

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY

In the Matter of:

MDEQ Docket No. AO-RRD-03-001

Former Standard Tube Facility

24400 Plymouth Road,  
Redford Township,  
Wayne County, Michigan  
Respondent.

Proceeding Under Section 20119 of Part 201, Environmental Remediation, of the  
Natural Resources and Environmental Protection Act, 1994 PA 451, as amended,  
MCL 324.20119

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**ADMINISTRATIVE ORDER FOR RESPONSE ACTIVITY**

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ATTACHMENT A – PROPERTY DESCRIPTION

ATTACHMENT B – INTERIM CLEANUP CRITERIA, MONITORING POINT 001A  
THROUGH OUTFALL 001

## **I. JURISDICTION**

This Administrative Order (Order) is issued pursuant to the authority vested in the Michigan Department of Environmental Quality (MDEQ) by Section 20119 of Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (NREPA), MCL 324.20119.

## **II. PARTIES BOUND**

This Order shall apply to and be binding upon Quanex Corporation (Respondent or Quanex) and its successors. No change in ownership or corporate status shall in any way alter Respondent's responsibilities under this Order. Respondent shall provide a copy of this Order to all contractors, subcontractors, laboratories, and consultants that are retained to conduct any portion of the response activities to be performed pursuant to this Order within three (3) days of the effective date of such retention. Notwithstanding the terms of any such contract, Respondent is responsible for compliance with the terms of this Order, and shall ensure that such contractors, subcontractors, laboratories, and consultants perform all response activities in conformance with the terms and conditions of this Order.

## **III. DEFINITIONS**

3.1 "Day" means a calendar day, unless otherwise specified in this Order.

3.2 "Effective Date" means the date the MDEQ Director issues this Order. All dates for the performance of obligations under this Order shall be calculated from the Effective Date.

3.3 “Former Standard Tube Facility” or “Facility” means the Property identified in Attachment A and any area, place, or property where a hazardous substance which originated at the Property and is emanating or has emanated from the Property and is present at concentrations that exceed the cleanup criteria established pursuant to Section 20120a(1)(a) or other requirements provided in Section 20120a(17) of the NREPA, MCL 324.20120a(1)(a) or (17), or the cleanup criteria for unrestricted residential use under Part 213, Leaking Underground Storage Tanks, of the NREPA, has been released, deposited, or disposed of, or has otherwise come to be located.

3.4 “Former Standard Tube Property” or “Property” means the real property legally described in Attachment A, and generally referenced as being located at 24400 Plymouth Road, Redford Township, Wayne County, Michigan.

3.5 “IRA” means interim response activity as defined in Section 20101(1)(u) of the NREPA and the Part 201 Administrative Rules, and specifically provided in Paragraph 5.1(b) of this Order.

3.6 “MDAG” means the Michigan Department of Attorney General, its successor entities, and those authorized persons or entities acting on its behalf.

3.7 “MDEQ” means the Michigan Department of Environmental Quality, its successor entities, and those authorized persons or entities acting on its behalf.

3.8 “Order” means this Administrative Order, No. AO-RRD-03-001, issued to Quanex to perform response activities relating to the Former Standard Tube Facility.

3.9 “Part 201” means Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act (NREPA), 1994 PA 451, as amended, MCL 324.20101 et seq., MSA 13A.20101 et seq., and the Administrative Rules promulgated thereunder.

3.10 "Part 201 Administrative Rules" means the Administrative Rules effective on December 21, 2002 that were promulgated under Part 201 of the NREPA, and any rules promulgated in the future pursuant to Part 201.

3.11 "Parties" means Quanex Corporation and the State.

3.12 "Quanex" or "Respondent" means Quanex Corporation, a Delaware Corporation.

3.13 "RAP" means a remedial action plan, as defined in Section 20101(1)(dd) of the NREPA, described in the Part 201 Administrative Rules, and that meets the requirements of Sections 20118, 20120a, 20120b, and 20120d of the NREPA.

3.14 "RI" means a remedial investigation that meets the requirements of the Part 201 Administrative Rules and Paragraph 5.1(a) of this Order.

3.15 "RRD" means the Remediation and Redevelopment Division of the MDEQ and its successor entities.

3.16 "State" and "State of Michigan" mean the Michigan Department of Attorney General and the Michigan Department of Environmental Quality, and any authorized representatives acting on their behalf.

3.17 "Submissions" means all plans, reports, schedules, and other submittals that Respondent is required to submit to the MDEQ pursuant to this Order.

3.18 Unless otherwise stated herein, all terms used in this Order, which are defined in Part 3, Definitions, of the NREPA, MCL 324.301; Part 201 of the NREPA, MCL 324.20101, et seq.; or the Part 201 Administrative Rules, shall have the same meaning in this document as in Parts 3 and 201 of the NREPA and the Part 201 Administrative Rules.

#### **IV. FINDINGS OF FACT AND DETERMINATIONS**

4.1 The Property was first developed for industrial use in 1947 by Standard Tube Company. Prior to 1947, the Property was farm land.

4.2 According to Michigan Department of Consumer and Industry Services records, Standard Tube Company merged with Michigan Seamless Tube Company on June 3, 1968, and changed its name to Quanax Corporation in February 1977. Respondent is a "person" as that term is defined in Section 301(g) of the NREPA, MCL 324.301(g).

4.3 In 1979, Respondent sold approximately 20 acres of the Property, a portion of which was reconveyed to Respondent in 1984.

4.4 Respondent sold the last portion of the Property it owned in 1985 to Warehouse Club, Inc., and has not owned any portion of the Property since then.

4.5 The Property has subsequently been used by Warehouse Club, Inc., for a retail establishment; Detroit Edison for equipment storage; and Rite-On Industries, Inc., for the manufacture of tools, fixtures and other industrial accessories.

4.6 Michigan Department of Consumer and Industry Services records indicate Quanax, and its predecessors, manufactured welded steel tubing at the Facility from 1947 until at least 1979.

4.7 Fuel oils, quenching oils, lubricating oils containing polychlorinated biphenyls ("PCBs"), and chlorinated solvents were utilized in the steel-tube manufacturing process, which included shaping, welding, straightening, polishing, cutting, annealing, quenching, pickling, rinsing, oil dipping, and machining.

