NM1 - __10 B____

APPROVALS

YEAR(S):

__2013 - 2014___

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

September 9, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval to Reuse Remediated Biopile Soils for the Stabilization/Solidification of Drilling Mud and Tank Bottoms and Sludge
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM,
San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated September 8, 2014, and associated analytical results to reuse the remediated soils for the stabilization and/or solidification of incoming drilling mud and tank bottoms and sludge from following biopile(s):

Pile # 566 *Pile # 869*

Based upon the information provided, the above-referenced biopiles are hereby approved for the stabilization and/or solidification of incoming drilling mud and tank bottoms and sludge.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Brad A. Jones
Environmental Engineer

BAJ/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Monday, September 08, 2014 1:58 PM
To: Jones, Brad A., EMNRD
Subject: 1BLANK Request to Reuse Soil
Attachments: 1BLANK Request to Reuse Soil.doc; Pile 566.pdf; Pile 869.pdf

Importance: High

Brad:

Please see request to reuse soils along with the corresponding analytical reports.

Thanks,
Marcella
Industrial Ecosystems, Inc.

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

September 9, 2014

Brad Jones
Environmental Bureau
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RE: Use of reclaimed soil

Dear Brad:

Recent analytical results show that the following biopiles(s) have reached acceptable levels as required by our NMOCD permit.

Pile #	
# 566	DRO Passed 08/06/14, GRO, BTEX & Chlorides (432 mg/kg) Passed 06/02/14
# 869	DRO Passed 08/06/14, GRO, BTEX & Chlorides (128 mg/kg) Passed 06/02/14

We are seeking your approval to recycle this soil by using it to mix/solidify incoming liquid waste.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosure(s) – Analytical Reports

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

PILE 869

H402363-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Petroleum Hydrocarbons by GC FID										
DRO >C10-C28	19.2		10.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
Surrogate: 1-Chlorooctane			*96.0 %*	*65.2-140*		*4080107*	MS	*04-Aug-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*105 %*	*63.6-154*		*4080107*	MS	*04-Aug-14*	*8015B*	

ANALYTICAL
AUG - 6 2014
PASSED

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

PILE 566

H402363-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Petroleum Hydrocarbons by GC FID										
DRO >C10-C28	**48.5**		10.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
Surrogate: 1-Chlorooctane			*96.2 %*	*65.2-140*		*4080107*	MS	*04-Aug-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*108 %*	*63.6-154*		*4080107*	MS	*04-Aug-14*	*8015B*	

ANALYTICAL
AUG - 6 2014
PASSED

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

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August 06, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 08/01/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4080407 - 1:4 DI Water										
Blank (4080407-BLK1)				Prepared & Analyzed: 05-Aug-14						
Chloride	ND	16.0	mg/kg							
LCS (4080407-BS1)				Prepared & Analyzed: 05-Aug-14						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (4080407-BSD1)				Prepared & Analyzed: 05-Aug-14						
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 565	H402363-01	Soil	31-Jul-14 08:00	01-Aug-14 10:30
PILE 566	H402363-02	Soil	31-Jul-14 08:40	01-Aug-14 10:30
PILE 568	H402363-03	Soil	31-Jul-14 09:05	01-Aug-14 10:30
PILE 835	H402363-04	Soil	31-Jul-14 09:37	01-Aug-14 10:30
PILE 864	H402363-05	Soil	31-Jul-14 10:00	01-Aug-14 10:30
PILE 869	H402363-06	Soil	31-Jul-14 10:30	01-Aug-14 10:30
PILE 870	H402363-07	Soil	31-Jul-14 10:55	01-Aug-14 10:30
PILE 890	H402363-08	Soil	31-Jul-14 11:20	01-Aug-14 10:30
PILE 898	H402363-09	Soil	31-Jul-14 11:40	01-Aug-14 10:30
PILE 877	H402363-10	Soil	31-Jul-14 12:15	01-Aug-14 10:30

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4080106 - Volatiles										
Blank (4080106-BLK1)				Prepared: 01-Aug-14 Analyzed: 02-Aug-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*98.0*	*89.4-126*			
LCS (4080106-BS1)				Prepared & Analyzed: 01-Aug-14						
Benzene	1.64	0.050	mg/kg	2.00		82.2	76.4-135			
Toluene	1.67	0.050	mg/kg	2.00		83.7	80.2-135			
Ethylbenzene	1.61	0.050	mg/kg	2.00		80.7	78.5-133			
Total Xylenes	5.02	0.150	mg/kg	6.00		83.7	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0493*		mg/kg	*0.0500*		*98.7*	*89.4-126*			
LCS Dup (4080106-BSD1)				Prepared & Analyzed: 01-Aug-14						
Benzene	1.90	0.050	mg/kg	2.00		95.2	76.4-135	14.7	16.4	
Toluene	1.91	0.050	mg/kg	2.00		95.6	80.2-135	13.2	16.6	
Ethylbenzene	1.85	0.050	mg/kg	2.00		92.4	78.5-133	13.6	16.1	
Total Xylenes	5.73	0.150	mg/kg	6.00		95.4	80.1-135	13.1	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0484*		mg/kg	*0.0500*		*96.8*	*89.4-126*			
Batch 4080401 - Volatiles										
Blank (4080401-BLK1)				Prepared: 04-Aug-14 Analyzed: 05-Aug-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0503*		mg/kg	*0.0500*		*101*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4080401 - Volatiles										
LCS (4080401-BS1)				Prepared & Analyzed: 04-Aug-14						
Benzene	1.65	0.050	mg/kg	2.00		82.7	76.4-135			
Toluene	1.68	0.050	mg/kg	2.00		84.1	80.2-135			
Ethylbenzene	1.66	0.050	mg/kg	2.00		83.0	78.5-133			
Total Xylenes	5.18	0.150	mg/kg	6.00		86.4	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0501*		mg/kg	*0.0500*		*100*	*89.4-126*			
LCS Dup (4080401-BSD1)				Prepared & Analyzed: 04-Aug-14						
Benzene	1.80	0.050	mg/kg	2.00		90.0	76.4-135	8.41	16.4	
Toluene	1.81	0.050	mg/kg	2.00		90.6	80.2-135	7.43	16.6	
Ethylbenzene	1.79	0.050	mg/kg	2.00		89.4	78.5-133	7.40	16.1	
Total Xylenes	5.59	0.150	mg/kg	6.00		93.1	80.1-135	7.49	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0492*		mg/kg	*0.0500*		*98.5*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4080107 - General Prep - Organics										
Blank (4080107-BLK1)				Prepared: 01-Aug-14 Analyzed: 04-Aug-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*47.2*		mg/kg	*50.0*		*94.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*48.1*		mg/kg	*50.0*		*96.2*	*63.6-154*			
LCS (4080107-BS1)				Prepared: 01-Aug-14 Analyzed: 04-Aug-14						
GRO C6-C10	200	10.0	mg/kg	200		99.8	66.4-124			
DRO >C10-C28	207	10.0	mg/kg	200		104	61.6-132			
Surrogate: 1-Chlorooctane	*49.7*		mg/kg	*50.0*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*54.6*		mg/kg	*50.0*		*109*	*63.6-154*			
LCS Dup (4080107-BSD1)				Prepared: 01-Aug-14 Analyzed: 04-Aug-14						
GRO C6-C10	204	10.0	mg/kg	200		102	66.4-124	2.11	23.4	
DRO >C10-C28	218	10.0	mg/kg	200		109	61.6-132	4.91	23.1	
Surrogate: 1-Chlorooctane	*51.3*		mg/kg	*50.0*		*103*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*59.2*		mg/kg	*50.0*		*118*	*63.6-154*			

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcellus
Address: 49 Rd 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 2549
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015B	Analyses Required: GRO 8015B	Analyses Required: BTEX 8021B	Analyses Required: Chlorides 300.0	Comments
1. Pile 565	7/31/14	8:00	RC	3	1	N							✓				19.5C on ice
2. " 566		8:40											✓				
3. " 568		9:05											✓				
4. " 835		9:37											✓				
5. " 864		10:00											✓	✓	✓	✓	
6. " 869		10:30											✓	✓	✓	✓	
7. " 870		10:55											✓				
8. " 890		11:20											✓				
9. " 898		11:40											✓	✓	✓	✓	
10. " 877		12:15											✓	✓	✓	✓	

