

June 27, 2013

LISA MEAGHER
TRC SOLUTIONS
230 W. Monroe St
Chicago, IL 60606

RE: Project: BNSF FAST TRACK 204997
Pace Project No.: 60147566

Dear LISA MEAGHER:

Enclosed are the analytical results for sample(s) received by the laboratory on June 25, 2013. 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,



Mary Jane Walls for
Angie Brown
Angie.Brown@pacelabs.com
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

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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SAMPLE SUMMARY

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

Lab ID	Sample ID	Matrix	Date Collected	Date Received
60147566001	GP-1 0-2	Solid	06/21/13 11:05	06/25/13 08:05
60147566002	GP-1 2-4	Solid	06/21/13 11:10	06/25/13 08:05
60147566003	GP-2 0-2	Solid	06/21/13 10:50	06/25/13 08:05
60147566004	GP-2 2-4	Solid	06/21/13 10:55	06/25/13 08:05
60147566005	GP-3 0-2	Solid	06/21/13 10:30	06/25/13 08:05
60147566006	GP-3 2-4	Solid	06/21/13 10:40	06/25/13 08:05

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SAMPLE ANALYTE COUNT

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

Lab ID	Sample ID	Method	Analysts	Analytes Reported
60147566001	GP-1 0-2	EPA 6010	SMW	10
		EPA 6010	TJT	1
		EPA 7471	TDS	1
		EPA 8270 by SIM	NAW	18
		ASTM D2974	CEM	1
		EPA 9045	NDL	1
60147566002	GP-1 2-4	EPA 6010	SMW	10
		EPA 6010	TJT	1
		EPA 7471	TDS	1
		EPA 8270 by SIM	NAW	18
		ASTM D2974	CEM	1
		EPA 9045	NDL	1
60147566003	GP-2 0-2	EPA 6010	SMW	10
		EPA 6010	TJT	1
		EPA 7471	TDS	1
		EPA 8270 by SIM	NAW	18
		ASTM D2974	CEM	1
		EPA 9045	NDL	1
60147566004	GP-2 2-4	EPA 6010	SMW	10
		EPA 6010	TJT	1
		EPA 7471	TDS	1
		EPA 8270 by SIM	NAW	18
		ASTM D2974	CEM	1
		EPA 9045	NDL	1
60147566005	GP-3 0-2	EPA 6010	SMW	10
		EPA 6010	TJT	1
		EPA 7471	TDS	1
		EPA 8270 by SIM	NAW	18
		ASTM D2974	CEM	1
		EPA 9045	NDL	1
60147566006	GP-3 2-4	EPA 6010	SMW	10
		EPA 6010	TJT	1
		EPA 7471	TDS	1
		EPA 8270 by SIM	NAW	18
		ASTM D2974	CEM	1
		EPA 9045	NDL	1

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ANALYTICAL RESULTS

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

Sample: GP-1 0-2 **Lab ID: 60147566001** Collected: 06/21/13 11:05 Received: 06/25/13 08:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	125	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:14	7440-38-2	M1,R1
Barium	246	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:14	7440-39-3	M1
Cadmium	6.5	mg/kg	0.59		1	06/25/13 11:00	06/25/13 16:14	7440-43-9	
Chromium	28.1	mg/kg	0.59		1	06/25/13 11:00	06/25/13 16:14	7440-47-3	
Copper	347	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:14	7440-50-8	M1
Lead	1040	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:14	7439-92-1	M1
Manganese	397	mg/kg	0.59		1	06/25/13 11:00	06/25/13 16:14	7439-96-5	M1
Selenium	1.9	mg/kg	1.8		1	06/25/13 11:00	06/25/13 16:14	7782-49-2	
Silver	ND	mg/kg	0.83		1	06/25/13 11:00	06/25/13 16:14	7440-22-4	
Zinc	1810	mg/kg	11.9		1	06/25/13 11:00	06/25/13 16:14	7440-66-6	M1

6010 MET ICP, TCLP

Analytical Method: EPA 6010 Preparation Method: EPA 3010

Leachate Method/Date: EPA 1311; 06/26/13 00:00

Lead	ND	mg/L	0.50		5	1	06/26/13 11:45	06/26/13 17:29	7439-92-1
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7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	1.8	mg/kg	0.31		5		06/25/13 15:30	06/26/13 09:55	7439-97-6	M1,R1
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8270 MSSV PAH by SIM

Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546

Acenaphthene	461	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	83-32-9	
Acenaphthylene	379	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	208-96-8	
Anthracene	1700	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	120-12-7	
Benzo(a)anthracene	7380	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	56-55-3	
Benzo(a)pyrene	6810	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	50-32-8	
Benzo(b)fluoranthene	12100	ug/kg	402		100		06/25/13 00:00	06/26/13 15:57	205-99-2	
Benzo(g,h,i)perylene	3370	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	207-08-9	
Chrysene	6720	ug/kg	402		100		06/25/13 00:00	06/26/13 15:57	218-01-9	
Dibenz(a,h)anthracene	1110	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	53-70-3	
Fluoranthene	12200	ug/kg	402		100		06/25/13 00:00	06/26/13 15:57	206-44-0	
Fluorene	432	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	86-73-7	
Indeno(1,2,3-cd)pyrene	3120	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	193-39-5	
Naphthalene	588	ug/kg	40.2		10		06/25/13 00:00	06/26/13 13:43	91-20-3	
Phenanthrene	6170	ug/kg	402		100		06/25/13 00:00	06/26/13 15:57	85-01-8	
Pyrene	8350	ug/kg	402		100		06/25/13 00:00	06/26/13 15:57	129-00-0	

Surrogates

2-Fluorobiphenyl (S)	0	%	40-120		10		06/25/13 00:00	06/26/13 13:43	321-60-8	S4
Terphenyl-d14 (S)	0	%	38-123		10		06/25/13 00:00	06/26/13 13:43	1718-51-0	S4

Percent Moisture

Analytical Method: ASTM D2974

Percent Moisture	18.9	%	0.50		1		06/25/13 00:00			
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9045 pH Soil

Analytical Method: EPA 9045

pH at 25 Degrees C	7.4	Std. Units	0.10		1		06/26/13 13:54			H3
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ANALYTICAL RESULTS

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

Sample: GP-1 2-4 **Lab ID:** 60147566002 **Collected:** 06/21/13 11:10 **Received:** 06/25/13 08:05 **Matrix:** Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	12.7	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:20	7440-38-2	
Barium	105	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:20	7440-39-3	
Cadmium	2.0	mg/kg	0.59		1	06/25/13 11:00	06/25/13 16:20	7440-43-9	
Chromium	10.6	mg/kg	0.59		1	06/25/13 11:00	06/25/13 16:20	7440-47-3	
Copper	60.2	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:20	7440-50-8	
Lead	109	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:20	7439-92-1	
Manganese	156	mg/kg	0.59		1	06/25/13 11:00	06/25/13 16:20	7439-96-5	
Selenium	ND	mg/kg	1.8		1	06/25/13 11:00	06/25/13 16:20	7782-49-2	
Silver	ND	mg/kg	0.82		1	06/25/13 11:00	06/25/13 16:20	7440-22-4	
Zinc	639	mg/kg	11.7		1	06/25/13 11:00	06/25/13 16:20	7440-66-6	

6010 MET ICP, TCLP

Analytical Method: EPA 6010 Preparation Method: EPA 3010

Leachate Method/Date: EPA 1311; 06/26/13 00:00

Lead	ND	mg/L	0.50		5	1	06/26/13 11:45	06/26/13 17:31	7439-92-1
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7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.94	mg/kg	0.062			1	06/25/13 15:30	06/26/13 09:36	7439-97-6
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8270 MSSV PAH by SIM

Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546

Acenaphthene	ND	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	83-32-9	
Acenaphthylene	47.6	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	208-96-8	
Anthracene	87.9	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	120-12-7	
Benzo(a)anthracene	324	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	56-55-3	
Benzo(a)pyrene	282	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	50-32-8	
Benzo(b)fluoranthene	602	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	205-99-2	
Benzo(g,h,i)perylene	107	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	207-08-9	
Chrysene	341	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	218-01-9	
Dibenz(a,h)anthracene	ND	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	53-70-3	
Fluoranthene	589	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	206-44-0	
Fluorene	ND	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	86-73-7	
Indeno(1,2,3-cd)pyrene	115	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	193-39-5	
Naphthalene	148	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	91-20-3	
Phenanthrene	454	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	85-01-8	
Pyrene	486	ug/kg	40.8		10	06/25/13 00:00	06/26/13 16:13	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	0	%	40-120		10	06/25/13 00:00	06/26/13 16:13	321-60-8	S4
Terphenyl-d14 (S)	0	%	38-123		10	06/25/13 00:00	06/26/13 16:13	1718-51-0	S4

Percent Moisture

Analytical Method: ASTM D2974

Percent Moisture	19.4	%	0.50		1		06/25/13 00:00		
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9045 pH Soil

Analytical Method: EPA 9045

pH at 25 Degrees C	6.5	Std. Units	0.10		1		06/26/13 13:54		H3
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ANALYTICAL RESULTS

