AMENDED PROPOSED PLAN OF REMEDIAL ACTION

Reichhold Chemical Site OU-2
Dover, Delaware
DNREC Project No. DE-0245

July 2017

Delaware Department of Natural Resources and Environmental Control
Division of Waste and Hazardous Substances
Site Investigation & Restoration Section
391 Lukens Drive
New Castle, Delaware 19720

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Approval:
This Proposed Plan meets the requirements of the Hazardous Substance Cleanup Act.

Approved by:
Timothy Ratsep, Environmental Program Administrator
Site Investigation & Restoration Section

Date: July 17, 2017
**What is the Proposed Plan of Remedial Action?**

The Proposed Plan of Remedial Action (Proposed Plan) summarizes the clean-up (remedial) actions that are being proposed to address contamination found at the Site for public comment. A legal notice is published in the newspaper for a 20-day comment period. DNREC considers and addresses all public comments received and publishes a Final Plan of Remedial Action (Final Plan) for the Site.

**Why is an Amended Proposed Plan of Remedial Action necessary for the Reichhold Chemical Site OU-2?**

A Final Plan of Remedial Action (Final Plan) for the Site was initially advertised on September 1999. The Final Plan remedy included: monitoring of marsh area, rerouting of drainage ditches and deed restriction. The marsh component of the Final Plan was amended in June 2004 to require a wetlands cap over the sediment to protect trespassers and prevent ecological impact. The actions required under that Final Plan, as amended, have been completed.

A subsequent Phase II Environmental Site Assessment (Phase II) identified previously unknown chlorinated volatile organic compounds (VOCs) including tetrachloroethene (PCE) as well as the PCE breakdown products in groundwater above DNREC groundwater standards in one section of the Site near former wastewater treatment lagoons. Accordingly, the Site is now divided into two operable units (OUs). OU1 is the relatively un-impacted area and will be redeveloped first. OU2 includes the area with VOC contamination, and the marsh area that contains the constructed wetlands cap.

An Amended Proposed Plan for OU-2 is required by DNREC-SIRS to address the contamination in the OU-2 area.

**What is the Reichhold Chemical Site OU-2?**

Reichhold Chemical Site is located at 144 Fork Branch Road in Dover, Delaware, and consists of 6 tax parcels (02-057.00-01-9.00, 10.00, 11.00, 12.00, 13.00 and 14.00), totaling approximately 110 acres (Figure 1). The nearest intersection to the Site is Fork Branch Road and Route 13. The Site consists of a fenced grass lot with one building and is zoned general industrial (Figure 2).

This proposed plan addresses Operable Unit-2 (OU-2). The location of the OUs is shown in Figure 2. A brief description of the OUs is provided in the table below.

<table>
<thead>
<tr>
<th>Operable Units</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OU-1</td>
<td>Tax Parcels- 02-057.00-01-9.00, 10.00, 11.00, 12.00, 13.00 and 14.00</td>
</tr>
<tr>
<td>OU-2</td>
<td>Tax Parcels- portions 02-057.00-01-11.00 and of 13.00.</td>
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</tbody>
</table>
OU-1 was addressed in a separate Proposed Plan, which was adopted as the Final Plan in November 2015.

**What happened at the Reichhold Chemical Site OU-2?**

The Site was developed in 1957. The Site produced styrene butadiene and polyvinyl acetate emulsion for use in the textile, adhesive, paint and paper industries. The plant was closed in 2008. The source and cause of the release of the chlorinated solvents is not known but is believed to have occurred at the Site as a result of historic operations. The release impacted the groundwater beneath the Site.

**What is the environmental problem at the Reichhold Chemical Site OU-2?**

A 1999 Remedial Investigation, Phase II and 2016 Brownfield Investigation Report found PCE and its breakdown products including trichloroethylene (TCE), cis-1,2-dichloroethene (DCE), trans-1,2-DCE, 1,1-DCE and vinyl chloride (VC) in groundwater in OU-2 over DNREC drinking standards. Groundwater is not impacting any downgradient drinking water receptors nor is anyone currently drinking the water at the Site. Groundwater contamination could potentially migrate as soil gas into future buildings (if constructed) and may present an inhalation risk to people in a building. There are currently no buildings on OU-2.

**What clean-up actions have been taken at the Reichhold Chemical Site OU-2?**

No interim actions have been conducted in OU-2 related to the VOC groundwater contamination. As part of the requirements for the 1999 Final Plan of Remedial Action, a groundwater management zone (GMZ) was established at the Site in 2011 (OU-1 and OU-2). The GMZ restricts the use of the Site water for drinking water purposes and also restricts the installation of all wells without DNREC approval. A wetlands cap over the sediment in the marsh area, which is included in OU-2, was previously constructed to protect trespassers and prevent ecological impact and satisfies the requirements of the Final Plan amended in 2004.

**What does the owner want to do at the Reichhold Chemical Site OU-2?**

The Site will be developed into an industrial park.

**What additional clean-up actions are needed at the Reichhold Chemical Site OU-2?**

DNREC proposes the following remedial actions for the Site, which need to be completed before a Certificate of Completion of Remedy (COCR) can be issued. The remedial actions proposed are proposed on an OU basis.