Relinquished by: [signature] Date: 7/31/14 Time: 2:25 Received by: [signature] Date: 7/31/14 Time: 1426
Relinquished by: [signature] Date: 7/31 Time: 1510 Received by: [signature] Date: 7/31/14 Time: 1510

* Sample Reject: [ ] Return [ ] Disposal [ ] Store 30 Days

1600 Fed Ex 7/31/14

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 566

H401627-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**432**		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	30-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	30-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*89.4-126*		*4052903*	MS	*30-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4052801	MS	28-May-14	8015B	
DRO >C10-C28	**608**		10.0	mg/kg	1	4052801	MS	28-May-14	8015B	
Surrogate: 1-Chlorooctane			*91.5 %*	*65.2-140*		*4052801*	MS	*28-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*135 %*	*63.6-154*		*4052801*	MS	*28-May-14*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 869

H401627-14 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	128		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	30-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	30-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*107 %*	*89.4-126*		*4052903*	MS	*30-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4052901	MS	29-May-14	8015B	
DRO >C10-C28	560		10.0	mg/kg	1	4052901	MS	29-May-14	8015B	
Surrogate: 1-Chlorooctane			*98.6 %*	*65.2-140*		*4052901*	MS	*29-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*115 %*	*63.6-154*		*4052901*	MS	*29-May-14*	*8015B*	

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June 02, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/28/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 647	H401627-01	Soil	23-May-14 07:50	28-May-14 10:30
PILE 564	H401627-02	Soil	23-May-14 08:20	28-May-14 10:30
PILE 565	H401627-03	Soil	23-May-14 08:40	28-May-14 10:30
PILE 566	H401627-04	Soil	23-May-14 09:05	28-May-14 10:30
PILE 591	H401627-05	Soil	23-May-14 09:25	28-May-14 10:30
PILE 712	H401627-06	Soil	23-May-14 09:50	28-May-14 10:30
PILE 716	H401627-07	Soil	23-May-14 10:30	28-May-14 10:30
PILE 760	H401627-08	Soil	23-May-14 10:50	28-May-14 10:30
PILE 826	H401627-09	Soil	23-May-14 11:40	28-May-14 10:30
PILE 840	H401627-10	Soil	23-May-14 12:00	28-May-14 10:30
PILE 842	H401627-11	Soil	23-May-14 12:15	28-May-14 10:30
PILE 850	H401627-12	Soil	23-May-14 12:30	28-May-14 10:30
PILE 868	H401627-13	Soil	23-May-14 12:40	28-May-14 10:30
PILE 869	H401627-14	Soil	23-May-14 12:56	28-May-14 10:30
PILE 870	H401627-15	Soil	23-May-14 13:15	28-May-14 10:30

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052811 - 1:4 DI Water										
Blank (4052811-BLK1)				Prepared & Analyzed: 28-May-14						
Chloride	ND	16.0	mg/kg							
LCS (4052811-BS1)				Prepared & Analyzed: 28-May-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4052811-BSD1)				Prepared & Analyzed: 28-May-14						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052903 - Volatiles										
Blank (4052903-BLK1)				Prepared & Analyzed: 29-May-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0526*		mg/kg	*0.0500*		*105*	*89.4-126*			
LCS (4052903-BS1)				Prepared & Analyzed: 29-May-14						
Benzene	2.30	0.050	mg/kg	2.00		115	76.4-135			
Toluene	2.33	0.050	mg/kg	2.00		116	80.2-135			
Ethylbenzene	2.23	0.050	mg/kg	2.00		111	78.5-133			
Total Xylenes	6.96	0.150	mg/kg	6.00		116	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0520*		mg/kg	*0.0500*		*104*	*89.4-126*			
LCS Dup (4052903-BSD1)				Prepared & Analyzed: 29-May-14						
Benzene	2.26	0.050	mg/kg	2.00		113	76.4-135	1.75	16.4	
Toluene	2.26	0.050	mg/kg	2.00		113	80.2-135	2.64	16.6	
Ethylbenzene	2.18	0.050	mg/kg	2.00		109	78.5-133	2.07	16.1	
Total Xylenes	6.80	0.150	mg/kg	6.00		113	80.1-135	2.23	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0520*		mg/kg	*0.0500*		*104*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052801 - General Prep - Organics										
Blank (4052801-BLK1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*65.9*		mg/kg	*50.0*		*132*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*65.7*		mg/kg	*50.0*		*131*	*63.6-154*			
LCS (4052801-BS1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	192	10.0	mg/kg	200		96.2	66.4-124			
DRO >C10-C28	206	10.0	mg/kg	200		103	61.6-132			
Surrogate: 1-Chlorooctane	*62.4*		mg/kg	*50.0*		*125*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*62.2*		mg/kg	*50.0*		*124*	*63.6-154*			
LCS Dup (4052801-BSD1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	194	10.0	mg/kg	200		97.2	66.4-124	1.06	23.4	
DRO >C10-C28	216	10.0	mg/kg	200		108	61.6-132	4.66	23.1	
Surrogate: 1-Chlorooctane	*63.9*		mg/kg	*50.0*		*128*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*64.2*		mg/kg	*50.0*		*128*	*63.6-154*			
Batch 4052802 - General Prep - Organics										
Blank (4052802-BLK1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*47.6*		mg/kg	*50.0*		*95.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.1*		mg/kg	*50.0*		*98.2*	*63.6-154*			
LCS (4052802-BS1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	190	10.0	mg/kg	200		94.9	66.4-124			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132			
Surrogate: 1-Chlorooctane	*47.5*		mg/kg	*50.0*		*95.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.4*		mg/kg	*50.0*		*98.8*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052802 - General Prep - Organics										
LCS Dup (4052802-BSD1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	186	10.0	mg/kg	200		93.2	66.4-124	1.85	23.4	
DRO >C10-C28	198	10.0	mg/kg	200		99.2	61.6-132	0.141	23.1	
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.8*		mg/kg	*50.0*		*102*	*63.6-154*			
Batch 4052901 - General Prep - Organics										
Blank (4052901-BLK1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*49.1*		mg/kg	*50.0*		*98.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.5*		mg/kg	*50.0*		*99.0*	*63.6-154*			
LCS (4052901-BS1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	198	10.0	mg/kg	200		99.2	66.4-124			
DRO >C10-C28	213	10.0	mg/kg	200		106	61.6-132			
Surrogate: 1-Chlorooctane	*52.2*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.7*		mg/kg	*50.0*		*111*	*63.6-154*			
LCS Dup (4052901-BSD1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	199	10.0	mg/kg	200		99.3	66.4-124	0.0992	23.4	
DRO >C10-C28	212	10.0	mg/kg	200		106	61.6-132	0.379	23.1	
Surrogate: 1-Chlorooctane	*51.9*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.0*		mg/kg	*50.0*		*110*	*63.6-154*			
Batch 4053004 - General Prep - Organics										
Blank (4053004-BLK1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*45.1*		mg/kg	*50.0*		*90.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.9*		mg/kg	*50.0*		*95.8*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4053004 - General Prep - Organics										
LCS (4053004-BS1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	160	10.0	mg/kg	200		79.8	66.4-124			
DRO >C10-C28	178	10.0	mg/kg	200		89.1	61.6-132			
Surrogate: 1-Chlorooctane	*42.1*		mg/kg	*50.0*		*84.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*44.4*		mg/kg	*50.0*		*88.7*	*63.6-154*			
LCS Dup (4053004-BSD1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	172	10.0	mg/kg	200		86.1	66.4-124	7.66	23.4	
DRO >C10-C28	189	10.0	mg/kg	200		94.7	61.6-132	6.09	23.1	
Surrogate: 1-Chlorooctane	*45.6*		mg/kg	*50.0*		*91.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*46.4*		mg/kg	*50.0*		*92.8*	*63.6-154*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 2