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

Sample: GP-2 0-2 **Lab ID: 60147566003** Collected: 06/21/13 10:50 Received: 06/25/13 08:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	107	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:22	7440-38-2	
Barium	402	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:22	7440-39-3	
Cadmium	4.9	mg/kg	0.58		1	06/25/13 11:00	06/25/13 16:22	7440-43-9	
Chromium	25.2	mg/kg	0.58		1	06/25/13 11:00	06/25/13 16:22	7440-47-3	
Copper	324	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:22	7440-50-8	
Lead	1220	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:22	7439-92-1	
Manganese	400	mg/kg	0.58		1	06/25/13 11:00	06/25/13 16:22	7439-96-5	
Selenium	ND	mg/kg	1.7		1	06/25/13 11:00	06/25/13 16:22	7782-49-2	
Silver	ND	mg/kg	0.81		1	06/25/13 11:00	06/25/13 16:22	7440-22-4	
Zinc	1880	mg/kg	11.6		1	06/25/13 11:00	06/25/13 16:22	7440-66-6	

6010 MET ICP, TCLP

Analytical Method: EPA 6010 Preparation Method: EPA 3010

Leachate Method/Date: EPA 1311; 06/26/13 00:00

Lead	ND	mg/L	0.50		5	1	06/26/13 11:45	06/26/13 17:33	7439-92-1
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7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.86	mg/kg	0.053			1	06/25/13 15:30	06/26/13 09:38	7439-97-6
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8270 MSSV PAH by SIM

Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546

Acenaphthene	114	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	83-32-9	
Acenaphthylene	160	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	208-96-8	
Anthracene	488	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	120-12-7	
Benzo(a)anthracene	2020	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	56-55-3	
Benzo(a)pyrene	1530	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	50-32-8	
Benzo(b)fluoranthene	3660	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	205-99-2	
Benzo(g,h,i)perylene	517	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	207-08-9	
Chrysene	2000	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	218-01-9	
Dibenz(a,h)anthracene	231	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	53-70-3	
Fluoranthene	4050	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	206-44-0	
Fluorene	111	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	86-73-7	
Indeno(1,2,3-cd)pyrene	545	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	193-39-5	
Naphthalene	301	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	91-20-3	
Phenanthrene	2120	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	85-01-8	
Pyrene	2800	ug/kg	75.2		20	06/25/13 00:00	06/26/13 16:30	129-00-0	

Surrogates

2-Fluorobiphenyl (S)	0	%	40-120		20	06/25/13 00:00	06/26/13 16:30	321-60-8	S4
Terphenyl-d14 (S)	111	%	38-123		20	06/25/13 00:00	06/26/13 16:30	1718-51-0	

Percent Moisture

Analytical Method: ASTM D2974

Percent Moisture	13.6	%	0.50		1		06/25/13 00:00		
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9045 pH Soil

Analytical Method: EPA 9045

pH at 25 Degrees C	7.7	Std. Units	0.10		1		06/26/13 13:54		H3
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ANALYTICAL RESULTS

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

Sample: GP-2 2-4 **Lab ID: 60147566004** Collected: 06/21/13 10:55 Received: 06/25/13 08:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	39.0	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:24	7440-38-2	
Barium	365	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:24	7440-39-3	
Cadmium	3.1	mg/kg	0.59		1	06/25/13 11:00	06/25/13 16:24	7440-43-9	
Chromium	20.3	mg/kg	0.59		1	06/25/13 11:00	06/25/13 16:24	7440-47-3	
Copper	256	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:24	7440-50-8	
Lead	1130	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:24	7439-92-1	
Manganese	294	mg/kg	0.59		1	06/25/13 11:00	06/25/13 16:24	7439-96-5	
Selenium	ND	mg/kg	1.8		1	06/25/13 11:00	06/25/13 16:24	7782-49-2	
Silver	ND	mg/kg	0.83		1	06/25/13 11:00	06/25/13 16:24	7440-22-4	
Zinc	923	mg/kg	11.9		1	06/25/13 11:00	06/25/13 16:24	7440-66-6	

6010 MET ICP, TCLP

Analytical Method: EPA 6010 Preparation Method: EPA 3010

Leachate Method/Date: EPA 1311; 06/26/13 00:00

Lead	ND	mg/L	0.50		5	1	06/26/13 11:45	06/26/13 17:36	7439-92-1
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7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.47	mg/kg	0.056			1	06/25/13 15:30	06/26/13 09:40	7439-97-6
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8270 MSSV PAH by SIM

Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546

Acenaphthene	45.9	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	83-32-9	
Acenaphthylene	101	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	208-96-8	
Anthracene	223	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	120-12-7	
Benzo(a)anthracene	787	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	56-55-3	
Benzo(a)pyrene	683	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	50-32-8	
Benzo(b)fluoranthene	1500	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	205-99-2	
Benzo(g,h,i)perylene	261	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	207-08-9	
Chrysene	868	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	218-01-9	
Dibenz(a,h)anthracene	84.1	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	53-70-3	
Fluoranthene	1430	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	206-44-0	
Fluorene	49.1	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	86-73-7	
Indeno(1,2,3-cd)pyrene	252	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	193-39-5	
Naphthalene	278	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	91-20-3	
Phenanthrene	1110	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	85-01-8	
Pyrene	1050	ug/kg	41.0		10	06/25/13 00:00	06/26/13 14:33	129-00-0	
Surrogates									
2-Fluorobiphenyl (S)	0	%	40-120		10	06/25/13 00:00	06/26/13 14:33	321-60-8	S4
Terphenyl-d14 (S)	0	%	38-123		10	06/25/13 00:00	06/26/13 14:33	1718-51-0	S4

Percent Moisture

Analytical Method: ASTM D2974

Percent Moisture	20.6	%	0.50		1		06/25/13 00:00		
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9045 pH Soil

Analytical Method: EPA 9045

pH at 25 Degrees C	7.5	Std. Units	0.10		1		06/26/13 13:54		H3
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ANALYTICAL RESULTS

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

Sample: GP-3 0-2 **Lab ID: 60147566005** Collected: 06/21/13 10:30 Received: 06/25/13 08:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	39.8	mg/kg	1.3		1	06/25/13 11:00	06/25/13 16:26	7440-38-2	
Barium	669	mg/kg	1.3		1	06/25/13 11:00	06/25/13 16:26	7440-39-3	
Cadmium	8.2	mg/kg	0.64		1	06/25/13 11:00	06/25/13 16:26	7440-43-9	
Chromium	26.9	mg/kg	0.64		1	06/25/13 11:00	06/25/13 16:26	7440-47-3	
Copper	409	mg/kg	1.3		1	06/25/13 11:00	06/25/13 16:26	7440-50-8	
Lead	3190	mg/kg	1.3		1	06/25/13 11:00	06/25/13 16:26	7439-92-1	
Manganese	396	mg/kg	0.64		1	06/25/13 11:00	06/25/13 16:26	7439-96-5	
Selenium	2.2	mg/kg	1.9		1	06/25/13 11:00	06/25/13 16:26	7782-49-2	
Silver	0.92	mg/kg	0.90		1	06/25/13 11:00	06/25/13 16:26	7440-22-4	
Zinc	1760	mg/kg	12.9		1	06/25/13 11:00	06/25/13 16:26	7440-66-6	

6010 MET ICP, TCLP Analytical Method: EPA 6010 Preparation Method: EPA 3010

Leachate Method/Date: EPA 1311; 06/26/13 00:00

Lead	49.8	mg/L	0.50	5	1	06/26/13 11:45	06/26/13 17:38	7439-92-1
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7471 Mercury Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.69	mg/kg	0.066		1	06/25/13 15:30	06/26/13 09:43	7439-97-6
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8270 MSSV PAH by SIM Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546

Acenaphthene	741	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	83-32-9	
Acenaphthylene	860	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	208-96-8	
Anthracene	4170	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	120-12-7	
Benzo(a)anthracene	18000	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	56-55-3	
Benzo(a)pyrene	15600	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	50-32-8	
Benzo(b)fluoranthene	32900	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	205-99-2	
Benzo(g,h,i)perylene	5490	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	207-08-9	
Chrysene	16900	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	218-01-9	
Dibenz(a,h)anthracene	1740	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	53-70-3	
Fluoranthene	37200	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	206-44-0	
Fluorene	998	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	86-73-7	
Indeno(1,2,3-cd)pyrene	5420	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	193-39-5	
Naphthalene	902	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	91-20-3	
Phenanthrene	16700	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	85-01-8	
Pyrene	25600	ug/kg	429		100	06/25/13 00:00	06/26/13 16:46	129-00-0	

Surrogates

2-Fluorobiphenyl (S)	0 %	40-120		100	06/25/13 00:00	06/26/13 16:46	321-60-8	S4
Terphenyl-d14 (S)	0 %	38-123		100	06/25/13 00:00	06/26/13 16:46	1718-51-0	S4

