

January 12, 2015

**VIA E-MAIL**

Mr. John Iacoangeli, Principal  
 Beckett & Raeder, Inc.  
 535 West William, Suite 101  
 Ann Arbor, MI 48013

**RE: DECEMBER 2014 RESULTS OF INTERIM ACME CREEK MONITORING AT GRAND TRAVERSE TOWN CENTER, ACME, MICHIGAN**

Dear John:

The purpose of this letter is to transmit the results of interim surface water monitoring of Acme Creek that was completed by Horizon Environmental Corporation (“Horizon”) on behalf of the Village at Grand Traverse, LLC (“VGT”), in relation to VGT’s development of the Grand Traverse Town Center (“GTTC”) site in Acme Township, Grand Traverse County, Michigan.

The surface water monitoring results presented here are from sampling completed on December 16, 2014, in accordance with the interim monitoring provisions of the Acme Creek Monitoring Plan, issued to Acme Township for review and consideration on December 5, 2014. Consistent with that plan, surface water samples were collected from Acme Creek at three locations during a qualifying rain event: one upstream of the GTTC site and two downstream (see enclosed Figure 1). This rain event deposited 0.15 inches of rain at the site and ended on December 16, 2014 at approximately 7:50 am. Samples were field analyzed for turbidity and temperature and were also submitted for laboratory analysis of total suspended solids (“TSS”). The results of this sampling event are summarized as follows:

Acme Creek Sampling Location	Sample Date	Sample Time	Temp. (°C)	TSS (mg/L)	Turbidity (NTU)
Upstream (at property line)	12/16/14	8:00 am	6.2	8.0	6
Downstream (at property line)	12/16/14	8:08 am	6.6	6.0	7
Downstream (at M-72)	12/16/14	8:35 am	6.5	<5.0	6

Mr. John Iacoangeli

January 12, 2015

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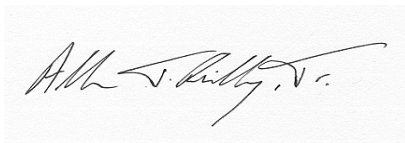
Field analyses for turbidity were completed using a Hach 2100P portable turbidimeter. Laboratory analytical reports of TSS results for these samples are presented as Attachment I.

Acme Creek was observed to be visually clear at the time of sampling in all sampling locations during the December 16 sampling event. Concentrations of TSS, temperature and turbidity levels in Acme Creek immediately downstream of the GTTC site are consistent with those observed immediately upstream of the GTTC site. Concentrations of TSS in Acme Creek during these sampling events were also generally consistent with TSS concentrations observed in the August 2012 baseline sampling event (11.2 mg/L and 4.4 mg/L upstream and downstream of the site, respectively).

If you have questions or require additional information regarding this sampling event, please contact me at 616.554.3210.

