September 12, 2008

Re: The Lubrizol Corporation-Painesville
EPA ID No: OHD 004 172 623
Modified Hazardous Waste Permit

Ms. Gwendolyn McDay
The Lubrizol Corporation-Painesville
155 Freedom Road
Painesville, Ohio 44077

Dear Ms. McDay:

On May 30, 2008, Ohio EPA issued a draft permit modification to The Lubrizol Corporation-Painesville facility, (Lubrizol) to implement site-wide Corrective Action remedies. The permit modification was initiated by Ohio EPA. The modified permit requires Lubrizol to enter into an environmental covenant limiting the portion of the facility south of Freedom Road to industrial use and also requires submittal of a plan to abandon some monitoring wells. The Agency received written comments concerning this modification and these comments were addressed in the responsiveness summary. I have enclosed the final modified Ohio hazardous waste facility installation and operation permit (Permit) that was issued by the director September 10, 2008. Please note that the modified Permit remains in effect until it is renewed, withdrawn, suspended or revoked.

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

Ted Strickland, Governor
Lee Fisher, Lieutenant Governor
Chris Koleski, Director
Environmental Review Appeals Commission
309 South Fourth Street, Room 222
Columbus, OH 43215

If you have any questions, please contact Bill Lutz of Ohio EPA's Northeast District Office at (330) 963-1245.

Sincerely,

[Signature]

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

cc: Edwin Lim, ERAS, DHWM, CO
    Jeremy Carroll/Shawn Sellers, ERAS, DHWM, CO
    Natalie Oryshkewych/Bill Lutz, DHWM, NEDO
    Carol Hester, PIC, Ohio EPA

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PUBLIC NOTICE

Lake County

OHIO EPA ISSUES FINAL MODIFIED HAZARDOUS WASTE PERMIT

On September 10, 2008, Ohio EPA issued a final modified hazardous waste facility installation and operation permit (Hazardous Waste Permit) to The Lubrizol Corporation (Lubrizol), for its facility at 155 Freedom Road, Painesville, Ohio 44077. The EPA Identification Number for this facility is OHD004172623.

Why does Lubrizol need this Permit modification?
The Lubrizol Corporation in Painesville is engaged in the manufacture of lubricant additives, fuel additives, and other specialty chemicals related to the transportation industry. From these activities, hazardous waste is generated. Lubrizol is authorized to store and treat hazardous waste in tanks, and treat hazardous waste by incineration. The Director of Ohio EPA initiated this modification to require Lubrizol to implement specific corrective measures to satisfy its corrective action obligations. Ohio EPA reviewed the facility's investigation information collected to date and is requiring that an Environmental Covenant to be placed on a portion of the property along with the submittal of a monitoring well abandonment plan. To issue this final modified permit, Ohio EPA determined that the selected corrective measures meet appropriate standards.

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

If I decide to appeal this final modified Permit, how and when must I make the appeal?
If you file an appeal, you must put it in writing no later than October 14, 2008. Your appeal must explain why you are appealing the action and the grounds you are using for your appeal. The appeal must be accompanied by a filing fee of $70.00 which the Commission, in its discretion, may reduce if by affidavit you demonstrate that payment of the full amount of the fee would cause extreme hardship. Ohio EPA requests that a copy of the appeal be served upon the Ohio Attorney General’s Office, Environmental Enforcement Section. You must file your appeal, according to Ohio Revised Code § 3745.04 with ERAC at the following address: Environmental Review Appeals Commission, 309 South Fourth Street, Room 222, Columbus, Ohio 43215. You must send a copy of the appeal to the director of Ohio EPA at the following address no later than three (3) days after you file it with ERAC: Chris Korleski, Director of Ohio EPA, P.O. Box 1049, Columbus, Ohio 43216-1049.
Responsiveness Summary for Comments
Received On the Statement of Basis and draft modified hazardous waste facility installation and operation permit

On May 30, 2008, Ohio EPA issued a Statement of Basis and draft modified hazardous waste facility installation and operation permit for the preferred remediation of The Lubrizol Corporation site located at 155 Freedom Road in Painesville, Ohio 44077. The public comment period began on May 31, 2008 and ended on July 15, 2008. One written comment was provided by The Lubrizol Corporation.

Comment Received from The Lubrizol Corporation:
With reference to the requirement to limit the portion of the facility south of Freedom Road to industrial use, it is stated that the Permittee shall initiate entering into an Environmental Covenant within sixty (60) days of Permit Modification issuance. Ohio EPA approval of the terms of the deed restriction for the Lubrizol property must be obtained before the Covenant can be formalized, and the process may take considerable time. In order to clarify the Permittee's responsibilities and allow time for Ohio EPA to review the deed restriction terms, Lubrizol requests that this requirement be modified such that Lubrizol must file a deed restriction within thirty (30) days of Ohio EPA's approval and acceptance of the form of the final deed restriction terms.

Lubrizol proposes the following language replace the existing first paragraph for E.9(a):
"The portion of the facility south of Freedom Road must be limited to industrial use. The permittee shall file a deed restriction with the appropriate recorder's office within thirty days of Ohio EPA's approval and acceptance of the terms of the Environmental Covenant restricting the portion of the property south of Freedom Road to industrial use."

Ohio EPA Response to Comment:
The purpose of requiring 60 days for the permittee to initiate entering into an Environmental Covenant is to provide a timeframe for the start of the process. It is our understanding that Lubrizol has already initiated the Environmental Covenant process by obtaining information from Ohio EPA legal counsel regarding the language and the structure of the Environmental Covenant. Therefore, Ohio EPA has removed the "initiate" language from the final Permit modification and revised the first paragraph for condition E.9(a) as follows: "The portion of the facility south of Freedom Road must be limited to industrial use. The permittee shall enter into an Environmental Covenant restricting the portion of property south of Freedom Road to industrial use."
Modification of the Hazardous Waste Facility Installation and Operation Permit will authorize Lubrizol to make the following changes:

**Class 3 Modification:**

1) Lubrizol shall enter into an environmental covenant limiting the portion of the facility south of Freedom Road to industrial use.

