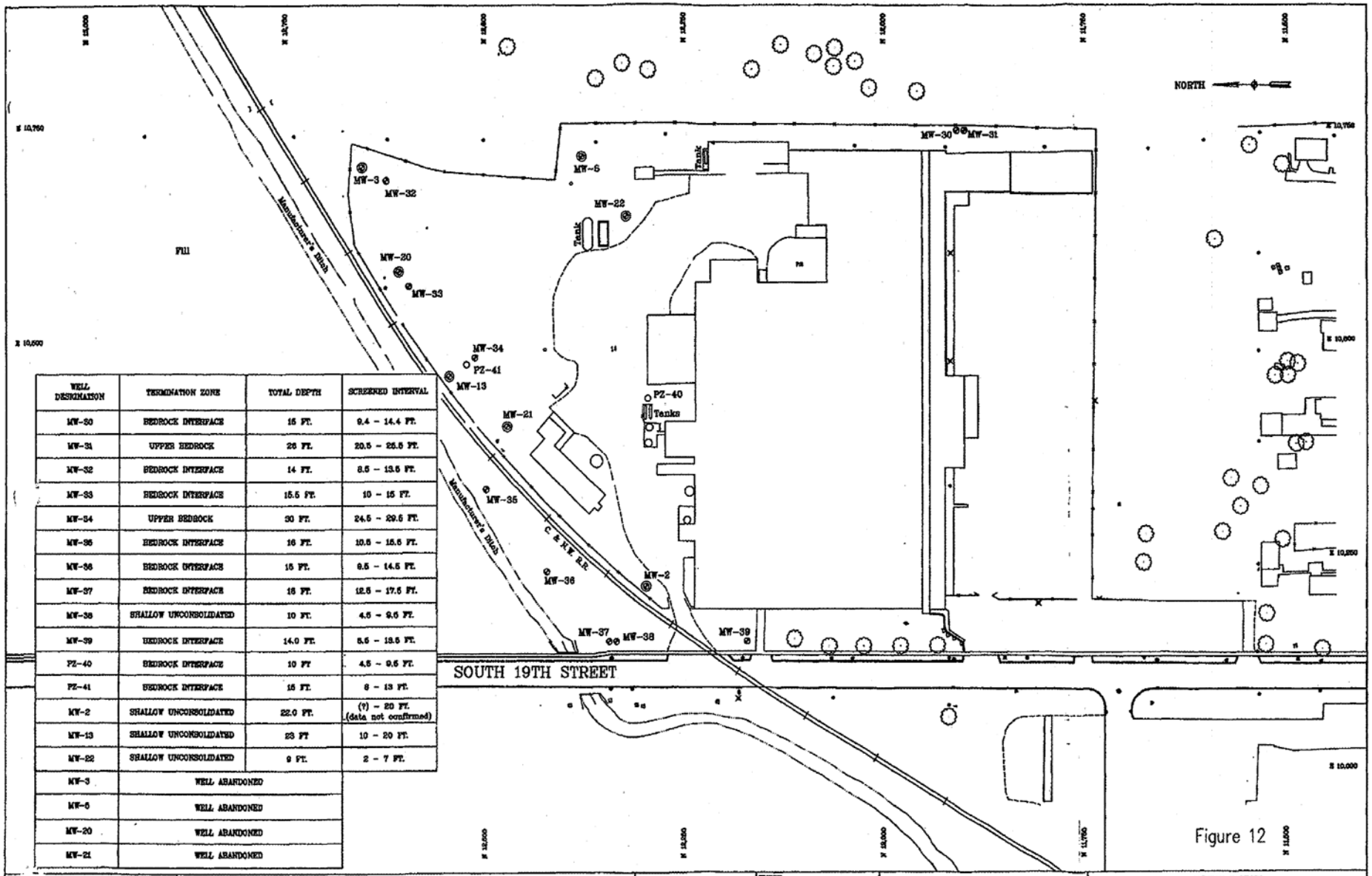
Interim measures were implemented to neutralize the zinc plating solution onsite.

- EPA approval 9/8/17 of Collis's Zinc Electroplating Solution Release Removal work plan
- Collis completed a removal action on offsite property to the east of the Collis property on the site of a former golf course. The investigation and removal action are documented and approved by EPA 11/13/17 in the "*Collis, Inc. – Zinc Electroplating Solution Release Summary Report – Final.*"
- EPA approval 9/14/17 of Collis's 2016-2017 Groundwater Monitoring Sampling Summary Report.
- EPA review of the Collis onsite Deep Well Report.
- EPA approval letter dated 9/19/17 on Collis final LTM GWM WP.
- EPA review and comment on Corrective Measures Study.
- EPA review and comment on Environmental Covenants for Collis onsite property and offsite City-owned property.
- EPA will be public noticing the Statement of Basis for the proposed final remedy and the Corrective Measures Study for public comment in the near future.

2018: The Following significant activities were completed

A Final Remedy Public Notice Fact sheet was produced

2019: The site was reclassified to Properly Closed with monitoring.



WELL DESIGNATION	TERMINATION ZONE	TOTAL DEPTH	SCREENED INTERVAL
MW-30	BEDROCK INTERFACE	15 FT.	9.4 - 14.4 FT.
MW-31	UPPER BEDROCK	26 FT.	20.5 - 25.5 FT.
MW-32	BEDROCK INTERFACE	14 FT.	8.5 - 13.5 FT.
MW-33	BEDROCK INTERFACE	15.5 FT.	10 - 15 FT.
MW-34	UPPER BEDROCK	30 FT.	24.5 - 29.5 FT.
MW-35	BEDROCK INTERFACE	16 FT.	10.5 - 15.5 FT.
MW-36	BEDROCK INTERFACE	15 FT.	9.5 - 14.5 FT.
MW-37	BEDROCK INTERFACE	18 FT.	12.5 - 17.5 FT.
MW-38	SHALLOW UNCONSOLIDATED	10 FT.	4.5 - 9.5 FT.
MW-39	BEDROCK INTERFACE	14.0 FT.	5.5 - 13.5 FT.
PZ-40	BEDROCK INTERFACE	10 FT	4.5 - 9.5 FT.
PZ-41	BEDROCK INTERFACE	15 FT.	8 - 13 FT.
MW-2	SHALLOW UNCONSOLIDATED	22.0 FT.	(?) - 20 FT. (data not confirmed)
MW-13	SHALLOW UNCONSOLIDATED	23 FT	10 - 20 FT.
MW-22	SHALLOW UNCONSOLIDATED	9 FT.	2 - 7 FT.
MW-3	WELL ABANDONED		
MW-5	WELL ABANDONED		
MW-20	WELL ABANDONED		
MW-21	WELL ABANDONED		

Figure 12

DRAWING FROM:

LEGEND
MW-35 ⊗ MONITORING WELLS INSTALLED IN APRIL 1996 ○ PIEZOMETERS INSTALLED IN APRIL 1996
MW-20 ⊗ EXISTING MONITORING WELL LOCATION

SCALE 1" = 50'

REVISIONS

HERITAGE ENVIRONMENTAL SERVICES, INC.
LOMONT, ILLINOIS

CLINTON FACILITY
CLINTON, IOWA

SITE PLAN
ABANDONED WELL AND MONITORING WELL LOCATIONS

DRAWN BY STAFF	DATE 5-27-96	PROJ. NO. 6114	DWG. NO. 6104712.DWG
APPROVED BY RAH	SCALE 1" = 50'		

(Collis Corporation)