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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF

**DE-9J**

OCT 23 2003

**CERTIFIED MAIL**
**RETURN RECEIPT REQUESTED**

CT Corporation System
36 S. Pennsylvania Street
Suite 700
Indianapolis, Indiana 46204

RE: Amended RCRA § 3013 Administrative Order
RCRA Docket No.: R3013-5-03-002
ISG Indiana Harbor Inc. and
Tecumseh Redevelopment Inc.

Dear Sir or Madam:

Enclosed is an Amended Administrative Order issued to ISG Indiana Harbor Inc. and Tecumseh Redevelopment Inc. (formerly known as ISG Indiana Harbor Properties Inc.,) by the United States Environmental Protection Agency (U.S. EPA) pursuant to Section (§) 3013 of the Resource Conservation and Recovery Act (RCRA) of 1976, as amended by the Hazardous and Solid Waste Amendments of 1984, U.S.C. § 6934.

The Order requires monitoring, testing, analysis and reporting, in connection with the facility located at 3001 Dickey Road, East Chicago, Indiana. The Order also requires a proposal for such monitoring, testing, analysis and reporting not later than thirty (30) days from the date this Order is issued. ISG may request a conference with U.S. EPA to discuss the Order. Any such conference must be held during the sixty (60) days after the issuance of the Order.

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If you have questions concerning this Order, or to schedule a conference, please contact Christine Liszewski at 312/ 886-4670.

Sincerely yours,

Joseph M. Boyle, Chief
Enforcement and Compliance Assurance Branch
Waste, Pesticides and Toxics Division

Enclosure

cc: Dale Papajcik Esq, Squires, Sanders & Dempsey
Mike Byron, IDEM
Mike Sickels, IDEM

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PROTECTION AGENCY
REGION V

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 5

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|---|---|---|
| **IN THE MATTER OF:** | ) | **RCRA Docket No.: R3013-5-03-002** |
| | ) | |
| **ISG Indiana Harbor Inc.** | ) | |
| **and** | ) | |
| **Tecumseh Redevelopment Inc.** | ) | |
| **3001 Dickey Road** | ) | |
| **East Chicago, Indiana 46312** | ) | |
| | ) | |
| | ) | |
| **EPA ID No. IND 005 462 601** | ) | **PROCEEDING UNDER SECTION** |
| | ) | **3013 OF THE RESOURCE** |
| **Respondents.** | ) | **CONSERVATION AND RECOVERY** |
| | ) | **ACT, 42 U.S.C. § 6934** |

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US ENVIRONMENTAL
PROTECTION AGENCY
REGION 1

**AMENDED ORDER REQUIRING MONITORING, TESTING, ANALYSIS AND REPORTING**

## I. JURISDICTION

1. This Amended Administrative Order (Order) is issued pursuant to the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) by Section 3013 of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6934 (RCRA). The authority to issue this Order has been delegated to the Regional Administrator by EPA Delegation No. 8-20 dated May 11, 1994, and further delegated to the Chief, Enforcement and Compliance Assurance Branch, Waste Pesticides and Toxics Division, Region 5 (Branch Chief) by Region 5 Delegation No. 8-20, dated April 24, 1996 .

2. This Order is issued to ISG Indiana Harbor Inc. (ISG or Respondent), a corporation organized under the laws of the State of Delaware, and Tecumseh Redevelopment Inc. (Tecumseh or Respondent), a corporation organized under the laws of the State of Delaware and formerly known as ISG Indiana Harbor Properties Inc.

3. On January 31, 1986, the State of Indiana received final authorization pursuant to RCRA Section 3006(b), 42 U.S.C. § 6926(b), to operate a hazardous waste program in lieu of the federal hazardous waste program established under RCRA Subtitle C. Pursuant to the Memorandum of Agreement (MOA) between the State of Indiana and EPA, EPA

expressly retains its rights to issue Orders and bring actions under Section 3013 of RCRA and any other applicable federal statute.

4. This Order is based upon the administrative record compiled by EPA and incorporated herein by reference. The record is available for review by the Respondents and the public at EPA's regional office at 77 West Jackson Boulevard, Chicago, IL 60604.

## II. PARTIES BOUND

5. The provisions of this Order shall apply to and be binding upon Respondents and their officers, directors, employees, agents, contractors, successors, and assigns.

6. No change in ownership, corporate, or partnership status relating to the facility described in this Order will in any way alter the status or responsibility of Respondents under this Order. Any conveyance by Respondents of title, easement, or other interest in the facility described herein, or a portion of such interest, shall not affect Respondents' obligations under this Order. Respondents shall be responsible for and liable for any failure to carry out all activities required of Respondents by this Order, irrespective of their use of employees, agents, contractors, or consultants to perform any such tasks.

7. Respondents shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants retained to conduct or monitor any portion of the work performed pursuant to this Order within seven (7) calendar days of the effective date of this Order, or on the date of such retention, and Respondents shall condition all such contracts on compliance with the terms of this Order.

8. Any documents transferring ownership and/or operations of the facility described herein from Respondents to a successor-in-interest shall include written notice of this Order. In addition, Respondents shall, no less than thirty (30) days prior to transfer of ownership or operation of the facility, provide written notice of this Order to their successors-in-interest, and written notice of said transfer of ownership and/or operation to EPA.

## III. FINDINGS OF FACT

9. ISG and Tecumseh own property at 3001 Dickey Road in East Chicago, Indiana that is currently or was formerly operated as an integrated primary steel manufacturing plant (the facility). The facility occupies over 1200 acres on the southern shore of Lake Michigan. It is bordered on the east by the Indiana Harbor Ship Canal; on the north by Lake Michigan; on the west by Amoco Whiting Refinery; and on the south by open land,



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residential property and small industries.

10. The facility has operated since the early 1900s under several different owners and has the capacity to produce iron, raw steel, cast steel, hot strip, cold rolled strip, hot dip galvanized steel and tin and chromium electroplated steels. The facility originally opened in the early 1900s as the Marks Steel Company. Subsequently, Youngstown Sheet and Tube Company, Jones & Laughlin Steel Corporation (Jones & Laughlin) and LTV Steel Company, Inc. (LTV Steel) owned and operated the plant. ISG acquired most of the property comprising the facility from LTV Steel on April 12, 2002. The remaining portion of the facility was acquired by ISG Indiana Harbor Properties Inc. on April 12, 2002. ISG Indiana Harbor Properties Inc. was re-named Tecumseh Redevelopment Inc. in a amendment to its Certificate of Incorporation dated April 14, 2003.