2) The permittee shall be required to remove the six monitoring wells that were installed during the RCRA Facility Investigation (RFI). The Permittee is required to submit within 90 days of issuance of this Permit Modification a Well Abandonment Plan to the Ohio EPA Northeast District Office for approval. The Permittee shall have 120 days to abandon the wells after approval of the Well Abandonment Plan.
OHIO ENVIRONMENTAL PROTECTION AGENCY

MODIFIED OHIO HAZARDOUS WASTE FACILITY
INSTALLATION AND OPERATION PERMIT

Date of Issuance: September 10, 2008
Effective Date: September 10, 2008

U.S. EPA ID No.: OHD 004 172 623
Ohio Permit No.: 02-43-0178

Name of Permittee: The Lubrizol Corporation - Painesville
Mailing Address: 155 Freedom Road
                 Painesville, Ohio 44077
Facility Location: 155 Freedom Road
                 Painesville, Ohio 44077
Person to Contact: Gwendolyn McDay

This Modified Ohio Hazardous Waste Facility Installation and Operation Permit is issued pursuant and subject to Section 3734.05(I) of the Ohio Revised Code and Rule 3745-50-51(J) of the Ohio Administrative Code.

The Ohio Hazardous Waste Facility Installation and Operation Permit with the above-referenced permit number as issued by the Ohio Environmental Protection Agency and journalized on March 31, 2004, is hereby incorporated by reference in its entirety, except as it may be modified herein.

This modification of the permit shall remain in effect until such time as the Ohio Hazardous Waste Facility Installation and Operation Permit is renewed, modified, withdrawn, suspended or revoked.

The modified Terms and Conditions of this permit are attached hereto and are incorporated herein by reference. The modified Terms and Conditions supersede and replace the corresponding pages found in the March 31, 2004 renewal permit.

I certify this to be a true and accurate copy of the official documents as filed in the records of the Ohio Environmental Protection Agency.

By: [Signature] Date: 9/10/08

Chris Korleski
Director
MODULE E - CORRECTIVE ACTION REQUIREMENTS

E. CORRECTIVE ACTION

Corrective Action Summary

On December 19, 2001, a RCRA Facility Assessment (RFA) for Lubrizol’s Painesville, Ohio facility was submitted to Ohio EPA. The RFA was prepared by Baker Environmental, Inc. which is a consulting firm contracted by Lubrizol. The December 2001 RFA is an update of a RFA submitted to U.S. EPA Region 5 on March 1, 1988. The above referenced documents are incorporated into the Part B application. The 1988 and 2001 RFAs identified twelve (12) historic Waste Management Units (WMU1 through WMU12), fourteen (14) current Waste Management Units (WMU13 through WMU25A), and six (6) Areas of Concern (AOC26 through AOC31). Two additional AOCs (AOC32 and AOC33) were identified by Ohio EPA based on the agency's Spill Report Data Base.

Based upon the information in the RFA reports and a Visual Site Inspection (VSI) conducted by Ohio EPA DHWM, the following Waste Management Units were removed from further study (WMU9, WMU10, WMU12 through WMU23). These WMUs were either within secondary containment or were located in an enclosed building with a well maintained concrete floor.

Lubrizol conducted an extended RFA to collect sampling data in the remaining WMUs which were not eliminated from further study. The facility's RFA Work Plan was approved by Ohio EPA on October 27, 2004. Based on the results of the extended RFA which were submitted to Ohio EPA on May 23, 2005, Ohio EPA determined that a RCRA Facility Investigation (RFI) would be required.

Lubrizol conducted the RFI in two phases. During the first phase (RFI Work Plan approved December 23, 2005, report submitted May 19, 2006) Lubrizol established background levels for metals and performed an aquifer evaluation. In all, six monitoring wells were installed along the perimeter of the facility. Results from the aquifer evaluation determined that five of the six wells installed did not produce enough water to meet the classification of “Yield Significant Amounts of Water,” which is 0.1 gallons per minute.

During the second phase of the RFI (RFI Work Plan approved December 1, 2006, report submitted April 13, 2007) Lubrizol conducted additional sampling in areas where sample results were above established screening levels. Ground water samples were also taken in the one well which met the definition of “Yield Significant Amounts of Water,” 0.1 gallons per minute.
Ground water results for the RFI, with the exception of arsenic and chromium for the unfiltered portion of the sample, were below applicable standards (National Primary Drinking Water Regulation, National Secondary Drinking Water Regulation). Arsenic and chromium are naturally occurring elements that are not associated with activities conducted at the facility. For the above reasons, ground water was determined to not have been impacted by site activities. In addition, the aquifer underneath the facility is of poor quality. Residents in the Painesville area receive their drinking water from public water supplies drawing from Lake Erie.

RFA and RFI soil sample results for several WMU’s were above standards considered safe for residential use. In all, four WMU’s exceeded residential use standards. WMU’s not meeting residential use standards are: WMU2, The Incinerator Lagoon; WMU5, Auxiliary Process Sewer Lagoon; WMU25, Soil Pile Area; and WMU25A, Temporary Gravel Storage Area. For WMU5, the Auxiliary Process Sewer Lagoon, there was one detected result for acetophenone, in only one of the four samples taken in the area. This is the only sample throughout the entire investigation that acetophenone was detected. Acetophenone is not a chemical associated with this waste management unit and the sample was collected at twelve feet below ground surface. Upon additional review, WMU5 was removed from further evaluation because it was determined the acetophenone result was a false positive.

