

June 9, 2014

Ms. Holly Burke  
State Cooperative Program/Remedial Section  
Kansas Department of Health and Environment  
1000 SW Jackson Street, Suite 410  
Topeka, Kansas 66612-1367

**RE: Catchment Dike System Compliance Sampling Report March 2014  
National Zinc Smelter Site, Cherryvale, Kansas**

Dear Ms. Burke,

On October 1, 2013 Project Navigator, Ltd. on behalf of United States Steel Corporation (USS) and Citigroup Global Market Holdings, Inc. (Respondents), completed an inspection of the Drum Creek Catchment Dike System (CDS) and collected three composite sediment samples for laboratory analysis as part of the agreed-upon bi-annual compliance monitoring. The work was performed by Philip Jen, P.G. and Brian Moore of Project Navigator, Ltd.

The results of the inspection, the sediment collection methodology and associated analytical results, including a comparison to the results of the samples taken during previous sampling events are provided in this letter report.

### **Inspection & Repairs**

The location of the CDS is provided in Figure 1. Water depth between the dikes was approximately 2 foot deep measured at the inside of the upstream catchment dike at the time of inspection and flow was moderate. The catchment was observed to be in good condition, however, a large tree was observed within the catchment. The upstream and downstream dikes did not appear to have sustained any damage. The tree was left in place as it does not appear to pose any danger to the catchment and will likely pass on downstream during a future storm event. No washouts were observed along or around the edges of the dikes. Photos of the catchment are provided in Figure 2.

Minimal accumulated sediment was observed within the catchment with sediment primarily trapped adjacent to the downstream gabion.

### **Analytical Sampling and Results**

The sampling locations and representative sediment photographs are depicted in Figures 2 and 3. Samples consisted of poorly sorted medium grained gravel, with minor sand and silt. Minor organic materials consisting of wood and leaf debris were observed.

Samples were collected with a retriever scoop, placed into 5 gallon buckets and homogenized prior to placement in 4 ounce sample jars provided by the laboratory. Samples were composites of accumulated sediment from random points across the area of accumulation; to the extent the locations were accessible. Water present in the samples was slowly decanted from the sample container following collection. Samples contained minimal excess water. Sample containers were then sealed and deposited into a cooler with ice for shipment to the laboratory for analysis.

The Respondents' samples were submitted to PACE Analytical Laboratory for analysis of cadmium, arsenic, lead, and zinc. The laboratory was instructed to grind the entire sample prior to analyses. Results are compared to the consensus-based sediment quality guidelines (CBG) developed for the site. Historical values for all samples collected by the Respondents are presented in Table 1. The laboratory reports for the current sampling events are included in Attachment 1.

The current sample results with a comparison with previous sample events are shown below. Values above the CBG are in red font.

	Sample ID	Date	Arsenic (mg/kg)	Cadmium (mg/kg)	Lead (mg/kg)	Zinc (mg/kg)
Upstream	SD-20	March 2011	38.6	4.6	57.4	500
	SD-23	August 2011	20.3	< 2.7	44.5	612
	SD-26	March 2012	78.3	4.9	75.2	766
	SD-29	August 2012	20.8	3.6	45.6	489
	SD-32	February 2013	44.6	< 2.4	33.6	538
	SD-35	October 2013	70.2	6.9	49.2	758
	SD-38	March 2014	7.1	0.71	424	226
Midstream	SD-19	March 2011	31.9	6.1	36.4	343
	SD-22	August 2011	10	< 1.1	42.1	596
	SD-25	March 2012	5.9	< 0.55	13.7	41.3
	SD-28	August 2012	20	3.3	35.2	463
	SD-31	February 2013	28.3	8.1	131	695
	SD-34	October 2013	70.7	5.4	70.5	685
	SD-37	March 2014	68	3.2	54.7	638
Downstream	SD-18	March 2011	47.2	6.1	61.4	475
	SD-21	August 2011	12.1	< 0.89	13.3	280
	SD-24	March 2012	< 5.1	< 2.5	13.8	93.5
	SD-27	August 2012	20.7	3.7	50.7	611
	SD-30	February 2013	46.8	< 5.0	49.4	589
	SD-33	October 2013	87.3	< 2.2	58.8	697
	SD-36	March 2014	55	3.2	76.1	753
<b>Consensus Based Guideline</b>			<b>33</b>	<b>4.98</b>	<b>128</b>	<b>459</b>

