

**ADDENDUM TO THE
CORRECTIVE MEASURES STUDY**

**TEXTILEATHER CORPORATION
3729 TWINING STREET
TOLEDO, OHIO**

**US EPA ID # OHD 980 279 376
U.S. EPA DOCKET # RCRA-05-2010-0001**

by

**Haley & Aldrich, Inc.
Cleveland, Ohio**

for

**Textileather Corporation
Toledo, Ohio**

**File No. 36005-012
December 20, 2013**

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December 20, 2013
File No. 36005-012

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Attention: Carolyn Bury
EPA Project Manager

Subject: Addendum to the Corrective Measures Study
Textileather Facility, Toledo, Ohio
EPA ID# OHD 980 279 376
U.S. EPA Docket # RCRA-05-2010-0001

Dear Ms. Bury:

On behalf of Textileather Corporation and pursuant to the Administrative Order on Consent (Order) dated 30 September 2009, please find enclosed the Addendum to the Corrective Measures Study for the Textileather Facility (the "Facility"). The Corrective Measures Study (CMS) was submitted to the U.S. EPA on 31 December 2012. As presented in the CMS there are three areas (AOI-01, AOI-15, and AOI-28) that may present unacceptable risk for future site use, when the site is ultimately redeveloped. As such, these areas require corrective measures to address.

Textileather has proposed an active remedy for each of the areas where corrective measures were required, which includes removal of impacted media based on the nature and extent of contaminants identified during the Resource Conservation and Recovery Act Facility Investigation. During review of the CMS, the U.S. EPA agreed with the approach for these areas and requested that preliminary remediation goals (PRGs) be established to evaluate whether the excavation remedies meet the corrective measure objectives. Haley & Aldrich proposed risk-based PRGs that were consistent with the methodology established in the RFI and would be protective of human health, given the assumed future use of the Site as commercial/industrial. These proposed PRGs were reviewed and discussed during teleconference calls on August 27 and September 12, 2013 with the U.S. EPA. The U.S. EPA was in general agreement with the methodology to establish the proposed PRGs, utilizing the risk-based approach. The following addendum to the CMS has been prepared to document the methodology used to calculate risk-based preliminary remediation goals (PRGs) that are protective for human health.



Textileather Corporation

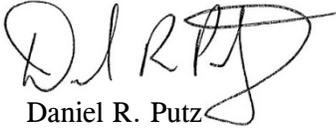
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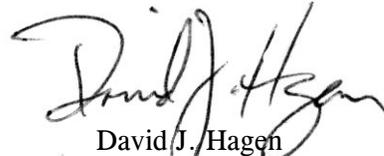
If you have any questions or require additional information, please contact us.

Sincerely yours,

HALEY & ALDRICH, INC.



Daniel R. Putz
Project Manager



David J. Hagen
Senior Vice President

c: D. Veinot- Canadian General-Tower

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1. INTRODUCTION

The Resource Conservation and Recovery Act (RCRA) Corrective Measures (CMS) (Haley & Aldrich December 2012) was prepared under the direction of Textileather Corporation for the Textileather Facility (the "Facility") located in Toledo, Ohio. The CMS was submitted to the U.S. EPA on 31 December 2012. The United States Environmental Protection Agency (U.S. EPA) ID Number for the Facility is #OHD980279376. The Site is located at 3729 Twining Street, Toledo, Ohio. The CMS describes the evaluation of corrective measures for addressing contaminated environmental media at the Facility identified during the RCRA Facility Investigation (RFI), and the rationale for their selection. The U.S. EPA will select final corrective measures for the Facility after the public comment period has ended and any information submitted during the comment period has been reviewed and considered.

As presented in the CMS there are three areas (AOI-01, AOI-15, and AOI-28) that may present unacceptable risk for future site use, when the site is ultimately redeveloped. As such, these areas require corrective measures to address. Textileather has proposed an active remedy for each of the areas where corrective measures were required, which includes removal of impacted media based on the nature and extent of contaminants identified during the Resource Conservation and Recovery Act Facility Investigation. During review of the CMS, the U.S. EPA agreed with the approach for these areas and requested that preliminary remediation goals (PRGs) be established to evaluate whether the excavation remedies meet the corrective measure objectives. The following addendum to the CMS has been prepared to document the methodology used to calculate risk-based preliminary remediation goals (PRGs) that are protective for human health.

