



State of Ohio Environmental Protection Agency

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***Certified Mail
Return Receipt Requested***

**Re: *Thomas Steel Strip Corporation
EPA ID # OHD 077 755 213
Decision Document of Corrective Action***

September 23, 2008

Thomas Steel Strip Corporation
Attn: Mr. Eric Howland
Delaware Avenue NW and Route 5
Warren, Ohio 44485

Dear Mr. Howland:

Here is the final Declaration and Decision Document for the Thomas Steel Strip Corporation facility located in Warren, Ohio. Staff at Ohio EPA, Division of Hazardous Waste Management (DHWM), have reviewed Thomas Steel Strip Corporation's final RCRA Facility Investigation (RFI) Report submitted for the property and issued a Statement of Basis seeking public input on the proposed remedies. The Agency did not receive written comments concerning the Statement of Basis.

Since the proposed remedies appear to comply with applicable hazardous waste rules, the Declaration and Decision Document represent the selected remedies for the Thomas Steel Strip Corporation facility, in accordance with the policies of Ohio EPA and the statutes and regulations of the State of Ohio.

In accordance with the Conclusions section presenting the remedy summaries, the actions that Thomas Steel Strip is required to take relative to each remedy component are as follows:

Enter into an Environment Covenant restricting future land use to industrial activities only; and,

Develop and implement an Operation & Maintenance Plan for Waste Management Unit #5 in order to maintain a grass cover and provide for periodic inspections for erosion damage. The plan must also include a protocol for repairing any damage that might occur. A maintenance plan cost estimate for a thirty year period will be developed within sixty days of this Final Decision, and financial assurance will be provided within thirty days of Ohio EPA approval of the estimate.

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Korleski, Director

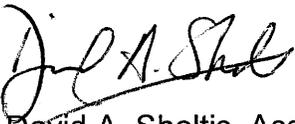
Thomas Steel Strip Corporation
Mr. Eric Howland
September 23, 2008
Page 2

You are hereby notified that this action of the Director is final and may be appealed to the Environmental Review Appeals Commission pursuant to Section 3745.04 of the Ohio Revised Code. The appeal must be in writing and set forth the action complained of and the grounds upon which the appeal is based. The appeal must be filed with the Commission within thirty (30) days after notice of the Director's action. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Notice of the filing of the appeal shall be filed with the Director within three (3) days of filing with the Commission. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. An appeal may be filed with the Environmental Review Appeals Commission at the following address:

Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions concerning the Corrective Action remedies selected, please call John Palmer of Ohio EPA's Northeast District Office at (330) 963-1200.

Sincerely,



David A. Sholtis, Assistant Chief
Division of Hazardous Waste Management

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cc: Edwin Lim, ERAS, DHWM, CO
Jeremy Carroll/Cole Miller, ERAS, DHWM, CO
John Palmer, DHWM, NEDO
Carol Hester, PIC
file

PUBLIC NOTICE

Trumbull County

OHIO EPA ISSUES DECLARATION AND FINAL DECISION DOCUMENT FOR THOMAS STEEL STRIP CORPORATION

On September 23, 2008, Ohio EPA issued a Declaration and final Decision Document to the Thomas Steel Strip Corporation (Thomas Steel Strip) located at Delaware Avenue NW, Warren, Ohio 44485-2699. The EPA Identification Number for this facility is OHD077755213.

Why does Thomas Steel Strip need a final Decision Document?

The Decision Document identifies Ohio EPA's selected remedies for the site, and explains the reasons for the selection of the remedies.

Thomas Steel Strip will enter into an Environment Covenant restricting future land use to industrial activities only; and will develop and implement an Operation & Maintenance Plan for Waste Management Unit #5 in order to maintain a grass cover and provide for periodic inspections for erosion damage. The plan must also include a protocol for repairing any damage that might occur.

Can I appeal this final Decision Document?

Yes, if you are an officer of an agency of the state or of a political subdivision, acting in a representative capacity, or any person who would be aggrieved or adversely affected by the Decision Document, you have the right to appeal this Permit decision to the Environmental Review Appeals Commission (ERAC).

If I decide to appeal this final Decision Document, how and when must I make the appeal?

If you file an appeal, you must put it in writing no later than October 24, 2008. Your appeal must explain why you are appealing the action and the grounds you are using for your appeal. The appeal must be accompanied by a filing fee of \$70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General's Office, Environmental Enforcement Section. You must file your appeal, according to Ohio Revised Code § 3745.04 with ERAC at the following address: **Environmental Review Appeals Commission**, 309 South Fourth Street, Room 222, Columbus, Ohio 43215. You must send a copy of the appeal to the director of Ohio EPA at the following address no later than three (3) days after you file it with ERAC: **Chris Korleski, Director of Ohio EPA**, P.O. Box 1049, Columbus, Ohio 43216-1049.

OHIO E.P.A.

SEP 23 2008

DECLARATION

SITE NAME AND LOCATION

Thomas Steel Strip Corporation
Delaware Avenue
Warren, Ohio
Trumbull County

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: John F. Kossick Date: 9-23-08

STATEMENT OF BASIS AND PURPOSE

This Decision Document presents the selected remedial actions for Thomas Steel Strip Corporation in accordance with the policies of the Ohio Environmental Protection Agency, statutes and regulations of the State of Ohio. This Decision Document also represents Ohio EPA's approval of the Work Plan submitted by the facility.

ASSESSMENT OF THE SITE

The Thomas Steel Strip facility is a RCRA regulated facility because of past disposal of hazardous waste from plating processes. These closed disposal units are regulated under an approved Post-Closure Plan governed by Ohio Administrative Code rules 3745-66-17 through 3745-66-21.

Other waste management units were identified and evaluated. Only one required remedies be implemented. Ohio EPA found that the implementation of the selected remedies will protect public health and the environment by permanently reducing risks to acceptable levels once the remedies are completed.

DESCRIPTION OF THE SELECTED REMEDIES

The selected remedies will include:

- Incorporate the Environmental Covenant into Thomas Steel Strip's land deed.
- Develop and implement an Operation & Maintenance Plan for WMU 5 to maintain a grass cover and provide for periodic inspections for erosion damage. The plan must also include protocol for repairing any damage that might occur.

STATUTORY DETERMINATIONS

Today's selection and required implementation of remedial actions is protective of human health and the environment, is in accordance to applicable State and federal laws and is responsive to public participation and input. The remedies utilize permanent solutions, to the maximum extent practicable, to reduce mobility and contact of hazardous substances at Thomas Steel Strip Corporation. The effectiveness of the remedies will be reviewed regularly.

Chris Korleski
Chris Korleski
Director

September 23, 2008
Date

Decision Document for the Remediation of
Thomas Steel Strip Corporation Facility
Delaware Avenue NW, Warren, Ohio
(Trumbull County)
OHD 077 755 213

Prepared By
The Ohio Environmental Protection Agency
September 2008

OHIO EPA DHWM

SEP 23 2008

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1.0 Introduction

1.1 Executive Summary

Ohio Environmental Protection Agency (Ohio EPA) has prepared this Decision Document for the remediation of the Thomas Steel Strip facility, located in Warren, Ohio. This Decision Document identifies Ohio EPA's selected remedies, and explains the reasons for the selection of the remedies.

Under the Resource Conservation and Recovery Act (RCRA), the Corrective Action program was created to address threats to human health and the environment from historic or past waste management areas at RCRA treatment, storage or disposal facilities (TSDF). The Thomas Steel Strip facility is a RCRA TSDF because of past disposal of hazardous waste. These closed disposal units are regulated under an approved Post-Closure Plan governed by Ohio Administrative Code rules 3745-66-17 through 3745-66-21.

To address the facility's Corrective Action requirements, Thomas Steel Strip voluntarily agreed to work with the Ohio EPA Division of Hazardous Waste Management (DHWMM), and has conducted extensive soil and ground water sampling at the Thomas Steel Strip facility in Warren, Ohio. A summary of the facility investigation is discussed in Section 3.

Ohio EPA has reviewed the Thomas Steel Strip Corporation's submittals that document the results of the facility investigation and previously available information and has selected remedies to remediate the site. The evaluation criteria Ohio EPA used in selecting the remedies are discussed in Section 4.

In brief, Ohio EPA proposes that Thomas Steel Strip enter into an Environmental Covenant for the facility restricting future use, and implement a maintenance plan for the unit which is designated as Waste Management Unit (WMU) 5. A summary of Ohio EPA's selected remedies is discussed in Section 5. Ohio EPA finds that these remedies will further protect public health and the environment by permanently reducing risks to acceptable levels once the remedies are implemented.

1.2 How the Corrective Action Process Works

The initial step in the 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 supports the selection and implementation of a

remedy or remedies. This step culminates with the facility's submission of a report summarizing the investigation data. Thomas Steel Strip has completed an investigation and submitted a report to Ohio EPA for review.

In the next step of the Corrective Action process, Ohio EPA generates a Statement of Basis which summarizes Ohio EPA's preferred remedies for the facility. This document is then made available to the public for review and comment. Ohio EPA issued the Statement of Basis for the Thomas Steel Strip located in Warren, Ohio on June 6, 2008. This document was made available to the public at the Ohio EPA Northeast District Office to review and comment on from June 6, 2008 to July 21, 2008. Ohio EPA did not receive any comments during the comment period.

After considering all comments received during the Public Comment period, Ohio EPA then issues a Decision Document. This document meets that purpose and is the Decision Document for the Thomas Steel Strip located in Warren, Ohio.

2.0 Site History

Thomas Steel Strip has occupied the site since 1920, with slight variations in the name. Previous site use is unknown. Thomas Steel Strip is currently a division of the Corus Group, a large (over £11 billion annual revenue) British company with its main offices in London.

2.1 Current Site Activities

Thomas Steel Strip processes and coil coats (electroplates) steel strip. Basic operations include annealing, acid pickling, cold rolling and electroplating. Applicable Standard Industrial Classification (SIC) codes are 3316 and 3471. Process waste waters are treated in an on-site waste water treatment plant, and discharged under a National Pollutant Discharge Elimination System (NPDES) permit to Dickey Run Ditch, a tributary to the Mahoning River. The company is a Large Quantity Generator of hazardous waste. Thomas Steel Strip also generates Universal Waste, solid waste, and scrap.

2.2 RCRA Permit Status

The Thomas Steel Strip facility has four closed hazardous waste surface impoundments. The post-closure care of these units is regulated through an approved

Post-Closure Plan (approved April 27, 2005) meeting the requirements of Ohio Administrative Code rules 3745-66-17 through 3745-66-21.

2.3 Physical Setting

The Thomas Steel Strip site is located on Delaware Avenue NW, Warren, Ohio (approximately North 41° 14.4' West 80° 50.8'). A street map, displaying the facility's location, is included as Figure 1. A topographical map, displaying the facility's topographic setting, is included as Figure 2. The site occupies approximately 154 acres. Surrounding land has mixed uses; industrial, commercial, residential, and rail. There are a number of buildings on the property, but because the buildings are all nearby each other, most of the property is undeveloped.

The Thomas Steel Strip site is located in Trumbull County, part of the Allegheny Plateau, which extends across the northern portion of Ohio. The western portion of Trumbull County is characterized by nearly horizontal beds of sandstone and shale. Glacial till overlies these formations. The till is a mixture of clay, silt, sand and pebbles and ranges in thickness from 5 to 30 feet.

