BENCHMARK

ENVIRONMENTAL
ENGINEERING &
SCIENCE, PLLC

February 26, 2007

RECEIVED

Mr. Stan Radon
Engineering Geologist II
New York State Department of Environmental Conservation
270 Michigan Avenue
Buffalo, NY 14203

FEB 2 7 2007 NYSDEC REG 9 FOIL REL \_\_UNREL

Re:

ISOCHEM Inc. – Lockport Facility

Summary of Site Reconnaissance Activities

Dear Mr. Radon:

Benchmark Environmental Engineering & Science, PLLC (Benchmark) has prepared this letter to present the findings of site reconnaissance activities performed at the ISOCHEM Inc. Lockport Facility (Site) on January 4, 2007.

#### SOUTH SLOPE ASSESSMENT

On January 4, 2007, Benchmark personnel conducted an on-site visual assessment of the southern portion of the Isochem Facility located in Lockport, NY (see Figure 1). Site reconnaissance photographs are presented in Attachment 1. This area of the site consists of a relatively steep slope that is densely vegetated with medium-aged trees and underbrush. The top of the slope begins south of the facility's security fence and terminates approximately 15 to 20 feet north of Eighteenmile Creek. The elevation change from the plant surface to the toe of slope is approximately 40 to 50 feet, where the topography becomes relatively flat adjacent to the creek bank. The flat area appears to be the riparian flood plain. Two outwash erosion channels were observed high on the slope near the plant site elevation indicating these channels may be caused by high velocity seasonal overland flow and drainage of the plant site.

To complete the inspection, Benchmark personnel traversed an area across the face of the slope approximately 300 feet long. It was observed that the fill material covering the bank consisted primarily of non-plastic fines with concrete, brick, metal pieces, slag, cindery ash, and miscellaneous debris. Abandoned stone walls and corrugated pipe structures (see Attachment 1) were also observed on both sides of the Creek in the vicinity of the slope inspection area indicating a long history of use/disturbance in this area.

In addition to fill, a black crystallized material was visually observed at several locations along the toe of the slope within the inspection area (see Figure 1 and Attachment 1). The solidified material was hard and brittle. Samples were collected by striking the material with a hammer. Broken pieces appeared to be weathered and crystalline in composition having a slight tar-like

odor. In general, the material appeared to have been mobile at one time flowing in "fingers" from the toe of slope toward, and at some locations, into the Creek, as evidenced by the flow pattern (see Attachment 1). The material at the waters edge did not produce any evidence of leaching as staining was not observed on Creek rocks nor was a sheen observed on the Creek water. A sample of the black material was collected and submitted to Severn Trent Laboratories, Inc. (STL) for analysis of Target Compound List Semi-Volatile Organic Compounds (SVOCs) via Method 8270C. Due to minimal olfactory evidence of impact, volatile organic compounds were not included in the analysis. Analytical results are summarized in Table 1. For comparison, monitoring well MW-2D dense non-aqueous phase liquid (DNAPL) analytical results have been included in the table.

#### **CONCLUSIONS**

Although the solid material analytical results indicate a similar composition to that of the DNAPL collected from upgradient well MW-2D, the solid material deposition from the toe of the slope to the Creek does not appear recent based on the hardness and weathered nature of the material. Based on these observations and the results of the previous downstream surface water sampling, the impact to the Creek from this material appears to be negligible at this time.

Please contact us if you have any questions or require additional information.

Sincerely,

Benchmark Environmental Engineering & Science, PLLC

Patrick T. Martin, P.E., BCEE

Project Manager

Att.