Sincerely,

HORIZON ENVIRONMENTAL

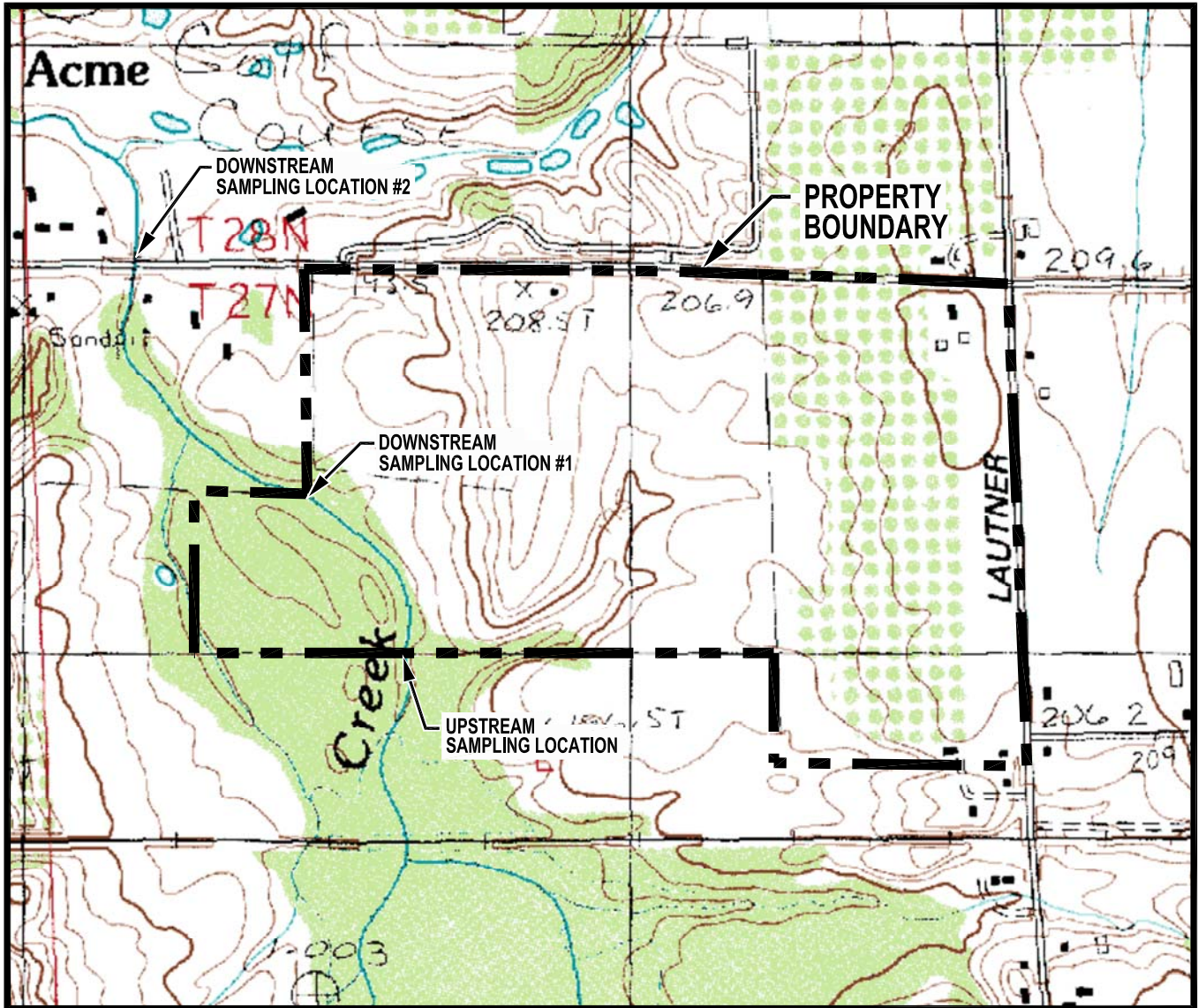
A handwritten signature in black ink, appearing to read "Allen J. Reilly, Jr.", is centered within a light gray rectangular box.

Allen J. Reilly, Jr.

Director, Environmental Risk Management

cc: J. Zollinger, Acme Township  
S. Schooler, VGT  
S. Smith, VGT  
E. Ritchie, Team Elmer's  
S. Folkersma, Team Elmer's  
D. Donohue, Warner Norcross & Judd

enclosures



TAKEN FROM 7.5 MINUTE SERIES TOPOGRAPHIC MAP  
GRAWN QUADRANGLE PHOTOREVISED 1983  
NOT TO SCALE



Acme Township  
Grand Traverse County, MI



North

**HORIZON ENVIRONMENTAL**

Village at Grand Traverse  
Acme Township, Grand Traverse County, Michigan

SITE LOCATION MAP

PROJECT NUMBER:  
WNU-1401

FIGURE:

**1**

DECEMBER 2014

***ATTACHMENT I***

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***LABORATORY ANALYTICAL RESULTS OF  
DECEMBER 2014 SURFACE WATER SAMPLING***



**INDEPENDENT TESTING LAB**

830 ROBINWOOD COURT, TRAVERSE CITY, MI 49686

PH: 231-929-0905

FAX: 231-929-0894

www.gtanalytical.com

Company: HORIZON ENVIRONMENTAL  
Name:  
ClientProj:

Site Addr: VGT - ACME

GTA ProjNo: 121714-7

Sampled By: MIKE POTTER/HORIZON  
Date Rec: 12/17/2014  
Time Rec: 2:00 PM

Sample No.	Sample ID	Date Sampled	Time Sampled	Sample Matrix
1	ACME UPSTREAM	12/16/2014	8:00 AM	WATER
2	ACME DOWNSTREAM	12/16/2014	8:08 AM	WATER
3	ACME @ M-72	12/16/2014	8:35 AM	WATER

ELECTRONIC SIGNATURE REPORT. This is a final report for the following pages of data for the samples specified above. All analysis was performed by the methods stated and all quality control measures required were completed. All quality control information is available upon request.