Percent Moisture Analytical Method: ASTM D2974

Percent Moisture	23.7	%	0.50		1		06/25/13 00:00
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9045 pH Soil Analytical Method: EPA 9045

pH at 25 Degrees C	7.3	Std. Units	0.10		1		06/26/13 13:54	H3
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ANALYTICAL RESULTS

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

Sample: GP-3 2-4 **Lab ID: 60147566006** Collected: 06/21/13 10:40 Received: 06/25/13 08:05 Matrix: Solid

Results reported on a "dry-weight" basis

Parameters	Results	Units	Report Limit	Reg. Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Red. Interference Analytical Method: EPA 6010 Preparation Method: EPA 3050									
Arsenic	15.0	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:28	7440-38-2	
Barium	90.9	mg/kg	1.2		1	06/25/13 11:00	06/25/13 16:28	7440-39-3	
Cadmium	85.0	mg/kg	1.2		2	06/25/13 11:00	06/26/13 15:06	7440-43-9	
Chromium	15.6	mg/kg	0.58		1	06/25/13 11:00	06/25/13 16:28	7440-47-3	
Copper	64.9	mg/kg	2.3		2	06/25/13 11:00	06/26/13 15:06	7440-50-8	
Lead	169	mg/kg	2.3		2	06/25/13 11:00	06/26/13 15:06	7439-92-1	
Manganese	348	mg/kg	0.58		1	06/25/13 11:00	06/25/13 16:28	7439-96-5	
Selenium	ND	mg/kg	3.5		2	06/25/13 11:00	06/26/13 15:06	7782-49-2	D3
Silver	ND	mg/kg	0.81		1	06/25/13 11:00	06/25/13 16:28	7440-22-4	
Zinc	8740	mg/kg	57.6		5	06/25/13 11:00	06/26/13 15:08	7440-66-6	

6010 MET ICP, TCLP

Analytical Method: EPA 6010 Preparation Method: EPA 3010

Leachate Method/Date: EPA 1311; 06/26/13 00:00

Lead	ND	mg/L	0.50		5	1	06/26/13 11:45	06/26/13 17:40	7439-92-1
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7471 Mercury

Analytical Method: EPA 7471 Preparation Method: EPA 7471

Mercury	0.36	mg/kg	0.060			1	06/25/13 15:30	06/26/13 09:45	7439-97-6
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8270 MSSV PAH by SIM

Analytical Method: EPA 8270 by SIM Preparation Method: EPA 3546

Acenaphthene	ND	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	83-32-9	
Acenaphthylene	148	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	208-96-8	
Anthracene	162	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	120-12-7	
Benzo(a)anthracene	1740	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	56-55-3	
Benzo(a)pyrene	1500	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	50-32-8	
Benzo(b)fluoranthene	2460	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	205-99-2	
Benzo(g,h,i)perylene	447	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	191-24-2	
Benzo(k)fluoranthene	ND	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	207-08-9	
Chrysene	1730	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	218-01-9	
Dibenz(a,h)anthracene	135	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	53-70-3	
Fluoranthene	1670	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	206-44-0	
Fluorene	ND	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	86-73-7	
Indeno(1,2,3-cd)pyrene	391	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	193-39-5	
Naphthalene	155	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	91-20-3	
Phenanthrene	393	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	85-01-8	
Pyrene	3060	ug/kg	39.4		10	06/25/13 00:00	06/26/13 17:03	129-00-0	

Surrogates

2-Fluorobiphenyl (S)	75	%	40-120		10	06/25/13 00:00	06/26/13 17:03	321-60-8	
Terphenyl-d14 (S)	100	%	38-123		10	06/25/13 00:00	06/26/13 17:03	1718-51-0	

Percent Moisture

Analytical Method: ASTM D2974

Percent Moisture	16.5	%	0.50		1		06/25/13 00:00		
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9045 pH Soil

Analytical Method: EPA 9045

pH at 25 Degrees C	7.0	Std. Units	0.10		1		06/26/13 13:54		H3
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QUALITY CONTROL DATA

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

QC Batch:	MERP/7456	Analysis Method:	EPA 7471
QC Batch Method:	EPA 7471	Analysis Description:	7471 Mercury
Associated Lab Samples:	60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006		

METHOD BLANK:	1210456	Matrix:	Solid
Associated Lab Samples:	60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	mg/kg	ND	0.050	06/26/13 09:25	

LABORATORY CONTROL SAMPLE: 1210457						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/kg	.5	0.52	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1210458													1210459		
Parameter	Units	60147566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual			
Mercury	mg/kg	1.8	.58	.52	2.2	1.6	61	-36	75-125	28	20	M1, R1			