2. PRELIMINARY REMEDIATION GOALS

2.1 Proposed Corrective Measures

The CMS identified three areas (AOI-01, AOI-15, and AOI-28) that may present unacceptable risk for future site use, when the site is ultimately redeveloped. In the CMS, Textileather proposed the most aggressive remedial option, such that the Facility can be brought back to beneficial re-use in the shortest period of time, while minimizing the requirement for long-term maintenance. The CMS concluded that for the issues at the Facility, this turns out to be the most effective, permanent and often most cost-effective alternative:

- AOI-01 – excavation of PCB-impacted subsurface soils and NAPL,
- AOI-15 – excavation of the NAPL around PZ-31, and
- AOI-28 – excavation of VOC-impacted soils.

Based on the evaluation detailed in the CMS, removal of the impacted soils would satisfy the three performance criteria established by the U.S. EPA. In addition, removal would score high in comparison to the balancing criteria. Therefore, the removal option was considered in the CMS to be the best corrective measures alternative for these areas.

2.2 Calculation of Risk-Based PRGs

This addendum provides documentation of the methodology used to calculate risk-based preliminary remediation goals (PRGs) that are protective for human health. PRGs represent chemical concentrations that correspond to set levels of target cancer risk and target hazard index. PRGs may be used to plan remediation (i.e., define the extent of areas that require response actions), and to evaluate the post-remediation confirmatory analytical results, to help determine when remediation has achieved conditions that do not pose unacceptable risks.

PRGs are derived in consideration of the exposure scenarios, media, and chemicals which were associated with risks in excess of USEPA risk management criteria, as defined by the results of the Human Health Risk Assessment (HHRA) provided in the RFI Report (Haley & Aldrich, December 2012). The results of the HHRA indicated that the following media were associated with risks greater than a cancer risk of 1E-04 and/or a hazard index (HI) greater than 1; chemicals that contributed to the risks at these areas are also indicated below, and include polychlorinated biphenyls (PCBs), bis(2-ethylhexyl)phthalate (BEHP), di-n-octylphthalate (DNOP), trichloroethene (TCE), and perchloroethene (PCE).

	Commercial Worker	Construction Worker
AOI-01 Subsurface Soil	$X_{(PCBs)}$	$X_{(PCBs)}$
AOI-01 NAPL (indoors)	$X_{(PCBs)}$	
AOI-15 NAPL (in soil)	$X_{(PCBs, BEHP, DNOP)}$	$X_{(PCBs, BEHP)}$
AOI-28 Soil Vapor	$X_{(TCE, PCE)}$	

PRGs were derived for three groups of chemicals at the Site:

- 1) Chemicals of Concern (COCs). COCs are chemicals associated with a cancer risk greater than 1E-06 or a hazard index (HI) greater than 1 for Areas of Concern (AOCs) in which cumulative receptor cancer risks exceeded 1E-04 or cumulative receptor hazard index values exceeded 1, based on the results of the HHRA. The COCs are the chemicals listed above.
- 2) Chemicals of Potential Concern (COPCs). COPCs are the chemicals that were quantitatively evaluated in the HHRA because they were detected in at least one sample at a concentration greater than conservative risk-based screening levels. PRGs were derived for COPCs to provide additional information by which to evaluate post-remedial confirmatory data, where required.
- 3) Other Site-related Chemicals of Interest. A PRG was also identified for tetrahydrofuran because it is known to be present in Site media. Although it was not detected at concentrations greater than conservative risk-based screening levels (i.e., not retained as a COPC), a PRG for this chemical will allow for evaluation of post-remedial confirmatory data, where required.

PRGs were not derived for NAPL because the remedial objectives for NAPL are to reduce NAPL volume and/or remove NAPL, not to reduce the concentrations of constituents detected within the NAPL.