The area surrounding the facility has several major hydrologic and hydrogeologic features. The Mahoning River is approximately one mile away. Mosquito Creek Reservoir, a major drinking water source, is six miles away. A portion of Dickey Run Ditch crosses the facility. It is channelized and eventually culverted prior to discharge into the Mahoning River. Thomas Steel Strip's NPDES 001 outfall discharges to Dickey Run.

The vicinity is a ground moraine (Hiram Till), which covers the majority of the county. The Hiram Till is approximately 15 to 25 feet thick. Subsurface investigations indicate the following lateral horizons: the top 1 to 2 feet are gravel and fill, the next 8 to 10 feet are silt and clay, and the remaining 7 feet is a mixture of sand, clay and gravel down to the shale bedrock. The clay content of the till indicates that porosity and permeability of the subsurface soil were lower than the more sandy materials in outwash areas.

The primary aquifer beneath Thomas Steel Strip is located at a depth of 80 to 200 feet, in sandstone. The yield of this aquifer is approximately 20 gpm. A shallow water-bearing zone occurs at approximately 20 feet, immediately above a shale/clay formation that is approximately 60 feet thick.

Ground water flow in the shallow zone is controlled by the Mahoning River. Ground water generally flows in a northwesterly (and sometimes northeasterly) direction across the F006 Closure Unit (see below) and in an easterly direction across the LSWPL

Closure Units (see below), presumably affected by the relative location of the river meander to the units.

3.0 Summary of Facility Assessments

3.1 Statement of Current Conditions

At the Ohio Environmental Protection Agency's request, Thomas Steel Strip submitted a Statement of Current Conditions dated April 11, 2007. Thomas Steel Strip collected information regarding facility inspections, hazardous waste management activities and practices, discharge permits, spills, releases, investigations, sampling, and remedial activities. The sources of this information included:

- A facility inspection on March 6, 2007, and review of the facility files
- A review of the files maintained at the Ohio Environmental Protection Agency's Northeast District Office
- A review of files maintained by (consulting firm) URS regarding the closures
- The Environmental Indicator reports prepared in 2000
- Aerial photographs and Sanborn Fire Insurance Maps
- Facility personnel

A total of 24 Waste Management Units (WMUs) (Table 1) and 2 Areas of Concern (AOCs) (Table 2) were identified. See Figure 3 for a drawing showing the External WMUs and AOCs.

Four WMUs (1,2,3,4) underwent RCRA Closure. These units were sludge de-watering and disposal ponds. The units were stabilized and then capped with geotextile, 6" of aggregate fill, and a 6" vegetative support layer. Surface water is managed, and the caps are vegetated. The Closure Plans and the Post Closure Plans were approved on April 27, 2005, and fulfilled public notice requirements. Certifications of closure were accepted (approved) on December 12, 2005. The units are maintained under a Post-Closure Plan and ground water monitoring is taking place. Ground water quality has not been impaired. No further action is recommended for these units.

3.2 Areas Removed From Further Study

Based upon the information obtained for the Statement of Current Conditions, and a site inspection conducted by Ohio EPA, seventeen Waste Management Units were removed

from consideration in the RFI study. These WMU units were either within secondary containment, located on an impermeable surface, or were located in an enclosed building with a well-maintained concrete floor. Most have never had a release, or if a release had occurred, there had been an adequate response. The facility stated in the RFI that units still in use will either undergo Generator Closure (for units managing hazardous waste), or will be decontaminated and decommissioned, upon cessation of operation. Investigation activities and remedial response may be required at that time. (See Table 1 for details.)

Area of Concern One, Outfall 001, is permitted under NPDES, and is subject to continuous monitoring. This area was removed from consideration in the RFI. See Table 2.

Area of Concern Two, Dickey Run Ditch, was remediated by excavation in February 2006. Excavated materials were stockpiled on Thomas Steel Strip property. See Table 2. The stockpile was investigated in the RFI, but the ditch itself was removed from further consideration.

3.3 RFI study

Three Waste Management Units and an Area of Concern were identified for additional investigation.

- WMU 5 - Landfill Area 1: Historic drawings and aerial photos indicated that a former landfill area was present on the north central portion of the facility since approximately 1965. This area is currently grass covered, with no visible solid waste. A preliminary assessment completed by the Ohio Environmental Protection Agency on June 12, 1984, indicated that the area contained demolition debris. Green sludge was observed in the area, at that time.
- WMU 6 - Landfill Area 2: Historic drawings and aerial photos indicated that a former landfill area was present northwest of the manufacturing area (currently west of the main access road) since approximately 1965. This area is currently grass and tree covered; however, some pieces of brick and concrete are visible at the surface.
- WMU 9 - Wastewater Treatment Plant: Notes from an internal Ohio Environmental Protection Agency file review conducted in 1986 reported that an Ohio Environmental Protection Agency memo dated May 15, 1972 indicated

that wastewater treatment sludge was dumped outside the treatment plant door. No additional information was found.

- The stockpiled soils previously removed from Dickey Run Ditch (AOC 2).

With the input and concurrence of the Ohio Environmental Protection Agency, Thomas Steel Strip developed an RFI Work Plan, which addressed Data Quality Objectives, sampling techniques and locations, analytical protocol and methods, data quality assurance, data reduction and evaluation, reporting protocols, and scheduling.

Thomas Steel Strip then implemented the plan, with very few field changes required. Sampling and analysis for geotechnical properties at WMU 5 was added during implementation of the plan. A summary of the findings follows.

- WMU 5 - Landfill Area 1: Ten volatile constituents were detected at least once in the samples collected from WMU 5 (Table 3). Most were infrequently detected. The chemical most frequently detected, and at the highest concentrations, was n-hexane (0.69 to 270 µg/kg). N-hexane was detected in all samples. Acetone also was frequently detected (40 to 58 µg/kg). Methylene chloride was detected in one sample and was co-located with the maximum n-hexane concentration. Twenty-four semi-volatile constituents were detected at least once (Table 4). Seventeen were polynuclear aromatic hydrocarbons. In general, these were detected at concentrations below 1 mg/kg. However, one sample had elevated concentrations of benzo(b)fluoranthene, fluoroanthene, chrysene, and pyrene. Nineteen metals and total cyanide were also detected (Table 5). Cadmium, mercury, selenium and tin were detected infrequently. The rest of the metals, and cyanide were detected in most samples. The sample collected at 6 to 8 feet at location SB-05 contained concentrations of nickel, chromium and copper (all metals with green colored salts) much higher than at other locations. This correlates with the boring log noting a greenish soil or sludge present at this location.

The concentrations were compared to the Division of Hazardous Waste Management's Direct Contact Soil Generic Cleanup Numbers, employing a multiple chemical adjustment, and assuming the maximum detection of each constituent was the exposure point concentration. The conclusion was that the contamination was sufficiently high to preclude future residential use of the unit. An analysis was also performed for an industrial worker scenario, and the unit failed to meet standards for toxicity.

Geotechnical tests were also run for this unit (Table 11) to determine the permeability of a clay layer that was overlying the fill. The clay layer ranges

from 2 to 7.5 feet in thickness, and has a permeability around 10^{-5} cm/sec. It appears that the clay was placed over the fill to provide cover. The contaminated media were mostly at depth.

A remedy evaluation was required for this unit.

- WMU 6 - Landfill Area 2: Three volatile constituents were infrequently detected: acetone at 43 $\mu\text{g}/\text{kg}$, and 2-butanone and n-hexane at much lower concentrations (Table 6). Three semi-volatile constituents were detected (Table 7): two polynuclear aromatic hydrocarbons and bis(2-ethylhexyl)phthalate (maximum concentration of the ester was 63 $\mu\text{g}/\text{kg}$). Seventeen metals and total cyanide were detected in the soil samples (Table 8). Cadmium, mercury, selenium and thallium were infrequently detected. The rest of the metals and total cyanide were detected in most soil samples. None of the reported concentrations appeared elevated.

The concentrations were compared to the Division of Hazardous Waste Management's Direct Contact Soil Generic Cleanup Numbers, employing a multiple chemical adjustment, and assuming the maximum detection of each constituent was the exposure point concentration. The conclusion was that the contamination was sufficiently low to allow future residential use at the unit. An analysis was also performed for an industrial worker scenario, and the unit met standards for both toxicity and excess lifetime cancer risk.

A remedy evaluation is not being required for this unit.

- WMU 9 - Wastewater Treatment Plant: Cyanide, cadmium, chromium, nickel, selenium and zinc were detected in all samples (Table 9). None of the reported concentrations appeared elevated.

The concentrations were compared to the Division of Hazardous Waste Management's Direct Contact Soil Generic Cleanup Numbers, employing a multiple chemical adjustment, and assuming the maximum detection of each constituent was the exposure point concentration. The conclusion was that the contamination was sufficiently low to allow future residential use at the unit. An analysis was also performed for an industrial worker scenario, and the unit met standards for both toxicity and excess lifetime cancer risk.

A remedy evaluation is not being required for this unit.

- The stockpiled soils previously removed from Dickey Run Ditch (AOC 2): Cyanide, cadmium, chromium, nickel, selenium and zinc were detected in all samples (Table 10). None of the reported concentrations appeared elevated.

The concentrations were compared to the Division of Hazardous Waste Management's Direct Contact Soil Generic Cleanup Numbers, employing a multiple chemical adjustment, and assuming the maximum detection of each constituent was the exposure point concentration. The conclusion was that the contamination was sufficiently low to allow future residential use at the unit. An analysis was also performed for an industrial worker scenario, and the unit met standards for both toxicity and excess lifetime cancer risk.

A remedy evaluation is not being required for this area.

3.4 Site Wide Ground Water

Extensive ground water monitoring has taken place at this site, and no impacts have ever been observed. For the most part, the target analytes have not been detected in any of the sampling events. Although driven by closure activities, Ohio EPA has concluded that the data is indicative of site-wide conditions. In particular, a monitor well has been located at the downgradient edge of WMU 5, the only WMU requiring remedial action (Figures 3 and 4). This well is designated ' DG-3 '. Table 12 shows typical results from this well. Two metals were detected at concentrations an order of magnitude below Maximum Contaminant Levels. The rest of the constituents of concern were not detected at all. This pattern has been observed in quarterly monitoring since the early 1990's. Note that ground water monitoring will continue under the Post-Closure Plans.

3.5 Ecological Evaluation

The facility is land-locked in a major urban/industrial area. Threatened or endangered species are not present at the site, and there aren't any complete pathways from WMU 5. Therefore, no further ecological evaluation is being required.

4.0 Evaluation and Selection of Remedies

4.1 Description of the Evaluation Criteria

For a proposed remedy to be considered a viable remedy when implemented, it must meet the threshold criterion that it be protective of human health and the environment. An option of "no action" to be implemented to address the contamination in WMU 5 is not acceptable to Ohio EPA. Even though use of the property is industrial and the current levels of contaminants present in the soils are not harmful to workers on site who come into direct contact with these soils, there is no legally enforceable mechanism in place to prevent the property from being converted to residential use in the future.

To ensure the affected portion of the property continues to be used only for industrial purposes, Ohio EPA considered as a remedy that the property owner and Ohio EPA enter into an Environmental Covenant. An Environmental Covenant is a legally enforceable mechanism that would describe the property and limits its use to industrial purposes. The Covenant would list appropriate land use while also describing what uses would not be allowable. The Covenant would run with the land and attach to the property deed and could not be changed without the written agreement of both the property owner and Ohio EPA even if the property was sold at some point in the future. Ohio EPA would monitor the property periodically to ensure that its use was consistent with the allowed uses listed in the Covenant.