11. Pursuant to Section 3010 of RCRA, 42 U.S.C. § 6930, on or about August 15, 1980, Jones and Laughlin notified EPA that it generated and treated, stored or disposed of hazardous waste at the facility.[1] On its notification of hazardous waste activity form (EPA Form 8700-12), Jones & Laughlin identified the hazardous wastes that it handled as F016, K062 and K087.

12. Pursuant to Section 3005(e) of RCRA, 42 U.S.C. § 6925(e), on or about November 14, 1980, Jones & Laughlin submitted to EPA a Part A Hazardous Waste Permit Application to treat, store or dispose of hazardous waste at the facility. In the Part A application, Jones & Laughlin stated that it stored K062 and D007 hazardous waste in tanks and treated F006 waste in its Central Wastewater Treatment Plant.

13. Hazardous Waste No. K062 consists of spent pickle liquor generated by steel finishing operations of facilities within the iron and steel industry. See 40 C.F.R. § 261.32. The hazardous constituents found in K062 are hexavalent chromium and lead. See Appendix

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[1] EPA first promulgated regulations on May 19, 1980 (45 Fed. Reg. 33073), for the identification and listing of wastes that are regulated under RCRA as hazardous wastes for purposes of 40 C.F.R. Parts 262 through 265, 268, 270, 271, and 124 (regulatory hazardous wastes). Regulatory hazardous wastes include wastes that are designated by waste codes beginning with the letters D, F, K, P and U. Waste codes D000 through D003 are described in 40 C.F.R. §§ 261.21 through 261.23. Waste codes D004 through D043 are described in 40 C.F.R. § 261.24. Wastes codes beginning with "F" are listed and described in 40 C.F.R. § 261.31. Waste codes beginning with "K" are listed and described in 40 C.F.R. § 261.32. Waste codes beginning with "P"and waste codes beginning with "U" are listed and described in 40 C.F.R. § 261.33.

The scope of RCRA § 3013 extends not only to such regulatory hazardous wastes, but also to wastes that are hazardous wastes pursuant to RCRA § 1004(5), even though they might not be regulatory hazardous wastes. See 40 C.F.R. § 261.1(b)(1).



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VII to 40 C.F.R. Part 261.

14. Hazardous Waste No. K087 consists of decanter tank tar sludge from coking operations. See 40 C.F.R. § 261.32. The hazardous constituents found in K087 are phenol and naphthalene. See Appendix VII to 40 C.F.R. Part 261.

15. Hazardous Waste No. D007 is chromium. See 40 C.F.R. § 261.24, Table 1.

16. Hazardous Waste No. F006 consists of wastewater treatment sludges from electroplating operations. The hazardous constituents found in F006 are cadmium, hexavalent chromium, nickel and cyanide (complexed). See Appendix VII to 40 C.F.R. Part 261.

17. In letters dated May 17, 1985 and October 31, 1985, LTV Steel notified EPA and the Indiana State Board of Health that it intended to withdraw its Part A Hazardous Waste Permit Application because one storage tank was excluded from RCRA permit requirements under 40 C.F.R. § 261.2(e)(ii) and the other storage tanks were no longer used to store hazardous waste for 90 days or longer and thus did not require a RCRA permit. In addition, LTV Steel determined that no RCRA permit was needed for the wastewater treatment plant pursuant to the exclusion for wastewater treatment units at 40 C.F.R. § 270.1(c)(2)(v).

18. The Indiana Department of Environmental Management (IDEM) conducted a RCRA Facility Assessment (RFA) of the facility in1992. The objectives of the RFA were: 1) to identify all solid waste management units (SWMUs) and Areas of Concern (AOCs) at the facility; 2) to assess the potential for release of hazardous waste or hazardous constituents from each SWMU and AOC; 3) to determine what further measures, if any, should be taken to safeguard human health and the environment from a release; and 4) to obtain a thorough understanding of past and present waste management practices. IDEM identified 81 SWMUs and 5 AOCs at the facility. Results of the RFA are documented in a RFA Report dated September 30, 1993. A list of the SWMUs and AOCs identified by IDEM is provided as Table I-1 and Table I-2, respectively, to this Order.

19. A SWMU is defined as any discernable unit at which solid 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 a facility at which solid wastes have been routinely and systematically released. See 55 Fed. Reg. 30808 (July 27, 1990); 61 Fed. Reg. 19442 (May 1, 1996). An AOC is defined as any area of the facility under the control or ownership of the owner or operator where a release to the environment of hazardous waste(s) or hazardous constituents has occurred, is suspected to have occurred, or may occur, regardless of the frequency or duration of the release.

20. Of the 81 SWMUs and 5 AOCs identified in the RFA, IDEM identified 34 SWMUs and 3 AOCs as having a high potential for release of hazardous waste or hazardous



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constituents and requiring further investigation. Based upon review of the information in the RFA and evaluation of additional information regarding conditions at the facility, EPA has concluded that the SWMUs and AOC described below require further investigation.

**SWMU # 1 - Blast Furnace Filter Cake Pile**

21. SWMU #1 consists of Blast Furnace Filter Cake Pile which sits directly on the ground in a semi-enclosed area with no roof located at the northern corner of the Sinter Plant. The blast furnace wastewater treatment plant treats blast furnace scrubber waters and uses a vacuum drum filter to remove solids as a filter cake. The Blast Furnace Filter Cake Pile is an active unit from which filter cake is removed on a routine basis and processed for reuse as raw material feedstock in the Sinter Plant. Analytical results of samples of the Blast Furnace Filter Cake collected by LTV Steel from 1994 through 2000 show the presence of, among other things, nickel, barium, chromium, lead, arsenic, and cadmium. The release potential to the surrounding soils, groundwater and surface water is high because the unit has no release controls. This SWMU is located on property owned by ISG.

**SWMU # 7 - "The Hill"**

22. SWMU #7, also known as "The Hill," is a landfill used for disposal of solid waste located northeast of the Terminal Lagoon. In a November 9, 2001 report prepared for EPA, LTV Steel stated that use of this unit was terminated in August 1989 and that this landfill was used to manage wastes similar to those placed in the Clark Landfill. Wastes placed in the Clark Landfill include BOF precipitator dust, terminal lagoon sludge, reladle/ desulfurization dust, tandem mill (6-Stand) oily sludge, caster scale pit sludge, roll shop wastes, ladle metallurgical facility (LMF) baghouse dust and general mill clean-up material. Analytical result show that these wastes contain, among other things, barium, cadmium, chromium, lead, and phenols. See paragraphs 26 through 29 below. This unit has no release controls. The lack of release controls and the nature of the waste managed indicate a high release potential to the soil, groundwater and surface water. This SWMU is located on property owned by ISG.