1) A proposed Environmental Covenant must be submitted to DNREC for approval within 60 days of the issuance of the approved Long Term Stewardship (LTS) Plan.
2) An Environmental Covenant, consistent with Delaware’s Uniform Environmental Covenants Act (7 Del.C. Chapter 79, Subchapter II) must be recorded in the Office of the Kent County Recorder of Deeds within 60 days of the issuance of the Final Plan of Remedial Action. The Environmental Covenant must include the following activity and/or use restrictions:

a. **Use Restriction.** Use of the Property shall be restricted solely to those non-residential type uses permitted within Commercial, Manufacturing, or Industrial Districts;

b. **Limitation of Groundwater Withdrawal.** No groundwater wells shall be installed and no groundwater shall be withdrawn from any well on the Property in accordance with the 2011 Groundwater Management Zone as amended and without the prior written approval of DNREC-SIRS and DNREC Division of Water; and

c. **Vapor Mitigation.** A vapor mitigation system will be required for any building constructed in OU-2;

d. **Interference with Remedy.** There shall be no digging, drilling, excavating, grading, constructing, earth moving, or any other land disturbing activities on the Property without the prior written approval of DNREC;

e. **Compliance with Contaminated Materials Management Plan.** All work required by the Contaminated Materials Management Plan must be performed to DNREC’s satisfaction in accordance with the Plan;

f. **Compliance with Long-Term Stewardship (LTS) Plan.** All work required by the Long-Term Stewardship Plan must be performed to DNREC’s satisfaction in accordance with the LTS Plan.

3) A Contaminated Materials Management Plan (CMMP) must be submitted to DNREC within 60 days of the issuance of the Final Plan of Remedial Action. The CMMP will provide guidance to enable construction workers to safely handle any potential contaminated soil and groundwater at the Site.

4) The CMMP will be implemented upon its approval by DNREC as required.

5) A Long-Term Stewardship (LTS) Plan shall be submitted to DNREC for approval within 60 days of the issuance of the Final Plan of Remedial Action. The LTS plan will detail: 1) the groundwater monitoring requirements and schedule to be followed in order to monitor the attenuation of the groundwater Contaminants of Concern (COCs); and 2) the site-inspection schedule to be followed in order to ensure the long-term integrity of the remedy.

6) The LTS Plan must be implemented within 60 days of its approval by DNREC.
7) Remedial Action Completion Report must be submitted to DNREC within 60 days of the completion of the remedial actions required in this Proposed Plan.

8) A request for a Certification of Completion of Remedy (COCR) must be submitted to DNREC within 60 days of approval of the Remedial Action Completion Report.

**What are the long term plans for the Site after the cleanup?**

The Site will be used as industrial park.

**How can I find additional information or comment on the Proposed Plan?**

The complete file on the Site including the Remedial Investigation Report and the various reports are available at the office of DNREC at 391 Lukens Dr., New Castle, DE 19720. Most documents are also found on:


The 20-day public comment period begins on July 20, 2017 and ends at close of business (4:30 pm) on August 9, 2017. Please send written comments to the DNREC office at 391 Lukens Drive, New Castle, DE 19720 to Rick Galloway, Project Officer or via email to rick.galloway@state.de.us.

Figure 1: Site Location Map
Figure 2: Site Map with Operable Units
## Glossary of Terms Used in this Proposed Plan

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
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<tbody>
<tr>
<td>Certification of Completion of Remedy (COCR)</td>
<td>A formal determination by the Secretary of DNREC that remedial activities required by the Final Plan of Remedial Action have been completed.</td>
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<tr>
<td>Contaminant of Concern (COC)</td>
<td>Potentially harmful substances at concentrations above acceptable levels.</td>
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<tr>
<td>Contaminated Materials Management Plan</td>
<td>A written plan specifying how potentially contaminated material at a Site will be sampled, evaluated, staged, transported and disposed of properly.</td>
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<tr>
<td>Final Plan of Remedial Action</td>
<td>DNREC’s adopted plan for cleaning up a hazardous site.</td>
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<tr>
<td>Risk</td>
<td>Likelihood or probability of injury, disease, or death.</td>
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<tr>
<td>Restricted Use</td>
<td>Commercial or Industrial setting</td>
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<tr>
<td>SIRS</td>
<td>Site Investigation Restoration Section of DNREC, which oversees cleanup of sites that were contaminated as a result of past use, from dry cleaners to chemical companies</td>
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LEGAL NOTICE

AMENDED PROPOSED PLAN OF REMEDIAL ACTION FOR THE REICHHOLD CHEMICAL INC. OU-2

The Department invites public comment on a proposal to clean up a portion of the Reichhold Chemical Inc. Operable Unit 2 (OU-2) in Dover, Delaware. Groundwater in OU-2 has been impacted by chlorinated hydrocarbons. The contamination will be addressed in OU-2 by restricting the area to commercial use, limiting interference with remedy, limiting the use of the groundwater, a plan for construction workers to safely handle the soil and groundwater, requiring a vapor mitigation system and a Long-Term groundwater monitoring program.

Details of the Amended Proposed Plan are available at the office of DNREC at 391 Lukens Dr. New Castle, DE 19720 or 89 Kings Highway, Dover, DE 19901, or online at http://www.dnrec.delaware.gov/whs/awm/SIRB/Pages/SIRBPlans.aspx.

The comment period ends on August 8, 2017. For additional information, please contact Rick Galloway, Project Manager, or via email at rick.galloway@state.de.us.