For the three remaining WMU’s, soil concentrations were above residential use standards, but, below industrial/commercial standards. The Permittee shall enter into an Environmental Covenant, limiting these areas to industrial/commercial use. The Environmental Covenant shall include the entire area for the portion of the facility south of Freedom Road, the industrial portion of the facility. An Environmental Covenant is a legally enforceable document that imposes activity and use limitations on a property. These use restrictions run with the property and are binding upon existing and any future property owner, should the property be sold. Ohio EPA will monitor the property owner’s adherence to the use restriction to help ensure continued protection of human health and the environment.

E.1 Corrective Action at the Facility
OAC Rules 3745-50-10 & 3745-54-101

In accordance with OAC Rule 3745-50-10 "waste management unit" means any discernible unit at which solid waste, hazardous waste, infectious waste (as those terms are defined in ORC Chapter 3734), constructions and demolition debris (as defined in ORC Chapter 3714) industrial waste, or other waste (as those terms are defined in ORC Chapter 6111), has been placed at any time, irrespective of whether the unit was intended for the management of waste or hazardous waste. Such units include any area at a facility at which wastes have been routinely and systematically
released. For the purpose of Corrective Action, facility is defined as all contiguous property under the control of the owner or operator seeking a permit under Subtitle C of RCRA. The terms Interim Measure (IM), RCRA Facility Investigation (RFI), Corrective Measures Study (CMS) and Corrective Measure Implementation (CMI) are defined in U.S. EPA’s Corrective Action Plan (CAP) (OSWER Directive 9902.3-2A, May 1994).

The Permittee must institute Corrective Action as necessary to protect human health and the environment for all releases of hazardous wastes or hazardous constituents from any waste management units (WMUs) at the Facility, regardless of the time at which waste was placed in such units.

E.2 Corrective Action Beyond the Facility Boundary
OAC Rule 3745-54-101

The Permittee must implement Corrective Action beyond the Facility property boundary, where necessary to protect human health and the environment, unless the Permittee demonstrates to the satisfaction of Ohio EPA that, despite the Permittee’s best efforts, the Permittee was unable to obtain the necessary permission to undertake such actions. The Permittee is not relieved of all responsibility to clean up a release that has migrated beyond the Facility boundary where off-site access is denied. On-site measures to address such releases will be addressed under the RFI, CMS, and CMI phases, as determined to be necessary on a case-by-case basis.

E.3 Identification of WMUs
OAC Rules 3745-50-44(D) and 3745-54-101

Attachment 1 of this permit identifies the WMUs and AOCs.

E.4 Reserved

E.5 RCRA Facility Investigation (RFI)
OAC Rule 3745-55-011

In the event of a newly discovered unit, the Permittee must conduct an RFI to thoroughly evaluate the nature and extent of any release of hazardous waste(s) and hazardous constituent(s) from all applicable WWUs identified in Condition E.10. The major tasks and required submittal dates are shown below. The scope of work for each of the tasks is found in U.S. EPA’s CAP.
(a) **RFI Workplan**

The Permittee must submit a written RFI Workplan to Ohio EPA, in case of a newly discovered waste management unit, on a timeframe established by Ohio EPA.

(i) Within 45 days of receipt of any Ohio EPA comments on the RFI Workplan, the Permittee must submit either an amended or new RFI Workplan that incorporates Ohio EPA's comments.

(ii) Ohio EPA will approve or modify and approve, in writing, the amended or new RFI Workplan. The RFI Workplan, as approved or as modified and approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved RFI Workplan must be authorized by Ohio EPA.

(b) **RFI Implementation**

The Permittee must implement the RFI Workplan according to the terms and schedule in the approved RFI Workplan.

(c) **RFI Final Report**

Within 60 days after the completion of the RFI, the Permittee must submit an RFI Final Report to Ohio EPA. The RFI Final Report must describe the procedures, methods, and results of the RFI. The Final Report must contain adequate information to support further decisions concerning Corrective Action at the Facility.

(i) Within 45 days of receipt of any Ohio EPA comments on the RFI Final Report, the Permittee must submit either an amended or new RFI Final Report that incorporates Ohio EPA's comments.

(ii) Ohio EPA will approve or modify and approve, in writing, the amended or new RFI Final Report. The RFI Final Report, as approved or as modified and approved, shall be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approved RFI Final Report must be authorized by Ohio EPA.
E.6 Interim Measure (IM)

Based on other information documenting a release of hazardous waste or constituents to the environment, Ohio EPA may require (or the Permittee may propose) the development and implementation of an IM (this may include an IM Workplan) at any time during the life of the permit to mitigate or eliminate a threat to human health or the environment. The Permittee shall implement the IM upon a time frame established by Ohio EPA.

E.7 Determination of No Further Action

(a) Permit Modification

Based on the results of the completed RFI and other relevant information, the Permittee may submit an application to Ohio EPA for a permit modification under OAC Rule 3745-50-51 to terminate the Corrective Action tasks of the Schedule of Compliance. Other tasks identified in the Schedule of Compliance shall remain in effect. This permit modification application must conclusively demonstrate that there are no releases of hazardous waste or constituents from WMUs at the Facility that pose an unacceptable risk to human health and the environment.

If, based upon review of the Permittee’s request for a permit modification, the results of the completed RFI, and other information, Ohio EPA determines that releases or suspected releases which were investigated either are nonexistent or do not pose an unacceptable risk to human health and the environment, Ohio EPA will approve the requested modification. Decisions regarding the completion of RCRA Corrective Action and no further action may be made for the entire Facility, for a portion of the Facility, or for a specific unit or release.