**SWMU # 8 - The Terminal Lagoon**

23. SWMU #8 is a large water treatment lagoon containing process water from the Blast Furnaces, Sinter Plant, Basic Oxygen Furnaces (BOF) and Powerhouse. It is an active unit. Data submitted by LTV Steel to IDEM on March 28, 1991 in its renewal application for a National Pollutant Discharge Elimination System (NPDES) permit show that discharges to the Terminal Lagoon contain, among other things, lead, cyanide and phenols. Analytical results of sludge samples collected by LTV Steel in 1987 and 1989 from Terminal Lagoon show the presence of, among other things, arsenic, barium,

cadmium, chromium, and lead. The release potential to soil, groundwater and surface water is high because this unit has no release controls. This SWMU is located on property owned by ISG.

**SWMU #9 - Terminal Lagoon Oil Skimmer Tank**

24. SWMU #9 is an oil skimmer tank that is part of an old oil separation system associated with the Terminal Lagoon (SWMU #8). It is located on the southwest side of the Terminal Lagoon. The tank appears to be an old railroad tank car. The tank's seams are riveted, rather than welded. As stated above, discharges to the Terminal Lagoon contain, among other things, lead, cyanide and phenols. Analytical results of sludge samples collected by LTV Steel in 1987 and 1989 from Terminal Lagoon show the presence of, among other things, arsenic, barium, cadmium, chromium, and lead. The release potential to soil and groundwater is moderate to high because this unit has no secondary containment system and sits over bare ground. This SWMU is located on property owned by ISG.

**SWMU #10 - Terminal Lagoon Sludge Pit**

25. SWMU #10 is the Terminal Lagoon Sludge Pit which is an unlined oily sludge dewatering pit that was used to manage oily wastewater treatment sludge. It was located on the north side of the Terminal Lagoon. In a November 9, 2001 report to EPA, LTV Steel stated that all sludge was removed from this unit and disposed of in the Clark Landfill or off-site. As stated above, discharges to the Terminal Lagoon contain, among other things, lead, cyanide and phenols. Analytical results of sludge samples collected by LTV Steel in 1987 and 1989 from Terminal Lagoon show the presence of, among other things, arsenic, barium, cadmium, chromium, and lead. The release potential to soil and groundwater is high because there were no release controls associated with this unit. This SWMU is located on property owned by ISG.

**SWMU #20 - Clark Landfill**

26. SWMU # 20 is the Clark Landfill which is located in the north central section of the facility and is approximately 43 acres in size. Waste materials disposed of at this landfill include BOF precipitator dust, terminal lagoon sludge, reladle/desulfurization dust, tandem mill (6-Stand) oily sludge, caster scale pit sludge, roll shop wastes, LMF baghouse dust and general mill clean-up material. This SWMU is located on property owned by ISG.

27. Analytical results of samples collected by LTV Steel of BOF precipitator dust from1986 through 1989 show that this waste contains, among other things, barium, cadmium, chromium, lead, and phenols. Analytical results of sludge samples from Terminal Lagoon collected by LTV Steel in 1987 and 1989 show the presence of, among other

things, arsenic, barium, cadmium, chromium, and lead. Analytical results of samples from reladle/desulfurization baghouse dust collected by LTV Steel in1987 and 1989 show the presence of, among other things, barium, cadmium, chromium, and lead. Analytical results of samples from tandem mill (6- Stand) oily sludge collected by LTV Steel in1986 and 1989 show the presence of, among other things, arsenic, barium, lead, and phenols. Analytical results of samples from caster scale pit sludge collected by LTV Steel in1987 and 1989 show the presence of, among other things, barium, cadmium, and chromium. Analytical results of samples from LMF baghouse dust collected by LTV Steel in1988 and 1989 show the presence of, among other things, phenols, cyanide, barium, cadmium, chromium and lead.

28. Analytical results of samples collected by LTV Steel of roll shop wastes in 1989 show the presence of, among other things, cadmium, chromium, and lead. Two of the samples of roll shop waste collected in 1989 exceeded the regulatory level for toxicity for chromium established by EPA in Table 1 of 40 C.F.R. § 261.24. In addition, one sample collected by LTV Steel in 1991, two samples collected in 1993, two samples collected in 1996 and one sample collected in 1997 exceeded the regulatory level for chromium.

29. On September 17 and 18, 1996, PRC Environmental Management, Inc., an EPA contractor, collected 13 samples of roll-shop waste from the facility. These samples were analyzed by EPA. At least four of the samples contained chromium in concentrations above the 5mg/l regulatory level established at 40 C.F. R 261.24.

30. On August 6, 1997, the foundation underlying the Clark Landfill failed and a portion of the toe of the landfill foundation moved both horizontally and vertically into LTV Steel's water intake flume. The movement of the landfill foundation allowed a portion of the landfill itself to drop into the void left by the moving foundation. As a result, LTV Steel estimated that between 11,000 and 18,000 cubic yards of landfill is now below the water table. LTV Steel did not conduct chemical testing to determine the impact of the landfill failure on the groundwater or water intake flume.

31. LTV Steel submitted an application for an interim solid waste (non-hazardous waste) permit for the Clark Landfill to IDEM on August 29, 1989. IDEM did not issue a solid waste permit for the landfill. In a May 20, 1996 letter to IDEM, LTV Steel stated that it intended to discontinue the use of the landfill after May 1998 and withdrew its application for a solid waste permit.

32. Waste disposal at the Clark Landfill ceased in March 1998. LTV Steel submitted an amended permit application for closure of the Clark Landfill as a non-hazardous landfill to IDEM on July 30, 1999. The permit application includes, among other things, a ground water sampling and analysis plan for four monitoring wells, a closure plan and a post-closure plan.

**SWMU #23 - Filter Backwash Pile Site**

33. SWMU #23 is the Filter Backwash Pile Site consisting of a pile of wastewater treatment sludge sitting outside, directly on the ground, on the north side of the 84-inch Hot Strip Mill. In a November 9, 2001 report prepared for EPA, LTV Steel stated that the Filter Backwash Pile Site has been eliminated or closed. Analytical results of samples of the 84-inch wastewater treatment filter backwash collected by LTV Steel from 1994 through 2000 show the presence of, among other things, nickel, barium, cadmium, chromium, lead, creosol and phenol. The release potential to soil and groundwater is high because there are no release controls associated with this unit. This SWMU is located on property owned by ISG.