### Analytical Summary

*Upstream:* The concentration of cadmium, zinc, and arsenic were detected below the CBG in the upstream catchment segment while the lead concentration was detected above the CBG. The analytical results may suggest that the sample collected is an outlier due to a significant shift in arsenic, lead, and zinc when compared to historic

concentrations as well as concentrations observed in both the midstream and downstream samples. We will continue to monitor this location and confirm using both historical and future analytical samples to determine if this is an outlier or a shift in the analytical trend.

*Between:* The concentration of zinc and arsenic were detected above the CBG in the midstream catchment segment while cadmium and lead concentration was detected below the CBG.

*Downstream:* The concentration of zinc and arsenic was detected above the CBG in the downstream catchment segment while the cadmium and lead concentrations were detected below the CBG.

An analysis of all results from the upstream, midstream, and downstream sediment samples show the average values of arsenic, cadmium, and lead are below the consensus-based sediment quality guidelines for the site. The average value of zinc was observed above the consensus-based sediment quality guideline. Historical concentrations and average values are displayed in Table 1.

However, and perhaps most importantly, the average values at the sampling point located between the dikes, which is the primary sampling point, show averages that are below the CBG for all four parameters.

The historical data shows fluctuations with no obvious pattern from which to conclude a definite cause for the variation. Variation in sediment concentrations could be the result of a combination of potential sources including: wastewater discharges, surface runoff from adjacent farmlands, metal containing debris, as well as naturally occurring concentrations from the indigenous geology.

The CDS appears to be functioning as designed to catch sediment traveling downstream in Drum Creek. We will continue to monitor the sediment accumulation as part of the periodic inspection and maintenance of the CDS.

Sincerely,



Mark Landress P.G. Kansas Licensed Geologist No. 793  
Project Navigator, Ltd.

Attachment

Cc: William C. Anderson, Doerner, Saunders, Daniel & Anderson, L.L.P.  
Jeffrey L. Rey, United States Steel Corporation  
Mark Rupnow, United States Steel Corporation  
Andrew G. Thiros, United States Steel Corporation  
Mike Stoub, ENACT  
Philip Jen, PNL

# **TABLES**

TABLE 1

**Drum Creek Catchment Sediment Sample Result Summary**  
**Former National Zinc Smelter Site**  
**Cherryvale, Kansas**  
**Respondent's Sampling**

Consensus Based Result Limit (ppm)

<b>33</b>	<b>4.98</b>	<b>128</b>	<b>459</b>
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Sample Location	Sample ID	Date	Arsenic	Cadmium	Lead	Zinc	Note
Upstream of Dikes	NS	8/1/2007					Not Sampled
Upstream of Dikes	NS	10/24/2007					Not Sampled
Upstream of Dikes	NS	2/14/2008					Not Sampled
Upstream of Dikes	SD-006-01	9/24/2008	17.5	2.2	23.3	332	Periodic Sample
Upstream of Dikes	SD-008	2/26/2009	<b>37.7</b>	0.94	42.4	<b>487</b>	Periodic Sample
Upstream of Dikes	SD-011	9/3/2009	<b>41.1</b>	<b>5</b>	54.6	<b>499</b>	Periodic Sample
Upstream of Dikes	SD-012	3/17/2010	27	2.8	62.4	<b>678</b>	Periodic Sample
Upstream of Dikes	SD-17	10/11/2010	<b>36.5</b>	2.5	55.6	<b>477.0</b>	Periodic Sample
Upstream of Dikes	SD-20	3/29/2011	<b>38.6</b>	4.6	57.4	<b>500.0</b>	Periodic Sample
Upstream of Dikes	SD-23	8/3/2011	20.3	2.7	44.5	<b>612</b>	Periodic Sample
Upstream of Dikes	SD-26	3/9/2012	<b>78.3</b>	4.9	75.2	<b>766</b>	Periodic Sample
Upstream of Dikes	SD-29	8/28/2012	20.8	3.6	45.6	<b>489</b>	Periodic Sample
Upstream of Dikes	SD-32	2/19/2013	<b>44.6</b>	ND	33.6	<b>538</b>	Periodic Sample
Upstream of Dikes	SD-35	10/1/2013	<b>70.2</b>	<b>6.9</b>	49.2	<b>758</b>	Periodic Sample
Upstream of Dikes	SD-38	3/19/2014	7.1	0.71	<b>424</b>	226	Periodic Sample