USEPA describes methods for deriving PRGs in *Risk Assessment Guidance for Superfund (RAGS) Part B* (USEPA, 1991). The methodology provided in RAGS Part B involves the algebraic rearrangement of the exposure intake and risk calculation algorithms used in the HHRA, to derive PRGs for a given set of receptor exposure parameters, toxicity values, and target risks. This methodology is useful for deriving PRGs at the on-set of the RFI process, before the HHRA has been completed. However, since the results of the HHRA establish a relationship between exposure point concentration (EPC), receptor exposure, toxicity, and risk, the results of the HHRA can be used directly to derive PRGs. In this approach, an equality is established between the EPC used in the HHRA and the risk or HI that was calculated for the EPC. The equality is then used to solve for the concentration that corresponds to a specified level of risk or HI; that concentration is the PRG, as shown in the following equation:

$$\frac{EPC}{Risk\ or\ HI} = \frac{PRG}{Target\ Risk\ or\ HI}$$

Table 1 provides documentation of the EPCs and risks that were used to derive PRGs in soil. The information provided in Table 1 was excerpted directly from Tables 37 and 38 of the HHRA. As indicated in Table 1, PRGs were derived for a target cancer risk of 1E-05 and a target HI of 1. Achieving a residual (post-remedial) concentration that does not exceed the lower of the PRG set at a target cancer risk of 1E-05 or a HI of 1 ensures that the cumulative cancer risk among all COCs will not exceed 1E-04.

Table 2 provides documentation of the PRG derivation for soil gas. PRGs were based on a cancer risk of 1E-05 and a target HI of 1.

2.3 Post-Remedy Evaluation

As identified in the CMS, the proposed remedies for the three areas that may present unacceptable risk for future site use, should site conditions change are:

- AOI-01 – excavation of PCB-impacted subsurface soils and NAPL,
- AOI-15 – excavation of the NAPL around PZ-31, and
- AOI-28 – excavation of VOC-impacted soils.

The PRG for excavation of NAPL in AOI-01 and AOI-15 is excavation of all visible signs of NAPL. Based on the RFI activities, the proposed excavations in AOI-01 and AOI-15 presented in the CMS should remove free- and residual- NAPL in these areas. Therefore, no post-remedy sampling is required.

The PRG for the PCB-impacted subsurface soils in AOI-01 is 6.5/8.5 mg/kg for commercial/construction workers. The proposed excavation in AOI-01 presented in the CMS should remove most, if not all, of the PCB-impacted soils. If soil staining or residual NAPL remains at the proposed extend of excavation, soil samples will be obtained from the sidewalls and bottom of the excavation at a rate of 1 per 50 lineal feet on the sidewalls and 1 per 1,000 sqft on the bottom of the excavation. The results will be compared to the PRGs established above.

In AOI-28, the HHRA indicated that the potentially complete future pathway would be for commercial workers exposed to elevated soil gas concentrations, when the site is ultimately redeveloped. The proposed remediation presented in the CMS will remove the elevated VOC soil impacts, such that the source of the VOCs in soil gas will be eliminated. Therefore, no post-remedy sampling is required.

Results of the post-remedy evaluation will be documented in the construction completion report for the corrective measures.