**SWMU # 24 - North Lagoon**

34. SWMU #24 is the North Lagoon, which has a surface area of approximately 13 acres and is located directly adjacent to Lake Michigan at the northern tip of the facility. The North Lagoon receives treated process water from the 84-inch Hot Strip Mill and the No. 3 Cold Reduction Sheet Mill, as well as storm water drainage from the facility. Data submitted by LTV Steel to IDEM on March 28, 1991 in its renewal application for a NPDES permit show that discharges to the North Lagoon contain, among other things, barium, lead and nickel. Analytical results of sediment samples from the North Lagoon collected by LTV Steel in 1999 show the presence of, among other things, chromium, lead, phenols, barium and nickel. There are no release controls associated with this unit and the release potential to soil, groundwater and surface water is high. This SWMU is located on property owned by ISG.

**SWMU #26 - Old Oily Sludge Pit**

35. SWMU #26 is the Old Oil Sludge Pit that was used as a wastewater treatment sludge dewatering pit. It was located on the south side of the North Lagoon. In a November 9, 2001 report prepared for EPA, LTV Steel stated that this site has been eliminated or closed. Release potential to soil, groundwater and surface water is high because there are no release controls associated with this unit. This SWMU is located on property owned by ISG.

**SWMU #47 - Wastewater Treatment Sludge Pile Site**

36. SWMU #47 is the Wastewater Treatment Sludge Pile Site that was used to manage wastewater treatment sludge (D006 and possibly F006). It was located outside, directly on the ground, northeast of the Central Treatment Plant. In a November 9, 2001 report prepared for EPA, LTV Steel stated that this sludge pile was eliminated or closed. EPA Hazardous Waste No. D006 is cadmium. As stated above, the hazardous constituents found in F006 are cadmium, hexavalent chromium, nickel and cyanide (complexed). See

Appendix VII to 40 C.F.R. Part 261. The release potential to soil, groundwater and surface water is high because the unit has no release controls. This SWMU is located on property owned by Tecumseh.

**SWMU #65 - Coke Plant Decanter Site**

37. SWMU #65 is the Coke Plant Decanter site that was formerly used for coking operations. It is located adjacent to the Indiana Harbor Shipping Canal. Decanter tar sludge (K087) from coking operations was managed in tanks at this site. As stated above, the hazardous constituents found in K087 are phenol and naphthalene. See Appendix VII to 40 C.F.R. Part 261. On July 11 and 12, 2000, TechLaw, Inc., an EPA contractor, collected samples from, among other things, the Coke Plant Decanter Site. These samples were analyzed by EPA. Analytical results of groundwater samples collected from this site show the presence of hazardous constituents including phenol, naphthalene, pyrene, fluorene and several other organic compounds. Split samples of the groundwater analyzed by LTV Steel show the presence of barium, cadmium, chromium, lead, silver, acenaphthene and napthalene. The release potential to groundwater and soil at this site is very high as documented by the results of groundwater samples. This SWMU is located on property owned by Tecumseh.

**SWMU #67 - Sinter Plant**

38. SWMU #67 is the Sinter Plant at which flue dust from the H3 and H4 blast furnaces and blast furnace wastewater treatment plant recycle sludge, among other things, are fused into a porous mass for charging into the blast furnace. During the RFA, an IDEM inspector observed spillage all around the plant. Analytical results of samples of the blast furnace wastewater treatment plant sludge collected by LTV Steel in 1997 show the presence of, among other things, nickel, barium, cadmium, chromium, lead, and arsenic. Analytical results of samples of the H3/H4 flue dust collected by LTV Steel in 1997 show the presence of, among other things, nickel, barium, chromium, and lead. The release potential to soil and groundwater is high because of the spillage visible all around the plant. This SWMU is located on property owned by ISG.

**SWMU #68 - Sinter Plant Feedstock Piles**

39. SWMU #68 is the Sinter Plant Feedstock Piles which consist of several huge feedstock piles which sit outside, directly on the ground. In a November 9, 2001 report prepared for EPA, LTV Steel stated that the feedstock is primarily flue dust from the H3 and H4 blast furnaces and blast furnace wastewater treatment plant recycle sludge. As stated above, analytical results of samples of the blast furnace wastewater treatment plant sludge collected by LTV Steel in 1997 show the presence of, among other things, nickel, barium, cadmium, chromium, lead, and arsenic. Analytical results of samples of the H3/H4 flue dust collected by LTV Steel in 1997 show the presence of, among other things, nickel,

barium, chromium, and lead. The release potential to soil and groundwater is high because the unit has no release controls. This SWMU is located on property owned by ISG.

**SWMU #73 - Old Quenching Area**

40. SWMU #73 is the Old Quenching Area located in the Heckett operation area next to the west bridge. Spent pickle liquor (K062) from the basic oxygen furnace was poured out of tankers onto piles for the purpose of quenching hot slag materials. As stated above, the hazardous constituents found in K062 are hexavalent chromium and lead. See Appendix VII to 40 C.F.R. Part 261. There are no release controls associated with this unit and the release potential to surface water, soil and groundwater is high. This SWMU is located on property owned by ISG.

**Area of Concern (Former Coking Area)**

41. This is the former coking area east of the facility designated on a facility map provided by LTV Steel to IDEM as Coke Plant #1. The area may have been used to manage decanter tar sludge. As stated above, the hazardous constituents found in decanter tar sludge (K087) are phenol and naphthalene. See Appendix VII to 40 C.F.R. Part 261. This area is now covered with vegetation. Land areas surrounding coking operations are usually highly contaminated. Therefore, release potential to soil and groundwater is high. This area is not identified in the September 30, 1993 RFA Report prepared by IDEM. It was identified on a facility map LTV Steel provided to IDEM after IDEM prepared the RFA Report. This SWMU is located on property owned by Tecumseh.

**Effects on Human Health or the Environment**

42. The following are effects on human health or the environment that may be caused by the constituents described above:

    A. Acenaphthene: Acenaphthene can cause liver and kidney damage at high levels.

    B. Arsenic: Arsenic is a known carcinogen, and a potential teratogenic agent. Its main path of exposure to humans is through inhalation and dermal absorption. Long term exposure can cause nerve and liver damage, narrowing of the blood vessels, and affect red blood cell production. Arsenic in the presence of acid may release a deadly gas, arsine. Arsenic has high acute toxicity to aquatic life, birds and land animals. It has a low solubility in water and is persistent in water, with a half-life of 200 days. Arsenic has high chronic toxicity to aquatic life, and is known to bioaccumulate in fish tissues.



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C. Barium: Barium's route of exposure is generally through ingestion and inhalation. Barium compounds that dissolve well in water cause the most harmful health effects. Acute high exposure through ingestion result in liver, kidney, and heart damage. EPA allows 2 parts per million (ppm) of barium in drinking water. Barium's solubility varies from high to moderate depending on the barium salt. It is highly persistent in water and has a half-life of greater than 200 days.