4.8 The oils were pumped through underground piping to the various manufacturing areas of the plant.

4.9 "Hazardous substances," as that term is defined in Section 20101(1)(t) of the NREPA, MCL 324.20101(1)(t), detected in the soils and groundwater at the Facility include PCBs, heavy metals, volatile organic compounds ("VOCs"), and polycyclic aromatic hydrocarbons ("PAHs"). Specifically, the heavy metals include arsenic, barium, cadmium, chromium, copper, lead, nickel, and zinc. The VOCs include 4-chloro-3-menthyphenyl, trichloroethylene ("TCE"), ethyl benzene, tetrachloroethylene, vinyl chloride and xylenes. The PAHs include acenaphthene, anthracene, benzo(a)anthracene, benzo(k)fluoranthene, benzo(a)pyrene, fluorene, naphthalene, phenanthrene, and pyrene, and are common constituents associated with fuel oils and cutting oils.

4.10 "Releases" or "threatened releases" within the meaning of Sections 20101(1)(bb) and 20101(1)(ii) of the NREPA have occurred at the Former Standard Tube Property.

- (a) Respondent operated two seepage lagoons from at least 1967 to around 1972 where waste oils and spent pickle liquor were disposed.
- (b) Respondent had at least one serious overfill incident of soluble oil and spent pickle liquor from the seepage lagoon in November 1971.
- (c) Respondent had multiple soluble oil losses between 1972 and 1975, including discharges into a holding sump, an overfill incident at a seepage lagoon, overflows from an open pump priming valve into an abandoned storm sewer discharging into Prindle Drain, and a leaking underground oil circulation line.

4.11 The Former Standard Tube Property is a "Facility" as that term is defined in Section 20101(1)(o) of the NREPA, MCL 324.20101(1)(o).

- (a) Remedial investigations of the Property in 1996, 1998, and 2000 establish that soil, groundwater and surface water samples contain heavy metals, VOCs, PAHs, and PCBs in concentrations above acceptable levels.
- (b) Free phase liquid was discovered at the Property during the remedial investigation, and analyses indicate the free phase liquid was comprised of TCE, #1 and #2 fuel oils, and cutting oil. PCBs were also detected in the free phase liquid.

4.12 Respondent is a person that is liable within the meaning of Section 20126(1) of the NREPA, MCL 324.20126(1).

- (a) Respondent is a former owner and operator of the Facility.
- (b) The hazardous substances present at the Facility are consistent with what was released by the Respondent.
- (c) Respondent was an owner and operator of the Facility at the time of disposal of hazardous substances at the Facility, and is responsible for an activity causing the release of hazardous substances into the environment.

4.13 The actual or threatened releases of hazardous substances at or from the Facility may pose an imminent and substantial endangerment to the public health, safety, welfare, or the environment within the meaning of Section 20119 of the NREPA, MCL 324.20119.

- (a) Based on the MDEQ's 1996, 1998, and 2000 investigations, it was determined that:
  - (i) Soils exceeding direct contact criteria for lead and TCE exist at the Facility in the area near the former seepage lagoons.
    - a. Concentrations of TCE as high as 4,400,000 parts per billion (ppb) have been identified in the soils near the seepage lagoons on the Property. This is 9 times higher than the soil saturation concentrations and the direct



contact criteria, and 44,000 times the drinking water protection criteria for soils established pursuant to Section 20120a(1)(a) of the NREPA for soils.

- b. Concentrations of lead as high as 3,800,000 ppb have been identified in the soils at the Property. This is 9.5 times the direct contact criteria and 180 times the statewide default background level for soils.
  - c. TCE is a suspected carcinogen, and may cause liver or lung cancer. Skin contact for short periods may cause rashes. Drinking large amounts of TCE may cause nausea, liver damage, unconsciousness, impaired hearing function, or death.
  - d. Lead is a suspected carcinogen, and can affect almost every organ and system in the body. The central nervous system is the most sensitive to lead, and kidney and reproductive damage can also occur. At high levels, lead may decrease reaction time, cause weakness, and affect the memory. Lead may also cause anemia.
- (ii) Free phase liquid, associated with fuels oils and cutting oils, and groundwater contamination are present at the Facility. PCBs were also detected in the free phase liquid and groundwater.
- a. Free phase liquids, largely comprised of PAHs, represent a continuing source of groundwater contamination.
  - b. Some PAHs may reasonably be expected to be carcinogens.
  - c. Concentrations of TCE as high as 3000 ppb have been identified in the groundwater at the Facility, which is 600 times higher than the drinking water cleanup criteria established pursuant to Section 20120a(1)(a) of the NREPA for groundwater.

- d. Concentrations of lead as high as 32 ppb have been identified in the groundwater at the Facility, which is 8 times higher than the drinking water cleanup criteria established pursuant to Section 20120a(1)(a) for groundwater.
  - e. Concentrations of PCBs as high as 12,200 ppb were detected in the free phase liquid. Concentrations of PCBs as high as 9.2 ppb were detected in the groundwater at the Facility, which is 18 times higher than the drinking water cleanup criteria established pursuant to Section 20120a(1)(a) of the NREPA for groundwater.
  - f. PCBs are considered a probable human carcinogen.
  - g. PCBs can cause skin conditions, such as acne and rashes. Exposure to PCBs can also lead to liver damage. PCBs have also been shown to suppress immune system function and cause reproductive, neurological, and endocrine system defects.
- (iii) Unacceptable concentrations of VOCs, PAHs, PCBs, and heavy metals are being discharged directly from Outfall 001 to the Rouge River via Prindle Drain and Livonia-Ashcroft Drain and indirectly to the surface water, including the Probst Drain, from sources at the Facility.
- a. Concentrations of various PAHs, VOCs, PCBs, and metals were detected in the groundwater and storm water above the Groundwater Surface Water Interface (GSI) criteria, and in soils above the GSI protection criteria. Various contaminants were detected at concentrations as high as 100 times above the criteria protective of the surface water.
  - b. PCBs are a persistent, identified bioaccumulative chemical of concern that have been demonstrated to

concentrate in the food chain, and have been linked to liver cancer.