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TABLES

**TABLE 1
PRELIMINARY REMEDIATION GOALS FOR SOIL
TEXTILEATHER CORPORATION
TEXTILEATHER FACILITY
TOLEDO, OHIO**

Constituent	CASRN	Units	Basis for Calculating Preliminary Remediation Goals (4)						Preliminary Remediation Goals (5)			
			EPC		Construction Worker		Commercial Worker		Construction Worker		Commercial Worker	
			Value	basis	ELCR	HI	ELCR	HI	ELCR = 1E-5	HI = 1	ELCR = 1E-5	HI = 1
Chemicals of Concern (1)												
Aroclor-1242 (PCB-1242)	53469-21-9	mg/kg	424	AOI 1 - subs	6E-05	6E+01	5E-04	3E+01	76	6.5	8.5	12
Aroclor-1248 (PCB-1248)	12672-29-6	mg/kg	4.7	AOI 22 - ss	6E-07	7E-01	6E-06	4E-01	76	6.5	8.5	12
Chemicals of Potential Concern (2)												
Benzo(a)anthracene	56-55-3	mg/kg	6.1	AOI 3 - ss	1.3E-07	0.0E+00	1.2E-06	0.0E+00	468		53	
Benzo(a)pyrene	50-32-8	mg/kg	5.9	AOI 3 - ss	1.1E-06	0.0E+00	1.0E-05	0.0E+00	52		5.8	
Benzo(b)fluoranthene	205-99-2	mg/kg	6.2	AOI 3 - ss	1.4E-07	0.0E+00	1.2E-06	0.0E+00	453		51	
bis(2-Ethylhexyl)phthalate	117-81-7	mg/kg	73	AOI 2 - subs	6.1E-08	3.0E-03	5.2E-07	5.2E-03	11,911	23,823	1,406	14,056
Di-n-octyl phthalate	117-84-0	mg/kg	425	AOI 2 - subs	0.0E+00	1.5E-02	0.0E+00	5.0E-02		28,587		8,434
Pentachlorophenol	87-86-5	mg/kg	30	AOI 17 - ss	9.8E-07	3.4E-02	9.8E-06	1.4E-02	307	876	31	2,179
Benzene	71-43-2	mg/kg	0.64	AOI 2 - subs	8.4E-09	2.6E-03	4.1E-08	4.9E-04	764	252	159	1,303
Ethylbenzene	100-41-4	mg/kg	426	AOI 2 - subs	0.0E+00	5.9E-03	0.0E+00	7.4E-03		71,928		57,277
Toluene	108-88-3	mg/kg	3025	AOI 2 - subs	0.0E+00	4.6E-02	0.0E+00	4.0E-02		65,869		76,387
Trichloroethene	79-01-6	mg/kg	5.3	AOI 28 - ss	3.3E-08	3.5E-02	1.7E-07	4.0E-02	1,624	152	311	131
Xylene (total)	1330-20-7	mg/kg	2777	AOI 2 - subs	0.0E+00	3.5E-02	0.0E+00	2.3E-01		79,398		11,974
Antimony	7440-36-0	mg/kg	3.4	AOI 2 - ss	0.0E+00	2.7E-02	0.0E+00	7.2E-03		124		467
Arsenic	7440-38-2	mg/kg	2.5	AOI 2 - ss	1.9E-07	3.0E-02	1.4E-06	8.7E-03	133	85	18	291
Chromium Total	7440-47-3	mg/kg	42	AOI 2 - ss	1.0E-08	6.9E-03	2.2E-07	1.2E-02		6,119		3,479
Lead	7439-92-1	mg/kg	178	AOI 2 - ss	0.0E+00	0.0E+00	0.0E+00	0.0E+00		800		800
Other Site-Related Constituents of Interest (3)												
Tetrahydrofuran	109-99-9	mg/kg	5500	Site-wide	Not calculated (not a COPC)					95,300		95,300

Notes and Abbreviations:

- (1) - Chemicals which posed a cancer risk greater than 1E-06 or a hazard index greater than 1 at AOCs for which cumulative risks were greater than 1E-04 or a hazard index of 1.
- (2) - Chemicals that were carried through the risk assessment, but which were not identified as chemicals of concern.
- (3) - Chemicals known to be significant Site-related constituents, but that were not retained as chemicals of potential concern because they were not detected in Site soil at concentrations greater than screening levels.
- (4) - Source of exposure point concentration and risk used to calculate preliminary remediation goal as defined in note (5).
- (5) - Preliminary remediation goals calculated as follows: PRG = target risk or HI / (EPC x ELCR or HI calculated for EPC)

EPC = Exposure Point Concentration.
 mg/kg = milligrams per kilogram.
 ELCR = excess lifetime cancer risk
 HI = hazard index

TABLE 2
PRELIMINARY REMEDIATION GOALS FOR FUTURE (AOI-28) INDOOR AIR
 TEXTILEATHER CORPORATION
 TEXTILEATHER FACILITY
 TOLEDO, OHIO

Chemical of Concern	CASRN	Units	Soil Gas EPC	Indoor Air EPC ⁽¹⁾	Commercial Worker		Preliminary Remediation Goals - Soil Vapor ⁽²⁾	
					ELCR	HI	ELCR = 1E-5	HI = 1
Volatile Organic Compounds								
Tetrachloroethene	127-18-4	ug/m3	310,000	3,100	6.5E-05	18	47,692	17,222
Trichloroethene	79-01-6	ug/m3	64,000	640	2.1E-04	72	3,048	889

Notes and Abbreviations:

(1) - Indoor Air EPC calculated using a subslab soil gas to indoor air attenuation factor equal to 0.01.

(2) - Preliminary remediation goals calculated as follows: PRG = target risk or HI x attenuation factor (100) / (EPC x ELCR or HI calculated for EPC)

EPC = Exposure Point Concentration.

ug/m3 = micrograms per cubic meter

ELCR = excess lifetime cancer risk

HI = hazard index