Sample Location	Sample ID	Date	Arsenic	Cadmium	Lead	Zinc	Note
Between Dikes	NS	8/1/2007					Not Sampled
Between Dikes	NS	10/24/2007					Not Sampled
Between Dikes	NS	2/14/2008					Not Sampled
Between Dikes	SD-005-01	9/24/2008	10	0.93	15.9	45.2	Periodic Sample
Between Dikes	NS	2/26/2009					Not Sampled
Between Dikes	SD-010	9/3/2009	28.4	<b>5.7</b>	34.9	376	Periodic Sample
Between Dikes	SD-013	3/17/2010	<b>35.1</b>	3.1	66.1	<b>695</b>	Periodic Sample
Between Dikes	SD-16	10/11/2010	26.2	1.2	24.4	273	Periodic Sample
Between Dikes	SD-19	3/29/2011	31.9	<b>6.1</b>	36.4	343	Periodic Sample
Between Dikes	SD-22	8/3/2011	10.0	1.1	42.1	<b>596</b>	Periodic Sample
Between Dikes	SD-25	3/9/2012	5.9	0.55	13.7	41.3	Periodic Sample
Between Dikes	SD-28	8/28/2012	20	3.3	35.2	<b>463</b>	Periodic Sample
Between Dikes	SD-31	2/19/2013	28.3	<b>8.1</b>	<b>131</b>	<b>695</b>	Periodic Sample
Between Dikes	SD-34	10/1/2013	<b>70.7</b>	<b>5.4</b>	70.5	<b>685</b>	Periodic Sample
Between Dikes	SD-37	3/19/2014	<b>68</b>	3.2	54.7	<b>638</b>	Periodic Sample
<b>AVERAGE BETWEEN DIKES</b>			<b>30.4</b>	<b>3.5</b>	<b>47.7</b>	<b>441</b>	

Sample Location	Sample ID	Date	Arsenic	Cadmium	Lead	Zinc	Note
Downstream of Dikes	SD-001	8/1/2007	9.9	2.1	15.4	155	Baseline
Downstream of Dikes	SD-002	10/24/2007	14	<b>5.6</b>	35.1	<b>508</b>	Initial post remedial
Downstream of Dikes	SD-003-1	2/14/2008	22.4	3.4	40	318	Periodic Sample
Downstream of Dikes	SD-004-01	9/24/2008	9.6	1	16.6	108	Periodic Sample
Downstream of Dikes	SD-007	2/26/2009	14	<b>6.2</b>	40.5	414	Periodic Sample
Downstream of Dikes	SD-009	9/3/2009	<b>38.8</b>	4.8	65.4	<b>533</b>	Periodic Sample
Downstream of Dikes	SD-014	3/17/2010	19.3	3	36.6	<b>511</b>	Periodic Sample
Downstream of Dikes	SD-15	10/11/2010	<b>51.6</b>	5.1	57.7	<b>915</b>	Periodic Sample
Downstream of Dikes	SD-18	3/29/2011	<b>47.2</b>	<b>6.1</b>	61.4	<b>475</b>	Periodic Sample
Downstream of Dikes	SD-21	8/3/2011	12.1	0.9	13.3	280	Periodic Sample
Downstream of Dikes	SD-24	3/9/2012	5.1	2.5	13.8	93.5	Periodic Sample
Downstream of Dikes	SD-27	8/28/2012	20.7	3.7	50.7	<b>611</b>	Periodic Sample
Downstream of Dikes	SD-30	2/19/2013	<b>46.8</b>	ND	49.4	<b>589</b>	Periodic Sample
Downstream of Dikes	SD-33	10/1/2013	<b>87.3</b>	ND	58.8	<b>697</b>	Periodic Sample
Downstream of Dikes	SD-36	3/19/2014	<b>55</b>	3.2	76.1	<b>753</b>	Periodic Sample