- c. The bioaccumulation of PCBs in fish tissue has resulted in a fish consumption advisory for fish species within the Rouge River based upon PCB contaminant levels.
- d. Concentrations of mercury, a heavy metal, were detected in the groundwater above the GSI criteria. Mercury is a persistent, identified bioaccumulative constituent that has been demonstrated to concentrate in the food chain. Mercury, at high levels, may damage the brain, kidneys, and developing fetus, and is a possible human carcinogen.

## V. ORDER

**Based upon the Section IV (Findings of Fact and Determinations), Respondent is hereby ordered to perform the response activities and other actions set forth in this Order.**

### 5.1 Performance Objectives

Respondent shall: (1) conduct a remedial investigation of the Facility that fulfills the performance objectives of Paragraph 5.1(a) of this Order; (2) perform the IRAs required in Paragraph 5.1(b) of this Order, and demonstrate and document the effectiveness of the implemented IRAs as provided in Paragraph 5.2 of this Order; and (3) submit to the MDEQ and receive approval for a RAP that, when fully implemented, (i) is protective of human health, safety, welfare and the environment, (ii) will achieve the cleanup criteria specified in Part 201, and (iii) ensures the effectiveness and integrity of the RAP. Respondent shall comply with the requirements of Part 201 and meet the performance objectives specified in this Paragraph 5.1 with respect to the Former Standard Tube Facility.

- (a) Remedial investigation performance objectives are to assess environmental conditions, including gathering data to supplement existing data, in order to select an appropriate remedial action that adequately addresses those conditions to protect the public health, safety, welfare, and the environment consistent with Part 201. This includes, but is not limited to, the following:
  - (i) Defining the source or sources of any contamination at and emanating from the Property and define the nature and extent of contamination originating from that source and present in soil, groundwater, surface water and sediments.
  - (ii) Defining the risks to the public health, safety, and welfare, and to the environment and natural resources, including, but not limited to, the identification of any water wells and wellhead

protection zones in the vicinity of the Facility and an evaluation of the impact of the Facility on any such wells or zones, and potential impact to the lower aquifer.

- (iii) Determining the relevant exposure pathways.
  - (iv) Defining the amount, concentration, hazardous properties, environmental fate, persistence, location, mobility, and physical state of the hazardous substances present at the Facility.
  - (v) Defining the extent to which hazardous substances have migrated or are expected to migrate from the area of release, including the potential for hazardous substances to migrate along preferential pathways, including storm drains and sewer systems. This includes, but is not limited to, evaluation of migration of hazardous substances through or along the storm water drainage system serving the Property, including discharges to and impacts on Prindle and Probst Drains.
  - (vi) Defining the geology, hydrogeology, groundwater flow, and gradients at the Facility.
  - (vii) Defining the extent to which natural barriers currently contain the hazardous substances and the adequacy of the barriers.
  - (viii) Determining current and potential groundwater use.
- (b) IRA performance objectives are:
- (i) Within six (6) months of the Effective Date of this Order, install and operate on an ongoing basis, a groundwater treatment system for all the groundwater going to the current oil/water separator to prevent unacceptable discharges to the surface water, and that meets the interim cleanup criteria provided in Attachment B to this Order.
  - (ii) Within ninety (90) days of the Effective Date of this Order, determine whether there are free phase liquids at or near soil boring SB-1 as provided in the June 8, 1998, Addendum to Remedial Investigation Report, prepared by Envirologic

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Technologies, Inc. If free phase liquids are present, the Respondent shall determine the extent of the free phase liquids.

- (iii) Within one hundred and thirty (130) days of the Effective Date of this Order, implement source control measures to remove reasonably recoverable free phase liquid on an ongoing basis from areas identified in the June 8, 1998, remedial investigation report, or by the MDEQ or the Respondent, as having free phase liquids present.
  - (iv) At any other time during the pendency of this Order, if reasonably recoverable free phase liquids are discovered, source control measures shall be implemented on an ongoing basis within sixty (60) days of discovery.
- (c) Remedial action plan performance objectives are to address all releases of hazardous substances in all environmental media at the Facility consistent with Sections 20118, 20120a, 20120b, and 20120d of the NREPA, and the Part 201 Administrative Rules. This includes, but is not limited to, the following:
- (i) Identifying which of the pathways, risks, and conditions provided in Rule 532(7) of the Part 201 Administrative Rules are relevant for the Facility, including an analysis of source control measures as required by Section 20118(8) of the NREPA.
  - (ii) Documenting that the cleanup criteria in the RAP are appropriate to the Facility, including, but not limited to, land use, activity patterns anticipated at the Facility, and identification of any wellhead protection zone that may be affected.
  - (iii) Identifying the category or categories of cleanup criteria that are being proposed or relied upon at the Facility.

- (iv) Assuring that, when implemented, the effectiveness and integrity of the remedial action is provided for in the MDEQ-approved RAP.
- (v) Obtaining all necessary permits, including a permit authorizing the discharge of water from the groundwater treatment system to the surface water, if applicable.
- (vi) Documenting that, when implemented, the identified remedial objective can be achieved by meeting the cleanup criteria established under Section 20120a of the NREPA, and complying with all applicable technical and administrative requirements of Sections 20118, 20120a, 20120b, and 20120d of the NREPA, and the Part 201 Administrative Rules at the Facility.
- (vii) Allowing for the continued use of the Property consistent with local zoning.