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QUALITY CONTROL DATA

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

QC Batch:	MPRP/23219	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3050	Analysis Description:	6010 MET
Associated Lab Samples: 60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006			

METHOD BLANK: 1210395 Matrix: Solid

Associated Lab Samples: 60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	mg/kg	ND	1.0	06/25/13 16:10	
Barium	mg/kg	ND	1.0	06/25/13 16:10	
Cadmium	mg/kg	ND	0.50	06/25/13 16:10	
Chromium	mg/kg	ND	0.50	06/25/13 16:10	
Copper	mg/kg	ND	1.0	06/25/13 16:10	
Lead	mg/kg	ND	1.0	06/25/13 16:10	
Manganese	mg/kg	ND	0.50	06/25/13 16:10	
Selenium	mg/kg	ND	1.5	06/25/13 16:10	
Silver	mg/kg	ND	0.70	06/25/13 16:10	
Zinc	mg/kg	ND	10.0	06/25/13 16:10	

LABORATORY CONTROL SAMPLE: 1210396

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	mg/kg	100	98.9	99	80-120	
Barium	mg/kg	100	104	104	80-120	
Cadmium	mg/kg	100	101	101	80-120	
Chromium	mg/kg	100	103	103	80-120	
Copper	mg/kg	100	103	103	80-120	
Lead	mg/kg	100	105	105	80-120	
Manganese	mg/kg	100	103	103	80-120	
Selenium	mg/kg	100	99.1	99	80-120	
Silver	mg/kg	50	47.0	94	80-120	
Zinc	mg/kg	100	103	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1210397 1210398

Parameter	Units	60147566001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	mg/kg	125	114	119	221	277	85	129	75-125	22	20	M1, R1
Barium	mg/kg	246	114	119	391	352	128	90	75-125	10	20	M1
Cadmium	mg/kg	6.5	114	119	116	124	96	99	75-125	7	20	
Chromium	mg/kg	28.1	114	119	137	153	95	105	75-125	11	20	
Copper	mg/kg	347	114	119	454	545	93	166	75-125	18	20	M1
Lead	mg/kg	1040	114	119	1080	1250	38	180	75-125	15	20	M1
Manganese	mg/kg	397	114	119	490	589	82	162	75-125	18	20	M1
Selenium	mg/kg	1.9	114	119	111	118	96	98	75-125	6	20	
Silver	mg/kg	ND	57.1	59.3	54.0	59.4	93	99	75-125	10	20	
Zinc	mg/kg	1810	114	119	1840	2150	29	288	75-125	15	20	M1

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QUALITY CONTROL DATA

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

QC Batch:	MPRP/23248	Analysis Method:	EPA 6010
QC Batch Method:	EPA 3010	Analysis Description:	6010 MET TCLP
Associated Lab Samples: 60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006			

METHOD BLANK:	1211150	Matrix:	Water
Associated Lab Samples: 60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006			

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Lead	mg/L	ND	0.50	06/26/13 17:18	

LABORATORY CONTROL SAMPLE: 1211151						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Lead	mg/L	1	1.0	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1211152													1211153		
Parameter	Units	60147566006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual			
Lead	mg/L	ND	10	10	9.8	9.3	98	93	75-125	5	20				

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QUALITY CONTROL DATA

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

QC Batch: OEXT/39016 Analysis Method: EPA 8270 by SIM
QC Batch Method: EPA 3546 Analysis Description: 8270/3546 MSSV PAH by SIM
Associated Lab Samples: 60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006

METHOD BLANK: 1210578 Matrix: Solid

Associated Lab Samples: 60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Acenaphthene	ug/kg	ND	3.3	06/26/13 13:10	
Acenaphthylene	ug/kg	ND	3.3	06/26/13 13:10	
Anthracene	ug/kg	ND	3.3	06/26/13 13:10	
Benzo(a)anthracene	ug/kg	ND	3.3	06/26/13 13:10	
Benzo(a)pyrene	ug/kg	ND	3.3	06/26/13 13:10	
Benzo(b)fluoranthene	ug/kg	ND	3.3	06/26/13 13:10	
Benzo(g,h,i)perylene	ug/kg	ND	3.3	06/26/13 13:10	
Benzo(k)fluoranthene	ug/kg	ND	3.3	06/26/13 13:10	
Chrysene	ug/kg	ND	3.3	06/26/13 13:10	
Dibenz(a,h)anthracene	ug/kg	ND	3.3	06/26/13 13:10	
Fluoranthene	ug/kg	ND	3.3	06/26/13 13:10	
Fluorene	ug/kg	ND	3.3	06/26/13 13:10	
Indeno(1,2,3-cd)pyrene	ug/kg	ND	3.3	06/26/13 13:10	
Naphthalene	ug/kg	ND	3.3	06/26/13 13:10	
Phenanthrene	ug/kg	ND	3.3	06/26/13 13:10	
Pyrene	ug/kg	ND	3.3	06/26/13 13:10	
2-Fluorobiphenyl (S)	%	79	40-120	06/26/13 13:10	
Terphenyl-d14 (S)	%	84	38-123	06/26/13 13:10	