Client: IEI
Contact: Marcella
Address: Hq CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2367
Project Name: JEJ

Table 1. Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
H401627																	8.1c only a c
1. Pile 647	5/23/14	9:50	RC	3	1	N							✓	✓	✓	✓	
2. 564		8:20				N							✓				
3. 565		8:40											✓	✓	✓	✓	
4. 566		9:05											✓	✓	✓	✓	
5. 591		9:25											✓	✓	✓	✓	
6. 712		9:50											✓	✓	✓	✓	
7. 716		10:30											✓	✓	✓	✓	
8. 762		10:50											✓	✓	✓	✓	
9. 826		11:40											✓	✓	✓	✓	
10. 840		12:00											✓	✓	✓	✓	

Relinquished by:		Date: 5/23/14	Time: 1325	Received by:		Date: 5-23-14	Time: 1325
Relinquished by:		Date: 5/23/14	Time: 1352	Received by:		Date: 5/23/14	Time: 1352

* Sample Reject: [ ] Return [ ] Dispose 5/27/14 1600 [ ] Store (30 Days)

5/27/14 1600 Fed Ex

5/24/14 10:30
Jodi Denson 4.8c #54

Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 2 of 2

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505/632-1782
FAX Number:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2367
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
H401627																	
1. P:6 842	5/23/14	12:15	RC	3	1	N							✓	✓	✓	✓	
2. 850		12:30											✓	✓	✓	✓	
3. 868		12:40											✓	✓	✓	✓	
4. 869		12:56											✓	✓	✓	✓	
5. 870		1:15											✓	✓	✓	✓	
6.																	
7.																	
8.																	
9.																	
10.																	

Relinquished by:	Date: 5/23/14	Time: 1525	Received by: Lyndsy Chee	Date: 5-23-14	Time: 1325
Relinquished by: Lyndsy Chee	Date: 5/23/14	Time: 1352	Received by: Kristin Clare	Date: 5/23/14	Time: 1352

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Kristin Clare 5/27/14 1600 Fed Ex 5/27/14 1600

5/28/14 10:30 #5
Jodi Henson 4.8°c

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

December 4, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval to Reuse Remediated Biopile Soils for the Stabilization/Solidification of Drilling Mud and Tank Bottoms and Sludge
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM,
San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated December 4, 2014, and associated analytical results to reuse the remediated soils for the stabilization and/or solidification of incoming drilling mud and tank bottoms and sludge from following biopile(s):

Pile # 805 *Pile # 836* *Pile # 885* *Pile # 895* *Pile # 902*

Based upon the information provided, the above-referenced biopiles are hereby approved for the stabilization and/or solidification of incoming drilling mud and tank bottoms and sludge.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Brad A. Jones
Environmental Engineer

BAJ/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Thursday, December 04, 2014 3:01 PM
To: Jones, Brad A., EMNRD
Subject: Request to Reuse Treated Soils-1st email
Attachments: 1BLANK Request to Reuse Soil.doc; Pile 805.pdf; Pile 836.pdf

Importance: High

Brad:

Please see the attached letter requesting reuse of treated soils along with the corresponding analytical reports. There will be more than one email sent over so that I don't "lock up" your system.

Thanks,
Marcella Marquez, HSE Administrator
Industrial Ecosystems, Inc.
Phone: (505) 632-1782
Fax: (505) 632-1876 or (505) 334-1003

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

December 4, 2014

Brad Jones
Environmental Bureau
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RE: Use of reclaimed soil

Dear Brad:

Recent analytical results show that the following biopiles(s) have reached acceptable levels as required by our NMOCD permit.

Pile #	
805	DRO, BTEX & Chlorides Passed 11/20/14, GRO Passed 10/01/14
836	DRO, GRO Passed 10/01/14, BTEX & Chlorides Passed 11/20/14
885	DRO, BTEX & Chlorides Passed 11/20/14, GRO Passed 10/01/14
895	DRO, GRO Passed 10/01/14, BTEX & Chlorides Passed 11/20/14
902	DRO, GRO Passed 09/26/14, BTEX & Chlorides Passed 11/20/14

We are seeking your approval to recycle this soil by using it to mix/solidify incoming liquid waste.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosure(s) – Analytical Reports

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

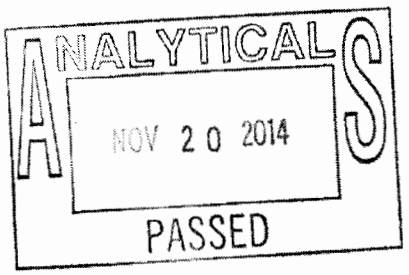
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

PILE 805

H403517-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**96.0**		16.0	mg/kg	4	4111704	AP	17-Nov-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*61-154*		*4111803*	ms	*18-Nov-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
DRO >C10-C28	ND		10.0	mg/kg	1	4111406	MS	14-Nov-14	8015B	
Surrogate: 1-Chlorooctane			*113 %*	*47.2-157*		*4111406*	MS	*14-Nov-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*116 %*	*52.1-176*		*4111406*	MS	*14-Nov-14*	*8015B*	



Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111704 - 1:4 DI Water										
Blank (4111704-BLK1)				Prepared & Analyzed: 17-Nov-14						
Chloride	ND	16.0	mg/kg							
LCS (4111704-BS1)				Prepared & Analyzed: 17-Nov-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4111704-BSD1)				Prepared & Analyzed: 17-Nov-14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	
Batch 4111705 - 1:4 DI Water										
Blank (4111705-BLK1)				Prepared & Analyzed: 17-Nov-14						
Chloride	ND	16.0	mg/kg							
LCS (4111705-BS1)				Prepared & Analyzed: 17-Nov-14						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (4111705-BSD1)				Prepared & Analyzed: 17-Nov-14						
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111803 - Volatiles										
Blank (4111803-BLK1)				Prepared & Analyzed: 18-Nov-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*98.0*	*61-154*			
LCS (4111803-BS1)				Prepared & Analyzed: 18-Nov-14						
Benzene	1.76	0.050	mg/kg	2.00		88.1	77.1-114			
Toluene	1.71	0.050	mg/kg	2.00		85.4	67-114			
Ethylbenzene	1.67	0.050	mg/kg	2.00		83.7	63.5-121			
Total Xylenes	5.02	0.150	mg/kg	6.00		83.7	62.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0468*		mg/kg	*0.0500*		*93.7*	*61-154*			
LCS Dup (4111803-BSD1)				Prepared & Analyzed: 18-Nov-14						
Benzene	1.90	0.050	mg/kg	2.00		95.2	77.1-114	7.77	16.4	
Toluene	1.85	0.050	mg/kg	2.00		92.6	67-114	8.13	16.2	
Ethylbenzene	1.84	0.050	mg/kg	2.00		91.9	63.5-121	9.31	17	
Total Xylenes	5.52	0.150	mg/kg	6.00		92.1	62.4-125	9.55	17	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0482*		mg/kg	*0.0500*		*96.4*	*61-154*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111406 - General Prep - Organics										
Blank (4111406-BLK1)				Prepared & Analyzed: 14-Nov-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*60.3*		mg/kg	*50.0*		*121*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*59.6*		mg/kg	*50.0*		*119*	*52.1-176*			
LCS (4111406-BS1)				Prepared & Analyzed: 14-Nov-14						
GRO C6-C10	212	10.0	mg/kg	200		106	72.5-115			
DRO >C10-C28	213	10.0	mg/kg	200		107	81.3-118			
Surrogate: 1-Chlorooctane	*62.4*		mg/kg	*50.0*		*125*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*61.0*		mg/kg	*50.0*		*122*	*52.1-176*			
LCS Dup (4111406-BSD1)				Prepared & Analyzed: 14-Nov-14						
GRO C6-C10	215	10.0	mg/kg	200		108	72.5-115	1.79	10.1	
DRO >C10-C28	211	10.0	mg/kg	200		105	81.3-118	1.12	15.3	
Surrogate: 1-Chlorooctane	*64.3*		mg/kg	*50.0*		*129*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*62.6*		mg/kg	*50.0*		*125*	*52.1-176*			

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 635-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2845
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Prod.W., 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Analyses Required: DRO 8015B; GRO 8015B; BTEX 8021B; Chlorides 300.