(b) Periodic Monitoring

A determination of no further action shall not preclude Ohio EPA from requiring continued or periodic monitoring of air, soil, ground water, or surface water, if necessary to protect human health and the environment, when site-specific circumstances indicate that a potential or an actual release of hazardous waste or constituents exists.
(c) Further Investigations

A determination of no further action shall not preclude Ohio EPA from requiring further investigations, studies, or remediation at a later date, if new information or subsequent analysis indicates that a release or potential release from a WMU at the Facility may pose an unacceptable risk to human health or the environment. In such a case, Ohio EPA shall initiate a modification to the terms of the permit to rescind the determination made in accordance with Permit Condition E.7(a). Additionally, in the event Ohio EPA determines that there is insufficient information on which to base a determination, the Permittee, upon notification, is required to develop a Work Plan and upon Ohio EPA approval of that Work Plan, perform additional investigations as needed.

E.8 Corrective Measures Study (CMS)

If Ohio EPA determines, based on the results of the RFI and any other relevant information, that corrective measures are necessary to protect human health and the environment, Ohio EPA will notify the Permittee in writing that the Permittee must conduct a CMS either as described below or as described in Ohio EPA's notification to the Permittee. The purpose of the CMS will be to develop and evaluate the corrective action alternative(s) and to outline one or more alternative corrective measure(s) that will satisfy the performance objectives specified in Permit Condition E.9.

(a) CMS Workplan

The Permittee must submit a written CMS Workplan to Ohio EPA within 90 days from the notification by Ohio EPA of the requirement to conduct a CMS.

(i) Within 45 days of receipt of any Ohio EPA comments, the Permittee must submit either an amended or new CMS Workplan that incorporates Ohio EPA's comments.

(ii) Ohio EPA will approve or modify and approve, in writing, the amended or new CMS Workplan. The CMS Workplan, as approved or as modified and approved, must be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approve CMS Workplan must be authorized by Ohio EPA.
(b) **CMS Workplan Implementation**

The Permittee must implement the CMS Workplan according to the terms and schedule in the approved CMS Workplan.

(c) **CMS Final Report**

Within 60 days after the completion of the CMS, the Permittee must submit a CMS Final Report to Ohio EPA. The CMS Final Report must summarize the results of the investigations for each remedy studied and must include an evaluation of each remedial alternative.

(i) Within 45 days of receipt of any Ohio EPA comments, the Permittee must submit either an amended or new CMS Final Report that incorporates Ohio EPA’s comments.

(ii) Ohio EPA will approve or modify and approve, in writing, the amended or new CMS Final Report. The CMS Final Report, as approved or as modified and approved, must be incorporated into this permit and become an enforceable condition of this permit. Subsequent changes to the approve CMS Final Report must be authorized by Ohio EPA.

**E.9 Corrective Measures Implementation (CMI)**

The Corrective Measure selected for implementation must: (1) be protective of human health and the environment; and as applicable (2) attain media cleanup standards; (3) control the source(s) of releases so as to reduce or eliminate further releases of hazardous waste(s) (including hazardous constituent[s]); and (4) comply with all applicable standards for management of wastes.

If two or more of the Corrective Measures studied meet the threshold criteria set out above, Ohio EPA will authorize the Corrective Measures Implementation by considered as applicable remedy selection factors including: (1) long-term reliability and effectiveness; (2) the degree to which the Corrective Measure will reduce the toxicity, mobility or volume of contamination (3) the Corrective Measure's short-term effectiveness; (4) the Corrective Measure's implementability; and (5) the relative cost associated with the alternative.

In authorizing the proposed Corrective Measures, Ohio EPA may also consider such other factors as may be presented by site-specific conditions.
The Permittee must implement corrective measures as described below.

(a) The portion of the facility south of Freeman Road must be limited to industrial use. The permittee shall enter into an Environmental Covenant restricting the portion of property south of Freedom Road to industrial use.

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

(i) Single and multi-family dwelling and rental units;
(ii) Day care centers and preschools;
(iii) Hotels and motels;
(iv) Educational (except as a part of industrial activities within the Property) and religious facilities;
(v) Restaurants and other food and beverage services (except as a part of industrial activities within the Property);
(vi) Entertainment and recreational facilities (except as a part of industrial activities within the Property);
(vii) Hospitals and other extended care medical facilities (except as a part of industrial activities within the Property); and
(viii) Transient or other residential facilities.

The term “industrial activities” shall include manufacturing, processing operations and office and warehouse use, including but not limited to production, storage and parking/driveway use. Because of health concerns specific to airborne beryllium dust, no digging or excavation will be permitted in the area of WMU 1 unless authorized via an excavation plan reviewed and approved by Ohio EPA.

(b) The Permittee must remove the six monitoring wells that were installed during the RCRA Facility Investigation (RFI). The Permittee shall submit within ninety (90) days of issuance of this Permit Modification a Well Abandonment Plan to the Ohio EPA DHWM Northeast District Office for approval. The permittee will have one-hundred and twenty (120) days to abandon the six wells after approval of the Well Abandonment Plan by Ohio EPA.
(c) **Financial Assurance**
OAC Rule 3745-54-101

Within thirty (30) days of the issuance of this Permit Modification, the Permittee must provide financial assurance in the amount necessary to implement the corrective measure(s) as required by OAC Rule 3745-54-101 (B) and (C)

E.10 **Newly Identified WMUs or Releases**
OAC Rule 3745-54-101

(a) **General Information**

The Permittee must submit to Ohio EPA, within 30 days of discovery, the following information regarding any new WMU identified at the Facility by Ohio EPA or the Permittee:

(i) The location of the unit on the site topographic map;

(ii) Designation of the type of unit;

(iii) General dimensions and structural description (supply any available drawings);

(iv) When the unit was operated; and

(v) Specification of all waste(s) that have been managed at the unit.

(b) **Release Information**

The Permittee must submit to Ohio EPA, within 30 days of discovery, all available information pertaining to any release of hazardous waste(s) or hazardous constituent(s) from any new or existing WMU.