LABORATORY CONTROL SAMPLE: 1210579

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Acenaphthene	ug/kg	33.2	22.7	68	58-120	
Acenaphthylene	ug/kg	33.2	22.4	68	56-120	
Anthracene	ug/kg	33.2	21.9	66	56-120	
Benzo(a)anthracene	ug/kg	33.2	24.2	73	56-120	
Benzo(a)pyrene	ug/kg	33.2	23.5	71	55-120	
Benzo(b)fluoranthene	ug/kg	33.2	22.1	67	54-120	
Benzo(g,h,i)perylene	ug/kg	33.2	24.7	74	42-120	
Benzo(k)fluoranthene	ug/kg	33.2	23.6	71	53-120	
Chrysene	ug/kg	33.2	24.1	73	48-120	
Dibenz(a,h)anthracene	ug/kg	33.2	23.7	71	44-120	
Fluoranthene	ug/kg	33.2	23.0	69	58-120	
Fluorene	ug/kg	33.2	22.9	69	59-120	
Indeno(1,2,3-cd)pyrene	ug/kg	33.2	23.8	72	45-120	
Naphthalene	ug/kg	33.2	23.9	72	58-120	
Phenanthrene	ug/kg	33.2	22.7	68	57-120	
Pyrene	ug/kg	33.2	24.0	72	55-120	
2-Fluorobiphenyl (S)	%			68	40-120	
Terphenyl-d14 (S)	%			72	38-123	

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QUALITY CONTROL DATA

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

QC Batch:	PMST/8669	Analysis Method:	ASTM D2974
QC Batch Method:	ASTM D2974	Analysis Description:	Dry Weight/Percent Moisture
Associated Lab Samples:	60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006		

METHOD BLANK: 1210582 Matrix: Solid

Associated Lab Samples: 60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Percent Moisture	%	ND	0.50	06/25/13 00:00	

SAMPLE DUPLICATE: 1210583

Parameter	Units	60147566001 Result	Dup Result	RPD	Max RPD	Qualifiers
Percent Moisture	%	18.9	18.3	3	20	

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QUALITY CONTROL DATA

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

QC Batch: WET/42049

Analysis Method: EPA 9045

QC Batch Method: EPA 9045

Analysis Description: 9045 pH

Associated Lab Samples: 60147566001, 60147566002, 60147566003, 60147566004, 60147566005, 60147566006

SAMPLE DUPLICATE: 1211080

Parameter	Units	60147566005 Result	Dup Result	RPD	Max RPD	Qualifiers
pH at 25 Degrees C	Std. Units	7.3	7.4	1	3	

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

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.

ANALYTE QUALIFIERS

D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

H3 Sample was received or analysis requested beyond the recognized method holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

R1 RPD value was outside control limits.