D. Cadmium: High exposure to cadmium can cause acute health effects such as severe lung damage, fluid in the lungs, and in severe cases death. Cadmium is a probable cancer causing agent in humans, some studies link it to kidney and prostate cancer in humans, and it has been shown to cause lung and testes cancer in animals. It is a probable teratogen in humans, and may also damage the testes and affect the female reproductive cycle. Repeated low exposure can cause permanent kidney damage. Cadmium is highly persistent in water, with a half-life of greater than 200 days. Cadmium toxicity is influenced by water hardness, the harder the water the lower the toxicity. It has chronic and acute toxicity to aquatic life.

E. Chromium: Acute exposure to chromium dust can cause "metal fume fever", which causes fevers, chills, and muscle aches. Chromium is highly persistent in water and has a half-life of greater than 200 days. Hexavalent chromium is soluble and more mobile in groundwater than the trivalent chromium. Hexavalent chromium has a high acute and chronic toxicity to aquatic life.

F. Creosol: When creosols are breathed, ingested or applied to the skin at very high levels, effects observed in people include irritation and burning of skin, eyes, mouth and throat; abdominal pain and vomiting; heart damage; anemia; liver and kidney damage; facial paralysis; and coma. U.S. EPA has determined that creosols are possible human carcinogens.

G. Cyanide: Exposure to high levels in the air for a short time harms the brain and heart and may cause coma and death. Low level exposure may result in breathing difficulties, heart pains, vomiting, blood changes, headaches and enlargement of the thyroid gland.

H. Lead: Lead is a probable teratogen in humans. The primary routes of exposure are through inhalation and ingestion. Chronic health effects include decreased fertility in male and females; kidney and brain damage. Chronic lead exposure causes nerve and behavioral effects in humans and could cause similar effects in birds and animals. Water hardness controls

the toxicity of lead to aquatic life, the softer the water the greater the toxicity. It has a high chronic toxicity to aquatic life.

I. Nickel: The most common adverse health effect in humans is an allergic reaction. Lung effects, include chronic bronchitis and reduced lung function. The U.S. Department of Health and Human Services has determined that nickel and certain nickel compound may reasonably be anticipated to be carcinogens.

J. Naphthalene: Very high levels of naphthalene can cause hemolytic anemia and damage the kidneys, liver and eyes. Naphthalene has moderate acute and chronic toxicity to aquatic life.

K. Phenol: Skin exposure to high levels causes liver damage, diarrhea and hemolytic anemia.

L. Pyrene: Adverse health effects have been observed in the central nervous system, liver, kidneys, skin and gastrointestinal system. Very high concentrations may cause narcosis.

M. Silver: Exposure to high levels results in breathing problems, lung and throat irritation and stomach pains. Long term exposure causes a condition called arygria, a blue-gray discoloration of the skin and other body tissues.

## IV. CONCLUSIONS OF LAW

43. Respondents' facility is a "facility or site" within the meaning of Section 3013(a) of RCRA, 42 U.S.C. § 6934(a).

44. Respondents are "persons" as defined in Section 1004(15) of RCRA, 42 U.S.C. § 6903(15).

45. Each Respondent is an "owner" and "operator" of portions of the facility within the meaning of Section 3013(a) of RCRA, 42 U.S.C. § 6934(a).

46. Section 1004(27) of RCRA, 42 U.S.C. § 6905(27) defines the term "solid waste" to mean "any garbage, refuse . . . and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from industrial, commercial, mining, and agricultural operations . . ."



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47. Section 1004(5) of RCRA, 42 U.S.C. § 6903(5), defines the term "hazardous waste" to mean:

> a solid waste, or combination of solid wastes, which because of its quantity, concentration, or physical, chemical, or infectious characteristics may-
>
> > (A) cause or significantly contribute to an increase in mortality or an increase in serious irreversible, or incapacitating reversible, illness; or
> >
> > (B) pose a substantial present or potential hazard to human health or the environment when improperly treated, stored, transported, or disposed of, or otherwise managed.

48. Section 1004(3) of RCRA, 42 U.S.C. § 6903(3), defines the term "disposal" to mean "the discharge, deposit, injection, dumping, spilling, leaking, or placing of any solid waste or hazardous waste into or on any land or water so that such solid waste or hazardous waste or any constituent thereof may enter the environment or be emitted into the air or discharged into any waters, including ground waters."

## V. FINDING OF SUBSTANTIAL HAZARD

Upon the basis of the foregoing Findings of Fact, and pursuant to Section 3013(a) of RCRA, 42 U.S.C. § 6934(a), EPA makes the following determinations:

49. Hazardous wastes within the meaning of Section 1004(5) of RCRA, 42 U.S.C. § 6903(5), are present at the facility and were treated, stored or disposed there.

50. The presence of hazardous wastes at the facility and/or the release of hazardous wastes from the facility may present a substantial hazard to human health or the environment.

51. The actions required by this Order are reasonable to ascertain the nature and extent of such hazard.

## VI. ORDER

52. Based on the Findings of Fact, Conclusions of Law and Findings of Substantial Hazard as set forth above, each Respondent is hereby ordered, pursuant to Section 3013 of RCRA, 42 U.S.C. § 6934, to submit three (3) copies of a written proposal to EPA within thirty (30) days from the issuance of this Order, for carrying out monitoring, testing, analysis,



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and reporting in order to ascertain the nature and extent of the hazard posed by the hazardous wastes that are present at or that may have been released from the portions of the facility owned and operated by each Respondent. Each Respondent is hereby ordered to implement such proposal once approved, or modified and approved, by EPA. All work undertaken pursuant to this Order shall be performed in a manner consistent with EPA Region 5's Environmental Investigations Standard Operating Procedures and Quality Assurance Manual. Such written proposal shall be specific and shall include, but is not limited to, the following:

A. A soil sampling and analysis work plan, including schedule and proposal for progress reports, to collect and analyze representative soil samples to determine the nature and extent of any soil contamination in and around all of the SWMUs and AOC identified above. The plan shall include the number, location, depth of samples, the parameters of the analyses, and quality assurance measures.

B. A sediment sampling and analysis work plan, including schedule and proposal for progress reports, to collect and analyze representative sediment samples to determine the nature and extent of contamination in sediments in SWMUs #8 and #24. The plan shall include the number, location, depth of samples, the parameters of the analyses, and quality assurance measures.