Sample ID	Date	Time	Collected by: (Init.)	Matrix Type From Table 1	No. of Containers	Sample Filtered ? Y/N	Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Comments
H403517													
1. P16 748	11/13/14	7:20	RC	3	1	N							6.2 on ice
2. " 836		8:00											
3. " 844		8:40											
4. " 872		9:10											
5. " 873		9:27											
6. " 805		10:05											
7. " 885		10:47											
8. " 895		11:20											
9. " 902		12:15											
10.													

Relinquished by:	Date: 11/13/14	Time: 2:26	Received by: M. Marcello	Date: 11/13/14	Time: 2:26
Relinquished by: M. Marcello	Date: 11/13/14	Time: 2:34	Received by:	Date: 11.13.14	Time: 1434
Relinquished by:	Date: 11/13/14	Time: 1505	Received by: Christine Clark	Date: 11/13/14	Time: 1505

Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

11/12/14 (MOD) Fed Ex 11/13 11:00

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Client Sample ID: Pile 805
Project: JFJ Landfarm
Collection Date: 9/22/2014 9:13:00 AM
Lab ID: 1409B08-003 **Matrix:** SOIL **Received Date:** 9/23/2014 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	280	9.9		mg/Kg	1	9/25/2014 2:26:12 PM	15459
Surr: DNOP	102	57.9-140		%REC	1	9/25/2014 2:26:12 PM	15459
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/26/2014 2:37:24 AM	15458
Surr: BFB	97.7	80-120		%REC	1	9/26/2014 2:37:24 AM	15458

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID **1409946-002AMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15397** RunNo: **21369**

Prep Date: **9/19/2014** Analysis Date: **9/23/2014** SeqNo: **624251** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		4.965		99.8	57.9	140			

Sample ID **1409946-002AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15397** RunNo: **21369**

Prep Date: **9/19/2014** Analysis Date: **9/23/2014** SeqNo: **624424** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		4.970		97.5	57.9	140	0	0	

Sample ID **1409A81-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626700** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	71	10	49.80	0	142	40.1	152			
Surr: DNOP	4.6		4.980		91.4	57.9	140			

Sample ID **1409A81-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626701** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.15	0	110	40.1	152	24.5	32.1	
Surr: DNOP	3.6		5.015		72.3	57.9	140	0	0	

Sample ID **MB-15459** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626708** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.3	57.9	140			

Sample ID **LCS-15459** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626709** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	113	68.6	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID	**LCS-15459**	SampType: **LCS**		TestCode: **EPA Method 8015D: Diesel Range Organics**					
Client ID:	**LCSS**	Batch ID: **15459**		RunNo: **21392**					
Prep Date:	**9/23/2014**	Analysis Date: **9/24/2014**		SeqNo: **626709**		Units: **mg/Kg**			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.5		5.000		111	57.9	140			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2.
RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID **MB-15490 MK**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R21449**	RunNo: **21449**
Prep Date:	Analysis Date: **9/25/2014**	SeqNo: **627596** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		87.7	80	120			

Sample ID **LCS-15490 MK**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R21449**	RunNo: **21449**
Prep Date:	Analysis Date: **9/25/2014**	SeqNo: **627597** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.0	80	120			

Sample ID **MB-15458**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **15458**	RunNo: **21468**
Prep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627678** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860		1000		86.4	80	120			

Sample ID **LCS-15458**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **15458**	RunNo: **21468**
Prep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627679** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
asoline Range Organics (GRO)	21	5.0	25.00	0	83.6	65.8	139			
Surr: BFB	880		1000		88.3	80	120			

Sample ID **1409B08-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **Pile 895**	Batch ID: **15458**	RunNo: **21468**
Prep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627681** Units: **mg/Kg**

nalyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
soline Range Organics (GRO)	21	4.8	23.81	0	88.4	71.8	132			
Surr: BFB	820		952.4		86.6	80	120			

ample ID **1409B08-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
ient ID: **Pile 895**	Batch ID: **15458**	RunNo: **21468**
ep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627682** Units: **mg/Kg**

alyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
oline Range Organics (GRO)	21	4.7	23.74	0	90.2	71.8	132	1.82	20	
rr: BFB	830		949.7		87.9	80	120	0	0	

lifiers:

	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	Spike Recovery outside accepted recovery limits		

Industrial Ecosystems Inc.
Mailing Address: P.O. Box 87
Bloomfield, NM 87413
Phone #: (505)320-1183
email or Fax#:

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)
☐ Other
☐ EDD (Type)

☒ Standard ☐ Rush

Project Name: JFJ Landfarm

Project #:

Project Manager: Jeff Blagg

Sampler: Jeff Blagg
On Ice: ☒ Yes ☐ No
Sample Temperature: 1.0°

HALL ENVIRONMENTAL
ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409B08	TPH 8015B (GRO / DRO)	Air Bubbles (Y or N)
09/22/2014	9:01	Soil	Pile 895	4oz x 1	cool	-001	x	
09/22/2014	9:08	Soil	Pile 748	4oz x 1	cool	-002	x	
09/22/2014	9:13	Soil	Pile 805	4oz x 1	cool	-003	x	
09/22/2014	9:20	Soil	Pile 793	4oz x 1	cool	-004	x	
09/22/2014	9:25	Soil	Pile 844	4oz x 1	cool	-005	x	
09/22/2014	9:31	Soil	Pile 836	4oz x 1	cool	-006	x	
09/22/2014	9:38	Soil	Pile 885	4oz x 1	cool	-007	x	

Date	Time	Relinquished by:	Received by:	Date	Time
9/22/2014	1615	Jeff Blagg	Christin Walter	9/22/2014	1615
9/22/14	1740	Christin Walter	Mitchell Lee	09/23/14	0745

Remarks: Bill JFJ
email results to:
marcella@industrialecosystems.com

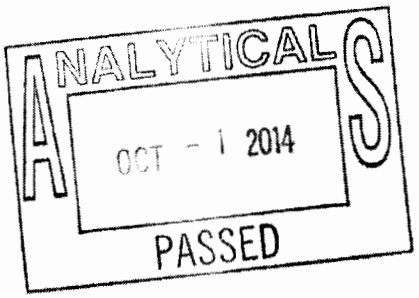
If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: JFJ Landfarm
Lab ID: 1409B08-006 **Matrix:** SOIL

Client Sample ID: Pile 836
Collection Date: 9/22/2014 9:31:00 AM
Received Date: 9/23/2014 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: **BCN**
Diesel Range Organics (DRO)	68	10		mg/Kg	1	9/25/2014 1:52:14 AM	15459
Surr: DNOP	96.0	57.9-140		%REC	1	9/25/2014 1:52:14 AM	15459
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/25/2014 7:19:21 PM	15458
Surr: BFB	90.7	80-120		%REC	1	9/25/2014 7:19:21 PM	15458



Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID **1409946-002AMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15397** RunNo: **21369**

Prep Date: **9/19/2014** Analysis Date: **9/23/2014** SeqNo: **624251** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		4.965		99.8	57.9	140			

Sample ID **1409946-002AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15397** RunNo: **21369**

Prep Date: **9/19/2014** Analysis Date: **9/23/2014** SeqNo: **624424** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		4.970		97.5	57.9	140	0	0	

Sample ID **1409A81-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626700** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	71	10	49.80	0	142	40.1	152			
Surr: DNOP	4.6		4.980		91.4	57.9	140			

Sample ID **1409A81-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626701** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.15	0	110	40.1	152	24.5	32.1	
Surr: DNOP	3.6		5.015		72.3	57.9	140	0	0	

Sample ID **MB-15459** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626708** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.3	57.9	140			