4.2 Ohio EPA's Evaluation of the Selected Remedies

Ohio EPA has reviewed the RCRA Facility Investigation and final Corrective Measures Study provided by Thomas Steel Strip Corporation. The following remedies were evaluated using the criteria described in Section 4.1.

Environmental Covenant – Ohio EPA proposes that use of the site will be restricted to industrial purposes only through enactment of an Environmental Covenant, an enforceable mechanism under Ohio law that can be used to restrict property use. This restriction will run with the land and will be binding upon all future property owners should the property be sold. The Environmental Covenant will include a legal description of the subject property, identifying the contaminated areas and describe acceptable and unacceptable land uses. Ohio EPA will monitor the property owner's adherence to the Environmental Covenant to ensure continued protection of human health and the environment. The types of limitations for this property include:

Industrial land use limitations. The Property shall not be used for residential, commercial (other than those associated with and incidental to industrial operations) or agricultural activities, but may be used for certain industrial activities. The term "residential activities" shall include, but not be limited to, the following:

- a. Single and multi-family dwelling and rental units;
- b. Day care centers and preschools;
- c. Hotels and motels;
- d. Educational (except as a part of industrial activities within the property) and religious facilities;
- e. Restaurants and other food and beverage services (except as a part of industrial activities within the property);
- f. Entertainment and recreational facilities (except as a part of industrial activities within the property);
- g. Hospitals and other extended care medical facilities (except as a part of industrial activities within the property); and
- h. Transient or other residential facilities.

The term "industrial activities" includes manufacturing, processing operations and office and warehouse use, including but not limited to production, storage and parking/driveway use.

The Environmental Covenant will include prohibitions on digging into the cap, or otherwise disturbing the cap in any invasive manner.

In addition, Thomas Steel Strip would be required to develop and implement an Operation & Maintenance Plan for WMU 5 to maintain a grass cover, and provide for periodic inspections for erosion damage. The plan must also include protocol for repairing any damage that might occur.

Ohio EPA believes the above proposed remedy would be protective of human health and the environment. The existing clay layer would provide a barrier to vertical migration of water, and eliminate direct contact and inhalation pathways to potential receptors. An Environmental Covenant would eliminate the potential for residential land use for the facility, and prohibit disturbance of the clay layer. An Operation & Maintenance Plan would provide further protection to the existing cover.

5.0 Conclusions

In conclusion, as they meet the threshold criteria for remedy acceptability, Ohio EPA has selected the remedies discussed in Section 4.2: Ohio's EPA's Evaluation of Selected Remedies. In addition, Thomas Steel Strip will continue to maintain the

financial requirements to cover all associated costs of the site, including the Operation & Maintenance Plan for WMU 5. The actions that Thomas Steel Strip is required to take relative to each remedy component are as follows:

- Enter into an Environmental Covenant restricting future land use to industrial activities only.
- Develop and implement an Operation & Maintenance Plan for WMU 5 within sixty days of this Final Decision to maintain a grass cover and provide for periodic inspections for erosion damage. The plan must also include protocol for repairing any damage that might occur. A maintenance plan cost estimate for a thirty year period will be developed within sixty days of this Final Decision, and financial assurance will be provided within thirty days of Ohio EPA approval of the estimate.

6.0 Terms

Area of Concern (AOC) - An area which may not necessarily have stored hazardous waste, but is of concern to the site investigation. Areas where a spill may have occurred could be included in this category.

Aquifer - An underground geological formation capable of holding and yielding water

Background Soil Investigation - An investigation to establish soil metal background levels for an area. A background area is an area which has been unaffected by human activity.

Carcinogen - A cancer-causing agent.

Constituents of Concern (COC) - Any contaminant discovered during a facility investigation at a level that has the potential to negatively impact human health or the environment.

Corrective Action - Gives RCRA authority to require responsible parties to address the investigation and cleanup of hazardous releases themselves.

Corrective Measures Study (CMS) - A study undertaken by a facility whose purpose is to develop and evaluate remedial alternatives for the cleanup of environmental contaminants at a facility.

Decision Document - A document issued by the Ohio Environmental Protection Agency that identifies the Director's selected remedy or remedies for a contaminated site and the reasons for its selection.

Ecological Receptor - Animals or plant life potentially exposed to contaminants released at a site.

Ecological Risk Assessment - An assessment that evaluates the likelihood that exposure to one of more chemical may cause harmful ecological effects. The effects can be direct or indirect.

Environmental Covenant - A legally enforceable document that imposes activity and use limitations . The land use restriction runs with the land and is binding upon existing and any future property owner, should the property be sold.

Exposure Pathway - Route by which a contaminant is transported from the site to a human or ecological receptor.

Filtered Ground Water Sample - The ground water sample is pumped through a filter to remove suspended solids.

Final Remedy - The remedy that was chosen after the entire RCRA Corrective Action evaluation has been completed for an area. It includes the investigation and public comment/involvement.

Generic Numerical Standards - Are concentrations in soil or water which are considered safe for a substance based on the substance's mobility and toxicity .

Generic Risk-based Cleanup Numbers - Are concentrations in soil or water which are considered safe for a substance based on the substance's mobility and toxicity

Hot Spot - Areas where there is a high concentration of a contaminant in soil or sediment.

Human Receptor - A person that has the potential to be exposed to contaminants released at a site.

Level 1 Ecological Risk Assessment - An ecological risk assessment which is designed to determine if there were current or past releases and determine if there are important ecological resources present or in the locality of the site.

Maximum Contaminant Level - Criteria for specific elements or compounds in drinking water established under the Safe Drinking Water Act that set the maximum acceptable concentration of the substance in public drinking water.

Operation and Maintenance Plan - A plan that defines long-term measures that will be implemented at a site, after the initial remedial actions, to assure that a remedy remains protective of human health and the environment.

Resource Conservation and Recovery Act (RCRA) - A federal law that regulates the generation, transport, storage, treatment and disposal of hazardous wastes.

RCRA Facility Assessment (RFA) - A RCRA Facility Assessment documents environmental conditions at the facility in regard to past and present waste management activities. All related facility files are reviewed and a visual on-site evaluation is also performed. The final RFA document identifies all waste management units and areas of concern and indicates if either a release of hazardous waste or constituents has occurred or if the potential for such a release exists. Conclusions and recommendations are included for each unit or area regarding the need for further investigation and/or some type of corrective action.

RCRA Facility Investigation (RFI) - A study conducted to collect information necessary to adequately characterize a site for the purpose of developing and evaluating effective remedial alternatives.

Responsiveness Summary - A summary of all comments received from the public on the Statement of Basis and RCRA Facility Investigation Report and Ohio EPA's response to those comments.

Risk Assessment - A study that evaluates the potential health risks to people and the environment from exposure to contaminated air, water, soil, and sediment.

Safe Drinking Water Act (SDWA) - An act passed by congress that gave USEPA the authority to set drinking water standards.

Screening Levels - Are concentrations in a medium such as soil, water, sediment, or air which are considered safe for a substance based on the substance's mobility and toxicity

Semi-Volatile Organic Compound - Carbon based compounds that do not evaporate very fast at room temperature.

Standard Industrial Classification (SIC) - A standard series of four-digit codes created

by the U.S. government for categorizing business activities.

Statement of Basis - A document that summarizes past investigations for a facility, identifies environmental problems, and seeks public input on the rationale for a proposed final remedy.

Treatment, Storage & Disposal Facility (TSDF) - A facility where hazardous waste is treated, stored or disposed. A hazardous waste permit is required for these activities

Unfiltered Ground Water Sample - The ground water sample is directly placed into an appropriate container after being removed from the well. The sample is not pumped through a filter as it is in a filtered sample.

USEPA Region IX Residential Direct Contact Preliminary Remediation Goals - Developed by U.S. EPA Region IX they are concentrations in soil or water which are considered safe for a substance based on the substance's mobility and toxicity

Visual Site Inspection - An on-site inspection to visibly verify site conditions, waste management units, areas of concern, and potential releases.

Volatile Organic Compound - Carbon based compounds which evaporate quickly at room temperature (e.g., solvents).

Waste Management Unit (WMU) - Any discernable unit at which wastes have been placed at any time irrespective of whether the unit was intended for the management of solid or hazardous waste; such units include any area at the facility where solid wastes have been routinely and systematically released.

