

Appendix E
Appendix E Chain of Custody Records and
Off-Site Laboratory Analytical Results,
Source Area Soil Sampling



Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

October 12, 2004

Ms. ERIN BLUME
Camp Dresser & McKee Inc.
9330 E CENTRAL
SUITE 400
WICHITA, KS 67206

RE: Lab Project Number: 6087195
Client Project ID: NORTHERN INDUSTRIAL CORRIDOR

Dear Ms. BLUME:

Enclosed are the analytical results for sample(s) received by the laboratory on September 24, 2004. Results reported herein conform to the most current NELAP standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Angie Brown
angela.brown@pacelabs.com
Project Manager

Kansas/NELAP Certification Number E-10116

Enclosures

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Pace Analytical Services, Inc.
9608 Loiret Blvd.
Lenexa, KS 66219
Phone: 913.599.5665
Fax: 913.599.1759

Lab Project Number: 6087195
Client Project ID: NORTHERN INDUSTRIAL CORRIDOR

<u>Project</u>	<u>Sample</u>	<u>Client Sample ID</u>	<u>Matrix</u>	<u>Date Collected</u>	<u>Date Received</u>
6087195-001	607508389	NIC-GPS-ASC-04-01-092204	Soil	09/22/04 13:20	09/24/04 06:00
6087195-002	607508728	SDG 6087195 DUE 10/1	Soil	09/24/04	09/24/04 09:44

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Lab Project Number: 6087195

Client Project ID: NORTHERN INDUSTRIAL CORRIDOR

Project			Analysis		Analytes
<u>Sample Number</u>	<u>Sample No</u>	<u>Client Sample ID</u>	<u>Code</u>	<u>Analysis Description</u>	<u>Reported</u>
6087195-001	607508389	NIC-GPS-ASC-04-01-092204	%MOISTURE	Percent Moisture	1
			8260 5035	GC/MS 8260 Soils by 5035	36

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Lab Project Number: 6087195
Client Project ID: NORTHERN INDUSTRIAL CORRIDOR

Solid results are reported on a wet weight basis

Lab Sample No: 607508389 Project Sample Number: 6087195-001 Date Collected: 09/22/04 13:20
Client Sample ID: NIC-GPS-ASC-04-01-092204 Matrix: Soil Date Received: 09/24/04 06:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
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Organics Prep

Percent Moisture	Method: SM 2540G								
Percent Moisture	13.2	%			1.0 09/29/04	ALJI			

GC/MS Volatiles

GC/MS 8260 Soils by 5035	Method: EPA 8260								
Benzene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	71-43-2		
Bromodichloromethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	75-27-4		
Bromoform	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	75-25-2		
Bromomethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	74-83-9		
Carbon tetrachloride	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	56-23-5		
Chlorobenzene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	108-90-7		
Chloroethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	75-00-3		
Chloroform	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	67-66-3		
Chloromethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	74-87-3		
Dibromochloromethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	124-48-1		
1,2-Dichlorobenzene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	95-50-1		
1,3-Dichlorobenzene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	541-73-1		
1,4-Dichlorobenzene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	106-46-7		
1,1-Dichloroethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	75-34-3		
1,2-Dichloroethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	107-06-2		
1,1-Dichloroethene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	75-35-4		
cis-1,2-Dichloroethene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	156-59-2		
1,2-Dichloropropane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	78-87-5		
cis-1,3-Dichloropropene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	10061-01-5		
trans-1,3-Dichloropropene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	10061-02-6		
Ethylbenzene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	100-41-4		
Methylene chloride	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	75-09-2		
1,1,1,2-Tetrachloroethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	630-20-6		
Tetrachloroethene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	127-18-4		
Toluene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	108-88-3		
1,1,1-Trichloroethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	71-55-6		
1,1,2-Trichloroethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	79-00-5		
Trichloroethene	3100	ug/kg	260	53.0	10/01/04 13:10	JKL	79-01-6		
Trichlorofluoromethane	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	75-69-4		
Vinyl chloride	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	75-01-4		
m&p-Xylene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL			
o-Xylene	ND	ug/kg	260	53.0	10/01/04 13:10	JKL	95-47-6		

Date: 10/12/04

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REPORT OF LABORATORY ANALYSIS

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Lab Project Number: 6087195
Client Project ID: NORTHERN INDUSTRIAL CORRIDOR

Lab Sample No: 607508389 Project Sample Number: 6087195-001 Date Collected: 09/22/04 13:20
Client Sample ID: NIC-GPS-ASC-04-01-092204 Matrix: Soil Date Received: 09/24/04 06:00