Sample ID **LCS-15459** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626709** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	113	68.6	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID	LCS-15459	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics				
Client ID:	LCSS	Batch ID:	15459	RunNo:	21392				
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	626709	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.5		5.000		111	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID **MB-15490 MK**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R21449**	RunNo: **21449**
Prep Date:	Analysis Date: **9/25/2014**	SeqNo: **627596** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		87.7	80	120			

Sample ID **LCS-15490 MK**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R21449**	RunNo: **21449**
Prep Date:	Analysis Date: **9/25/2014**	SeqNo: **627597** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.0	80	120			

Sample ID **MB-15458**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **15458**	RunNo: **21468**
Prep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627678** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860		1000		86.4	80	120			

Sample ID **LCS-15458**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **15458**	RunNo: **21468**
Prep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627679** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
asoline Range Organics (GRO)	21	5.0	25.00	0	83.6	65.8	139			
Surr: BFB	880		1000		88.3	80	120			

Sample ID **1409B08-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **Pile 895**	Batch ID: **15458**	RunNo: **21468**
Prep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627681** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
soline Range Organics (GRO)	21	4.8	23.81	0	88.4	71.8	132			
Surr: BFB	820		952.4		86.6	80	120			

ample ID **1409B08-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
ient ID: **Pile 895**	Batch ID: **15458**	RunNo: **21468**
ep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627682** Units: **mg/Kg**

alyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
oline Range Organics (GRO)	21	4.7	23.74	0	90.2	71.8	132	1.82	20	
urr: BFB	830		949.7		87.9	80	120	0	0	

ılifiers:

	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	Spike Recovery outside accepted recovery limits		

Client:	Blagg Engineering, Inc.
	Industrial Ecosystems Inc.
Mailing Address:	P.O. Box 87
	Bloomfield, NM 87413
Phone #:	(505)320-1183
email or Fax#:	
QA/QC Package:	
☒ Standard	☐ Level 4 (Full Validation)
☐ Other	
☐ EDD (Type)	

☒ Standard ☐ Rush

Project Name: JFJ Landfarm

Project #:

Project Manager: Jeff Blagg

Sampler: Jeff Blagg

On Ice: ☑ Yes ☐ No

Sample Temperature: 1.0°

ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409B08	TPH 8015B (GRO / DRO)	Air Bubbles (Y or N)
09/22/2014	9:01	Soil	Pile 895	4oz x 1	cool	-001	x	
09/22/2014	9:08	Soil	Pile 748	4oz x 1	cool	-002	x	
09/22/2014	9:13	Soil	Pile 805	4oz x 1	cool	-003	x	
09/22/2014	9:20	Soil	Pile 793	4oz x 1	cool	-004	x	
09/22/2014	9:25	Soil	Pile 844	4oz x 1	cool	-005	x	
09/22/2014	9:31	Soil	Pile 836	4oz x 1	cool	-006	x	
09/22/2014	9:38	Soil	Pile 885	4oz x 1	cool	-007	x	

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/22/2014	1615	Jeff Blagg	Christine Walker	9/22/2014	1615
9/22/14	1740	Christine Walker	Michelle Garcia	09/23/14	0745

Remarks: Bill JFJ
email results to:
marcella@industrialecosystems.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

CARDINAL Laboratories

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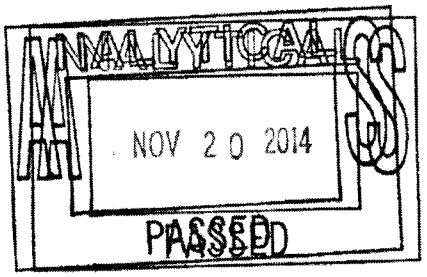
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

PILE 836

H403517-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**208**		16.0	mg/kg	4	4111704	AP	17-Nov-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*61-154*		*4111803*	ms	*18-Nov-14*	*8021B*	



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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111704 - 1:4 DI Water										
Blank (4111704-BLK1)				Prepared & Analyzed: 17-Nov-14						
Chloride	ND	16.0	mg/kg							
LCS (4111704-BS1)				Prepared & Analyzed: 17-Nov-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4111704-BSD1)				Prepared & Analyzed: 17-Nov-14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	
Batch 4111705 - 1:4 DI Water										
Blank (4111705-BLK1)				Prepared & Analyzed: 17-Nov-14						
Chloride	ND	16.0	mg/kg							
LCS (4111705-BS1)				Prepared & Analyzed: 17-Nov-14						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (4111705-BSD1)				Prepared & Analyzed: 17-Nov-14						
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111803 - Volatiles										
Blank (4111803-BLK1)				Prepared & Analyzed: 18-Nov-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*98.0*	*61-154*			
LCS (4111803-BS1)				Prepared & Analyzed: 18-Nov-14						
Benzene	1.76	0.050	mg/kg	2.00		88.1	77.1-114			
Toluene	1.71	0.050	mg/kg	2.00		85.4	67-114			
Ethylbenzene	1.67	0.050	mg/kg	2.00		83.7	63.5-121			
Total Xylenes	5.02	0.150	mg/kg	6.00		83.7	62.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0468*		mg/kg	*0.0500*		*93.7*	*61-154*			
LCS Dup (4111803-BSD1)				Prepared & Analyzed: 18-Nov-14						
Benzene	1.90	0.050	mg/kg	2.00		95.2	77.1-114	7.77	16.4	
Toluene	1.85	0.050	mg/kg	2.00		92.6	67-114	8.13	16.2	
Ethylbenzene	1.84	0.050	mg/kg	2.00		91.9	63.5-121	9.31	17	
Total Xylenes	5.52	0.150	mg/kg	6.00		92.1	62.4-125	9.55	17	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0482*		mg/kg	*0.0500*		*96.4*	*61-154*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111406 - General Prep - Organics										
Blank (4111406-BLK1)			Prepared & Analyzed: 14-Nov-14							
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*60.3*		mg/kg	*50.0*		*121*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*59.6*		mg/kg	*50.0*		*119*	*52.1-176*			
LCS (4111406-BS1)			Prepared & Analyzed: 14-Nov-14							
GRO C6-C10	212	10.0	mg/kg	200		106	72.5-115			
DRO >C10-C28	213	10.0	mg/kg	200		107	81.3-118			
Surrogate: 1-Chlorooctane	*62.4*		mg/kg	*50.0*		*125*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*61.0*		mg/kg	*50.0*		*122*	*52.1-176*			
LCS Dup (4111406-BSD1)			Prepared & Analyzed: 14-Nov-14							
GRO C6-C10	215	10.0	mg/kg	200		108	72.5-115	1.79	10.1	
DRO >C10-C28	211	10.0	mg/kg	200		105	81.3-118	1.12	15.3	
Surrogate: 1-Chlorooctane	*64.3*		mg/kg	*50.0*		*129*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*62.6*		mg/kg	*50.0*		*125*	*52.1-176*			

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Celey D. Keene, Lab Director/Quality Manager

Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 632-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2845
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Prod.W., 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015B	Analyses Required: GRO 8015B	Analyses Required: BTEX 8021B	Analyses Required: Chlorides 300.0	Comments
H403517																	0.2 c on ice
1. P16 748	11/13/14	7:20	RC	3	1	N							✓		✓	✓	
2. " 836		8:00													✓	✓	
3. " 844		8:40											✓		✓	✓	
4. " 872		9:10											✓	✓	✓	✓	
5. " 873		9:27											✓				
6. " 805		10:05											✓		✓	✓	
7. " 885		10:47											✓		✓	✓	
8. " 895		11:28													✓	✓	
9. " 902	↓	12:15	↓	↓	↓	↓									✓	✓	
10.																	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	11/13/14	2:26	M. Marco	11/13/14	2:26
M. Marco	11/13/14	2:34		11-13-14	1434
	11/13/14	1505	Chassity Clark	11/13/14	1505

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

11:00

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

PILE 885

H403517-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	4111705	AP	17-Nov-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Total Xylenes*	**0.730**		0.150	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Total BTEX	**0.730**		0.300	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*61-154*		*4111803*	ms	*18-Nov-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
DRO >C10-C28	**53.7**		10.0	mg/kg	1	4111406	MS	14-Nov-14	8015B	
Surrogate: 1-Chlorooctane			*117 %*	*47.2-157*		*4111406*	MS	*14-Nov-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*115 %*	*52.1-176*		*4111406*	MS	*14-Nov-14*	*8015B*	