5.2 The Respondent shall provide the MDEQ the following submissions:

- (a) Within sixty (60) days after the Effective Date of this Order, and quarterly thereafter until a RAP for the Facility has been approved by the MDEQ, Respondent shall submit an IRA Progress Report to the MDEQ for review. The IRA Progress Report shall document how the IRA performance objectives of Paragraph 5.1 of this Order are being met, including:
  - (i) A description of the objectives of the response activity and how they were or will be achieved;
  - (ii) A detailed description of the response activity undertaken, including all data that is relevant to the conclusions drawn. Information supplied shall include sufficient documentation of the nature and extent of contamination to support any conclusions about the effectiveness of the response activity;

- (iii) A schedule for implementation of the activities proposed for the next quarter.
- (b) Within 18 months of the Effective Date of this Order, Respondent shall provide to the MDEQ for review and comment a preliminary submittal that will be incorporated into the RAP for the Facility, which contains the following elements:
  - (i) A remedial investigation report for the Facility that includes the information required by Rule 528(3) of the Part 201 Administrative Rules and the performance objectives of Section 5.1(a) of this Order.
  - (ii) The remedial objective that will be proposed in the RAP, as reflected by the selection of categorical cleanup criteria under Section 20120a(1) or site specific cleanup criteria under Section 20120(2) of the NREPA, which together with applicable technical and administrative requirements, shall result in compliance at the Facility with Sections 20118, 20120a, 20120b, and 20120d of the NREPA, and the Part 201 Administrative Rules.
  - (iii) A plan for obtaining access, as described in Section 6.2 of this Order, to any properties not owned or controlled by Respondent that is needed to perform the response activities to be contained in the RAP. If Respondent proposes to perform a remedial action that relies on the cleanup criteria established under Section 20120a(1)(b) through (j) or (2) of the NREPA and that RAP will provide for land and resource use restrictions, monitoring, operation and maintenance, or permanent markers as prescribed by Section 20120b(3)(a) through (d) of the NREPA, Respondent shall include documentation from property owners or local units of government that the necessary access to these properties has



been or will be obtained and that any proposed land or resource use restrictions can or will be placed or enacted.

- (iv) A detailed description of the specific work tasks to be conducted; a description of how these work tasks will achieve the remedial objective identified in Paragraph 5.1(b)(iii) and the following Part 201 Administrative Rules: Rule 532(1), (6) through (8), (11)(a through h), (11)(j), and (11)(k); Rule 538; Rule 540; Rule 705 (1), (5), and (6); and Rules 706 through 752; and a description and supporting documentation of how the results of the remedial investigation or other response activities that have been performed at the Facility support the selection of the remedial action to be contained in the RAP.
  - (v) Implementation schedules for conducting the response activities and for submission of RAP progress reports and a RAP Closure Report.
  - (vi) A description of the nature and amount of waste materials expected to be generated during the performance of response activities and the name and location of the facilities Respondent proposes to use for the off-site transfer, storage, treatment, or disposal of those waste materials.
- (c) Within six (6) months after Respondent's receipt of the MDEQ's comments on the preliminary submittal described above, Respondent shall submit a RAP for the Facility to the MDEQ for review and approval. The RAP shall meet the performance objectives in Paragraph 5.1 of this Order, including a detailed schedule for implementation of the response activities contained in the RAP, and any engineering design plans and construction plans necessary to implement the response activity. The RAP shall be subject to the MDEQ review and approval in accordance with Section XI (Submissions and Approvals).

## **VI. ACCESS**

6.1 Upon the Effective Date of this Order and to the extent access to the Facility, and any associated property owned, controlled by, or available to Respondent, the MDEQ, its authorized employees, agents, representatives, contractors, and consultants, upon presentation of proper credentials and providing reasonable notice to Respondent, shall have access at all reasonable times to the Facility, and any associated property for the purpose of conducting any activity to which access is required for the implementation of this Order or to otherwise fulfill any responsibility under federal or State law with respect to the Facility, including, but not limited to:

- (a) Monitoring response activities or any other activities taking place pursuant to this Order at the Facility;
- (b) Verifying any data or information submitted to the MDEQ;
- (c) Conducting investigations relating to contamination at or near the Facility;
- (d) Obtaining samples;
- (e) Assessing the need for or planning or conducting response activities at or near the Facility;
- (f) Assessing compliance with requirements for the performance of monitoring, operation and maintenance, or other measures necessary to assure the effectiveness and integrity of the interim response activities;
- (g) Inspecting and copying non-privileged records, operating logs, contracts or other documents;
- (h) Communicating with Respondent's Project Coordinator or other personnel, representatives, or consultants for the purpose of assessing compliance with this Order;
- (i) Determining whether the Facility is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted, by or pursuant to this Order; and

- (j) Assuring the protection of public health, safety, and welfare and the environment.

6.2 To the extent that the Facility is owned or controlled by persons other than Respondent, Respondent shall use its best efforts to secure from such persons access for the Parties and their authorized employees, agents, representatives, contractors, and consultants. Respondent shall provide the MDEQ with a copy of each access agreement secured pursuant to this section. For purposes of this paragraph, "best efforts" include, but are not limited to, providing compensation acceptable to the owner or taking judicial action to secure such access. If judicial action is required to obtain access, Respondent shall provide documentation to the MDEQ that such judicial action has been filed in a court of appropriate jurisdiction no later than sixty (60) days after Respondent's receipt of the MDEQ's approval of the work plan for which such access is needed. If Respondent has not been able to obtain access within sixty (60) days after filing judicial action, Respondent shall promptly notify the MDEQ of the status of its efforts to obtain access and provide an assessment of how any delay in obtaining access may affect the performance of response activities for which the access is needed.

6.3 Any lease, purchase, contract, or other agreement entered into by Respondent, which transfers to another person a right of control over the Facility shall contain a provision preserving for the MDEQ or any other person undertaking the response activities and their authorized representatives, the access provided under this Section VI (Access) and Section VIII (Record Retention/Access to Information).

6.4 Any person granted access to the Facility where the response activities are to be performed by Respondent under this Order shall comply with all applicable health and safety laws and regulations.

6.5 Notwithstanding any provision of this Order, the MDEQ shall retain all of its information gathering, inspection, enforcement, and access authorities under Part 201 of the NREPA and any applicable statute or regulation.