C. A work plan, including schedule and proposal for progress reports, to evaluate (based on field data, tests, and cores ) the hydrogeologic conditions at the facility, including the determination and description of: (i) hydrogeologic cross-sections showing the extent of hydrogeologic units in the vicinity of the facility; (ii) horizontal and vertical conductivities, permeabilities, and porosities of the aquifers in the vicinity of the facility and the nature of the hydraulic interconnections and aquitards, or barriers; (iii) the water level contour and/or potentiometric maps; and (iv) the direction and velocity of groundwater flow, and seasonal variations, in the uppermost water-bearing zones in the area likely to be affected by migration of hazardous wastes from the facility. The plan shall consider means to determine areas of discharge and recharge of groundwater in the areas likely to be affected by migration of hazardous wastes from the facility.

D. A groundwater sampling and analysis work plan, including schedule and proposal for progress reports, to characterize the groundwater quality and the extent of any groundwater contamination, both vertically and horizontally, which may exist in, around or on account of the SWMUs and AOC identified above. The plan shall include the number, location and frequency of samples to be taken, the analysis parameters, and quality assurance measures.

53. Each work plan above shall be designed to define the nature, location, extent, direction and rate of movement of any hazardous wastes or hazardous waste constituents which are

present at or have been released from the facility. Each work plan shall document the procedures the Respondent shall use to conduct the investigations necessary: (1) to characterize the potential pathways of migration of hazardous waste and hazardous waste constituents; (2) characterize the sources of hazardous waste and/or hazardous waste constituent contamination; (3) define the degree and extent of hazardous waste and/or hazardous constituent contamination; and (4) identify actual or potential receptors.

54. Respondents shall insure that laboratories used by Respondents for analyses perform such analyses according to the EPA methods included in "Test Methods for Evaluating Solid Waste" (SW-846) or other methods deemed satisfactory to EPA. If methods other than EPA methods are to be proposed, Respondents shall submit all protocols to be used for analysis to EPA at least 30 calendar days prior to the commencement of the analyses. Respondents shall also ensure that laboratories used by Respondents for analyses participate in a quality assurance/quality control program equivalent to that which is followed by EPA.

55. Based on work performed under the work plans described above, EPA may determine that additional investigation, analysis, and/or reporting is necessary to meet the purposes of this Order. If EPA determines that Respondent(s) shall perform additional work, EPA will notify Respondent(s) in writing and specify the basis for its determination that additional work is necessary. Within fifteen (15) days after the receipt of such determination, Respondent(s) shall have the opportunity to meet or confer with EPA to discuss the additional work. If required by EPA, Respondent(s) shall submit for EPA approval a work plan for the additional work. EPA will specify the contents of such work plan. Such work plan shall be submitted by Respondent(s) within thirty (30) days of receipt of EPA's determination that additional work is necessary, or according to an alternative schedule established by EPA.

56. The written proposal and all reports or documents required to be submitted under this Order shall be mailed to:

Jonathan Adenuga, Project Coordinator
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, IL 60604

## VII. SUBMISSIONS / AGENCY REVIEW

57. EPA will review all plans, reports, or other submittals required under this Order. EPA may: (a) approve the submission; (b) approve the submission with modifications; (c) disapprove the submission and direct Respondent(s) to re-submit the document after

incorporating EPA's comments; or (d) disapprove the submission and assume responsibility for performing all or any part of the work. As used in this Order, the terms "approval by EPA," "EPA approval," or a similar term means the action described in (a) or (b) of this paragraph.

58. Prior to approval in writing, or approval with modifications in writing, no plan, report, or other submittal shall be construed as approved and final. Oral advice, suggestions, or comments given by EPA representatives will not constitute approval, nor shall any oral approval or oral assurance of approval be considered as binding.

59. Upon receipt of a notice of disapproval in paragraph 57(c) above or a request for a modification, Respondent(s) shall, within fifteen (15) days, or such longer time as specified by EPA in its notice of disapproval or request for modification, correct the deficiencies and resubmit the plan, report, schedule, other item for approval. Notwithstanding the notice of disapproval, or approval with modifications, Respondent(s) shall proceed, at the direction of EPA, to take any action required by any non-deficient portion of the submission.

60. Within ten (10) days following EPA approval, or approval with modifications, of a plan, the Respondent shall implement the approved document.

61. All plans, reports, and/or other submittals required by this Order are, upon approval or approval with modifications by EPA, incorporated into this Order as if fully set forth in text herein. Any noncompliance with such EPA-approved plans, reports, specifications, schedules, and attachments shall be noncompliance with this Order. Oral advice or approvals given by EPA representatives shall not relieve Respondents of their obligations to obtain any formal, written approvals required by this Order.

62. In all instances which this Order requires written submissions to EPA, each submission must be accompanied by the following certification signed by a "responsible official":

> I certify that the information contained in or accompanying this submission is true, accurate, and complete.

For the purpose of this certification, a "responsible official" means person in charge of a principal facility function, or any other person who performs similar decision-making functions for the facility.

## VIII. PROJECT COORDINATORS

63. EPA hereby designates as its Project Coordinator:

Jonathan Adenuga
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, IL 60604

64. Within ten (10) calendar days of receipt of this Order, each Respondent shall designate a Project Coordinator and submit the designated Project Coordinator's name, address, and telephone number in writing to EPA.

65. Each Project Coordinator shall, on behalf of the party that designated that Project Coordinator, oversee the implementation of this Order and function as the principal project contact.

66. Respondents shall provide EPA with a written notice of any change in their Project Coordinators. Such notice shall be provided at least seven (7) calendar days prior to the change in Project Coordinator.

## IX. THREATS TO PUBLIC HEALTH OR THE ENVIRONMENT

67. If EPA's Project Coordinator determines that activities in compliance or noncompliance with this Order have caused or may cause a release of hazardous waste or waste constituents, or a threat to the public health or to the environment, EPA may require that the Respondent(s) stop further implementation of this Order for such a period of time as may be needed to abate any such release or threat and/or undertake any action which EPA determines is necessary to abate such release or threat; and may require Respondent(s) to resume implementation of this Order.

## X. SAMPLING AND DOCUMENT AVAILABILITY

68. The Respondents shall submit to EPA upon request, the results of all sampling and/or tests or other data generated by, or on behalf of, the Respondents in implementing the requirements of this Order.

## XI. ACCESS

69. Respondents shall provide access at all reasonable times to the facility and facility



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property and to all records and documentation relating to conditions at the facility and the activities conducted pursuant to this Order to EPA and its employees, contractors, agents, consultants, and representatives. These individuals shall be permitted to move freely at the facility in order to conduct activities which EPA determines to be necessary.