NS = No Sample

Italics = result at or below detection limit

All results mg/kg (ppm)

Bold - Above PEC

Consensus Based Result Limit PEC (ppm)

Consensus Limit ppm

<b>33</b>	<b>4.98</b>	<b>128</b>	<b>459</b>
<b>Arsenic</b>	<b>Cadmium</b>	<b>Lead</b>	<b>Zinc</b>

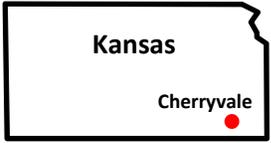
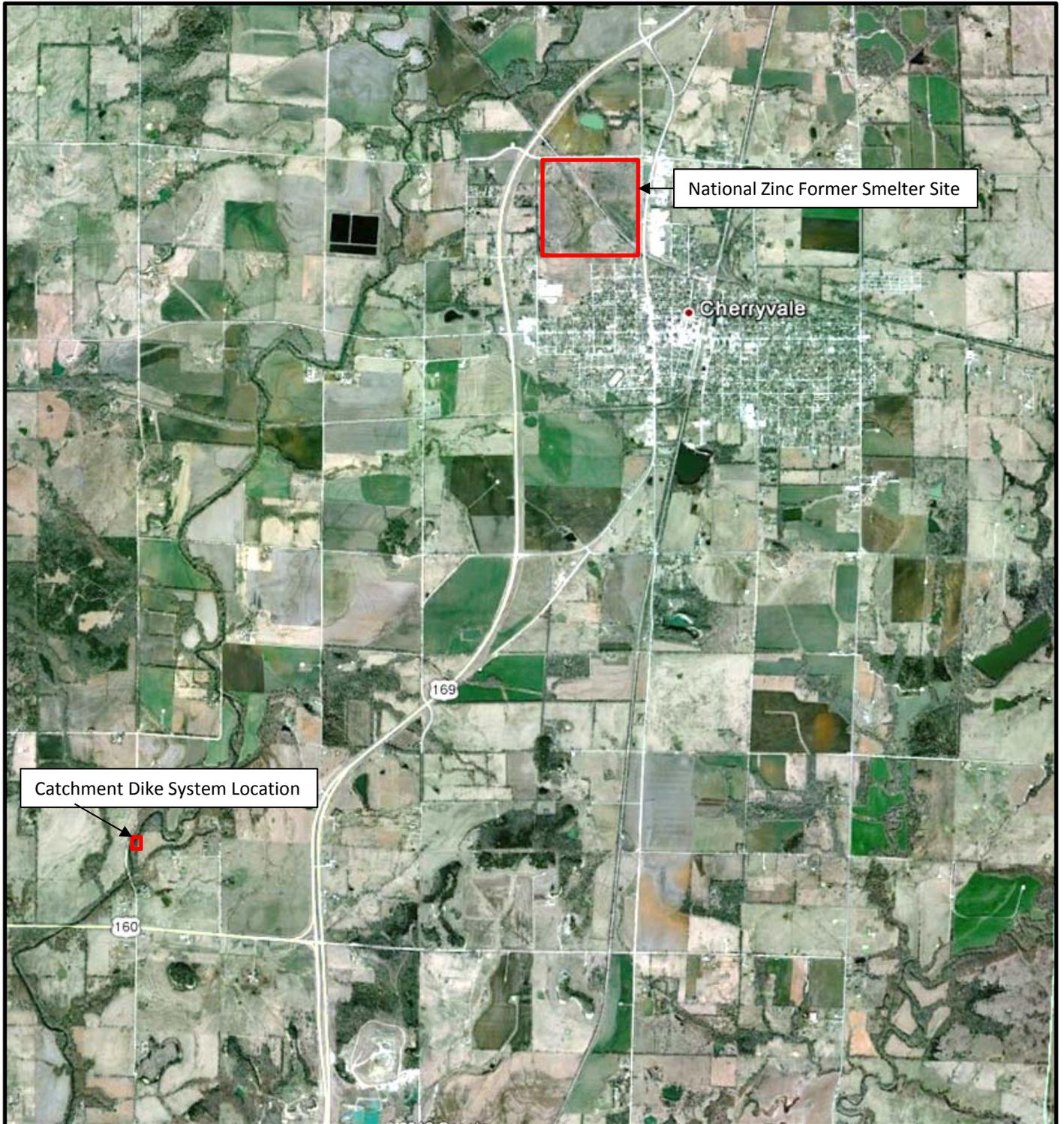
Total Project Average