## **VII. QUALITY ASSURANCE/SAMPLING**

### **7.1 Quality Assurance Sampling and Analytical Requirements**

Sampling and analytical activities shall be developed and performed in accordance with the United States Environmental Protection Agency's ("USEPA" or "EPA") "EPA Requirements for Quality Assurance Project Plans," EPA QA/R-5, March 2001; "Guidance for Quality Assurance Project Plans," EPA QA/G-5, December 2002; and "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," American National Standard ANSI/ASQC E4-1994. Respondent shall utilize recommended sampling methods and analytical methods and analytical detection levels specified in "Operational Memo No. 6, Analytical Method Detection Level Guidance for Environmental Contamination Response Activities under Part 201, Environmental Remediation, of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended (Revision 6, January 2001)." Respondent shall utilize the MDEQ 2002 Sampling Strategies and Statistics Training Materials for Part 201 Cleanup Criteria to determine the number of samples collected for the purposes of verifying the cleanup. Respondent shall comply with the above documents or documents that supercede or amend these documents, or may utilize other methods demonstrated by the Respondent to be appropriate, as approved by the MDEQ.

7.2 All sampling and analysis conducted pursuant to this Order shall follow the methodologies specified in Paragraph 7.1; the rules promulgated under Part 31, Water Resources Protection, of the NREPA; and guidance provided by the MDEQ on sampling locations, collection methods, parameters, detection limits, and analytical methods.

7.3 Respondent, or its consultants or subcontractors, shall provide the MDEQ a fourteen-day (14-day) notice prior to any sampling activity to be conducted pursuant to this Order to allow the RRD Project Coordinator, or his or her authorized representative, the opportunity to take split or duplicate samples, to take additional samples, or to observe the sampling procedures. In circumstances where a fourteen-day (14-day) notice is not possible, Respondent, or its consultants or subcontractors, shall provide notice of the planned sampling activity as soon as possible to the RRD Project Coordinator and explain why earlier notification was not possible. If the RRD Project Coordinator concurs with the explanation provided, Respondent may forego the fourteen-day (14-day) notification period for that particular sampling event.

7.4 Respondent shall provide the MDEQ with the results of all environmental sampling and other analytical data generated regarding the Facility in the performance or monitoring of any requirement under this Order included in Parts 31; 111, Hazardous Waste Management; 115, Solid Waste Management; 201; 211, Underground Storage Tank Regulations; or 213 of the NREPA, or other relevant authorities. Said results shall be included in the preliminary submittal that will be incorporated into the RAP for the Facility, and the RAP set forth in Section V of this Order.

7.5 For the purpose of quality assurance monitoring, Respondent shall assure that the MDEQ and its authorized representatives are allowed access to any laboratory that is used by Respondent in implementing this Order.

#### **VIII. RECORD RETENTION/ACCESS TO INFORMATION**

8.1 Respondent and its representatives, consultants, and contractors shall preserve and retain, during the pendency of this Order and for a period of ten (10) years after RAP approval, all records, electronic documents or databases,

sampling or test results, charts and other documents relating to historical hazardous substance disposal, treatment or handling activities at the Facility or that are maintained or generated pursuant to any requirement of this Order. After the ten-year (10-year) period of document retention, Respondent and its successors shall obtain the MDEQ's written permission prior to the destruction of such documents and, upon request, Respondent and/or its successors shall relinquish custody of all documents to the MDEQ. Respondent's request shall be accompanied by a copy of this Order and sent to the following address:

Chief  
Remediation and Redevelopment Division  
Michigan Department of Environmental Quality  
P.O. Box 30426  
Lansing, Michigan 48909-7926

8.2 Upon request, Respondent shall provide to the MDEQ copies of all documents and information within its possession, or within the possession or control of its employees, contractors, agents or representatives relating to the response activities at the Facility or to the implementation of this Order, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the response activities. Respondent shall also, upon request, make available to the MDEQ, upon reasonable notice, Respondent's employees, contractors, agents, or representatives with knowledge of the relevant facts concerning the performance of the response activities.

8.3 If Respondent submits to the MDEQ documents or information that Respondent believes it is entitled to protection as provided for in Section 20117(10) and (11) of the NREPA, Respondent may designate in that submittal the documents or information to which it believes it is entitled such protection. If no such designation accompanies the information when it is submitted to the MDEQ, the information may be made available to the public by the MDEQ without further notice to Respondent. Information described in Section 20117(11)(a) through (h) of the NREPA shall not be

claimed as confidential or privileged by Respondent. Information or data generated under this Order shall not be subject to Part 148, Environmental Audit Privilege and Immunity, of the NREPA, MCL 324.14801 et seq.

## **IX. EMERGENCY RESPONSE**

9.1 If, during the pendency of this Order, an act or the occurrence of an event causes a release or threat of release of a hazardous substance at or from the Facility or causes exacerbation of existing contamination at the Facility, and the release, threat of release, or exacerbation poses or threatens to pose an imminent and substantial endangerment to public health, safety, or welfare or the environment, Respondent shall immediately undertake all appropriate actions to prevent, abate or minimize such release, threat of release, exacerbation or endangerment and shall immediately notify the MDEQ Project Coordinator. In the event of his or her unavailability, Respondent shall notify the Pollution Emergency Alerting System (PEAS) at 1-800-292-4706. In such an event, any actions taken by Respondent shall be in accordance with all applicable health and safety laws and regulations.

9.2 Within ten (10) days of notifying the MDEQ of such an act or event, Respondent shall submit a written report setting forth a description of the act or event that occurred and the measures taken or to be taken to mitigate any release, threat of release, exacerbation, or endangerment caused or threatened by the act or event and to prevent recurrence of such an act or event. If an act or event causes a release, threat of release, or exacerbation, or poses or threatens to pose an imminent and substantial endangerment to public health, safety, or welfare, or the environment, the MDEQ may: (a) require Respondent to stop response activities at the Facility for such period of time as may be needed to prevent or abate any such release, threat of release, exacerbation, or endangerment; (b) require Respondent to undertake any actions that the MDEQ determines are necessary to prevent or abate any such release, threat of release, exacerbation, or endangerment; or (c) undertake any actions

that the MDEQ determines are necessary to prevent or abate such release, threat of release, exacerbation, or endangerment.