70. To the extent that activities required by this Order, or by any approved work plans prepared pursuant hereto, must be done on property not owned or controlled by Respondents, Respondents will use their best efforts to obtain site access agreements in a timely manner from the present owners of such property. Best efforts as use in this paragraph shall include the payment of reasonable compensation in consideration of granting access. Respondents shall ensure that EPA's Project Coordinator has a copy of any access agreements.

71. Nothing in this Order limits or otherwise affects EPA's right of access and entry pursuant to applicable law, including RCRA and CERCLA.

72. Respondents shall notify EPA in writing at least ten (10) calendar days before engaging in any field activities, including but not limited to sampling, well-drilling, and installation of equipment. At the request of EPA, Respondents shall provide or allow EPA or its authorized representatives to take split and/or duplicate samples of all samples collected by Respondents pursuant to this Order.

## XII. RECORD PRESERVATION

73. Respondents shall retain, during the pendency of this Order and for a minimum of five (5) years after its termination, a copy of all data, records, and documents now in its possession or control, or in the possession or control of their contractors, subcontractors, representatives, or which come into the possession or control of the Respondents, their contractors, subcontractors, or representatives, which relate in any way to this Order. Respondents shall notify EPA, in writing, at least ninety (90) days in advance of the destruction of any such records, and shall provide EPA with the opportunity to take possession of any such records. Such written notification shall reference the caption, docket number and date of issuance of this Order and shall be addressed to:

Chief
Enforcement and Compliance Assurance Branch
Waste, Pesticides and Toxics Division
EPA Region 5
77 West Jackson Boulevard
Chicago, IL 60604



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In addition, Respondents shall provide data, records and documents retained under this Section at any time before the expiration of the five year period at the written request of EPA.

## XIII. INFORMATION SUBMITTED TO EPA

74. Any information that Respondents are required to provide or maintain pursuant to this Order is not subject to the Paperwork Reduction Act of 1995, 44 U.S.C. § 3501 et seq.

75. Respondents may assert a business confidentiality claim in the manner described in 40 CFR § 2.203(b) covering all or part of any information submitted to EPA pursuant to this Order. Any assertion of confidentiality shall be adequately substantiated by Respondents when the assertion is made in accordance with 40 CFR § 2.204(e)(4). Information submitted for which Respondents have asserted a claim of confidentiality as specified above shall be disclosed by EPA only to the extent and manner permitted by 40 CFR Part 2, Subpart B. If no such confidentiality claim accompanies the information when it is submitted to EPA, it may be made available to the public by EPA without further notice to the Respondents.

## XIV. RESERVATION OF RIGHTS

76. EPA expressly reserves all rights and defenses that it may have, including the right to disapprove of work performed by Respondents pursuant to this Order.

77. EPA expressly reserves all statutory and regulatory powers, authorities, rights, remedies, both legal and equitable, including any which may pertain to Respondents' failure to comply with any of the requirements of this Order, specifically including, without limitation, the right to commence a civil action against Respondents seeking an order requiring compliance with this Order and/or the assessment of penalties under § 3013(e) of RCRA, 42 U.S.C. § 6934(e), and all rights EPA has pursuant to RCRA § 3013(d) to conduct monitoring, testing, analysis at the facility and to seek reimbursement from Respondents for the costs of such activity. This Order shall not be construed as a covenant not to sue, or as a release, waiver or limitation of any rights, remedies, defenses, powers and/or authorities, civil or criminal, which EPA has under RCRA, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), the Safe Drinking Water Act (SDWA), the Clean Air Act (CAA), or any other statutory, regulatory, or common law enforcement authority of the United States.

78. EPA expressly reserves all rights and defenses that it may have, including the right both



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to disapprove of work performed by Respondents pursuant to this Order, and to order that Respondents perform additional tasks.

## XV. OTHER APPLICABLE LAWS

79. All actions required to be taken pursuant to this Order shall be undertaken in accordance with the requirements of all applicable federal, state, and local laws, regulations, permits, and ordinances.

80. Compliance by Respondents with the terms of this Order shall not relieve Respondents of their obligations to comply with RCRA, or any other applicable federal, state, or local laws, regulations, permits, and ordinances.

81. This Order is not and shall not be interpreted to be a permit, or as a ruling or a determination of any issue related to a permit, under federal, state or local law; nor shall this Order in any way affect Respondents' obligations, if any, to secure such a permit; nor shall this Order be interpreted in any way to affect or waive any of the conditions or requirements that may be imposed as conditions of such permit or of Respondents' rights to appeal any conditions of such permit. Respondents shall obtain or cause their representatives to obtain all permits and approvals necessary under such laws and regulations.

## XVI. OTHER CLAIMS

82. Nothing in this Order shall constitute or be construed as a release from any claim, cause of action, demand, or defense in law or equity, against any person, firm, partnership, or corporation for any liability it may have arising out of or relating in any way to the generation, storage, treatment, handling, transportation, release, or disposal of any hazardous waste constituents, hazardous substances, hazardous wastes, pollutants, or contaminants found at, taken to, or migrating from the facility.

83. By issuance of this Order, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts of omissions of Respondents or their agents, contractors, subcontractors or other representatives.

84. Neither the United States nor EPA shall be a party or be held out as a party to any contact entered into by the Respondents or their directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out activities pursuant to this Order.



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## XVII. SUBSEQUENT MODIFICATION OF ORDER

85. Except as provided in paragraph 86, this Order may only be modified by written amendment signed by the Branch Chief or the Regional Administrator, EPA, Region 5.

86. Modifications in any schedule adopted pursuant to this Order may be made in writing by EPA's Project Coordinator.

87. No informal advice, guidance, suggestions, or comments by EPA shall be construed to modify the requirements of this Order. Routine communications exchanged verbally, in person or by telephone, between the parties to facilitate the orderly conduct of work contemplated by this Order shall not alter or waive any rights and/or obligations of the parties under this Order.

## XVIII. STATEMENT OF SEVERABILITY

88. If any provision or authority of this Order, or the application of this Order to any party or circumstances, is held by any judicial or administrative authority to be invalid, the application of such provisions to other Parties or circumstances and the remainder of the Order shall not be affected thereby.

## XIX. TERMINATION AND SATISFACTION

89. Respondents may seek termination of this Order by submitting to EPA a written document which indicates the respective Respondent's compliance with all requirements of this Order, and the associated dates of approval correspondence from EPA. The provisions of this Order shall be deemed satisfied upon Respondent's and EPA's execution of an "Acknowledgment of Termination and Agreement for Record Preservation and Reservation of Rights" (Acknowledgment). The Acknowledgment shall specify that Respondent has demonstrated to the satisfaction of EPA that the terms of this Order, including any additional tasks determined by EPA to be required pursuant to this Order, have been satisfactorily completed.