E.11 **Corrective Action for Newly Identified WMUs and Releases**
OAC Rule 3745-54-101

If Ohio EPA determines that a RCRA Facility Investigation is required for newly identified WMUs, the Permittee must submit a written RCRA Facility Investigation Workplan to Ohio EPA upon a time frame established in written notification by Ohio
EPA in accordance with Permit Condition E.5. This determination will be made based on the information submitted in accordance with Permit Condition E.10. Further investigations or corrective measures will be established by Ohio EPA. Permittee must make such submittal in accordance with time frames established by Ohio EPA.

E.12 Documents Requiring Professional Engineer Stamp
ORC 4733.01

Preparation of the following Corrective Action documents constitutes the "practice of engineering" as defined by ORC 4733.01:

Final Interim Measures Report
Corrective Measures Final Design
Corrective Measures Construction Completion Report
Corrective Measures Attainment of Groundwater Performance Standards Report
Corrective Measures Completion of Work Report

As such, the Permittee must ensure that these documents, as submitted to Ohio EPA, are stamped by a Professional Engineer licensed to practice in the State of Ohio.
<table>
<thead>
<tr>
<th>Unit</th>
<th>Materials Stored</th>
<th>Description</th>
<th>Additional Sampling</th>
<th>Status</th>
</tr>
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<tbody>
<tr>
<td>WMU-1 Beryllium Disposal Area</td>
<td>Beryllium contaminated materials including rubber linings, cast iron pipe, flexible rubber hose, stainless steel drip pan trays, two 100 gallon tanks, deck plating, beryllium ingots</td>
<td>Disposal area was a trench measuring approximately 20' wide x 60' long x 20' deep. Trench was compacted then filled in with gravel and fill dirt. Building 18 currently is on top of the unit.</td>
<td>18 samples were taken and analyzed for beryllium. Sample values were above OEPa DHWM Generic Residential Standards but below VAP Industrial/Commercial Standards.</td>
<td>Facility will enter into an Environmental Covenant limiting the area to Industrial/Commercial use.</td>
</tr>
<tr>
<td>WMU-2 Incinerator Lagoon</td>
<td>Storm sewer water, process sewer water, boiler blowdown, incinerator flyash, incinerator wall wash down, gas well brines, sewer clarifier sludge, sodium aluminate, neutralized phenolic spills, spill residues</td>
<td>Received waste between 1972 and 1986. Lagoon was approximately 150' long x 55' wide x 12' deep. The material was solidified and stabilized. Approximately 1,750 cubic yards of material was removed and sent to a public landfill. The lagoon was backfilled with clean soil. The unit is currently a grassy area.</td>
<td>4 samples were taken and analyzed for volatiles, semivolatiles and metals. Several sample values were above OEPa DHWM Generic Residential Standards but below VAP Industrial/Commercial Standards.</td>
<td>Facility will enter into an Environmental Covenant limiting the area to Industrial/Commercial use.</td>
</tr>
<tr>
<td>WMU-3 Maintenance Lagoon</td>
<td>Sodium aluminate solution, sewer sludge, neutralized phenolic spills, spill residue, toluene spill residue, neutralized sulfide reactive sewer sludge, rainwater</td>
<td>Receive waste from 1981 to 1985. Lagoon was approximately 200' long x 60' wide x 8' deep. Materials in lagoon were solidified using kiln dust and portland cement, and sent off as non-hazardous waste. Area was backfilled and two equalization tanks were installed over the unit.</td>
<td>3 samples were taken and analyzed for volatiles, semivolatiles and metals. All samples were below OEPa DHWM Generic Residential Standards.</td>
<td>Unit removed from further consideration based on sample results from the Extended RFA soil analysis being below established screening levels.</td>
</tr>
<tr>
<td>WMU-4 Process Sewer Lagoon</td>
<td>Process wastewater containing toxic materials, gravel contaminated with organics, effluent sludge</td>
<td>Received waste from 1967 to 1986. Lagoon was approximately 200' long x 50' wide x 14' deep. Sludge was removed in 1986 and disposed off-site as non-hazardous waste. Lagoon was then backfilled with clean soil and seeded with grass. Currently area is partially covered with gravel and a concrete pad. Roll-off boxes are stored on the pad filled with various solids including contaminated gravel.</td>
<td>4 samples were taken and analyzed for volatiles, semivolatiles and metals. All samples were below OEPa DHWM Generic Residential Standards.</td>
<td>Unit removed from further consideration based on sample results from the Extended RFA soil analysis being below established screening levels.</td>
</tr>
</tbody>
</table>