Parameters	Results	Units	Report Limit	DF	Analyzed	By	CAS No.	Qual	RegLmt
Toluene-d8 (S)	99	%		1.0	10/01/04 13:10	JKL	2037-26-5		
4-Bromofluorobenzene (S)	91	%		1.0	10/01/04 13:10	JKL	460-00-4		
Dibromofluoromethane (S)	93	%		1.0	10/01/04 13:10	JKL	1868-53-7		
1,2-Dichloroethane-d4 (S)	93	%		1.0	10/01/04 13:10	JKL	17060-07-0		

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PARAMETER FOOTNOTES

Dilution factor shown represents the factor applied to the reported result and reporting limit due to changes in sample preparation, dilution of the extract, or moisture content

- ND . Not detected at or above adjusted reporting limit
- NC Not Calculable
- J Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
- MDL Adjusted Method Detection Limit
- (S) Surrogate

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Lab Project Number: 6087195
Client Project ID: NORTHERN INDUSTRIAL CORRIDOR

QC Batch: 179078
QC Batch Method: EPA 8260
Associated Lab Samples: 607508389

Analysis Method: EPA 8260
Analysis Description: GC/MS 8260 Soils by 5035

METHOD BLANK: 607533775
Associated Lab Samples: 607508389

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Benzene	ug/kg	ND	5.0	
Bromodichloromethane	ug/kg	ND	5.0	
Bromoform	ug/kg	ND	5.0	
Bromomethane	ug/kg	ND	5.0	
Carbon tetrachloride	ug/kg	ND	5.0	
Chlorobenzene	ug/kg	ND	5.0	
Chloroethane	ug/kg	ND	5.0	
Chloroform	ug/kg	ND	5.0	
Chloromethane	ug/kg	ND	5.0	
Dibromochloromethane	ug/kg	ND	5.0	
1,2-Dichlorobenzene	ug/kg	ND	5.0	
1,3-Dichlorobenzene	ug/kg	ND	5.0	
1,4-Dichlorobenzene	ug/kg	ND	5.0	
1,1-Dichloroethane	ug/kg	ND	5.0	
1,2-Dichloroethane	ug/kg	ND	5.0	
1,1-Dichloroethene	ug/kg	ND	5.0	
cis-1,2-Dichloroethene	ug/kg	ND	5.0	
1,2-Dichloropropane	ug/kg	ND	5.0	
cis-1,3-Dichloropropene	ug/kg	ND	5.0	
trans-1,3-Dichloropropene	ug/kg	ND	5.0	
Ethylbenzene	ug/kg	ND	5.0	
Methylene chloride	ug/kg	ND	5.0	
1,1,1,2-Tetrachloroethane	ug/kg	ND	5.0	
Tetrachloroethene	ug/kg	ND	5.0	
Toluene	ug/kg	ND	5.0	
1,1,1-Trichloroethane	ug/kg	ND	5.0	
1,1,2-Trichloroethane	ug/kg	ND	5.0	
Trichloroethene	ug/kg	ND	5.0	
Trichlorofluoromethane	ug/kg	ND	5.0	
Vinyl chloride	ug/kg	ND	5.0	
m&p-Xylene	ug/kg	ND	5.0	

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QUALITY CONTROL DATA

Lab Project Number: 6087195

Client Project ID: NORTHERN INDUSTRIAL CORRIDOR

METHOD BLANK: 607533775

Associated Lab Samples: 607508389

Parameter	Units	Blank Result	Reporting Limit	Footnotes
o-Xylene	ug/kg	ND	5.0	
Toluene-d8 (S)	%	101		
4-Bromofluorobenzene (S)	%	92		
Dibromofluoromethane (S)	%	97		
1,2-Dichloroethane-d4 (S)	%	111		

LABORATORY CONTROL SAMPLE: 607533783

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
Benzene	ug/kg	50.00	49.37	99	78-116	
Bromodichloromethane	ug/kg	50.00	44.43	89	85-125	
Bromoform	ug/kg	50.00	48.21	96	81-121	
Bromomethane	ug/kg	50.00	60.07	120	31-150	
Carbon tetrachloride	ug/kg	50.00	51.73	103	73-129	
Chlorobenzene	ug/kg	50.00	49.93	100	78-115	
Chloroethane	ug/kg	50.00	62.33	125	42-133	
Chloroform	ug/kg	50.00	50.36	101	79-117	
Chloromethane	ug/kg	50.00	51.01	102	25-139	
Dibromochloromethane	ug/kg	50.00	45.75	92	84-120	
1,2-Dichlorobenzene	ug/kg	50.00	48.30	97	68-119	
1,3-Dichlorobenzene	ug/kg	50.00	47.53	95	60-124	
1,4-Dichlorobenzene	ug/kg	50.00	47.42	95	60-121	
1,1-Dichloroethane	ug/kg	50.00	49.61	99	78-119	
1,2-Dichloroethane	ug/kg	50.00	48.79	98	76-126	
1,1-Dichloroethene	ug/kg	50.00	47.29	95	71-127	
cis-1,2-Dichloroethene	ug/kg	50.00	45.80	92	80-116	
1,2-Dichloropropane	ug/kg	50.00	46.75	94	78-114	
cis-1,3-Dichloropropene	ug/kg	50.00	47.80	96	80-118	
trans-1,3-Dichloropropene	ug/kg	50.00	49.02	98	84-117	
Ethylbenzene	ug/kg	50.00	49.27	98	75-118	
Methylene chloride	ug/kg	50.00	45.66	91	55-138	
1,1,1,2-Tetrachloroethane	ug/kg	50.00	49.53	99	83-119	
Tetrachloroethene	ug/kg	50.00	49.73	100	68-126	
Toluene	ug/kg	50.00	50.89	102	76-116	