ANALYTICAL
NOV 20 2014
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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111704 - 1:4 DI Water										
Blank (4111704-BLK1)				Prepared & Analyzed: 17-Nov-14						
Chloride	ND	16.0	mg/kg							
LCS (4111704-BS1)				Prepared & Analyzed: 17-Nov-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4111704-BSD1)				Prepared & Analyzed: 17-Nov-14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	
Batch 4111705 - 1:4 DI Water										
Blank (4111705-BLK1)				Prepared & Analyzed: 17-Nov-14						
Chloride	ND	16.0	mg/kg							
LCS (4111705-BS1)				Prepared & Analyzed: 17-Nov-14						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (4111705-BSD1)				Prepared & Analyzed: 17-Nov-14						
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111803 - Volatiles										
Blank (4111803-BLK1)				Prepared & Analyzed: 18-Nov-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*98.0*	*61-154*			
LCS (4111803-BS1)				Prepared & Analyzed: 18-Nov-14						
Benzene	1.76	0.050	mg/kg	2.00		88.1	77.1-114			
Toluene	1.71	0.050	mg/kg	2.00		85.4	67-114			
Ethylbenzene	1.67	0.050	mg/kg	2.00		83.7	63.5-121			
Total Xylenes	5.02	0.150	mg/kg	6.00		83.7	62.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0468*		mg/kg	*0.0500*		*93.7*	*61-154*			
LCS Dup (4111803-BSD1)				Prepared & Analyzed: 18-Nov-14						
Benzene	1.90	0.050	mg/kg	2.00		95.2	77.1-114	7.77	16.4	
Toluene	1.85	0.050	mg/kg	2.00		92.6	67-114	8.13	16.2	
Ethylbenzene	1.84	0.050	mg/kg	2.00		91.9	63.5-121	9.31	17	
Total Xylenes	5.52	0.150	mg/kg	6.00		92.1	62.4-125	9.55	17	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0482*		mg/kg	*0.0500*		*96.4*	*61-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111406 - General Prep - Organics										
Blank (4111406-BLK1)				Prepared & Analyzed: 14-Nov-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*60.3*		mg/kg	*50.0*		*121*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*59.6*		mg/kg	*50.0*		*119*	*52.1-176*			
LCS (4111406-BS1)				Prepared & Analyzed: 14-Nov-14						
GRO C6-C10	212	10.0	mg/kg	200		106	72.5-115			
DRO >C10-C28	213	10.0	mg/kg	200		107	81.3-118			
Surrogate: 1-Chlorooctane	*62.4*		mg/kg	*50.0*		*125*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*61.0*		mg/kg	*50.0*		*122*	*52.1-176*			
LCS Dup (4111406-BSD1)				Prepared & Analyzed: 14-Nov-14						
GRO C6-C10	215	10.0	mg/kg	200		108	72.5-115	1.79	10.1	
DRO >C10-C28	211	10.0	mg/kg	200		105	81.3-118	1.12	15.3	
Surrogate: 1-Chlorooctane	*64.3*		mg/kg	*50.0*		*129*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*62.6*		mg/kg	*50.0*		*125*	*52.1-176*			

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Celey D. Keene, Lab Director/Quality Manager

Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec, NM 87410
Phone Number: 632-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2845
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Prod.W., 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015B	GRO 8015B	BTEX 8021B	Chlorides 300.0	Comments
H403517																	6.2°C on ice
1. Pit 6 748	11/13/14	7:20	RC	3	1	N							✓		✓	✓	
2. " 836		8:00													✓	✓	
3. " 844		8:40											✓		✓	✓	
4. " 872		9:10											✓	✓	✓	✓	
5. " 873		9:27											✓				
6. " 805		10:05											✓		✓	✓	
7. " 885		10:47											✓		✓	✓	
8. " 895		11:28													✓	✓	
9. " 902	↓	12:15	↓	↓	↓	↓									✓	✓	
10.																	

Relinquished by:		Date: 11/13/14	Time: 2:26	Received by: M. Marcellino	Date: 11/13/14	Time: 2:26
Relinquished by: M. Marcellino		Date: 11/13/14	Time: 2:34	Received by:	Date: 11.13.14	Time: 1434
Relinquished by:		Date: 11/13/14	Time: 1505	Received by: Allison Clark	Date: 11/13/14	Time: 1505

Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

11/13/14 Hold) Fed Ex 11/13/14 11:00

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: JFJ Landfarm
Lab ID: 1409B08-007
Matrix: SOIL
Client Sample ID: Pile 885
Collection Date: 9/22/2014 9:38:00 AM
Received Date: 9/23/2014 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	400	10		mg/Kg	1	9/25/2014 2:22:35 AM	15459
Surr: DNOP	104	57.9-140		%REC	1	9/25/2014 2:22:35 AM	15459
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/25/2014 7:47:53 PM	15458
Surr: BFB	92.3	80-120		%REC	1	9/25/2014 7:47:53 PM	15458

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID **1409946-002AMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15397** RunNo: **21369**

Prep Date: **9/19/2014** Analysis Date: **9/23/2014** SeqNo: **624251** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		4.965		99.8	57.9	140			

Sample ID **1409946-002AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15397** RunNo: **21369**

Prep Date: **9/19/2014** Analysis Date: **9/23/2014** SeqNo: **624424** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		4.970		97.5	57.9	140	0	0	

Sample ID **1409A81-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626700** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	71	10	49.80	0	142	40.1	152			
Surr: DNOP	4.6		4.980		91.4	57.9	140			

Sample ID **1409A81-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626701** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.15	0	110	40.1	152	24.5	32.1	
Surr: DNOP	3.6		5.015		72.3	57.9	140	0	0	

Sample ID **MB-15459** SampType: **MBLK** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **PBS** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626708** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.3	57.9	140			

Sample ID **LCS-15459** SampType: **LCS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **LCSS** Batch ID: **15459** RunNo: **21392**

Prep Date: **9/23/2014** Analysis Date: **9/24/2014** SeqNo: **626709** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	113	68.6	130			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID	LCS-15459	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	15459	RunNo:	21392					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	626709	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.5		5.000		111	57.9	140			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2.
RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID **MB-15490 MK**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **R21449**	RunNo: **21449**
Prep Date:	Analysis Date: **9/25/2014**	SeqNo: **627596** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		87.7	80	120			

Sample ID **LCS-15490 MK**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **R21449**	RunNo: **21449**
Prep Date:	Analysis Date: **9/25/2014**	SeqNo: **627597** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.0	80	120			

Sample ID **MB-15458**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **15458**	RunNo: **21468**
Prep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627678** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860		1000		86.4	80	120			

Sample ID **LCS-15458**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **15458**	RunNo: **21468**
Prep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627679** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
asoline Range Organics (GRO)	21	5.0	25.00	0	83.6	65.8	139			
Surr: BFB	880		1000		88.3	80	120			

Sample ID **1409B08-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **Pile 895**	Batch ID: **15458**	RunNo: **21468**
Prep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627681** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
soline Range Organics (GRO)	21	4.8	23.81	0	88.4	71.8	132			
Surr: BFB	820		952.4		86.6	80	120			

ample ID **1409B08-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
ient ID: **Pile 895**	Batch ID: **15458**	RunNo: **21468**
ep Date: **9/23/2014**	Analysis Date: **9/26/2014**	SeqNo: **627682** Units: **mg/Kg**

alyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
oline Range Organics (GRO)	21	4.7	23.74	0	90.2	71.8	132	1.82	20	
ur: BFB	830		949.7		87.9	80	120	0	0	

lifiers:

	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	Spike Recovery outside accepted recovery limits		