7.0 Acronyms

AOC - Area of Concern

DHWM - Division of Hazardous Waste Management

EPA - Environmental Protection Agency

GPM - Gallons Per Minute

NPDES - National Pollutant Discharge Elimination System

RCRA - Resource Conservation and Recovery Act

RFI - RCRA Facility Investigation

SIC - Standard Industrial Classification

TSDF - Transfer, Storage, Disposal Facility

WMU - Waste Management Unit

Appendix Tables and Figures

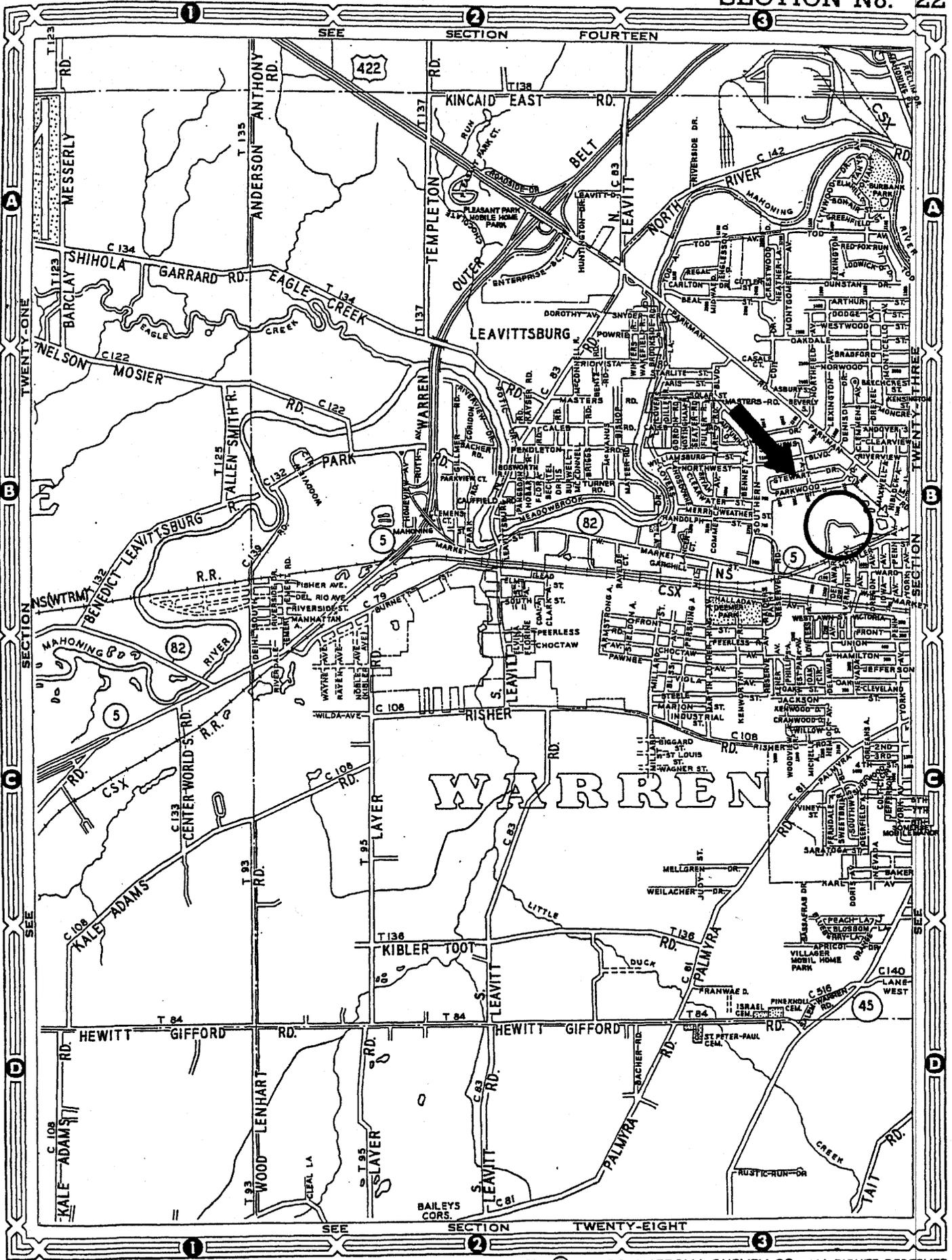
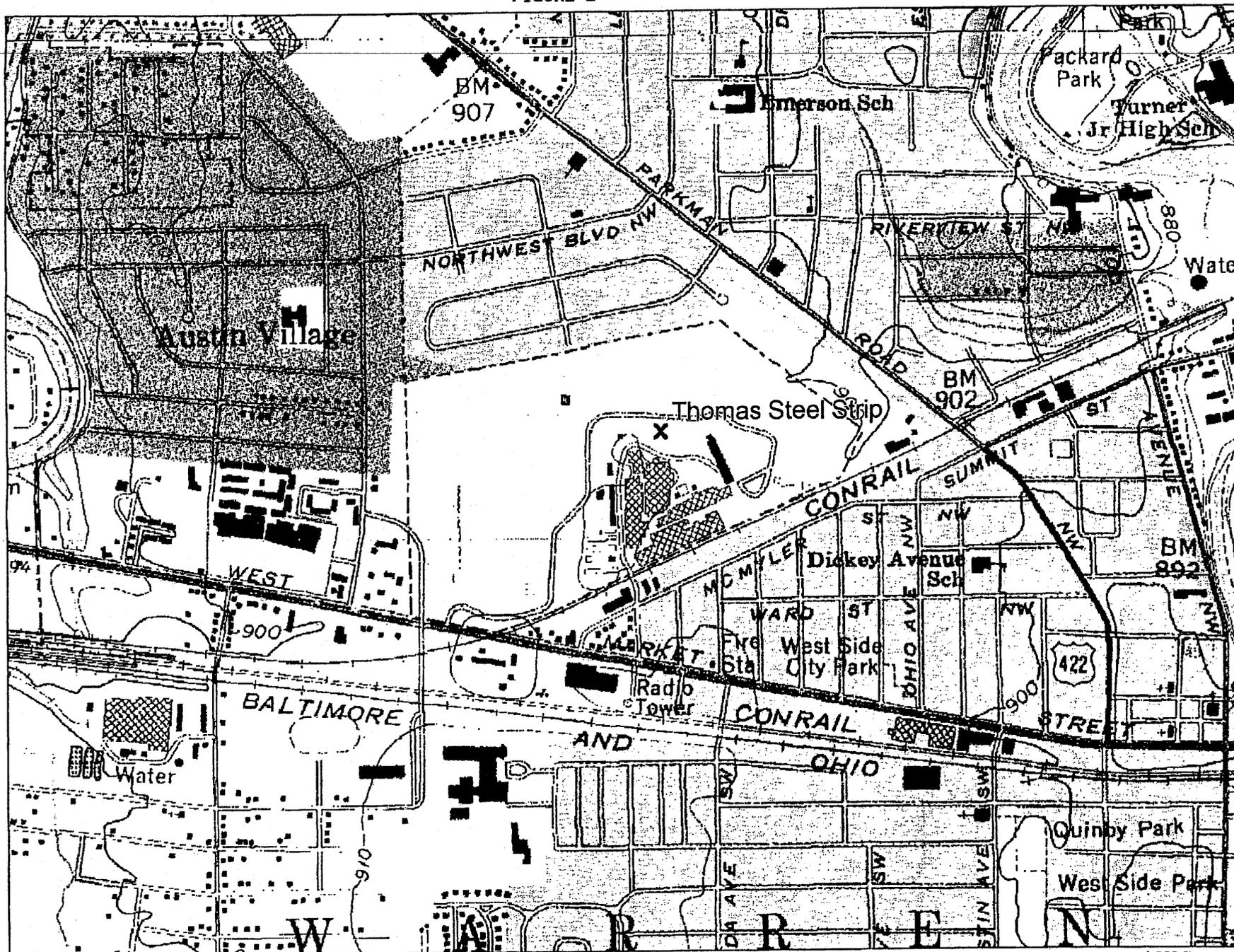
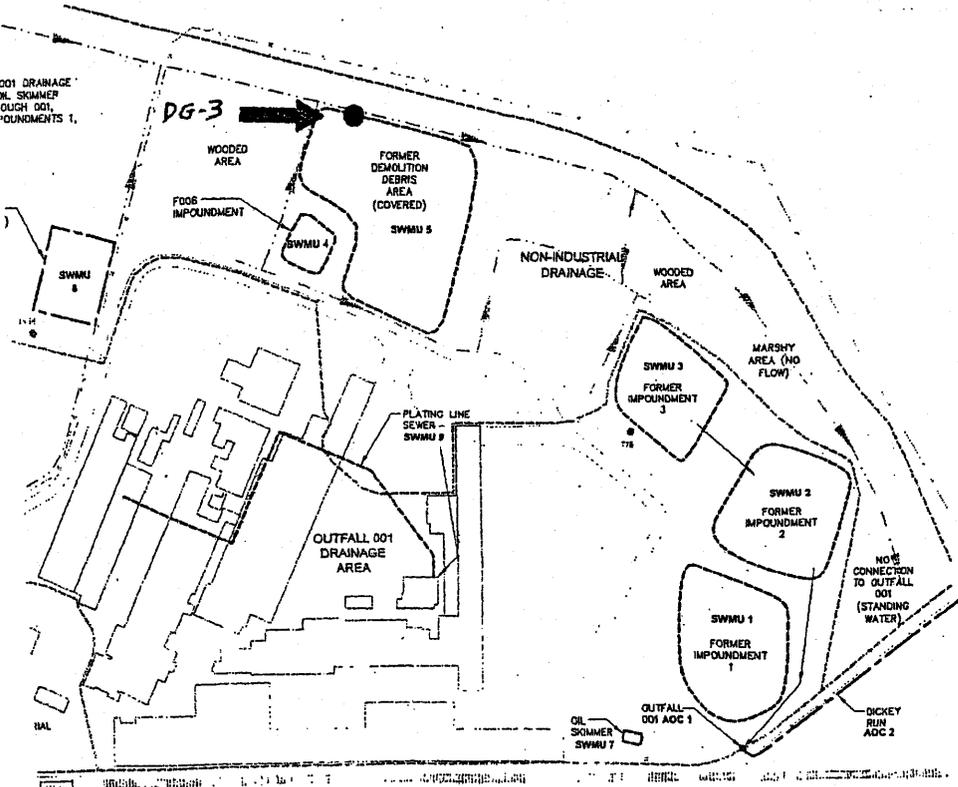


FIGURE 2



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Scale: 1 : 12,800 Map Rotation: 0° Magnetic Declination: 0.0°E



LEGEND

	AOC
	SWMU
	BUILDING
	PERMETER FENCE
	DITCH CENTERLINE AND WATER FLOW DIRECTION
	DRAINAGE

FIGURE 3

URS			
THOMAS STEEL STRIP CORPORATION RFI WORK PLAN			
EXTERIOR SWMUs AND AOCs			
DRAWN BY: YRC	CHECKED BY: MW	PROJECT No: 1381344	DATE: 6/26/07

Jun 26, 2007 - 1:11pm

OHIO EPA DHW
SEP 23 2008

TABLE 1
THOMAS STEEL STRIP CORPORATION
WARREN, OHIO
SOLID WASTE MANAGEMENT UNIT (SWMU)

Group ID	SWMU ID	Location	Statement of Current Conditions	Release History	Recommendation
A	SWMU 1 - Lime Stabilized Waste Pickle Liquor Sludge (LSWPLS)	LSWPL Lagoons # 1, located on the southeast portion of the Property.	This LSWPL lagoon underwent RCRA Closure activities in October 2005. During closure activities, soils were removed from the access roads and truck loading/unloading areas between lagoons 1 and 2, and adjacent to lagoon 3. All excavated soils were disposed within the lagoon # 2 prior to closure activities. Post-closure groundwater monitoring activities are currently ongoing.	No releases from this unit have been documented.	No Further Action is warranted based on the completion of RCRA Closure, and Post-Closure monitoring activities at this unit.
A	SWMU 2 - Lime Stabilized Waste Pickle Liquor Sludge (LSWPLS)	LSWPL Lagoons # 2, located on the northeast portion of the Property. This lagoon was suspected to also contain F006.	This LSWPL lagoon underwent RCRA Closure activities in October 2005. During closure activities, soils were removed from the access roads and truck loading/unloading areas between lagoons 1 and 2, and adjacent to lagoon 3. All excavated soils were disposed within the lagoon # 2 prior to closure activities. Post-closure groundwater monitoring activities are currently ongoing.	No releases from this unit have been documented.	No Further Action is warranted based on the completion of RCRA Closure, and Post-Closure monitoring activities at this unit.
A	SWMU 3 - Lime Stabilized Waste Pickle Liquor Sludge (LSWPLS)	LSWPL Lagoon # 3, located on the northeast portion of the Property. This lagoon was suspected to also contain F006.	This LSWPL lagoon underwent RCRA Closure activities in October 2005. During closure activities, soils were removed from the access roads and truck loading/unloading areas between lagoons 1 and 2, and adjacent to lagoon 3. All excavated soils were disposed within the lagoon # 2 prior to closure activities. Post-closure groundwater monitoring activities are currently ongoing.	No releases from this unit have been documented.	No Further Action is warranted based on the completion of RCRA Closure, and Post-Closure monitoring activities at this unit.
	SWMU 4 - F006 Pond	The F006 lagoon located north of Building 34.	This F006 lagoon underwent RCRA Closure activities in October 2005. During closure activities, soils were removed from the apron and truck loading/unloading area adjacent to the F006 lagoon. Excavated soils were disposed within the F006 lagoon prior to closure activities. Post-closure groundwater monitoring activities are currently ongoing.	No releases from this unit have been documented.	No Further Action is warranted based on the completion of RCRA Closure, and Post-Closure monitoring activities at this unit.
	SWMU 5 - Landfill Area 1	Adjacent to F006 Pond	Historic drawings and aerial photos indicated that a former landfill area was present on the north central portion of the Property since approximately 1965. This area is currently grass covered with no visible solid waste.	A Preliminary Assessment completed by the Ohio EPA on June 12, 1984, indicated that this area contained demolition debris. It also noted that green sludge was observed spilled in this area.	The unit was sampled, and had elevated levels of contamination. A clay cap overlies the unit, preventing contact. An Environmental Covenant restricting use of the property, and restricting disturbance of this unit, should be entered into. Maintenance of the cap should also be ensured.
	SWMU 6 - Landfill Area 2	Located west of the northwest corner of Building # 35	Historic drawings and aerial photos indicated that a landfill area was present northwest of the manufacturing area (currently west of main access road) since approximately 1965. This area is currently grass and tree covered; however, some pieces of brick and concrete were visible at surface.	No releases from this area have been documented.	The unit was sampled, and did not have elevated levels of contamination. Constituents present met residential standards.
	SWMU 7 - Oil Skimmer (Oil/Water Separator)	Located at the southeast corner of the Property	Process waters are directed to the oil skimming prior to discharge at outfall 001. Oil skimming and additional settling of the combined plant discharge is accomplished in a sedimentation/skimming basin prior to Outfall 001.	No releases from this unit have been documented.	No action is warranted based on no documented releases from this unit.