**Kirk L. Chase**

Digitally signed by Kirk L. Chase  
DN: cn=Kirk L. Chase, o=Grand Traverse Analytical,  
ou=Head Chemist, email=kirk@gtanalytical.com, c=US  
Date: 2014.12.19 13:25:18 -05'00'

Kirk L. Chase/Chemist  
Grand Traverse Analytical  
830 Robinwood Court  
Traverse City, MI 49686  
Ph: 231-929-0905  
Fx: 231-929-0894  
kirk@gtanalytical.com

COMPANY: HORIZON ENVIRONMENTAL  
PROJECT NO:  
LOCATION: VGT - ACME  
MI  
SAMPLED BY: MIKE POTTER/HORIZON

GTA PROJECT NO: 121714-7  
GTA SAMPLE NO: 1  
DATE SAMPLED: 12/16/2014  
TIME SAMPLED: 8:00 AM  
DATE RECEIVED: 12/17/2014  
TIME RECEIVED: 2:00 PM

**SAMPLE RESULTS**

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample Matrix</u>
	SAMPLE ID: ACME UPSTREAM						
	TOTAL SUSPENDED SOLIDS SM2540D	8.0	5.0	mg/L (PPM)	TR	12/19/2014	WATER

ND = NOT DETECTED, RESULT < LOD  
LOD = LIMIT OF DETECTION  
s.u. = STANDARD pH UNITS REPORTED AT 25 C

COMPANY: HORIZON ENVIRONMENTAL  
 PROJECT NO:  
 LOCATION: VGT - ACME  
 MI  
 SAMPLED BY: MIKE POTTER/HORIZON

GTA PROJECT NO: 121714-7  
 GTA SAMPLE NO: 2  
 DATE SAMPLED: 12/16/2014  
 TIME SAMPLED: 8:08 AM  
 DATE RECEIVED: 12/17/2014  
 TIME RECEIVED: 2:00 PM

**SAMPLE RESULTS**

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample Matrix</u>
	SAMPLE ID: ACME DOWNSTREAM						
	TOTAL SUSPENDED SOLIDS SM2540D	6.0	5.0	mg/L (PPM)	TR	12/19/2014	WATER

ND = NOT DETECTED, RESULT < LOD  
 LOD = LIMIT OF DETECTION  
 s.u. = STANDARD pH UNITS REPORTED AT 25 C

COMPANY: HORIZON ENVIRONMENTAL  
 PROJECT NO:  
 LOCATION: VGT - ACME  
 MI  
 SAMPLED BY: MIKE POTTER/HORIZON

GTA PROJECT NO: 121714-7  
 GTA SAMPLE NO: 3  
 DATE SAMPLED: 12/16/2014  
 TIME SAMPLED: 8:35 AM  
 DATE RECEIVED: 12/17/2014  
 TIME RECEIVED: 2:00 PM

**SAMPLE RESULTS**

<u>No:</u>	<u>Analysis</u>	<u>Concentration</u>	<u>LOD</u>	<u>Units</u>	<u>Analyst</u>	<u>Date Completed</u>	<u>Sample Matrix</u>
	SAMPLE ID: ACME @ M-72						
	TOTAL SUSPENDED SOLIDS SM2540D	ND	5.0	mg/L (PPM)	TR	12/19/2014	WATER

ND = NOT DETECTED, RESULT < LOD  
 LOD = LIMIT OF DETECTION  
 s.u. = STANDARD pH UNITS REPORTED AT 25 C



CELEBRATING 10 YEARS ☆ 2002-2012 ☆

**CHAIN OF CUSTODY**

PROJECT NUMBER	SITE NAME/ADDRESS	COMPANY/NAME
	VGT	Horizon Environmental
SAMPLED BY	COMPANY	GTA PROJECT #
Miles Potts	Horizon Environmental	

**SAMPLE INFORMATION**

#	SAMPLE ID	DATE SAMPLED	TIME	MATRIX	ANALYSIS
1	Acme upstream	12-16-14	0800	W	TSS
2	Acme Downstream	↓	0808	W	TSS
3	Acme @ M-72	↓	0835	W	TSS

<b>BILL TO:</b>	<b>REPORT TO:</b>		
RELEASED BY	DATE/TIME	RECEIVED BY	DATE/TIME
M. Potts	12-17-14 1400	J. Long	12/17/14 14:00

REQUESTED TAT  STANDARD  1 BUSINESS DAY  2 BUSINESS DAYS  3 BUSINESS DAYS