**Ohio EPA DHWM**

**SEP 1 0 2008**
<table>
<thead>
<tr>
<th>Module E</th>
<th>Attachment 1 – Waste Management Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WMU-5 Auxiliary Process Sewer Lagoon</td>
<td>Process wastewater containing toxic materials, gravel contaminated with organics, effluent sludge. Unit was taken out of service in 1985. Lagoon was approximately 185' long x 45' wide x 12' deep. Material was removed and backfilled with clean soil, then seeded with grass. Currently, the area is partially covered with gravel and partially covered with a concrete pad which is used as a Roll-off Storage Area. 3 samples were taken and analyzed for volatiles, semivolatiles and metals. All samples were below OEPADHWM Generic Residential Standards with the exception of Acetophenone which is not a chemical associated with this unit and determined to be a false positive. Unit removed from further consideration based on sample results from the Extended RFA soil analysis being below established screening levels.</td>
</tr>
<tr>
<td>WMU-6 Ash Pit</td>
<td>Ash and clinkers, gravel contaminated with organics. Received material from 1972 till 1980. Pit was approximately 60' long x 50' wide. The depth was unknown. The pit was backfilled with clean soil. The area is currently paved with concrete and the pretreatment system is located on top of the former pit. 2 samples were taken and analyzed for volatiles, semivolatiles and metals. All samples were below OEPADHWM Generic Residential Standards. Unit removed from further consideration based on sample results from the Extended RFA soil analysis being below established screening levels.</td>
</tr>
<tr>
<td>WMU-7 Landfarming Area</td>
<td>Storm sewer water, process sewer water, boiler blowdown, incinerator flyash, incinerator wall wash down, gas well brines, sewer clarifier sludge, sodium aluminate, neutralized phenolic spills, spill residues, gravel contaminated with organics, effluent sludge, process wastewater containing toxic materials. The area is approximately 1 acre in size. Sludge was spread and dried here from 1980 till 1985. The area was cleared and part of the material in the unit was used to build a dike. The remainder was placed on an existing dirt pile located north of the process lagoons. 5 samples were taken and analyzed for volatiles, semivolatiles and metals. All samples were below OEPADHWM Generic Residential Standards. Unit removed from further consideration based on sample results from the Extended RFA soil analysis being below established screening levels.</td>
</tr>
<tr>
<td>WMU-8 Soil Pile</td>
<td>Dried sludge from the Process Sewer Lagoon, process wastewater containing toxic materials, gravel contaminated with organics, effluent sludge. An open, unlined dirt area approximately 70 feet square. Currently, the area is an unused, open grass area. 2 samples were taken and analyzed for volatiles, semivolatiles and metals. All samples were below OEPADHWM Generic Residential Standards. Unit removed from further consideration based on sample results from the Extended RFA soil analysis being below established screening levels.</td>
</tr>
<tr>
<td>WMU-9 Less than 90 Day Drum Storage Area</td>
<td>Mercury contaminated waste materials, Spent trichloroethylene, 1,1,1-trichloroethane, methylene chloride, asbestos stored in lined cardboard drums, acetylene tetrabromide</td>
</tr>
<tr>
<td>WMU-10 Filter Cake Hopper Storage Area</td>
<td>Barium filter cake</td>
</tr>
<tr>
<td>WMU-11 Building 34 Drum Storage Area</td>
<td>Unknown</td>
</tr>
<tr>
<td>WMU-12 Underground Storage Tank</td>
<td>D001 characteristic waste generated by the laboratory</td>
</tr>
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<tr>
<td><strong>WMU-13</strong>&lt;br&gt;Above ground Waste Tank System</td>
<td>Waste from facility manufacturing operations, filter cake, organic wastes, aqueous waste, sludges Unit consists of 12 above ground hazardous waste tanks. All tanks are made of a reinforced sealed concrete secondary containment system. Expansion joints and water stops are used at all joints. Tank integrity assessments are performed annually. Tank has a secondary containment system. A visual site inspection conducted by Ohio EPA did not notice any signs that there has been a release. Ohio EPA did not request any sampling for this WMU. Unit removed from further consideration based on information in the RFA reports and a Visual Site Inspection.</td>
</tr>
<tr>
<td><strong>WMU-14</strong>&lt;br&gt;Above ground Less than 90 Day Storage Tank 31</td>
<td>Process line flushes, drip pan contents from loading lines, lubricating additives, solvents, alcohol, D001, D002, D003, D018, D023, D024, D025, D026, D027, D035, F003 spent xylene Tank is located on a concrete pad. The area surrounding the pad is covered with track pans before reaching gravel. Tank system consists of one 3,000 gallon, double wall with secondary containment using the outer shell to contain any leaks from the inner shell, horizontal steel tank. Tank has a secondary containment system. A visual site inspection conducted by Ohio EPA did not notice any signs that there has been a release. Ohio EPA did not request any sampling for this WMU. Unit removed from further consideration based on information in the RFA reports and a Visual Site Inspection.</td>
</tr>
<tr>
<td><strong>WMU-15</strong>&lt;br&gt;Above ground Less than 90 Day Storage Tank 102</td>
<td>Recovered organic material, D001, D002, D003, D005, D018, D023, D024, D025, D026, D027, D035, F003 spent xylene Unit consists of one 4,188 gallon vertical above ground tank. Secondary containment consists of a concrete base and 4.7 feet high steel dike walls. The capacity of the containment area is sufficient to handle the tank capacity and precipitation from a 25-year, 24-hour rainfall event. Tank has a secondary containment system. A visual site inspection conducted by Ohio EPA did not notice any signs that there has been a release. Ohio EPA did not request any sampling for this WMU. Unit removed from further consideration based on information in the RFA reports and a Visual Site Inspection.</td>
</tr>
<tr>
<td><strong>WMU-16</strong>&lt;br&gt;Above ground Less than 90 Day Storage Tank 130</td>
<td>Organic materials from building reactors, D001, D002, D003, D005, D018, D023, D024, D025, D026, D027, D035, F003 spent xylene Unit consists of one 6,600 gallon, double wall, above ground carbon steel tank. The tank is equipped with secondary containment utilizing the outer shell to contain any releases from the inner shell. Tank has a secondary containment system. A visual site inspection conducted by Ohio EPA did not notice any signs that there has been a release. Ohio EPA did not request any sampling for this WMU. Unit removed from further consideration based on information in the RFA reports and a Visual Site Inspection.</td>
</tr>
<tr>
<td><strong>WMU-17</strong>&lt;br&gt;Above ground Less than 90 Day Storage Tank E-75</td>
<td>Unit collects material from the drum washer, auto packer console, collection pans, and area vessels, D001, D002, D003, D005, D018, D023, D024, D025, D026, D027, D035, F003 spent xylene Unit consists of one 6,600 gallon, double wall, above ground carbon steel tank. The tank is equipped with secondary containment utilizing the outer shell to contain any releases from the inner shell. Tank has a secondary containment system. A visual site inspection conducted by Ohio EPA did not notice any signs that there has been a release. Ohio EPA did not request any sampling for this WMU. Unit removed from further consideration based on information in the RFA reports and a Visual Site Inspection.</td>
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<tr>
<td>WMU-18 Above ground Less than 90 Day Storage Tank J-15</td>