SEP 23 2008

OHIO EPA D/HMM

TABLE 1
 THOMAS STEEL STRIP CORPORATION
 WARREN, OHIO
 SOLID WASTE MANAGEMENT UNIT (SWMU)

Group ID	SWMU ID	Location	Statement of Current Conditions	Release History	Recommendation
	SWMU 8 - TPC Pickling Line (Hydrochloric Acid Strip Pickling) and Regeneration Plant	<p>The TPC Pickling Line is located in Building # 29</p> <p>The Regenerations Plant is located Adjacent to the northwest corner of the TPC Pickle Line Building</p>	<p>Acid pickling chemically removes scale and metallic oxides from the surface of steel. During the process, hydrochloric acid (HCl) reacts with the scale and metallic oxides on the surface of the steel to form ferrous chloride. The concentrations of ferrous chloride in the pickling baths increase as the HCl is consumed in the process and eventually the HCl is "spent". Spent pickle liquor is classified as a listed hazardous waste (K062) when destined for disposal. The spent pickle liquor at TSSC is regenerated in a system that produces HCl and iron oxide.</p> <p>K062 and contaminated rinsewater are constantly circulated to the regeneration plant, where pickle liquor is regenerated through the roasting process, and iron oxide is produced. The regeneration plant is a state-of-the-art zero discharge system. Five storage ASTs are associated with system. Iron Oxide is the waste generated from the regeneration of spent hydrochloric acid pickle liquor. The iron oxide is accumulated in a silo and is transferred from the facility once per week. The iron oxide is transferred to trucks via a pipe/hose. These transfer operations are conducted in a three-sided shed. The generated iron oxide is considered a high temperature metals recovery (HTMR) residue, which is an exempted waste in accordance with 40 CFR 261.3(c)(2)(ii)(C).</p>	<p>No releases from this unit have been documented.</p> <p>On April 16, 2002, an incident involving the transfer of a roll-off box of scrap and other miscellaneous maintenance materials that contained rainwater contaminated with iron oxide (K062) occurred at this unit. Some of the contaminated rainwater leaked onto the public roadways during transport of the roll-off box to Warren Recycling Inc. At Warren Recycling Inc. the waste was mixed with other solid waste and taken to Central Waste, Inc. All impacted areas (on and off site) were cleaned and wash waters were treated at the TSSC WWTP. All materials transported and disposed at Central Waste, Inc. were removed and transported to a permitted hazardous waste landfill for disposal.</p> <p>It was noted during an Ohio EPA inspection that the oxide dust (K062) generated in the Regeneration Plant covered the outside walls of the Regeneration Plant, the adjacent tank farm, and the concrete road and soils on the north and east side of the building. The TPC Acid Regeneration Dust Loading Area underwent Site Remediation. The remediation was conducted in accordance with the specifications and schedule presented in the TPC Acid Regeneration Site Remediation Plan. The Remediation Report was approved by the Ohio EPA Director on October 27, 2003.</p> <p>In March 2003, a tractor trailer was being loaded with iron oxide powder through the front hatch opening in the trailer tarp via the feed auger/hose chute device. The tractor and trailer rooved forward while loading was in progress resulting in a 1 foot wide trail down the center of the trailer tarp and a 2 feet high by 4 feet wide pile behind the trailer before the loading operation was terminated. The powder was carefully shoveled into 55-gallon drums for recycling back to the Regeneration Plant. A vacuum truck was used to collect any remaining residue material on the concrete pad, the truck, and tarp.</p>	<p>No action is warranted based on no documented releases from this unit.</p> <p>No Further Action is warranted based on the cleanup activities conducted.</p> <p>No Further Action is warranted based on the cleanup activities conducted.</p> <p>No Further Action is warranted based on the cleanup activities conducted.</p>
	SWMU 9 - Wastewater Treatment Plant (WWTP) and Plating Line Sewer	<p>Building # 30, North of Building #4A and west of Building #4B</p> <p>The plating sewer line originates at the Nickel #5 plating line (Building 35). The sewer is connected to all the facility plating lines. The sewer terminates at the WWTP.</p>	<p>Wastewater from the electroplating operations, including that pretreated in the cyanide destruction unit and that in the chromium reduction unit, is pH-adjusted and sent through a filter, producing wastewater treatment sludges from electroplating operations (F006).</p> <p>Underground piping exists at the facility from the plating lines to the wastewater treatment plant (SWMU 10).</p>	<p>Notes from an Internal Ohio EPA file review conducted in February 1998 reported that an Ohio EPA memo dated May 15, 1972, indicated that Waste Water Treatment Plant sludge was being dumped outside the treatment plant door. No additional information or the location of the incident was available in the Ohio EPA files.</p> <p>No releases from this unit have been documented.</p>	<p>The unit was sampled, and did not have elevated levels of contamination. Constituents present met residential standards.</p> <p>No action is warranted based on no documented releases from this unit.</p>

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OHIO EPA DIRM

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TABLE 1
 THOMAS STEEL STRIP CORPORATION
 WARREN, OHIO
 SOLID WASTE MANAGEMENT UNIT (SWMU)

Group ID	SWMU ID	Location	Statement of Current Conditions	Release History	Recommendation
	SWMU 10 - Cyanide Destruction Unit	This unit is located at the southwest corner of the WWTP building.	This unit destroys the cyanide amenable to treatment found in solutions from electroplating operations where cyanides are used in the process (F007), and plating bath sludges from the bottom of the plating baths from electroplating operations where cyanides are used in the process (F008).	No releases from this unit have been documented.	No action is warranted based on no documented releases from this unit.
	SWMU 11 - Nickel/Zinc (NiZn) Electroplating Line	Center portion of Building # 3	The nickel/zinc electroplating line is comprised of alkaline cleaning, rinsing, acid cleaning, mechanical cleaning (scrubbing), nickel plating, rinsing, zinc plating, rinsing, chromate dip and rinsing steps.	No releases from this unit have been documented.	No action is warranted based on no documented releases from this unit.
	SWMU 12 - Copper/Brass Electroplating Line	Western portion of Building # 3	Comprised of alkaline cleaning, rinsing, acid cleaning, mechanical cleaning (scrubbing), copper plating, rinsing, brass plating, rinsing, chromate dip and rinsing steps. Sodium hypochlorite is used for cyanide oxidation in spent copper and brass plating solutions. Sodium cyanide is stored at several locations adjacent to this unit and is utilized in the Copper-Brass Electroplating line.	In December 2003, a spill of approximately 70-80 gallons of weak plating solution occurred at this unit. The water had been turned on to fill the cyanide addition system. The mixing tank overflowed into the containment tank and onto the floor. Some of the spill flowed into the Copper/Brass plating tank and some flowed onto the nearby wooded floor area. The affected wood block floor and waste brass plating solution were collected and placed in haz-mat bags. The area was washed and cleaned by Chemtron.	No Further Action is warranted based on the cleanup activities conducted.
	SWMU 13 - Nickel # 1 Electroplating Line	Eastern portion of Building # 3	This unit is currently out of service.	No releases from this unit have been documented.	No action is warranted based on no documented releases from this unit.
	SWMU 14 - Nickel # 4 Electroplating Line	Building # 8	Comprised of alkaline cleaning, rinsing, acid cleaning, mechanical cleaning (scrubbing), nickel plating, rinsing, cobalt plating, rinsing, and anti-stick post treatment (aluminum sulfate) steps. Spent caustic cleaning solution (D002) is generated at this unit. This solution is accumulated in and shipped from Tank C23h for off-site treatment and disposal.	No releases from this unit have been documented.	No action is warranted based on no documented releases from this unit.
	SWMU 15 - Nickel # 5 Electroplating Line	Building # 35	Comprised of alkaline cleaning, rinsing, acid cleaning, mechanical cleaning (scrubbing), plating, rinsing and anti-stick post treatment (aluminum sulfate) steps. Spent caustic cleaning solution (D002) is generated at this unit. This solution is accumulated in and shipped from Tank C23h for off-site treatment and disposal.	In November 2004, approximately 1,193 gallons of nickel plating solution was contained in the waste nickel sump pit. When the source was determined, the nickel plating line was shut down and the plating solution was pumped to the storage tanks. The nickel solution was fully contained within the waste nickel sump pit in the basement and the sump was turned off. The solution was then pumped to the storage ASTs. During pumping, the nickel plating solution overflowed through the tank's vent pipe. The nickel plating solution was contained and combined with rainwater outside in the slag and concrete containment area between the Nickel 4 and Nickel 5 process buildings. Approximately 200 gallons (100 gallons of nickel plating solution and 100 gallons of rainwater) were removed from the containment area via a vacuum truck. In January 2007, approximately 50 gallons of sulfuric acid discharged at this unit. It was determined that a valve on the sulfuric acid day tank was not closed completely. The acid was washed into the pickle pit in the basement, metered to the 25 m ³ pit, diluted, and slowly pumped to the wastewater treatment plant.	No Further Action is warranted based on the cleanup activities conducted.