S4 Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BNSF FAST TRACK 204997

Pace Project No.: 60147566

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
60147566001	GP-1 0-2	EPA 3050	MPRP/23219	EPA 6010	ICP/18305
60147566002	GP-1 2-4	EPA 3050	MPRP/23219	EPA 6010	ICP/18305
60147566003	GP-2 0-2	EPA 3050	MPRP/23219	EPA 6010	ICP/18305
60147566004	GP-2 2-4	EPA 3050	MPRP/23219	EPA 6010	ICP/18305
60147566005	GP-3 0-2	EPA 3050	MPRP/23219	EPA 6010	ICP/18305
60147566006	GP-3 2-4	EPA 3050	MPRP/23219	EPA 6010	ICP/18305
60147566001	GP-1 0-2	EPA 3010	MPRP/23248	EPA 6010	ICP/18321
60147566002	GP-1 2-4	EPA 3010	MPRP/23248	EPA 6010	ICP/18321
60147566003	GP-2 0-2	EPA 3010	MPRP/23248	EPA 6010	ICP/18321
60147566004	GP-2 2-4	EPA 3010	MPRP/23248	EPA 6010	ICP/18321
60147566005	GP-3 0-2	EPA 3010	MPRP/23248	EPA 6010	ICP/18321
60147566006	GP-3 2-4	EPA 3010	MPRP/23248	EPA 6010	ICP/18321
60147566001	GP-1 0-2	EPA 7471	MERP/7456	EPA 7471	MERC/7415
60147566002	GP-1 2-4	EPA 7471	MERP/7456	EPA 7471	MERC/7415
60147566003	GP-2 0-2	EPA 7471	MERP/7456	EPA 7471	MERC/7415
60147566004	GP-2 2-4	EPA 7471	MERP/7456	EPA 7471	MERC/7415
60147566005	GP-3 0-2	EPA 7471	MERP/7456	EPA 7471	MERC/7415
60147566006	GP-3 2-4	EPA 7471	MERP/7456	EPA 7471	MERC/7415
60147566001	GP-1 0-2	EPA 3546	OEXT/39016	EPA 8270 by SIM	MSSV/12341
60147566002	GP-1 2-4	EPA 3546	OEXT/39016	EPA 8270 by SIM	MSSV/12341
60147566003	GP-2 0-2	EPA 3546	OEXT/39016	EPA 8270 by SIM	MSSV/12341
60147566004	GP-2 2-4	EPA 3546	OEXT/39016	EPA 8270 by SIM	MSSV/12341
60147566005	GP-3 0-2	EPA 3546	OEXT/39016	EPA 8270 by SIM	MSSV/12341
60147566006	GP-3 2-4	EPA 3546	OEXT/39016	EPA 8270 by SIM	MSSV/12341
60147566001	GP-1 0-2	ASTM D2974	PMST/8669		
60147566002	GP-1 2-4	ASTM D2974	PMST/8669		
60147566003	GP-2 0-2	ASTM D2974	PMST/8669		
60147566004	GP-2 2-4	ASTM D2974	PMST/8669		
60147566005	GP-3 0-2	ASTM D2974	PMST/8669		
60147566006	GP-3 2-4	ASTM D2974	PMST/8669		
60147566001	GP-1 0-2	EPA 9045	WET/42049		
60147566002	GP-1 2-4	EPA 9045	WET/42049		
60147566003	GP-2 0-2	EPA 9045	WET/42049		
60147566004	GP-2 2-4	EPA 9045	WET/42049		
60147566005	GP-3 0-2	EPA 9045	WET/42049		
60147566006	GP-3 2-4	EPA 9045	WET/42049		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt
ESI Tech Spec Client

6211-3
WO#: 60147566



Client Name: BNSF TRC / PASI GB

Courier: Fed Ex ☒ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other ☐

Tracking #: 9325 1887 3600

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 ☐

Thermometer Used: T-112 / T-194

Type of Ice: Wet Blue ☐ None ☐ Samples received on ice, cooling process has begun.
(circle one)

Cooler Temperature: 5.0

Date and initials of person examining contents: 6-25-13 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 checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>1-2 Days</u>
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	
Pace containers used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
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	
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	
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	14.
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 checked="" type="checkbox"/> No <input type="checkbox"/> N/A	17. List State: <u>IL</u>

Client Notification/ Resolution:

Copy COC to Client? Y ☒ N ☐

Field Data Required? Y ☐ N ☒

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: _____

Date: 6/27/13

Temp Log: Record start and finish times when unpacking cooler, if >20 min, recheck sample temps.

Start:	Start:
End:	End:
Temp:	Temp:



Sample Condition Upon Receipt

Client Name: BNSF

Project #

Courier: ☐ Fed Ex ☐ UPS ☐ USPS ☐ Client ☒ Commercial ☐ Pace

Other CS Logistics

Tracking #:

Custody Seal on Cooler/Box Present: ☒ yes ☐ no

Seals intact: ☒ yes ☐ no

Custody Seal on Samples Present: ☐ yes ☒ no

Seals intact: ☐ yes ☐ no

Packing Material: ☒ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used

SR-13

Type of Ice: ☒ Wet ☐ Blue ☐ Dry ☐ None

☒ Samples on ice, cooling process has begun

Cooler Temperature

Uncorr: 1

/Corr:

1°C

Biological Tissue is Frozen: ☐ yes

Temp Blank Present:

☒ yes ☐ no

☐ no

Temp should be above freezing to 6°C for all sample except Biota.

Frozen Biota Samples should be received ≤ 0°C.

Comments:

Person examining contents:

Date: 6/22/13

Initials: BF

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 Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7. <u>1-2 day TAT. 6/22/13 BF</u>
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 type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	12.
-Includes date/time/ID/Analysis Matrix:	<u>IS</u>	
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13.
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO ₃ , H ₂ SO ₄ ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted:

Date/Time:

Comments/ Resolution:

Project Manager Review:

Date:

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