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QUALITY CONTROL DATA

Lab Project Number: 6087195

Client Project ID: NORTHERN INDUSTRIAL CORRIDOR

LABORATORY CONTROL SAMPLE: 607533783

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Footnotes
1,1,1-Trichloroethane	ug/kg	50.00	50.29	101	75-128	
1,1,2-Trichloroethane	ug/kg	50.00	43.26	86	81-119	
Trichloroethene	ug/kg	50.00	49.24	98	76-120	
Trichlorofluoromethane	ug/kg	50.00	44.01	88	57-138	
Vinyl chloride	ug/kg	50.00	46.66	93	50-125	
m&p-Xylene	ug/kg	100.00	98.48	98	73-118	
o-Xylene	ug/kg	50.00	46.86	94	79-115	
Toluene-d8 (S)				101	81-117	
4-Bromofluorobenzene (S)				98	74-121	
Dibromofluoromethane (S)				93	80-120	
1,2-Dichloroethane-d4 (S)				104	80-120	

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QUALITY CONTROL DATA

Lab Project Number: 6087195
Client Project ID: NORTHERN INDUSTRIAL CORRIDOR

QC Batch: 178818 Analysis Method: SM 2540G
QC Batch Method: SM 2540G Analysis Description: Percent Moisture
Associated Lab Samples: 607508389

SAMPLE DUPLICATE: 607520954

<u>Parameter</u>	<u>Units</u>	<u>607508322</u>	<u>DUP</u>	<u>RPD</u>	<u>RPD</u>	<u>Footnotes</u>
		<u>Result</u>	<u>Result</u>			
Percent Moisture	%	18.60	18.70	1		

Date: 10/12/04

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA PARAMETER FOOTNOTES

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

LCS(D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate
ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
RPD	Relative Percent Difference
(S)	Surrogate

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

CROSS REFERENCE TABLE

Lab Project Number: 6087195

Client Project ID: NORTHERN INDUSTRIAL CORRIDOR

Lab Sample No Identifier	Client Sample Identifier	QC Batch Method	QC Batch Identifier	Analytical Method	Analytical Batch Identifier
607508389	NIC-GPS-ASC-04-01-092204	EPA 8260	179078		
607508389	NIC-GPS-ASC-04-01-092204	SM 2540G	178818		

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Required Client Information: Section A		Required Client Information: Section B		Client Information (Check quote/contract):		To Be Completed by Pace Analytical Client: Section C	
Company: CDM		Report To: Erin Blume		Requested Due Date: Std.		Quote Reference:	
Address: 9330 E. Central Ave. Ste. 400		Copy To:		*TAT: Standard		Project Manager: Angie Brown	
Wichita, KS 67206		Invoice To: Erin Blume		* Turn around times less than 14 days subject		Project #: 6087195	
Phone: 316-634-688 Fax: 316-634-2835		P.O. 2395-36825		laboratory and contractual obligations and may		Profile #:	
		Project Name: NIC		in a Rush Turnaround Surcharge.			
		Project Number:		Turn Around Time (TAT) in calendar days.			

ITEM NUMBER	Required Client Information: Section D SAMPLE ID (One charater per box.)	Valid Matrix Codes Matrix Code Water WT Soil SL Oil OL Wipe WP Air AR Tissue TS Other OT	MATRIX CODE	DATE COLLECTED	TIME COLLECTED	Preservatives										Requested Analysis					REMARKS / Lab ID		
						# Containers	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	B260/5035									
1	NIC-GPS-ASC-04-01-092204 3 EC 1.4oz		SL	09/22/2004	13:20	4	4															On Ice 607508389	
2																							
3																							
4																							
5																							
6																							
7																							
8																							
9																							
10																							
11																							
12																							

SHIPMENT METHOD	AIRBILL NO.	SHIPPING DATE	NO. OF COOLERS	ITEM #	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
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					Mark Peters	9/23/04	10:05	David [unclear]		
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SAMPLE CONDITION: SAMPLE NOTES:

Temp in C: 5.2

Received on Ice: N

Sealed Cooler: N

Sample Intact: N

LOW DETECTION LIMITS (1 ug/L)

Additional Comments:

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Mark Peters

SIGNATURE of SAMPLER: *Mark Peters*

DATE Signed: 9/24/04