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**TABLE 1
THOMAS STEEL STRIP CORPORATION
WARREN, OHIO
SOLID WASTE MANAGEMENT UNIT (SWMU)**

Group ID	SWMU ID	Location	Statement of Current Conditions	Release History	Recommendation
	SWMU 16 - Former Fuel Oil AST (T45)	North of WWTP	The former 200,000-gallon fuel oil AST is located north of the WWTP Building. This AST is currently out of service and the containment has been removed. Tank was emptied, cleaned, and rendered unusable. The remaining steel shell of the AST is slated for removal.	In August 2005, a maintenance crew was in the process of demolishing an oil tank no longer necessary for plant operations. During the removal of the tank piping, a 3" steam valve at the bottom of the tank was inadvertently broken resulting in approximately 100 gallons of oil draining into the containment area. A vacuum truck was utilized to recover the leaking oil. A second vacuum truck was utilized to drain the remaining oil in the tank. Approximately 20 cubic yards of impacted soil and clay was removed from the secondary containment area.	No Further Action is warranted based on the cleanup activities conducted.
B	SWMU 17A through 17I - Facility Parts Washers	Various locations throughout facility	Several parts washers are located throughout the plant. These units were observed to be in good condition with no signs of staining in the vicinity. These units are routinely emptied and are located in buildings with no floor drains, basements, or containment curbs.	No releases from these units have been documented.	No action is warranted based on no documented releases from this unit.
C	SWMU 18A through 18 E - Scrap Metal Rolloffs	Various locations throughout facility	Rolloff boxes are staged at various locations around the plant. The rolloffs are staged on concrete. These units appeared to be in good condition with no signs of staining.	No releases from these units have been documented.	No action is warranted based on no documented releases from this unit.
	SWMU 19 - Scrap Metal Compressor Area	Building # 4A, east of auditorium	Scrap metal is staged in the western portion of Building #4A. Scrap metal is placed on pallets or hoppers and then sorted into the appropriate tractor trailer for disposal. This area was observed to be in good condition with only minimal staining noted.	No releases from this unit have been documented.	No action is warranted based on no documented releases from this unit.
	SWMU 20 - Former Filter Plant Building	Building # 2B	This unit is currently out of service.	No releases from this unit have been documented.	No action is warranted based on no documented releases from this unit.
	SWMU 21 - Chemistry Lab	Building # 3C	The plant chemistry lab is located at the southern end of Building # 3. The lab is utilized for plant testing (solutions, outfall). The lab was observed in good condition with no signs of staining.	No releases from this unit have been documented.	No action is warranted based on no documented releases from this unit.
	SWMU 22 - Waste Storage Area	Inside Storage Building B41	This area is utilized for the storage of miscellaneous plant hazardous and nonhazardous wastes. The building has a containment curb with an access ramp.	No releases from this unit have been documented.	No action is warranted based on no documented releases from this unit.
	SWMU 23 - Former Paint Lines	Eastern portion of Building # 5	This area is currently utilized for coil storage and the TSSC Packaging Line. A 1950 Sanborn Map indicated that a trichloroethylene tower and a paint applicator were located along the eastern wall of Building # 5. Ohio EPA records indicated that a continuous coil coating line (paint line) was installed in 1959 (no location indicated). According to the Ohio EPA records, paint line operations were permanently discontinued in May 1980.	No releases from this unit have been documented.	No action is warranted based on no documented releases from this unit.
	SWMU 24 - Solvent Spill Area	The Solvent Spill Area (SSA) was located north of the Maintenance Shop (# 20)	This area is currently occupied by the Maintenance Stores Building (# 34). This is a warehouse building with a concrete floor. Small parts and office materials are delivered and staged in this building.	Ohio EPA files indicated that Risk Assessments (August 1988 and April 1989) were completed for the solvent spill area located north of the machine shop. The files indicated that the chemicals of concern were perchloroethylene (PCE), trichloroethylene, and vinyl chloride. Risk-based levels were established and soil excavation activities were conducted. The files indicated that the Ohio EPA approved the remedial activities and new building construction (Building # 34).	No Further Action is warranted based on the cleanup activities conducted.

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OHIO EPA DHHM

**TABLE 2
THOMAS STEEL STRIP CORPORATION
WARREN, OHIO**

AREAS OF CONCERN (AOC)

AOC ID	Name	Location	Statement of Current Conditions (indications for a need for further investigations (sampling) or further actions)	Summary of Release (Actual or Potential) (based on construction, contents and location)	Response Action (Further investigation or not)
1	NPDES Outfalls	The outfalls are located at different points of the wastewater treatment system and are numbered as follows: Outfall 001 (discharges to Mahoning River via Dickey Run ditch), Outfall 601 (discharges to Outfall 001), and Outfall 603 (discharges to Outfall 001).	Outfall 001 is the only external outfall for this facility. Outfall 001 discharges to Dickey Run storm sewer, which in turn discharges to the Mahoning River. Wastewater at Outfall 001 includes treated process wastewater from internal outfalls, stormwater, and noncontact cooling water. Stormwater and internal outfalls (or monitoring stations) 601 and 603 discharge to Outfall 001. Prior to discharging from Outfall 603, cyanide-bearing wastewater is chemically oxidized with sodium hypochlorite and caustic soda in the cyanide destruction system (Outfall 603). Similarly, hexavalent chromium reduction is accomplished with sulfur dioxide and sulfuric acid prior to commingling with other process wastestreams. Spent rolling solutions are treated with polymers to break oil emulsions. At Outfall 601, all process wastewaters are subsequently treated via chemical neutralization and precipitation, followed by pressure filtration. Oil skimming and additional settling of the combined plant discharge is accomplished in a sedimentation/skimming basin prior to Outfall 001.	Several exceedances of the NPDES permit have been documented at Outfall 001.	Monitoring of the Outfall 001 discharge levels will continue. Procedures have been established to minimize releases.
2	Dickey Run Ditch	Located at the southeast corner of the Property and accepts discharges from Outfall 001.	Dickey Run ditch receives treated process wastewater, stormwater, and noncontact cooling water from Outfall 001. Prior to discharge to Dickey Run ditch, all process wastewaters are subsequently treated via chemical neutralization and precipitation, followed by pressure filtration.	<p>Several exceedances of the NPDES permit have been documented at Outfall 001 as discharged to the Dickey Run ditch. In addition, historical releases have been documented. Notes from an Internal Ohio EPA file review conducted in February 1986 reported a release of approximately 231,000 gallons of partially treated metal plating wastes discharged to Dickey Run in May 1972. No additional information on the location of the incident was available in the Ohio EPA files.</p> <p>An interview with TSSC personnel indicated that the ditch between the oil skimmer and Outfall 001 was cleared of debris in 2003 and 2004. Excavated soils were sent to a landfill for disposal. Soils and debris were also excavated from the Dickey Run ditch in February 2006. Dickey Run was cleared from the property fence line to the stormwater catch basin located on the adjacent property. Excavated soils were placed along the bank of Dickey Run on TSSC property.</p>	<p>No Further Action is warranted based on the cleanup activities conducted.</p> <p>The stockpiled dredgings were sampled. Constituents detected met residential use standards.</p>

OHIO EPA DHHM
 SEP 23 2008

Table 3
SWMU 5 Analytical Data Summary - Volatiles
Thomas Steel Strip
Warren, Ohio

PARAMETER	SWMU5-SB05-0002 10/01/2007 ug/kg	SWMU5-SB05-0608 10/01/2007 ug/kg	SWMU5-SB05-1315 10/01/2007 ug/kg	SWMU5-SB06-0002 10/01/2007 ug/kg	SWMU5-SB06-0406 10/01/2007 ug/kg	SWMU5-SB06-1315 10/01/2007 ug/kg	SWMU5-SB07-0002 10/01/2007 ug/kg
2-Butanone	26 U	95 UJ	21 UJ	26 U	40 UJ	25 U	23 U
Acetone	26 U	54 J	34	26 U	56	25 UJ	23 U
Benzene	6.5 U	24 U	5.3 U	6.4 U	9.9 U	6.2 U	5.7 U
Carbon disulfide	6.5 U	24 U	5.3 U	6.4 U	9.9 U	6.2 U	5.7 U
Chlorobenzene	6.5 U	24 U	5.3 U	6.4 U	9.9 U	6.2 U	5.7 U
Isopropylbenzene	6.5 U	24 U	5.3 U	6.4 U	0.48 J	6.2 U	5.7 U
Methylene chloride	6.5 U	24 UJ	5.3 U	6.4 U	9.9 U	6.2 U	5.7 U
n-Hexane	2.1 J	3.8 J	0.84 J	0.87 J	2.0 J	0.70 J	1.1 J
Trichloroethene	9.8	2.4 J	5.3 U	6.4 U	9.9 U	6.2 U	5.7 U
Xylenes (total)	13 U	48 U	11 U	13 U	20 U	12 U	11 U

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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OHIO EPA DMMW

Table 3
SWMU 5 Analytical Data Summary - Volatiles
Thomas Steel Strip
Warren, Ohio

PARAMETER	SWMU5-SB07-1012 10/01/2007 ug/kg	SWMU5-SB07-1517 10/01/2007 ug/kg	SWMU5-SB08-0002 10/01/2007 ug/kg	SWMU5-SB08-0406 10/01/2007 ug/kg	SWMU5-SB08-1214 10/01/2007 ug/kg	SWMU5-SB09-0002 10/02/2007 ug/kg	SWMU5-SB09-0406 10/02/2007 ug/kg
2-Butanone	25 UJ	22 U	22 U	24 UJ	21 U	22 U	8.9 J
Acetone	28 UJ	22 UJ	22 U	52	21 UJ	22 U	40
Benzene	6.2 U	5.4 U	5.4 U	0.66 J	5.3 U	5.4 U	5.9 U
Carbon disulfide	6.2 U	0.90 J	5.4 U	2.4 J	5.3 U	5.4 U	5.9 U
Chlorobenzene	6.2 U	5.4 U	5.4 U	6.1 U	5.3 U	5.4 U	5.9 U
Isopropylbenzene	6.2 U	5.4 U	5.4 U	6.1 U	5.3 U	5.4 U	5.9 U
Methylene chloride	6.2 U	5.4 U	5.4 U	6.1 U	5.3 U	5.4 U	5.9 U
n-Hexane	1.4 J	0.69 J	1.2 J	1.6 J	1.1 J	1.3 J	1.1 J
Trichloroethene	6.2 U	0.46 J	5.4 U	6.1 U	0.48 J	5.4 U	5.9 U
Xylenes (total)	12 U	11 U	11 U	0.97 J	11 U	11 U	12 U

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

OHIO EPA DMM
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Table 3
 SWMU 5 Analytical Data Summary - Volatiles
 Thomas Steel Strip
 Warren, Ohio

PARAMETER	SWMU5-SB09-0810 10/02/2007 ug/kg	SWMU5-SB10-0002 10/02/2007 ug/kg	SWMU5-SB10-0204 10/02/2007 ug/kg	SWMU5-SB10-0810 10/02/2007 ug/kg
2-Butanone	20 U	23 U	5100 U	4.7 J
Acetone	20 U	23 U	5100 U	58
Benzene	5.0 U	5.6 U	1300 U	4.8 U
Carbon disulfide	5.0 U	5.6 U	1300 U	4.8 U
Chlorobenzene	0.79 J	5.6 U	1300 U	4.8 U
Isopropylbenzene	5.0 U	5.6 U	1300 U	4.8 U
Methylene chloride	5.0 U	5.6 U	830 J	4.8 U
n-Hexane	1.1 J	1.0 J	270 J	0.89 J
Trichloroethene	5.0 U	5.6 U	1300 U	4.8 U
Xylenes (total)	10 U	11 U	2500 U	9.6 U

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

SEP 23 2008

OHIO EPA DMM

Table 4
SWMU 5 Analytical Data Summary - Semivolatiles
Thomas Steel Strip
Warren, Ohio