<b>32.3</b>	<b>3.5</b>	<b>45.9</b>	<b>478.2</b>
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Pre Remedial

Sample Location	Sample ID	Date	Arsenic	Cadmium	Lead	Zinc	Note
5100 Bridge	5100 Bridge	11/22/2005	61.35	7.5	50.2	755	Pre Remediation
4200 Road Bridge	4200 Road Bridge	11/22/2005	33.9	4.72	46	459	Pre Remediation
low water crossing	S17-D10	6/24/2003	18.5	14.3	48.2	517	Pre Remediation

# FIGURES



**Catchment Dike Sediment Sampling  
Cherryvale, KS**

**Location Map**

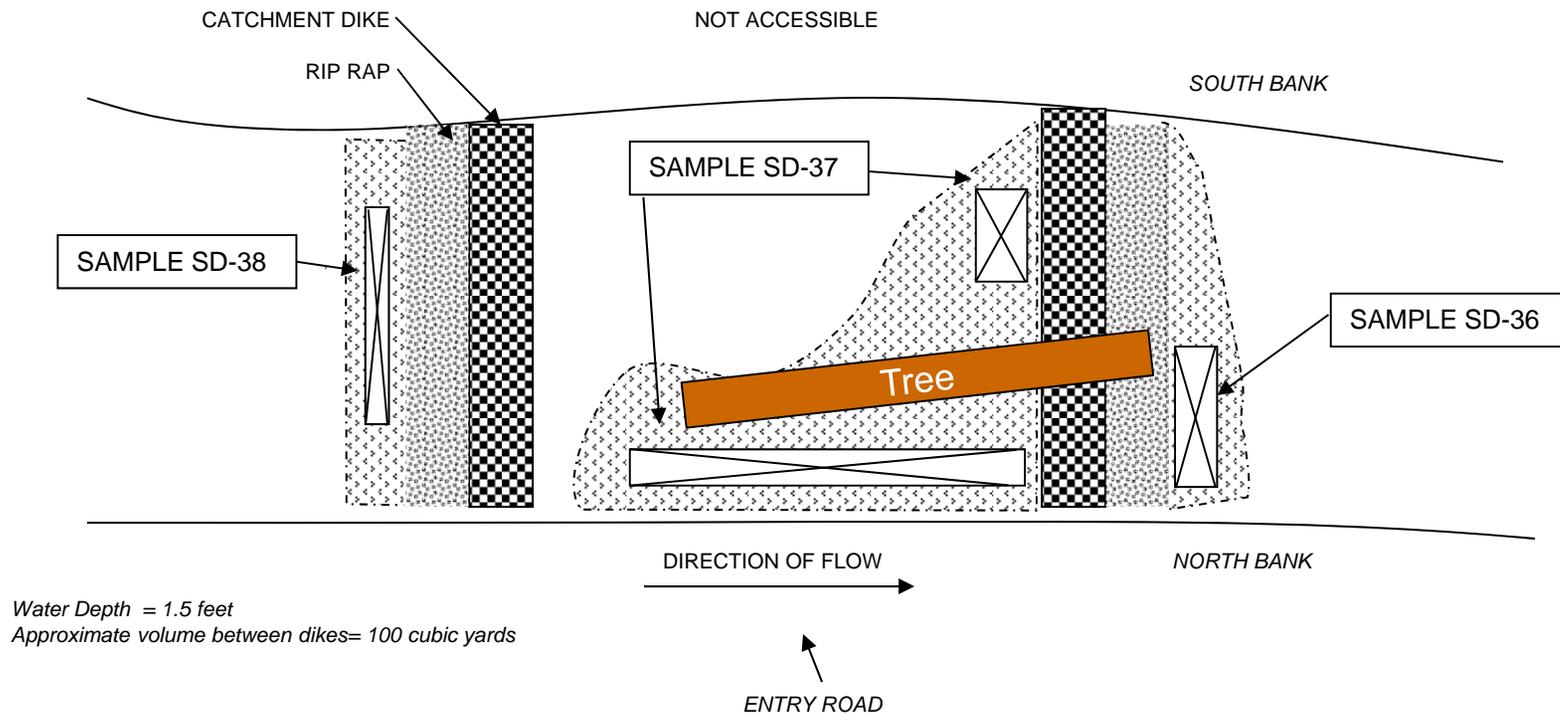


# Figure 2

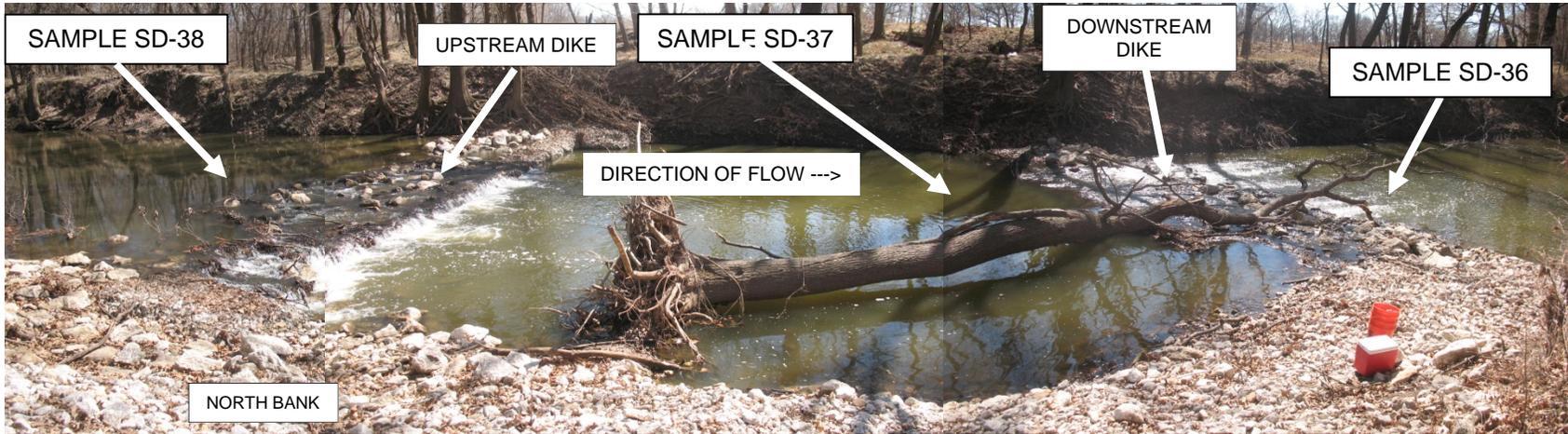
## Drum Creek Catchment Sample Locations

### March 2014

Schematic layout of sample locations and accumulated sediment, Drum Creek Catchment, Montgomery County, KS



# Figure 3 Drum Creek Catchment Sample Locations March 2014



# **ATTACHMENTS**

April 21, 2014

Mark Landress  
Project Navigator, Ltd.  
10497 Town and Country Way  
Suite 830  
Houston, TX 77024

RE: Project: NATIONAL ZINC  
Pace Project No.: 60165428

Dear Mark Landress:

Enclosed are the analytical results for sample(s) received by the laboratory on March 21, 2014. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,



Jamie Church  
jamie.church@pacelabs.com  
Project Manager

Enclosures

cc: Philip Jen, Project Navigator, Ltd.



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: NATIONAL ZINC

Pace Project No.: 60165428

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### **Kansas Certification IDs**

9608 Loiret Boulevard, Lenexa, KS 66219

WY STR Certification #: 2456.01

Arkansas Certification #: 13-012-0

Illinois Certification #: 003097

Iowa Certification #: 118

Kansas/NELAP Certification #: E-10116

Louisiana Certification #: 03055

Nevada Certification #: KS000212008A

Oklahoma Certification #: 9205/9935

Texas Certification #: T104704407-13-4

Utah Certification #: KS000212013-3

Illinois Certification #: 003097

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: NATIONAL ZINC

Pace Project No.: 60165428

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Lab ID	Sample ID	Matrix	Date Collected	Date Received
60165428001	SD-36	Solid	03/19/14 13:00	03/21/14 08:30
60165428002	SD-37	Solid	03/19/14 13:00	03/21/14 08:30
60165428003	SD-38	Solid	03/19/14 13:00	03/21/14 08:30