90. The provisions of this Order shall be deemed satisfied upon Respondent's receipt of written notice from EPA that Respondent has demonstrated to the satisfaction of EPA that the terms of the Order, including any additional tasks determined by EPA to be

required pursuant to this Order, have been satisfactorily completed. This notice shall not, however, terminate Respondent's obligations to comply with any continuing obligations hereunder, including without limitation, Section XII (Record Preservation), XIV (Reservation of Rights), XV (Other Applicable Laws).

## XX. OPPORTUNITY TO CONFER

91. In accordance with Section 3013(c) of RCRA, 42 U.S.C. § 6934(c), Respondents or their representatives may confer in person or by telephone with EPA regarding this Order. The opportunity to confer with EPA may be pursued by the Respondents either before or after the proposals are due, but not later than sixty (60) days after the issuance of this Order. At such conference, Respondents may discuss the following with EPA: the Order, its applicability to the Respondents, the correctness of any factual determinations upon which the Order is based, the appropriateness of any actions which Respondents are hereby ordered to undertake, and any other relevant and material issue.

92. The scheduling of a conference with EPA does not relieve Respondents of the obligation to submit the written proposals required under Section VI of this Order within thirty (30) days of the date of issuance of this Order, or to implement the proposals once approved, or approved with modifications, by EPA.

93. At the conference described above, Respondents may appear in person and/or by attorney or other representative. Additionally, Respondents may submit written comments to the EPA Project Coordinator addressing issues that could be raised in the conference within the time frames set for conducting such conference.

94. Any request for a conference with EPA, and other questions regarding this Order should be directed to:

Christine Liszewski
Associate Regional Counsel
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, IL 60604
(312) 886-4670

If Respondents fail to request a conference within the time periods provided in this Section, or fail to agree upon a date to schedule such conference within the time periods provided in this section, Respondents shall be deemed to have waived their rights under Section 3013 of RCRA to confer with EPA regarding this Order.



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## XXI. POTENTIAL CONSEQUENCES OF FAILURE TO COMPLY

92. In the event Respondents fail or refuse to comply with the terms and provisions of this Order, EPA may commence a civil action in accordance with Section 3013(e) of RCRA, 42 U.S.C. § 6934(e), to require compliance with such Order and to assess a civil penalty (consistent with 40 CFR Part 19) not to exceed $5,500 for each day during which such failure or refusal occurs.

93. If EPA determines that Respondents are not able to conduct the activities required by this Order in a satisfactory manner, or if actions carried out are deemed unsatisfactory, then EPA or its representatives may conduct such actions deemed reasonable by EPA to ascertain the nature and extent of the hazard at the property and/or facility of Respondents. Respondents may then be ordered to reimburse EPA or its representatives for the costs of such activity pursuant to Section 3013(d) of RCRA, 42 U.S.C. § 6934(d).

## XXII. EFFECTIVE DATE/DATE OF ISSUANCE

94. The effective date of this Order is the date it is signed by the Branch Chief. The date of issuance of this Order shall be the same date as the effective date.



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**IN THE MATTER OF**
**ISG INDIANA HARBOR INC.**
**AND**
**TECUMSEH PROPERTIES INC**
**3001 DICKEY ROAD**
**EAST CHICAGO, INDIANA**
**IND 005 462 601**

**IT IS SO ORDERED**

for Joseph Boyle, Chief
Enforcement & Compliance Assurance Branch
Waste, Pesticides and Toxics Division
U.S. Environmental Protection Agency/ Region 5

October 23, 2003
Date

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PROTECTION AGENCY
REGION V



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## TABLE I-1

### List of SWMUs

| SWMU | SWMU Name |
|---|---|
| 1 | Blast Furnace Filter Cake Pile |
| 2 | Sinter Plant Cyclone |
| 3 | Sinter Plant Precipitator |
| 4 | Outfall 009 |
| 5 | Outfall 010 |
| 6 | Sinter Plant Scrubber |
| 7 | "The Hill" |
| 8 | Terminal Lagoon |
| 9 | Oil Skimmer Tank |
| 10 | Terminal Lagoon Sludge Pit |
| 11 | Ladle Metallurgy Facility Baghouse |
| 12 | Bosch Tank Drain Clarifier Sludge Roll-Off |
| 13 | Outfall 011 |
| 14 | Reladle Desulfurization Baghouse |
| 15 | Basic Oxygen Furnace |
| 16 | Refuse Pile Near Basic Oxygen Furnace |
| 17 | Basic Oxygen Furnace Precipitator and Ash Output |
| 18 | Levy Operation Slag Piles |
| 19 | Oil Recovery Unit |
| 20 | Clark Materials Landfill |
| 21 | No. 1 Scale Pit |
| 22 | No. 2 Scale Pit |



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| | |
|---|---|
| 49 | Titzel Used Oil Reclamation Unit |
| 50 | No. 2 Tin Mill Waste Chromic Acid Tank |
| 51 | No. 2 Tin Mill Sulfuric Acid Spillage |
| 52 | Safety-Kleen Parts Washers |
| 53 | Used Crankcase Oil Tank and Container Storage |
| 54 | Laboratory Waste Accumulation |
| 55 | Slab Scarfer Scrubber |
| 56 | PCB Storage Area |
| 57 | Asbestos Waste Roll-Off |
| 58 | Old Lead Baghouse Site |
| 59 | Container Storage Area |
| 60 | Grit Blast Baghouse |
| 61 | Wastewater Treatment Plant Waste Pickle Liquor Storage Tank |
| 62 | Chemical Waste Management Roll-Offs |
| 63 | Chemical Waste Management Roll-Offs |
| 64 | Chemical Waste Management Roll-Offs |
| 65 | Coke Plant Decanter Site |
| 66 | No. 1 Tin Mill Demolition Rubble Piles |
| 67 | Sinter Plant |
| 68 | Sinter Plant Feedstock Piles |
| 69 | No. 2 Tin Mill Waste Sodium Dichromate Tank Sump |
| 70 | No. 2 Sheet Mill Spent Pickle Liquor Tank Sump |
| 71 | Blast Furnace Demolition Rubble Piles |
| 72 | Cleanup Wastes Staging Area |
| 73 | Old Quenching Area |
| 74 | Lakefill Area |



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## TABLE I-2

### List of AOCs

| AOC | AOC Name |
|---|---|
| A | Titzel Unit Oil Spillage Area |
| B | Scrap Metal Cutting Area |
| C | Fuel Oil Spill Area |
| D | Leaking Underground Fuel Oil Tank(s) Remediation Area |
| E | Leaking Underground Coating Oil Tanks(s) Remediation Area |



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