PARAMETER	SWMU5-SB05-0002 10/01/2007 ug/kg	SWMU5-SB05-0608 10/01/2007 ug/kg	SWMU5-SB05-1315 10/01/2007 ug/kg	SWMU5-SB06-0002 10/01/2007 ug/kg	SWMU5-SB06-0406 10/01/2007 ug/kg	SWMU5-SB07-0002 10/01/2007 ug/kg	SWMU5-SB07-1012 10/01/2007 ug/kg
2-Methylnaphthalene	460 U	10000 U	400 U	14 J	22 J	140 J	29 J
Acenaphthene	460 U	10000 U	400 U	430 U	200 J	19 J	420 U
Acenaphthylene	460 U	10000 U	400 U	430 U	590 U	41 J	420 U
Anthracene	460 U	10000 U	400 U	430 U	30 J	90 J	420 U
Benzo(a)anthracene	460 U	10000 U	400 U	9.9 J	17 J	380 J	10 J
Benzo(a)pyrene	460 U	10000 U	400 U	17 J	52 J	390 J	9.3 J
Benzo(b)fluoranthene	11 J	220 J	400 U	19 J	56 J	740 J	14 J
Benzo(ghi)perylene	13 J	10000 U	400 U	26 J	23 J	450 J	420 U
Benzo(k)fluoranthene	460 U	10000 U	400 U	430 U	24 J	210 J	420 U
bis(2-Ethylhexyl) phthalate	460 UJ	10000 U	480	430 UJ	590 UJ	960 UJ	420 UJ
Butyl benzyl phthalate	460 U	10000 U	310 J	430 U	590 U	230 J	420 U
Carbazole	460 U	10000 U	400 U	430 U	590 U	72 J	420 U
Chrysene	460 U	10000 U	400 U	17 J	33 J	500 J	11 J
Dibenz(a,h)anthracene	460 U	10000 U	400 U	430 U	590 U	140 J	420 U
Dibenzofuran	460 U	10000 U	400 U	430 U	150 J	960 U	420 U
Di-n-butyl phthalate	460 U	10000 U	400 U	430 U	590 U	58 J	420 U
Di-n-octyl phthalate	460 U	10000 U	400 U	430 U	590 U	960 U	420 U
Fluoranthene	460 U	330 J	400 U	15 J	59 J	800 J	18 J
Fluorene	460 U	10000 U	400 U	430 U	140 J	28 J	420 U
Indeno(1,2,3-cd)pyrene	460 U	10000 U	400 U	12 J	20 J	370 J	420 U
Isophorone	460 U	10000 U	400 U	430 U	590 U	1400	420 U
Naphthalene	460 U	10000 U	400 U	8.8 J	18 J	160 J	21 J
Phenanthrene	460 U	10000 U	400 U	16 J	180 J	490 J	15 J
Pyrene	460 U	330 J	400 U	16 J	56 J	660 J	14 J

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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Table 4
SWMU 5 Analytical Data Summary - Semivolatiles
Thomas Steel Strip
Warren, Ohio

PARAMETER	SWMU5-SB07-1517 10/01/2007 ug/kg	SWMU5-SB08-0002 10/01/2007 ug/kg	SWMU5-SB08-0406 10/01/2007 ug/kg	SWMU5-SB08-1214 10/01/2007 ug/kg	SWMU5-SB09-0002 10/02/2007 ug/kg	SWMU5-SB09-0406 10/02/2007 ug/kg	SWMU5-SB10-0002 10/02/2007 ug/kg	SWMU5-SB10-0204 10/02/2007 ug/kg
2-Methylnaphthalene	420 U	240 J	200 J	440 U	83 J	13 J	9.0 J	1600 U
Acenaphthene	420 U	9.7 J	1100 U	21 J	1600 U	450 U	380 UJ	1600 U
Acenaphthylene	420 U	10 J	44 J	440 U	1600 U	450 U	15 J	1600 U
Anthracene	420 U	16 J	120 J	16 J	45 J	450 U	15 J	1600 U
Benzo(a)anthracene	420 U	69 J	910 J	16 J	200 J	22 J	160 J	98 J
Benzo(a)pyrene	420 U	70 J	960 J	440 U	230 J	26 J	130 J	82 J
Benzo(b)fluoranthene	420 U	110 J	1500	14 J	420 J	36 J	210 J	140 J
Benzo(ghi)perylene	420 U	57 J	730 J	440 U	200 J	20 J	94 J	1600 U
Benzo(k)fluoranthene	420 U	37 J	480 J	440 U	140 J	14 J	76 J	48 J
bis(2-Ethylhexyl) phthalate	420 UJ	400 UJ	1100 U	440 UJ	1600 U	450 U	380 UJ	1600 U
Butyl benzyl phthalate	420 U	400 U	1100 U	440 U	1600 U	450 U	380 UJ	1600 U
Carbazole	420 U	400 U	92 J	440 U	1600 U	450 U	380 UJ	1600 U
Chrysene	420 U	85 J	1000 J	18 J	280 J	31 J	160 J	110 J
Dibenz(a,h)anthracene	420 U	16 J	220 J	440 U	1600 U	450 U	380 UJ	1600 U
Dibenzofuran	420 U	42 J	64 J	440 U	1600 U	450 U	380 UJ	1600 U
Di-n-butyl phthalate	420 U	400 U	1100 U	440 U	1600 U	450 U	380 UJ	1600 U
Di-n-octyl phthalate	31 J	400 U	1100 U	440 U	1600 U	450 U	380 UJ	1600 U
Fluoranthene	420 U	100 J	1400	58 J	380 J	55 J	340 J	120 J
Fluorene	420 U	12 J	25 J	29 J	1600 U	450 U	380 UJ	1600 U
Indeno(1,2,3-cd)pyrene	420 U	45 J	660 J	440 U	180 J	17 J	87 J	33 J
Isophorone	420 U	400 U	1100 U	440 U	1600 U	450 U	380 UJ	1600 U
Naphthalene	420 U	190 J	140 J	15 J	43 J	450 U	380 UJ	1600 U
Phenanthrene	420 U	120 J	560 J	71 J	220 J	28 J	63 J	60 J
Pyrene	420 U	85 J	1200	44 J	310 J	40 J	260 J	140 J

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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OHIO EPA/DNR

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Table 5
 SWMU 5 Analytical Data Summary - Metals and Cyanide
 Thomas Steel Strip
 Warren, Ohio

PARAMETER	SWMU5-SB05-0002 10/01/2007 mg/kg	SWMU5-SB05-0608 10/01/2007 mg/kg	SWMU5-SB05-1315 10/01/2007 mg/kg	SWMU5-SB06-0002 10/01/2007 mg/kg	SWMU5-SB06-0406 10/01/2007 mg/kg	SWMU5-SB06-1315 10/01/2007 mg/kg	SWMU5-SB07-0002 10/01/2007 mg/kg
Aluminum	13000	4580	8840	13400	3410	13200	9310
Antimony	0.91 J	186 U	7.2 U	0.66 J	1.5 J	0.47 J	1.9 J
Arsenic	21.3	23.8	7.0	19.1	4.5	18.0	14.5
Barium	55.6	62.1	22.3 J	38.9	17.6 J	209	122
Beryllium	0.68 J	1.5 U	0.34 J	0.65 J	0.30 J	0.75	0.61
Cadmium	0.70 U	2.7 J	0.60 U	0.66 U	0.89 U	0.69 U	0.26 J
Chromium	19.9 J	1530 J	11.5 J	20.3 J	21.3 J	17.4 J	18.3 J
Cobalt	13.8	15.1 J	8.1	15.3	4.6 J	13.3	4.1 J
Copper	95.7	66900	9.9	34.4	46.4	18.3	438
Iron	34200	36700	14300	32000	99800	29300	22800
Lead	37.4	116	8.0	17.7	7.0	11.5	249
Manganese	276	688	141	272	550	282	307
Mercury	0.14 U	0.31 U	0.12 U	0.13 U	0.18 U	0.14 U	0.12 U
Nickel	42.6	53600	12.3	42.2	267	29.9	135
Selenium	0.70 U	17.4	0.60 U	0.66 U	0.89 U	0.69 U	0.58 U
Thallium	1.1 J	3.1 U	0.96 J	1.4	2.0	1.1 J	1.0 J
Tin	14 UJ	115	12 UJ	13.1 UJ	17.7 U	13.7 UJ	80.4
Vanadium	18.5	69.3	15.1	18.6	21.2	19.4	15.2
Zinc	180 J	55800 J	37.7 J	120 J	149 J	67.1 J	839 J
Total Cyanide	0.31 J	320	0.60 U	0.66 U	0.89 U	0.69 U	0.70

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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Table 5
SWMU 5 Analytical Data Summary - Metals and Cyanide
Thomas Steel Strip
Warren, Ohio

PARAMETER	SWMU5-SB07-1012 10/01/2007 mg/kg	SWMU5-SB07-1517 10/01/2007 mg/kg	SWMU5-SB08-0002 10/01/2007 mg/kg	SWMU5-SB08-0406 10/01/2007 mg/kg	SWMU5-SB08-1214 10/01/2007 mg/kg	SWMU5-SB09-0002 10/02/2007 mg/kg	SWMU5-SB09-0406 10/02/2007 mg/kg
Aluminum	7700	13300	14600	13800	11100	12200	5530
Antimony	7.8 U	0.84 J	0.74 J	0.80 J	0.81 J	7.2 U	8.2 U
Arsenic	9.8	19.1	20.1	13.1	18.7	17.3	19.4
Barium	29.7	53.5	57.6	124	65.9	112	44.9
Beryllium	0.29 J	0.69	0.74	1.1	0.62 J	1.0	0.29 J
Cadmium	0.64 U	0.63 U	0.60 U	0.22 J	0.67 U	0.16 J	0.68 U
Chromium	11.7 J	32.3 J	21.1 J	107 J	19.2 J	87.6	17.1
Cobalt	6.4	16.5	13.9	7.2	13.4	8.7	5.4 J
Copper	19.8	190	59.8	1670	144	1560	62.5
Iron	25800	38900	35400	36500	32800	26500	44900
Lead	10.3	14.4	21.4	82.7	40.7	83.1	32.4
Manganese	299	331	315	1070	478	793	763
Mercury	0.13 U	0.13 U	0.12 U	0.13 U	0.13 U	0.17	0.092 J
Nickel	16.3	51.2	43.1	1750	176	1520	26.1
Selenium	0.64 U	0.63 U	0.60 U	0.72	0.67 U	0.60 U	0.68 U
Thallium	0.93 J	1.3	1.1 J	2.1	1.5	1.4	1.7
Tin	12.7 U	5.4 J	12 UJ	81.1	127	28.2	13.6 UJ
Vanadium	14.2	19.4	19.6	20.7	17.0	17.1	14.0
Zinc	43 J	127 J	98 J	4040 J	771 J	2010	97.6
Total Cyanide	0.22 J	0.13 J	0.60 U	55	0.67 U	37	2.6

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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OHIO EPA DWM

Table 5
SWMU 5 Analytical Data Summary - Metals and Cyanide
Thomas Steel Strip
Warren, Ohio

PARAMETER	SWMU5-SB09-0810 10/02/2007 mg/kg	SWMU5-SB10-0002 10/02/2007 mg/kg	SWMU5-SB10-0204 10/02/2007 mg/kg	SWMU5-SB10-0810 10/02/2007 mg/kg
Aluminum	11500	14200	2370	11100
Antimony	7.1 U	0.60 J	22.7 U	7.2 U
Arsenic	19.3	17.0	2.8 J	24.0
Barium	62.0	120	23.1 J	46.4
Beryllium	0.57 J	1.0	0.24 J	0.60
Cadmium	0.59 U	0.16 J	0.48 J	0.60 U
Chromium	17.6	45.7	41.3	15.3
Cobalt	13.7	12.0	5.6 J	12.6
Copper	20.5	199	325	31.6
Iron	29300	29500	156000	36000
Lead	14.5	81.4	14.5	23.0
Manganese	465	1180	742	311
Mercury	0.12 U	0.035 J	0.19 U	0.12 U
Nickel	31.7	182	376	29.7
Selenium	0.59 U	0.58 U	1.9 U	0.60 U
Thallium	1.3	1.4	3.8 U	1.4
Tin	11.8 U	11.8	18.9 UJ	12.1 UJ
Vanadium	16.8	21.0	12.4 J	14.5
Zinc	70.4	713	381	97.3
Total Cyanide	0.29 J	11	9.1	0.60 U