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### SAMPLE ANALYTE COUNT

Project: NATIONAL ZINC

Pace Project No.: 60165428

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
60165428001	SD-36	EPA 6010	SMW	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
60165428002	SD-37	EPA 6010	SMW	4	PASI-K
		ASTM D2974	DWC	1	PASI-K
60165428003	SD-38	EPA 6010	SMW	4	PASI-K
		ASTM D2974	DWC	1	PASI-K

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NATIONAL ZINC

Pace Project No.: 60165428

**Sample: SD-36**      **Lab ID: 60165428001**      Collected: 03/19/14 13:00      Received: 03/21/14 08:30      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP Red. Interference</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050						
Arsenic	<b>55.0</b>	mg/kg	0.84	1	03/26/14 18:00	03/28/14 13:02	7440-38-2	
Cadmium	<b>3.2</b>	mg/kg	2.1	5	03/26/14 18:00	03/28/14 13:38	7440-43-9	
Lead	<b>76.1</b>	mg/kg	4.2	5	03/26/14 18:00	03/28/14 13:38	7439-92-1	
Zinc	<b>753</b>	mg/kg	41.9	5	03/26/14 18:00	03/28/14 13:38	7440-66-6	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974						
Percent Moisture	<b>14.7</b>	%	0.50	1		03/25/14 00:00		

### REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: NATIONAL ZINC

Pace Project No.: 60165428

**Sample: SD-37**      **Lab ID: 60165428002**      Collected: 03/19/14 13:00      Received: 03/21/14 08:30      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP Red. Interference</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050						
Arsenic	<b>68.0</b>	mg/kg	1.0	1	03/26/14 18:00	03/28/14 13:15	7440-38-2	
Cadmium	<b>3.2</b>	mg/kg	2.6	5	03/26/14 18:00	03/28/14 13:42	7440-43-9	
Lead	<b>54.7</b>	mg/kg	5.1	5	03/26/14 18:00	03/28/14 13:42	7439-92-1	
Zinc	<b>638</b>	mg/kg	51.1	5	03/26/14 18:00	03/28/14 13:42	7440-66-6	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974						
Percent Moisture	<b>12.6</b>	%	0.50	1		03/25/14 00:00		

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## ANALYTICAL RESULTS

Project: NATIONAL ZINC

Pace Project No.: 60165428

**Sample: SD-38**      **Lab ID: 60165428003**      Collected: 03/19/14 13:00      Received: 03/21/14 08:30      Matrix: Solid

**Results reported on a "dry-weight" basis**

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
<b>6010 MET ICP Red. Interference</b>		Analytical Method: EPA 6010    Preparation Method: EPA 3050						
Arsenic	7.1	mg/kg	0.88	1	03/26/14 18:00	03/28/14 13:22	7440-38-2	
Cadmium	0.71	mg/kg	0.44	1	03/26/14 18:00	03/28/14 13:22	7440-43-9	
Lead	424	mg/kg	0.88	1	03/26/14 18:00	03/28/14 13:22	7439-92-1	
Zinc	226	mg/kg	8.8	1	03/26/14 18:00	03/28/14 13:22	7440-66-6	
<b>Percent Moisture</b>		Analytical Method: ASTM D2974						
Percent Moisture	12.8	%	0.50	1		03/25/14 00:00		

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: NATIONAL ZINC

Pace Project No.: 60165428

QC Batch: MPRP/26597 Analysis Method: EPA 6010  
 QC Batch Method: EPA 3050 Analysis Description: 6010 MET  
 Associated Lab Samples: 60165428001, 60165428002, 60165428003

METHOD BLANK: 1349744 Matrix: Solid

Associated Lab Samples: 60165428001, 60165428002, 60165428003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	03/28/14 12:03	
Cadmium	mg/kg	ND	0.50	03/28/14 12:03	
Lead	mg/kg	ND	1.0	03/28/14 12:03	
Zinc	mg/kg	ND	10.0	03/28/14 12:03	