<td>Unit collects organic material from Building 20 and 21 vessels and the 400 Ballhouse, D001, D002, D003, D005, D018, D023, D024, D025, D026, D027, D035, F003 spent xylene. Unit consists of one 6,600 gallon, double wall, above ground carbon steel tank. The tank is equipped with secondary containment utilizing the outer shell to contain any releases from the inner shell. Tank has a secondary containment system. A visual site inspection conducted by Ohio EPA did not notice any signs that there has been a release. Ohio EPA did not request any sampling for this WMU. Unit removed from further consideration based on information in the RFA reports and a Visual Site Inspection.</td>
</tr>
<tr>
<td>WMU-19 Incinerator</td>
<td>Organic liquid wastes, slurry from solid and aqueous and/or organic wastes, phase separated aqueous wastes, distillates, personal protective equipment, lab waste, filter cake, D001, D002, D003, D005, F003. Unit is paved with concrete. Unit is inspected daily checking for any leaks, spills, or fugitive emissions. Unit has an emergency waste feed cut-off system that is tested monthly. There is diking around the immediate area. Unit is paved and inspected daily. A visual site inspection conducted by Ohio EPA did not notice any signs that there has been a release. Ohio EPA did not request any sampling for this WMU. Unit removed from further consideration based on information in the RFA reports and a Visual Site Inspection.</td>
</tr>
<tr>
<td>WMU-20 Wastewater Pretreatment Facility</td>
<td>Process wastewater, tank farm drainings, boiler and cooling tower blowdown, steam condensate, aqueous streams from all areas of the plant. Unit is designed to contain releases resulting from uncontrolled spills, leaks or overflows. Releases from non-contained areas above ground or run-off enter a storm drain or reenter the process sewer system. Unit is designed to contain releases. A visual site inspection conducted by Ohio EPA did not notice any signs that there has been a release. Ohio EPA did not request any sampling for this WMU. Unit removed from further consideration based on information in the RFA reports and a Visual Site Inspection.</td>
</tr>
<tr>
<td>WMU-21 Less than 90 Day Central Storage Area</td>
<td>Process filter cake, barium filter cake, contaminated filter cloths. Area is approximately 120' long x 50' wide and is surrounded by a 12&quot; high concrete curb on three sides for secondary containment. The fourth side is contained by a concrete hump that is raised. The floor is constructed of 8&quot; concrete. Unit has a secondary containment system. A visual site inspection conducted by Ohio EPA did not notice any signs that there has been a release. Ohio EPA did not request any sampling for this WMU. Unit removed from further consideration based on information in the RFA reports and a Visual Site Inspection.</td>
</tr>
<tr>
<td>WMU-22 Roll-off Storage Area</td>
<td>Contaminated gravel and filter cakes, semi-solid crystallized sulfur waste. Unit lies over the former process sewer lagoon and auxiliary process sewer lagoon. The unit consists of a 110' x 30' concrete pad with sealed concrete joints. Sampling was conducted in both the process sewer lagoon and auxiliary process sewer lagoon, which are underneath this unit. All sample results for both units were below OHEPA DHWM Generic Residential Standards. Unit removed from further consideration based on information in the RFA reports and a Visual Site Inspection. OHIO EPA DHWM.</td>
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<td><strong>WMU-23 QA Laboratory Waste Storage Area</strong></td>
<td>QA Laboratory waste, D001, D002, D003, D005, D018, D023, D024, D025, D026, D027, D035, F003 spent xylene</td>
</tr>
<tr>
<td><strong>WMU-24 Waste Transfer and Collection Areas</strong></td>
<td>Waste from facility manufacturing operations, filter cake, organic wastes, aqueous waste, sludges</td>
</tr>
<tr>
<td><strong>WMU-25 Soil Pile Area</strong></td>
<td>Dirt and gravel scrapings from spills, sludge periodically excavated from the creek at the storm sewer outfall, excavations from underground line repairs, drainage ditch dredging, organic contaminants</td>
</tr>
<tr>
<td><strong>WMU-25A Temporary Gravel Storage Area</strong></td>
<td>Gravel and dirt contaminated with organics</td>
</tr>
<tr>
<td><strong>AOC-26 Xylene Release 2000</strong></td>
<td>xylene</td>
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<td><strong>AOC-27</strong>&lt;br&gt;Hydroxylamine&lt;sup&gt;1&lt;/sup&gt;&lt;br&gt;Substituted&lt;br&gt;Phenol&lt;br&gt;Release 1996</td>
<td>Volatiles&lt;br&gt;On September 13, 1996 approximately 7,600 pounds of hydroxylamine substituted phenol was released through a drain valve on Tank 432 which was inadvertently left open after maintenance. As part of the cleanup, approximately 200 cubic yards of contaminated material was removed.&lt;br&gt;4 samples were taken and analyzed for ethylbenzene and xylene. 2 additional samples were analyzed for volatiles. All sample values were below OEPA Generic Residential Standards.</td>
</tr>
<tr>
<td><strong>AOC-28</strong>&lt;br&gt;Carbon Disulfide&lt;br&gt;Release 1996</td>
<td>Carbon Disulfide&lt;br&gt;On May 22, 1996 approximately 123 gallons of carbon disulfide was spilled along a railcar spur. The spill migrated to soils along the railroad track through a drain. The contaminated area was identified through soil sampling and approximately 5 cubic yards of material was removed.&lt;br&gt;2 samples were taken and analyzed for carbon disulfide. All samples were below OEPA DHWM Generic Residential Standards.</td>
</tr>
<tr>
<td><strong>AOC-29</strong>&lt;br&gt;Benzene&lt;br&gt;Release 1996</td>
<td>Volatiles, Benzene&lt;br&gt;On August 9, 1991 approximately 100 pounds of organic material containing benzene was released to the storm sewer. A facility fire water line broke causing the flooding of a waste sump at the incinerator, and solid waste overflowed the pit. Approximately 100 cubic yards of contaminated gravel and dirt was recovered and disposed.&lt;br&gt;4 samples were taken and analyzed for volatiles, semivolatiles and barium. All samples were below OEPA DHWM Generic Residential Standards.</td>
</tr>
<tr>
<td><strong>AOC-30</strong>&lt;br&gt;Xylene&lt;br&gt;Release 1991</td>
<td>Volatiles, Xylene, Ethylbenzene&lt;br&gt;On August 15, 1991 approximately 3,000 gallons of xylene and ethylbenzene product mixture spilled from Tank 232. The spill was contained within the secondary containment system until recovery. Pumpable product was recovered and the gravel around the spill area was high pressure washed.&lt;br&gt;Spill occurred in secondary containment and was cleaned up. Ohio EPA conducted a visual site inspection and did not notice any signs that there had been a release. OEPA did not require the facility to conduct any further sampling.</td>
</tr>
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<sup>1</sup> OEPA DHWM, SEP 1 0 2008.
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<tr>
<td><strong>AOC-31</strong>&lt;br&gt;Phenol Release 1985</td>
<td><strong>Semiaivatiles, Phenol</strong>&lt;br&gt;On March 29, 1985 approximately 55 pounds of phenolic waste was released to the storm and process sewers after a rupture in Tank 448. Material spread across the road and over a field/wooded area. Details of the cleanup were not documented.</td>
</tr>
<tr>
<td><strong>AOC-32</strong>&lt;br&gt;Diesel Fuel Release April 2001</td>
<td><strong>Diesel Fuel</strong>&lt;br&gt;In April of 2001, approximately 1,500 gallons of diesel fuel was reported spilled from a saddle tank from an on-site locomotive.</td>
</tr>
<tr>
<td><strong>AOC-33</strong>&lt;br&gt;Ethyl Glycol Release April 1992</td>
<td><strong>Ethylene Glycol</strong>&lt;br&gt;In April of 1992, approximately 490 pounds of ethylene glycol was reported to have bypassed the treatment system. The release occurred within a concrete diked area and drained to the facility’s waste water treatment system.</td>
</tr>
</tbody>
</table>
Pages 47-62 are blank due to modification of Permit Terms & Conditions.
INTER-OFFICE COMMUNICATION