#### **X. PROJECT COORDINATORS AND COMMUNICATIONS/NOTICES**

10.1 Within thirty (30) days of the Effective Date of this Order, Respondent shall designate and provide contact information to a project coordinator who shall have primary responsibility for overseeing the performance of the response activities at the Facility and other requirements specified in this Order for Respondent. The MDEQ Project Coordinator shall be Paul Owens, who can be contacted as follows:

Mr. Paul Owens, Project Coordinator  
Remediation and Redevelopment Division  
Southeast Michigan District Office  
Michigan Department of Environmental Quality  
38980 West Seven Mile Road  
Livonia, Michigan 48152-1006  
Telephone: 734-432-1294  
Facsimile: 734-953-1544

The MDEQ Project Coordinator will be the primary designated representative for the MDEQ for the Facility. Whenever notices are required to be given or progress reports, information on the collection and analysis of samples, sampling data, work plan submittals, approvals, or disapprovals, or other technical submissions are required to be forwarded by one party to the other party under this Order, or whenever other communications between the Parties are needed, such communications shall be directed to the MDEQ Project Coordinator at the address listed above. If any party changes its designated Project Coordinator, the name, address, and telephone number of the successor shall be provided to the other Party, in writing, as soon as practical.



10.2 The MDEQ may designate other authorized representatives, employees, contractors and consultants to observe and monitor the progress of any activity undertaken pursuant to this Order.

10.3 This paragraph does not relieve Respondent from other reporting obligations under the law.

## **XI. SUBMISSIONS AND APPROVALS**

11.1 All Submissions required by this Order shall comply with all applicable laws and regulations and the requirements of this Order, and shall be delivered to the MDEQ in accordance with the schedules set forth in this Order. All Submissions delivered to the MDEQ pursuant to this Order shall include a reference to the Former Standard Tube Facility and MDEQ Reference No. AO-RRD-03-001. Any Submission delivered to the MDEQ for approval also shall be marked "Draft" and shall include, in a prominent location in the document, the following disclaimer:

Disclaimer: This document is a DRAFT document that has not received final approval from the Michigan Department of Environmental Quality (MDEQ). This document was prepared pursuant to a governmental administrative order. The opinions, findings, and conclusions expressed are those of the authors and not those of the MDEQ.

11.2 Upon review of the RAP, the RRD Division Chief will in writing:

- (a) approve the RAP; (b) reject the RAP as insufficient if the RAP lacks any information necessary or required by the MDEQ to make a decision regarding RAP approval; or
- (c) deny approval of the RAP. If the MDEQ denies approval of the RAP, it will provide Respondent with a complete and specific statement of the conditions or requirements necessary to obtain approval.

11.3 Within ninety (90) days after receipt of a rejection or denial of approval of a RAP from the MDEQ pursuant to Paragraph 11.2(b) or (c), Respondent shall resubmit the RAP to the MDEQ for review and approval. The time period for resubmission may be extended by the MDEQ. The MDEQ will review the resubmitted RAP in accordance with the procedure stated in Paragraph 11.2. If the MDEQ does not approve the RAP upon resubmission, the MDEQ will so advise Respondent, and the MDEQ will deem Respondent to be in violation of this Order.

11.4 If the initial submittal of any Submission, including a RAP, contains significant deficiencies such that the Submission is not in the judgment of the MDEQ a good faith effort by Respondent to deliver an acceptable Submission that complies with Part 201 and this Order, the MDEQ will notify Respondent of such and will deem Respondent to be in violation of this Order. Any other delay in the delivery of a Submission, noncompliance with a Submission or attachment to this Order, or failure to cure a deficiency of a Submission in accordance with this Section XI, may also place Respondent in violation of this Order. Violation of this Order may subject Respondent to penalties for non-compliance as provided in Section XIV (Penalties for Non-Compliance) of the Order or to other remedies available to the State.

11.5 Upon approval by the MDEQ, any Submission and attachments to Submissions required by this Order shall be considered part of this Order and are enforceable pursuant to the terms of this Order. If there is a conflict between the requirements of this Order and any Submission or an attachment to a Submission, the requirements of this Order shall prevail.

11.6 An approval shall not be construed to mean that the MDEQ concurs with any of the conclusions, methods, or statements in any Submission or warrants that the Submission comports with law.

11.7 Informal advice, guidance, suggestions, or comments by the MDEQ regarding any Submission provided by Respondent shall not be construed as relieving Respondent of its obligation to obtain any formal approval required under this Order.

## **XII. COMPLIANCE WITH OTHER LAWS**

All actions required to be taken pursuant to this Order shall be undertaken in accordance with the requirements of all applicable or relevant and appropriate state and federal laws and regulations, including Parts 31 and 201 of the NREPA, and laws relating to occupational safety and health, and other state environmental laws. Other agencies may also be called upon to review the conduct of response activities under this Order.

## **XIII. AMENDMENTS/MODIFICATIONS/INCORPORATION BY REFERENCE**

This Order may only be amended in writing by signature of the Director of the MDEQ. The RAP prepared pursuant to Paragraph 5.2(c) of this Order, or any other required response activity, may be modified only by the RRD Division Chief or his or her authorized representative.

## **XIV. PENALTIES FOR NON-COMPLIANCE**

Pursuant to Sections 20119(4) and 20137(1) of the NREPA, MCL 324.20119(4) and MCL 324.20137(1), Respondent is advised that if, without sufficient cause, Respondent violates or fails to satisfactorily comply with this Order, or any portion thereof, Respondent may be: (a) fined in a civil action brought in circuit court up to twenty-five thousand dollars (\$25,000.00) for each day in which such violation occurs or such failure to comply continues; and/or (b) subject to liability for exemplary

damages in the amount of three (3) times the amount of any costs incurred by the State of Michigan as a result of Respondent's violation or failure to comply with this Order.

#### **XV. DISCLAIMERS**

The State of Michigan, including the MDEQ and its employees, agents and consultants, shall not be liable for injuries or damages to persons or property resulting from acts or omissions by Respondent, its officers, employees, agents, or contractor(s) in carrying out activities pursuant to this Order. The State of Michigan, including the MDEQ, shall not be held as a party to any contract entered into by Respondent or its officers, employees, agents, or contractor(s) in carrying out activities pursuant to this Order.