LABORATORY CONTROL SAMPLE: 1349745

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	106	106	80-120	
Cadmium	mg/kg	100	108	108	80-120	
Lead	mg/kg	100	110	110	80-120	
Zinc	mg/kg	100	112	112	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1349746 1349747

Parameter	Units	60165166002		MS		MSD		MS		MSD		% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Arsenic	mg/kg	5.0	90.9	90.9	89.8	88.6	93	92	75-125	1	20			
Cadmium	mg/kg	ND	90.9	90.9	87.7	86.7	96	95	75-125	1	20			
Lead	mg/kg	12.0	90.9	90.9	95.5	94.9	92	91	75-125	1	20			
Zinc	mg/kg	64.1	90.9	90.9	158	166	103	112	75-125	5	20			

### REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: NATIONAL ZINC

Pace Project No.: 60165428

QC Batch: PMST/9505

Analysis Method: ASTM D2974

QC Batch Method: ASTM D2974

Analysis Description: Dry Weight/Percent Moisture

Associated Lab Samples: 60165428001, 60165428002, 60165428003

METHOD BLANK: 1349589

Matrix: Solid

Associated Lab Samples: 60165428001, 60165428002, 60165428003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	03/25/14 00:00	

SAMPLE DUPLICATE: 1349590

Parameter	Units	60165061001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	12.6	12.9	2	20	

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## QUALIFIERS

Project: NATIONAL ZINC

Pace Project No.: 60165428

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### DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to changes in sample preparation, dilution of the sample aliquot, or moisture content.

ND - Not Detected at or above adjusted reporting limit.

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PRL - Pace Reporting Limit.

RL - Reporting Limit.

S - Surrogate

1,2-Diphenylhydrazine (8270 listed analyte) decomposes to Azobenzene.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

### LABORATORIES

PASI-K Pace Analytical Services - Kansas City

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: NATIONAL ZINC

Pace Project No.: 60165428

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60165428001	SD-36	EPA 3050	MPRP/26597	EPA 6010	ICP/20248
60165428002	SD-37	EPA 3050	MPRP/26597	EPA 6010	ICP/20248
60165428003	SD-38	EPA 3050	MPRP/26597	EPA 6010	ICP/20248
60165428001	SD-36	ASTM D2974	PMST/9505		
60165428002	SD-37	ASTM D2974	PMST/9505		
60165428003	SD-38	ASTM D2974	PMST/9505		

### REPORT OF LABORATORY ANALYSIS

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**Sample Condition Upon Receipt**

WO#: 60165428



Client Name: Project Navigator

Optional
Proj Due Date:
Proj Name:

Courier: Fed Ex  UPS  USPS  Client  Commercial  Pace  Other

Tracking #: 8047 8936 5040 Pace Shipping Label Used? Yes  No

Custody Seal on Cooler/Box Present: Yes  No  Seals intact: Yes  No

Packing Material: Bubble Wrap  Bubble Bags  Foam  None  Other  ZIPLOC

Thermometer Used: T-239 / T-194 Type of Ice: Wet Blue  None  Samples received on ice, cooling process has begun.  
(circle one)

Cooler Temperature: 5.2

Date and initials of person examining contents: 3/21/14 BA

Temperature should be above freezing to 6°C

Chain of Custody present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody filled out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler name & signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples arrived within holding time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Short Hold Time analyses (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Containers intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Unpreserved 5035A soils frozen w/in 48hrs?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Filtered volume received for dissolved tests?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	12.
Sample labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13.
Includes date/time/ID/analyses Matrix: <u>SL</u>		13.
All containers needing preservation have been checked.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
All containers needing preservation are found to be in compliance with EPA recommendation.	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Exceptions: VOA, coliform, TOC, O&G, WI-DRO (water), Phenolics	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Initial when completed
Trip Blank present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	Lot # of added preservative
Pace Trip Blank lot # (if purchased):		15.
Headspace in VOA vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Project sampled in USDA Regulated Area:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	17. List State:

Client Notification/ Resolution: Copy COC to Client? Y / N Field Data Required? Y / N

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review Jami Church \_\_\_\_\_ Date: 3/24/14