TO: Chris Korleski, Director
FROM: Dave Sholtis, Asst. Chief, Division of Hazardous Waste Management
SUBJECT: Agency-Initiated Permit Modification for The Lubrizol Corporation – Painesville – OHD 004 172 623
DATE: August 27, 2008

Attached for your review and signature is an agency-initiated permit modification for The Lubrizol Corporation located in Painesville, Ohio. Lubrizol operates a research and development facility and is authorized to treat and store hazardous waste in tanks, and treat hazardous waste in an incinerator.

The permit modification consists of the following change:

Implementation of site-wide corrective measures to address contamination at Lubrizol’s Painesville Facility. Corrective Measures will include implementation of an Environmental Covenant, limiting the portion of the facility south of Freedom Road to industrial use. The permittee shall also be required to remove six monitoring wells that were installed during the RCRA Facility Investigation (RFI). This site-wide corrective action remedy is supported by a Statement of Basis which identifies remedies proposed by Lubrizol and explains the reasons for Ohio EPA’s decision to impose an Environmental Covenant.

The DHWM staff has prepared the agency-initiated modification according to Ohio Administrative Code (OAC) Rule 3745-50-51, and has determined that the proposal complies with the Ohio EPA hazardous waste rules. Therefore, the Division recommends that the modified permit be issued.

On May 30, 2008 the Agency issued the modification in draft form. The public comment period for this draft modification ended on July 15, 2008. One comment letter from the permittee was received during the comment period for this modification. The comment was reviewed and a Responsiveness Summary prepared which is attached to this
correspondence. The remainder of the administrative record is available for your review in the DHWM’s Regulatory and Information Services Section.

If you have any questions regarding the permit modification, please call me at 4-2958 or Ed Lim at 4-2824. Should you sign the modified permit, please return the package to myself for journalizing and issuance. In accordance with OAC Rule 3745-50-51, Ohio EPA is required to issue an action on this modification by September 13, 2008.

cc: Ed Lim, Manager, ERAS, DHWM, CO
    Jeremy Carroll, DHWM, CO
    Shawn Sellers, DHWM, CO
    Natalie Oryshkewych, DHWM, NEDO
    Bill Lutz, DHWM, NEDO
OHIO EPA
State of Ohio Environmental Protection Agency

COVER MEMO

( X ) Director's Signature  ( ) Assistant Director's Signature
( ) DRAFT - Governor's Signature  ( ) Deputy Director's Signature
( ) Background Investigation Report - CONFIDENTIAL
Subject: (MCR# ) The Lubrizol Corporation, Painesville, Ohio – OHD 004 172 623
FINAL Agency-Initiated Permit Modification
Prepared by: Shawn Sellers  Division: DHWM, CO  Date: August 27, 2008

NECESSARY APPROVALS

( ) Assistant Director

APPROVED BY

DATE

( ) Deputy Director, Legal Affairs

( ) Deputy Director, Communication

( ) Director's Office, Rules Coordinator

( ) Legal

( ) Other

( ) Other

Todd Anderson

9/3/08

DATE

District Personnel Information

Approvals:
Supervisor
Manager
Assistant Dist. Chief
District Chief
Other

Date:

Division Personnel Information

Approvals:
Unit Supervisor
Section Manager
Assistant Chief
Chief
Other

Date:

09/22/08

8/27/08

9/3/08

RETURN ALL SUPPORTING DOCUMENTS TO:

Name: Jeri Savelle  
Division: DHWM, CO

Document Name: G:\sellers\she\FINAL Agency Init. Permit Mod\Sellers
WPS Initials/Date: jms

Attachments: CC:  Yes  No  BC:  Yes  No

Other: 

Revised April 2007