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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Table 6
 SWMU 6 Analytical Data Summary - Volatiles
 Thomas Steel Strip
 Warren, Ohio

PARAMETER	SWMU6-SB01-0002 10/01/2007 ug/kg	SWMU6-SB01-0406 10/01/2007 ug/kg	SWMU6-SB01-1012 10/01/2007 ug/kg	SWMU6-SB02-0002 10/01/2007 ug/kg	SWMU6-SB02-0406 10/01/2007 ug/kg	SWMU6-SB02-0810 10/01/2007 ug/kg	SWMU6-SB03-0002 10/01/2007 ug/kg	SWMU6-SB03-0608 10/01/2007 ug/kg
2-Butanone	32 U	26 U	2.6 J	28 U	38 U	19 U	20 U	6.5 J
Acetone	32 U	26 U	23 UJ	28 U	38 U	19 U	20 U	43
n-Hexane	1.4 J	1.2 J	1.1 J	1.7 J	2.1 J	1.0 J	1.4 J	1.8 J

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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OHIO EPA DWM

Table 6
 SWMU 6 Analytical Data Summary - Volatiles
 Thomas Steel Strip
 Warren, Ohio

PARAMETER	SWMU6-SB03-0608D 10/01/2007 ug/kg	SWMU6-SB03-0810 10/01/2007 ug/kg	SWMU6-SB04-0002 10/01/2007 ug/kg	SWMU6-SB04-0406 10/01/2007 ug/kg	SWMU6-SB04-1012 10/01/2007 ug/kg
2-Butanone	6.0 J	21 U	38 U	35 U	22 U
Acetone	38	21 U	38 U	35 U	22 U
n-Hexane	1.6 J	1.4 J	2.2 J	1.9 J	1.0 J

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

UJ = The analyte was not detected at or above the sample reporting limit. However, the reporting limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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Table 7
SWMU 6 Analytical Data Summary - Semivolatiles
Thomas Steel Strip
Warren, Ohio

PARAMETER	SWMU6-SB01-0002 10/01/2007 ug/kg	SWMU6-SB01-1012 10/01/2007 ug/kg	SWMU6-SB02-0002 10/01/2007 ug/kg	SWMU6-SB03-0810 10/01/2007 ug/kg	SWMU6-SB04-0002 10/01/2007 ug/kg	SWMU6-SB04-1012 10/01/2007 ug/kg
2-Methylnaphthalene	500 U	420 U	15 J	420 U	570 U	410 U
bis(2-Ethylhexyl) phthalate	38 J	33 J	460 U	27 J	63 J	23 J
Phenanthrene	500 U	420 U	9.8 J	420 U	570 U	410 U

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.
 J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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Table 8
 SWMU 6 Analytical Data Summary - Metals and Cyanide
 Thomas Steel Strip
 Warren, Ohio

PARAMETER	SWMU6-SB01-0002 10/01/2007 mg/kg	SWMU6-SB01-0406 10/01/2007 mg/kg	SWMU6-SB01-1012 10/01/2007 mg/kg	SWMU6-SB02-0002 10/01/2007 mg/kg	SWMU6-SB02-0406 10/01/2007 mg/kg	SWMU6-SB02-0810 10/01/2007 mg/kg	SWMU6-SB03-0002 10/01/2007 mg/kg
Aluminum	4870	2460	12900	4250	2760	10600	11400
Arsenic	9.4	2.2 J	3.3	7.9	3.6	18.5	18.5
Barium	32.0	16.5 J	87.0	30.8	17.8 J	79.4	45.8
Beryllium	0.37 J	0.31 J	0.48 J	0.25 J	0.25 J	0.68	0.59 J
Cadmium	0.75 U	0.34 J	0.64 U	0.70 U	0.97 U	0.62 U	0.62 U
Chromium	46.5 J	23.6	13.9	41.6	36.5	15.9	16.9
Cobalt	6.2 J	4.7 J	3.7 J	5.4 J	5.4 J	13.4	14.3
Copper	76.8 J	19.1	16.1	320	46.5	21.7	19.0
Iron	79400	129000	8980	55500	103000	26800	28800
Lead	16.7	4.1	16.4	16.7	19.0	17.7	13.0
Manganese	607	676	59.2	488	454	526	348
Mercury	0.042 J	0.15 U	0.033 J	0.031 J	0.19 U	0.016 J	0.12 U
Nickel	56.9 J	60.8	12.2	328	43.4	40.2	30.7
Selenium	0.75 U	1.5 U	0.42 J	0.70 U	0.97 U	0.62 U	0.62 U
Thallium	2.5	3.1 U	1.3 U	0.89 J	1.9 U	1.8	1.1 J
Vanadium	11.8	5.0 J	14.8	15.4	9.2 J	18.4	16.3
Zinc	194 J	69.3	42	815	44.6	75.9	70.8
Total Cyanide	4.3	34	0.64 U	2.6	16	1.7	0.62 U

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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OHIO EPA DMM

Table B
SWMU 6 Analytical Data Summary - Metals and Cyanide
Thomas Steel Strip
Warren, Ohio

PARAMETER	SWMU6-SB03-0608 10/01/2007 mg/kg	SWMU6-SB03-0608D 10/01/2007 mg/kg	SWMU6-SB03-0810 10/01/2007 mg/kg	SWMU6-SB04-0002 10/01/2007 mg/kg	SWMU6-SB04-0406 10/01/2007 mg/kg	SWMU6-SB04-1012 10/01/2007 mg/kg
Aluminum	14900	10900	9780	1910	5460	11100
Arsenic	6.6	4.2	19.6	1.1 J	7.9	7.7
Barium	152	81.2	58.6	13.4 J	23.8 J	57.0
Beryllium	0.72	0.58 J	0.47 J	0.15 J	0.30 J	0.48 J
Cadmium	0.66 U	0.67 U	0.63 U	0.86 U	0.87 U	0.62 U
Chromium	13.0	9.8	15.5	33.5	31.1	15.4
Cobalt	2.3 J	1.7 J	13.0	4.4 J	7.5 J	7.0
Copper	24.8	18.4	19.6	33.0	31.7	21.4
Iron	11200	10900	26700	103000	82500	18300
Lead	27.8	16.4	12.4	13.2	10.1	13.4
Manganese	34.1	25.7	487	517	381	134
Mercury	0.063 J	0.056 J	0.13 U	0.30	0.17 U	0.12 U
Nickel	10.3	7.9	39.1	36.1	37.2	24.6
Selenium	0.44 J	0.56 J	0.63 U	0.86 U	0.87 U	0.62 U
Thallium	1.3 U	1.3 U	1.0 J	1.5 J	1.4 J	1.2
Vanadium	22.8	14.1	15.1	5.3 J	16	14.4
Zinc	26	20.4	69.9	68.9	34.2	65
Total Cyanide	0.66 U	0.67 U	0.63 U	24	3.4	0.62 U

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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OHIO EPA DWMN

Table 9
 SWMU 9 Analytical Data Summary - Metals and Cyanide
 Thomas Steel Strip
 Warren, Ohio

PARAMETER	SWMU9-SB11-0001 10/02/2007 mg/kg	SWMU9-SB12-0001 10/02/2007 mg/kg	SWMU9-SB11-0001D 10/02/2007 mg/kg
Cadmium	0.62 U	0.13 J	0.082 J
Chromium	21.6	32.8	21.9
Nickel	124	110	184
Selenium	0.62 U	0.39 J	0.59 U
Zinc	177	594	307
Total Cyanide	1.2	0.15 J	0.75

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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OHIO EPA DWM

Table 10
AOC 2 Analytical Data Summary - Metals and Cyanide
Thomas Steel Strip
Warren, Ohio

PARAMETER	AOC2-SR01 10/02/2007 mg/kg	AOC2-SR02 10/02/2007 mg/kg	AOC2-SP03 10/02/2007 mg/kg	AOC2-SP04 10/02/2007 mg/kg
Cadmium	0.31 J	0.25 J	0.32 J	0.29 J
Chromium	50.7	45.5 J	48.5	61.6
Nickel	970	1200	735	775
Selenium	0.87 U	0.62 U	0.64 U	0.63
Zinc	1020	823	672	627
Total Cyanide	4.6	6.3 J	2.6	1.8

U = The analyte was analyzed for, but was not detected. Value shown is the sample reporting limit.

J = Estimated concentration because the result was below the sample reporting limit or quality control criteria were not met.

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OHIO EPA DHEM

Table 11
Summary of Geotechnical Results
Thomas Steel Strip
Warren, Ohio

Sample ID	Sample Depth	USCS Class	Grain Size (%)			Atterberg		Permeability (cm/sec)	Specific Gravity	Moisture Content (%)	Bulk Density (pcf)
			Gravel	Sand	Fines	Plasticity Index	Liquid Limit				
SB05	2 - 4 ft	CL	4.6	16	79.4	16	37	6.2E-05	2.7	17.8	105.7
SB06	1 - 3 ft	--	--	--	--	--	--	--	--	14.9	101.5
SB09	1 - 3 ft	--	--	--	--	--	--	--	--	--	--

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OHIO EPA DWM

Table 12
Analytical Data Summary
Thomas Steel Strip Corporation
September 2006

Parameter	L0609483-01,02 UG-3 9/19/2006 mg/L	L0609483-03,04 UG-4 9/19/2006 mg/L	L0609483-09,10 DG-1 9/19/2006 mg/L	L0609483-11,12 DG-2 9/19/2006 mg/L	L0609483-13,14 DG-3 9/19/2006 mg/L	L0609483-15,16 DG-4 9/19/2006 mg/L	L0609483-17,18 DG-5 9/19/2006 mg/L	L0609483-19,20 DG-6 9/19/2006 mg/L	L0609483-21,22 DG-7 9/19/2006 mg/L	L0609483-23,24 DUP-09192006 9/19/2006 mg/L
Arsenic, Dissolved	0.0011	0.0037	0.001 U	0.001 U	0.00112	0.001 U				
Cadmium, Dissolved	0.0005 U	0.00068 U	0.0005 U	0.0005 U	0.0005 U	0.00060 U	0.0005 U	0.0005 U	0.0005 U	0.0005 U
Chromium, Dissolved	0.02 U									
Copper, Dissolved	0.02 U									
Lead, Dissolved	0.005 U									
Mercury, Dissolved	0.0002 U									
Nickel, Dissolved	0.04 U									
Selenium, Dissolved	0.00441	0.00258	0.00151	0.00102	0.00383	0.00193	0.00191	0.00157	0.00146	0.00161
Silver, Dissolved	0.01 U									
Tin, Dissolved	0.5 UJ									
Zinc, Dissolved	0.02 U									
Cyanide	0.01 U	0.0533	0.01 U	0.01 U	0.01 U					

U = The analyte was analyzed for, but was not detected. Value shown is the laboratory reporting limit.

UJ = The analyte was not detected at or above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.



DG-3

SEP 23 2006

010 EPA D1000