#### **XVI. RESERVATION OF RIGHTS BY THE MDEQ**

16.1 The MDEQ expressly reserves all rights and defenses that it may have, including the MDEQ's right both to disapprove of work performed by Respondent and to request or order Respondent to perform response activities in addition to those detailed in this Order. In addition, the MDEQ reserves the right to undertake response activities at any time and to perform any and all portions of the response activities required by this Order that Respondent has failed or refused to perform properly or promptly. The MDEQ, in cooperation with the MDAG, reserves any and all rights to take any enforcement action pursuant to Part 201 of the NREPA, or any other available legal authority, including the right to seek injunctive relief, monetary costs, damages or penalties, or punitive damages for any violation of law or of this Order.

16.2 Nothing in this Order shall be deemed to limit the power and authority of the MDEQ or the State of Michigan to take, direct, or order all appropriate action to protect the public health, welfare, or the environment or to prevent, abate or minimize a release or threatened release of hazardous substances, pollutants, contaminants, or hazardous wastes on, at or from the Facility.

#### **XVII. RESPONDENT'S INTENT TO COMPLY WITH THIS ORDER**

In accordance with Section 20119(3) of the NREPA, MCL 324.20119(3), Respondent is advised that within thirty (30) days of the Effective Date of this Order, Respondent is required to indicate to the MDEQ in writing whether or not Respondent intends to comply with this Order to:

Mr. Andrew W. Hogarth, Chief  
Remediation and Redevelopment Division  
Michigan Department of Environmental Quality  
P.O. Box 30426  
Lansing, Michigan 48909-7926

#### **XVIII. OPPORTUNITY TO CONFER**

Respondent may, by orally notifying the MDEQ Project Coordinator within seven (7) days after receipt of this Order, request a conference with the MDEQ to discuss the correctness of any factual determinations upon which the Order is based, the applicability of this Order to Respondent, and the appropriateness of any action Respondent is ordered to take. If Respondent requests a conference, such conference shall be held either Wednesday, August 27, 2003; or Tuesday, September 2, 2003. At any conference held pursuant to Respondent's request, Respondent may appear in person or through an attorney or other representative for the purpose of orally presenting any objections, defenses or contentions that

Respondent may have regarding this Order, provided that such presentations shall not be a part of the administrative record upon which this Order is based.

#### **XIX. SEVERABILITY**

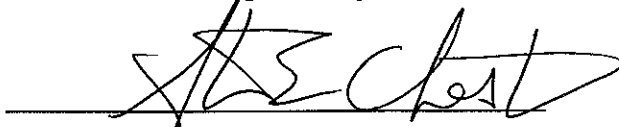
The provisions of this Order shall be severable. If any provision of this Order is declared by a court of competent jurisdiction to be inconsistent with state law, and therefore unenforceable, the remaining provisions of this Order shall remain in full force and effect.

#### **XX. EFFECTIVE DATE**

This Order is effective on the date of its issuance.

**IT IS SO ORDERED BY:**

Issued at Lansing, Michigan, this 7 day of August, 2003.



Steven E. Chester, Director  
Michigan Department of Environmental Quality

**APPROVED AS TO FORM:**



Kathleen L. Cavanaugh (P38006)  
Assistant Attorney General  
Environment, Natural Resources, and Agriculture Division  
Michigan Department of Attorney General

Date: 7-31-03

**Attachment A**  
Property Description

The West one-half of the East one-half of the Southeast one-quarter of Section 29 and the East 10 acres of the West one-half of the Southeast one-quarter of Section 29, except the Northerly 49.50 feet thereof; all being in Town 1 South, Range 10 East.



Christie  
Alwin  
17414

**Attachment B**

**Interim Cleanup Criteria, Monitoring Point 001A Through**

The Respondent is authorized to discharge from Monitoring Point 001A through Outfall 001. Outfall 001 discharges to the Rouge River via Prindle Drain and Livonia-Ashcroft Drain. Such discharge shall be monitored by the Respondent as specified below.

<u>Parameter</u>	<u>Maximum Allowable Concentrations For Quantity or Loading</u>			<u>Maximum Allowable Concentrations for Quality or Concentration</u>			<u>Frequency of Analysis</u>	<u>Sample Type</u>
	<u>Monthly</u>	<u>Daily</u>	<u>Units</u>	<u>Monthly</u>	<u>Daily</u>	<u>Units</u>		
Flow	(report)	(report)	MGD	---	---	---	Daily	Report Total Daily Flow
Oil and Grease	---	---	---	---	15	mg/l	Monthly	Grab
Total Polychlorinated Biphenyls 3.5x10 <sup>-7</sup>		(report)	lbs/day	0.000026	(report)	µg/l	Weekly	Grab
Total Silver	0.012	(report)	lbs/day	0.90	(report)	µg/l	Weekly	24-Hr Composite
Vinyl Chloride	0.95	(report)	lbs/day	71	(report)	µg/l	Quarterly	Grab
Total Antimony	---	(report)	lbs/day	---	(report)	µg/l	Quarterly	24-Hr Composite
Total Barium	---	(report)	lbs/day	---	(report)	µg/l	Quarterly	24-Hr Composite
Total Boron	---	(report)	lbs/day	---	(report)	µg/l	Quarterly	24-Hr Composite
Total Copper	---	(report)	lbs/day	---	(report)	µg/l	Quarterly	24-Hr Composite
Total Lead	---	(report)	lbs/day	---	(report)	µg/l	Quarterly	24-Hr Composite
Total Nickel	---	(report)	lbs/day	---	(report)	µg/l	Quarterly	24-Hr Composite
Total Strontium	---	(report)	lbs/day	---	(report)	µg/l	Quarterly	24-Hr Composite
Total Zinc	---	(report)	lbs/day	---	(report)	µg/l	Quarterly	24-Hr Composite
Chrysene	(report)	(report)	lbs/day	(report)	(report)	µg/l	Weekly	Grab
Pyrene	(report)	(report)	lbs/day	(report)	(report)	µg/l	Weekly	Grab
Benzo(a)anthracene	(report)	(report)	lbs/day	(report)	(report)	µg/l	Weekly	Grab
Phenanthrene	(report)	(report)	lbs/day	(report)	(report)	µg/l	Weekly	Grab
cis-1,2-Dichloroethylene	---	(report)	lbs/day	---	(report)	µg/l	Quarterly	Grab
Trichloroethylene	---	(report)	lbs/day	---	(report)	µg/l	Quarterly	Grab
Outfall Observation	(report)	---	---	---	---	---	See Part I.A.1.c.	Visual

The receiving water shall contain no unnatural turbidity, color, oil films, floating solids, foams, settleable solids, suspended solids, or deposits as a result of this discharge.