c: Matt Barmasse, ISOCHEM File: 0049-007-100



# **TABLES**





## TABLE 1

## **NON-AQUEOUS PHASE LIQUID ANALYSIS**

## **Groundwater Evaluation** Isochem, Inc. Lockport, New York

Parameter	Sample Location			
	DNAPL - Liquid		DNAPL - solid	
	Concentration	Percent of Total	Concentration	Percent of Total
Semi-Volatiles (ug/kg)				
2-Methylnaphthalene	52,000,000 D	15.29%	1,800,000	3.57%
Acenaphthene	34,000,000 D	10.00%	2,200,000	4.37%
Acenaphthylene	ND	0.00%	43,000 J	0.09%
Anthracene	6,100,000 DJ	1.79%	3,000,000	5.96%
Benzo(a)anthracene	1,700,000 DJ	0.50%	4,100,000	8.14%
Benzo(a)pyrene	ND	0.00%	3,100,000	6.15%
Benzo(b)fluoranthene	720,000 DJ	0.21%	2,500,000	4.96%
Benzo(g,h,i)perylene	ND	0.00%	1,700,000	3.37%
Benzo(k)fluoranthene	820,000 DJ	0.24%	920,000	1.83%
Biphenyl	ND	0.00%	200,000 J	0.40%
Carbazole	1,300,000 DJ	0.38%	240,000 J	0.48%
Chrysene	1,300,000 DJ	0.38%	4,000,000	7.94%
Dibenz(a,h)anthracene	ND	0.00%	540,000 J	1.07%
Dibenzofuran	33,000,000 D	9.71%	230,000 J	0.46%
Fluoranthene	18,000,000 D	5.29%	4,900,000	9.73%
Fluorene	27,000,000 D	7.94%	1,500,000	2.98%
Indeno(1,2,3-c,d)pyrene	73,000	0.02%	1,200,000	2.38%
Naphthalene	88,000,000 D	25.88%	1,400,000	2.78%
Phenathrene	66,000,000 D	19.41%	9,400,000	18.66%
Pyrene	10,000,000 DJ	2.94%	7,400,000	14.69%
TOTAL	340,013,000	100.00%	50,373,000	100.00%

- 1. Only those compounds detected above the method detection limit at a minimum of one sample location are reported in this table.
- 2. " D " = analyzed at the secondary dilution factor.3. " J " = Estimated Value
- 4. "ND" indicates parameter was not detected above laboratory reporting limit and is reported herein as not detected (ND).

# **FIGURES**



## **ATTACHMENT 1**

PROJECT PHOTOGRAPHS





## **Client Name:**

Isochem, Inc.

## Site Location:

South property limits near and adjacent to Eighteenmile Creek

## Project No.:

0049-007-100

Photo No.

**Date** 

1

01/04/07

#### **Direction Photo Taken:**

Looking north toward plant, upslope

## **Description:**

Photo of one of two erosion channels and vegetation



Photo No.

Date

2

01/04/07

## **Direction Photo Taken:**

Looking west downstream

## Description:

Eighteenmile Creek, flowing away from view, showing man-made structures adjacent to the Creek.



Prepared By:

BCH



## **Client Name:**

Isochem, Inc.

## Site Location:

South property limits near and adjacent to Eighteenmile Creek

## Project No.:

0049-007-100

Photo No.

3

01/04/07

Date

#### **Direction Photo Taken:**

Looking west downstream

## Description:

Evidence of historical man-made structures located south of Eighteenmile Creek - note pipe along top left of photo and stacked stone walls at left center.



Photo No.

Date

4

01/04/07

#### **Direction Photo Taken:**

Looking south across Eighteenmile Creek

#### Description:

Evidence of historical man-made presence located south of Eighteenmile Creek - note stacked stone walls.



Prepared By: BCH

Page 2 of 5



## **Client Name:**

Isochem, Inc.

## Site Location:

South property limits near and adjacent to Eighteenmile Creek

Project No.:

0049-007-100

Photo No.

Date

5

01/04/07

**Direction Photo Taken:** 

NA



Black material to right of 6" discharge pipe (origin unknown).



Photo No.

Date

6

01/04/07

**Direction Photo Taken:** 

NA

## Description:

Black material appeared to have once flowed from north side of toe of slope toward creek bank.



Prepared By: \_\_\_\_

BCH



**Client Name:** 

Isochem, Inc.

Site Location:

South property limits near and adjacent to Eighteenmile Creek

Project No.:

0049-007-100

Photo No.

Date

7

01/04/07

**Direction Photo Taken:** 

NA

Description:

Black material following breaking with hammer.



Photo No.

Date

8

01/04/07

**Direction Photo Taken:** 

Looking west downstream

Description:

Black material appears to have flowed into Eighteenmile Creek. No staining or sheen was observed.



BCH

Prepared By:



**Client Name:** 

Isochem, Inc.

Site Location:

South property limits near and adjacent to Eighteenmile Creek

Project No.:

0049-007-100

Photo No.

9

01/04/07

**Date** 

**Direction Photo Taken:** 

Looking northeast, upslope

Description:

Slag material on slope of bank.



Photo No.

Date

10

01/04/07

**Direction Photo Taken:** 

Looking north, upslope

Description:

Cindery ash material on slope of bank.



 $\mathcal{BCH}$ 



**FIGURE** 

## SITE PLAN

SUPPLEMENTAL FIELD INVESTIGATION & SAMPLING ACTIVITIES

ISOCHEM LOCKPORT FACILITY LOCKPORT, NEW YORK

> PREPARED FOR ISOCHEM, INC.



BENCHMARK 726 EXCHANGE STREET SUTTE 624 BUFFALO, NEW YORK 14210 (716) 856-0599

JOB NO.: 0049-007-100