### **Monitoring Location**

Samples, measurements, and observations taken in compliance with the monitoring requirements above shall be taken prior to discharge to the Prindle Drain.

### **Outfall Observation**

The outfall observation shall be conducted weekly during dry weather and daily during periods of discharge of snow melt or storm water runoff. Any unusual characteristics of the discharge (i.e., unnatural turbidity, color, oil film, floating solids, foams, settleable solids, suspended solids, or deposits) shall be reported within 24 hours to the MDEQ followed with a written report within five (5) days detailing the findings of the investigation and the steps taken to correct the condition.

### **Target Detection Limit for Total Antimony, Total Barium, Total Boron, Total Copper, Total Lead, Total Nickel, Total Zinc, Chrysene, Pyrene, Benzo(a)anthracene, Phenanthrene, cis-1,2-Dichloroethylene, and Trichloroethylene**

The following target detection limits (TDLs) shall be used unless a higher level is appropriate because of sample matrix interference: total antimony, total copper, total lead, chrysene, pyrene, benzo(a)anthracene, cis-1,2-dichloroethylene, phenanthrene, and trichloroethylene – 1 µg/l; total nickel – 2 µg/l; total zinc – 4 µg/l, total barium and total strontium – 5 µg/l; total boron – 20 µg/l. Justification for higher TDLs shall be submitted to the MDEQ within 30 days of learning that the specified TDLs cannot be achieved.

### **Target Detection Limit for PCBs**

The sampling procedures, preservation and handling, and analytical protocol for compliance monitoring for total PCBs shall be in accordance with EPA Method 608. The TDL shall be 0.2 µg/l unless a higher level is appropriate because of sample matrix interference. Justification for higher TDL shall be submitted to the MDEQ within 30 days of learning that the specified TDLs cannot be achieved.

Any discharge of total PCBs at or above the TDL specified in this Order is a specific violation, and may subject the Respondent to civil penalties under state or federal law. If an interim cleanup criteria sample is less than the TDL, the Respondent will be considered to be in compliance with the total PCBs interim cleanup criteria set forth in this Order for the period that the sample represents. For the purpose of determining if an interim cleanup criteria sample is less than the TDL, total PCBs shall be defined as

the sum of the individual analytical results for each of the aroclors 1016, 1221, 1232, 1242, 1248, 1254, and 1260 with any aroclor result less than the TDL being treated as a zero. For the purpose of reporting, the Respondent shall calculate concentration and loading levels of total PCBs in this same manner; however, the result of any individual aroclor measurement less than the TDL but greater than the detection level shall be reported as a Daily Concentration. This paragraph does not authorize the discharge of total PCBs at levels which are injurious to the designated uses of the waters of the state or which constitute a threat to the public health or welfare.

### **Chronic Whole Effluent Toxicity Testing, Monitoring Point 001A**

The Respondent shall conduct chronic toxicity tests on each of two (2) test species once every two (2) months for a total of eight (8) tests (four on each species). Testing commence two (2) months after installation of the water treatment system. Test species shall include fathead minnow and either *Daphnia magna* or *Ceriodaphnia dubia*. Testing and reporting procedures shall follow procedures contained in EPA/600/4-91/002, "Short-Term Methods for Estimating the Chronic Toxicity of Effluents and Receiving Waters to Freshwater Organisms," for fathead minnow and *Ceriodaphnia*, and ASTM E1193-97 "Standard Guide for Conducting *Daphnia magna* Life-Cycle Toxicity Tests" for *D. magna* as modified by the MDEQ Water Division ("Water Division modifications to ASTM E1193-97"). Toxicity test pH shall be maintained at 8 standard units. Acute toxicity and chronic toxicity data shall be included in the reporting of the toxicity test results. Toxicity test data acceptability is contingent upon the validation of the test method by the testing laboratory. Test results shall be submitted with the quarterly IRA Progress Reports.

### **Chemical Specific Toxicity Testing**

Prior to installation of the groundwater treatment system, the Respondent shall submit to the MDEQ the following Tier II toxicity information for chrysene and pyrene: 1) the results of a 48-hour LC<sub>50</sub> or EC<sub>50</sub> for a North American planktonic crustacean (either *Ceriodaphnia* species, *Daphnia* species or *Simocephalus* species), 2) the results of a toxicity test for one other North American freshwater aquatic species (other than a planktonic crustacean) that meets a minimum requirement of Rule 323.1057(2)(a) of the Water Quality Standards, and 3) the results of a "no observable adverse effect level (NOAEL)" developed from a repeated dose study, using mammals, which is not less than 28 days in duration. Procedures for the aquatic toxicity testing shall follow ASTM, Standard E 729-88a titled "Standard Guide for Conducting Acute Toxicity Tests with Fishes, Macroinvertebrates, and Amphibians." Procedures for conducting mammalian toxicity testing shall follow EPA TSCA Health Effects Testing Guidelines (59 FR 39397, 9/27/85). Alternate testing procedures may be used upon approval of the MDEQ. All testing shall conform with the data quality requirements described in Rule 323.1057 of the Water Quality Standards. Sufficient documentation shall be provided with the test results to demonstrate conformance with the specified method.

The Respondent may submit additional mammalian and/or aquatic toxicity data, as appropriate, to reduce the uncertainty factor used in the development of Tier II values or to allow for calculation of Tier I values. Prior to conducting any additional toxicity testing, the Respondent should contact the MDEQ to determine the appropriate test organism(s).

This data shall be submitted to the MDEQ with the first IRA Progress Report. Upon review of this data, the interim cleanup criteria may be modified in accordance with applicable laws and rules.