Client:	Blagg Engineering, Inc.	☒ Standard ☐ Rush	
	Industrial Ecosystems Inc.	Project Name:	JFJ Landfarm
Mailing Address:	P.O. Box 87	Project #:	
	Bloomfield, NM 87413		
Phone #:	(505)320-1183		
email or Fax#:		Project Manager:	Jeff Blagg
QA/QC Package:			
☒ Standard	☐ Level 4 (Full Validation)		
☐ Other		Sampler:	Jeff Blagg
☐ EDD (Type)		On Ice:	☑ Yes ☐ No
		Sample Temperature:	1.0°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409B08	TPH 8015B (GRO / DRO)	Air Bubbles (Y or N)
09/22/2014	9:01	Soil	Pile 895	4oz x 1	cool	-001	x	
09/22/2014	9:08	Soil	Pile 748	4oz x 1	cool	-002	x	
09/22/2014	9:13	Soil	Pile 805	4oz x 1	cool	-003	x	
09/22/2014	9:20	Soil	Pile 793	4oz x 1	cool	-004	x	
09/22/2014	9:25	Soil	Pile 844	4oz x 1	cool	-005	x	
09/22/2014	9:31	Soil	Pile 836	4oz x 1	cool	-006	x	
09/22/2014	9:38	Soil	Pile 885	4oz x 1	cool	-007	x	

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/22/2014	1615	Jeff Blagg	Christin Walters	9/22/2014	1615
9/22/14	1740	Christin Walters	Michelle Garcia	09/23/14	0745

Remarks: Bill JFJ
email results to:
marcella@industrialecosystems.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Analytical Report
Lab Order **1409B08**
Date Reported: **10/1/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: JFJ Landfarm
Lab ID: 1409B08-001 **Matrix:** SOIL

Client Sample ID: Pile 895
Collection Date: 9/22/2014 9:01:00 AM
Received Date: 9/23/2014 7:45:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	32	9.9		mg/Kg	1	9/25/2014 1:25:38 PM	15459
Surr: DNOP	97.0	57.9-140		%REC	1	9/25/2014 1:25:38 PM	15459
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/26/2014 12:34:40 AM	15458
Surr: BFB	82.7	80-120		%REC	1	9/26/2014 12:34:40 AM	15458

ANALYTICAL
OCT - 1 2014
PASSED

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID	1409946-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	15397	RunNo:	21369					
Prep Date:	9/19/2014	Analysis Date:	9/23/2014	SeqNo:	624251	Units:	%REC			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		4.965		99.8	57.9	140			

Sample ID	1409946-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	15397	RunNo:	21369					
Prep Date:	9/19/2014	Analysis Date:	9/23/2014	SeqNo:	624424	Units:	%REC			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		4.970		97.5	57.9	140	0	0	

Sample ID	1409A81-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	15459	RunNo:	21392					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	626700	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	71	10	49.80	0	142	40.1	152			
Surr: DNOP	4.6		4.980		91.4	57.9	140			

Sample ID	1409A81-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	15459	RunNo:	21392					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	626701	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	55	10	50.15	0	110	40.1	152	24.5	32.1	
Surr: DNOP	3.6		5.015		72.3	57.9	140	0	0	

Sample ID	MB-15459	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	15459	RunNo:	21392					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	626708	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.7		10.00		97.3	57.9	140			

Sample ID	LCS-15459	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	15459	RunNo:	21392					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	626709	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	56	10	50.00	0	113	68.6	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID	LCS-15459	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	15459	RunNo:	21392					
Prep Date:	9/23/2014	Analysis Date:	9/24/2014	SeqNo:	626709	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.5		5.000		111	57.9	140			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2.
RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409B08**

01-Oct-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID **MB-15490 MK** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **R21449** RunNo: **21449**

Prep Date: Analysis Date: **9/25/2014** SeqNo: **627596** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	880		1000		87.7	80	120			

Sample ID **LCS-15490 MK** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **R21449** RunNo: **21449**

Prep Date: Analysis Date: **9/25/2014** SeqNo: **627597** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: BFB	980		1000		98.0	80	120			

Sample ID **MB-15458** SampType: **MBLK** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **PBS** Batch ID: **15458** RunNo: **21468**

Prep Date: **9/23/2014** Analysis Date: **9/26/2014** SeqNo: **627678** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	860		1000		86.4	80	120			

Sample ID **LCS-15458** SampType: **LCS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **LCSS** Batch ID: **15458** RunNo: **21468**

Prep Date: **9/23/2014** Analysis Date: **9/26/2014** SeqNo: **627679** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
asoline Range Organics (GRO)	21	5.0	25.00	0	83.6	65.8	139			
Surr: BFB	880		1000		88.3	80	120			

Sample ID **1409B08-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Gasoline Range**

Client ID: **Pile 895** Batch ID: **15458** RunNo: **21468**

Prep Date: **9/23/2014** Analysis Date: **9/26/2014** SeqNo: **627681** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
soline Range Organics (GRO)	21	4.8	23.81	0	88.4	71.8	132			
Surr: BFB	820		952.4		86.6	80	120			

ample ID **1409B08-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Gasoline Range**

ient ID: **Pile 895** Batch ID: **15458** RunNo: **21468**

ep Date: **9/23/2014** Analysis Date: **9/26/2014** SeqNo: **627682** Units: **mg/Kg**

alyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
oline Range Organics (GRO)	21	4.7	23.74	0	90.2	71.8	132	1.82	20	
rr: BFB	830		949.7		87.9	80	120	0	0	

lifiers:

	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	Value above quantitation range	H	Holding times for preparation or analysis exceeded
	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
	RSD is greater than RSDlimit	P	Sample pH greater than 2.
	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	Spike Recovery outside accepted recovery limits		

Client:	Blagg Engineering, Inc.	☒ Standard ☐ Rush	
	Industrial Ecosystems Inc.	Project Name:	JFJ Landfarm
Mailing Address:	P.O. Box 87	Project #:	
	Bloomfield, NM 87413		
Phone #:	(505)320-1183		
email or Fax#:		Project Manager:	Jeff Blagg
QA/QC Package:			
☒ Standard	☐ Level 4 (Full Validation)		
☐ Other		Sampler:	Jeff Blagg
☐ EDD (Type)		On Ice:	☑ Yes ☐ No
		Sample Temperature:	1.0°

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409B08	TPH 8015B (GRO / DRO)	Air Bubbles (Y or N)
09/22/2014	9:01	Soil	Pile 895	4oz x 1	cool	-001	x	
09/22/2014	9:08	Soil	Pile 748	4oz x 1	cool	-002	x	
09/22/2014	9:13	Soil	Pile 805	4oz x 1	cool	-003	x	
09/22/2014	9:20	Soil	Pile 793	4oz x 1	cool	-004	x	
09/22/2014	9:25	Soil	Pile 844	4oz x 1	cool	-005	x	
09/22/2014	9:31	Soil	Pile 836	4oz x 1	cool	-006	x	
09/22/2014	9:38	Soil	Pile 885	4oz x 1	cool	-007	x	

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/22/2014	1615	Jeff Blagg	Christin Walker	9/22/2014	1615
9/22/14	1740	Christin Walker	Michelle Garcia	09/23/14	0745

Remarks: Bill JFJ
email results to:
marcella@industrialecosystems.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

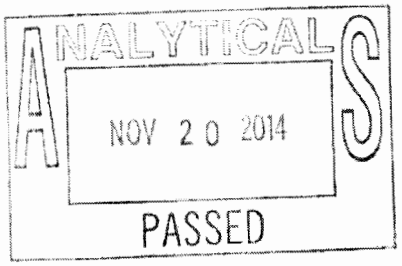
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

PILE 895

H403517-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**224**		16.0	mg/kg	4	4111705	AP	17-Nov-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*61-154*		*4111803*	ms	*18-Nov-14*	*8021B*	



Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111704 - 1:4 DI Water										
Blank (4111704-BLK1)				Prepared & Analyzed: 17-Nov-14						
Chloride	ND	16.0	mg/kg							
LCS (4111704-BS1)				Prepared & Analyzed: 17-Nov-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4111704-BSD1)				Prepared & Analyzed: 17-Nov-14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	
Batch 4111705 - 1:4 DI Water										
Blank (4111705-BLK1)				Prepared & Analyzed: 17-Nov-14						
Chloride	ND	16.0	mg/kg							
LCS (4111705-BS1)				Prepared & Analyzed: 17-Nov-14						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (4111705-BSD1)				Prepared & Analyzed: 17-Nov-14						
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111803 - Volatiles										
Blank (4111803-BLK1)				Prepared & Analyzed: 18-Nov-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*98.0*	*61-154*			
LCS (4111803-BS1)				Prepared & Analyzed: 18-Nov-14						
Benzene	1.76	0.050	mg/kg	2.00		88.1	77.1-114			
Toluene	1.71	0.050	mg/kg	2.00		85.4	67-114			
Ethylbenzene	1.67	0.050	mg/kg	2.00		83.7	63.5-121			
Total Xylenes	5.02	0.150	mg/kg	6.00		83.7	62.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0468*		mg/kg	*0.0500*		*93.7*	*61-154*			
LCS Dup (4111803-BSD1)				Prepared & Analyzed: 18-Nov-14						
Benzene	1.90	0.050	mg/kg	2.00		95.2	77.1-114	7.77	16.4	
Toluene	1.85	0.050	mg/kg	2.00		92.6	67-114	8.13	16.2	
Ethylbenzene	1.84	0.050	mg/kg	2.00		91.9	63.5-121	9.31	17	
Total Xylenes	5.52	0.150	mg/kg	6.00		92.1	62.4-125	9.55	17	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0482*		mg/kg	*0.0500*		*96.4*	*61-154*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111406 - General Prep - Organics										
Blank (4111406-BLK1)				Prepared & Analyzed: 14-Nov-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*60.3*		mg/kg	*50.0*		*121*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*59.6*		mg/kg	*50.0*		*119*	*52.1-176*			
LCS (4111406-BS1)				Prepared & Analyzed: 14-Nov-14						
GRO C6-C10	212	10.0	mg/kg	200		106	72.5-115			
DRO >C10-C28	213	10.0	mg/kg	200		107	81.3-118			
Surrogate: 1-Chlorooctane	*62.4*		mg/kg	*50.0*		*125*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*61.0*		mg/kg	*50.0*		*122*	*52.1-176*			
LCS Dup (4111406-BSD1)				Prepared & Analyzed: 14-Nov-14						
GRO C6-C10	215	10.0	mg/kg	200		108	72.5-115	1.79	10.1	
DRO >C10-C28	211	10.0	mg/kg	200		105	81.3-118	1.12	15.3	
Surrogate: 1-Chlorooctane	*64.3*		mg/kg	*50.0*		*129*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*62.6*		mg/kg	*50.0*		*125*	*52.1-176*			

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Celey D. Keene, Lab Director/Quality Manager

Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 635-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2845
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Prod.W., 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB # ____

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015B	Analyses Required: GRO 8015B	Analyses Required: BTEX 8021B	Analyses Required: Chlorides 300.0	Comments
H403517																	6.2c on ice
1. P16 748	11/13/14	7:20	RC	3	1	N							✓		✓	✓	
2. " 836		8:00													✓	✓	
3. " 844		8:40											✓		✓	✓	
4. " 872		9:10											✓	✓	✓	✓	
5. " 823		9:27											✓				
6. " 805		10:05											✓		✓	✓	
7. " 885		10:47											✓		✓	✓	
8. " 895		11:28													✓	✓	
9. " 902	↓	12:15	↓	↓	↓	↓									✓	✓	
10.																	

Relinquished by:		Date: 11/13/14	Time: 2:26	Received by: M. Marcellus	Date: 11/13/14	Time: 2:26
Relinquished by: M. Marcellus		Date: 11/13/14	Time: 2:34	Received by:	Date: 11.13.14	Time: 1434
Relinquished by:		Date: 11/13/14	Time: 1505	Received by: Christine Clark	Date: 11/13/14	Time: 1505

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

11:00

Analytical Report
Lab Order **1409951**
Date Reported: **9/26/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: JFJ Landfarm
Lab ID: 1409951-008 **Matrix:** SOIL

Client Sample ID: Pile 902
Collection Date: 9/17/2014 11:07:00 AM
Received Date: 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	ND	9.9		mg/Kg	1	9/22/2014 4:48:51 PM	15396
Surr: DNOP	98.0	57.9-140		%REC	1	9/22/2014 4:48:51 PM	15396
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/23/2014 6:20:30 PM	15403
Surr: BFB	96.4	80-120		%REC	1	9/23/2014 6:20:30 PM	15403

ANALYTICAL
SEP 26 2014
PASSED

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

WO#: 1409951

Hall Environmental Analysis Laboratory, Inc.

26-Sep-14

Client: Blagg Engineering
Project: JFJ Landfarm

Sample ID MB-15363	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: PBS	Batch ID: 15363	RunNo: 21269						
Prep Date: 9/18/2014	Analysis Date: 9/18/2014	SeqNo: 620601	Units: %REC					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		100	57.9	140			

Sample ID LCS-15363	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 15363	RunNo: 21269						
Prep Date: 9/18/2014	Analysis Date: 9/18/2014	SeqNo: 620602	Units: %REC					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.2		5.000		104	57.9	140			

Sample ID MB-15396	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: PBS	Batch ID: 15396	RunNo: 21269						
Prep Date: 9/19/2014	Analysis Date: 9/19/2014	SeqNo: 621919	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.4		10.00		94.4	57.9	140			

Sample ID LCS-15396	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 15396	RunNo: 21269						
Prep Date: 9/19/2014	Analysis Date: 9/19/2014	SeqNo: 621920	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	180	10	50.00	0	354	68.6	130			S
Surr: DNOP	15		5.000		292	57.9	140			S

Sample ID LCS-15369	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 15369	RunNo: 21309						
Prep Date: 9/18/2014	Analysis Date: 9/19/2014	SeqNo: 622110	Units: %REC					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		100	57.9	140			

Sample ID LCS-15396	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics						
Client ID: LCSS	Batch ID: 15396	RunNo: 21269						
Prep Date: 9/19/2014	Analysis Date: 9/19/2014	SeqNo: 622111	Units: mg/Kg					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	107	68.6	130			
Surr: DNOP	5.1		5.000		103	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409951

26-Sep-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID LCS-15372	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: LCSS	Batch ID: 15372	RunNo: 21309
Prep Date: 9/18/2014	Analysis Date: 9/19/2014	SeqNo: 622114 Units: %REC

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.000		102	57.9	140			

Sample ID MB-15369	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 15369	RunNo: 21309
Prep Date: 9/18/2014	Analysis Date: 9/19/2014	SeqNo: 622115 Units: %REC

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9		10.00		89.3	57.9	140			

Sample ID MB-15372	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: PBS	Batch ID: 15372	RunNo: 21309
Prep Date: 9/18/2014	Analysis Date: 9/19/2014	SeqNo: 622131 Units: %REC

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		90.8	57.9	140			

Sample ID 1409878-002AMS	SampType: MS	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: BatchQC	Batch ID: 15369	RunNo: 21309
Prep Date: 9/18/2014	Analysis Date: 9/19/2014	SeqNo: 623164 Units: %REC

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		4.975		103	57.9	140			

Sample ID 1409878-002AMSD	SampType: MSD	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: BatchQC	Batch ID: 15369	RunNo: 21309
Prep Date: 9/18/2014	Analysis Date: 9/19/2014	SeqNo: 623165 Units: %REC

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.1		4.955		143	57.9	140	0	0	S

Sample ID 1409892-001AMS	SampType: MS	TestCode: EPA Method 8015D: Diesel Range Organics
Client ID: BatchQC	Batch ID: 15372	RunNo: 21309
Prep Date: 9/18/2014	Analysis Date: 9/20/2014	SeqNo: 623178 Units: %REC

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		106	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409951

26-Sep-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID **1409892-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15372** RunNo: **21309**

Prep Date: **9/18/2014** Analysis Date: **9/20/2014** SeqNo: **623179** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		107	57.9	140	0	0	

Sample ID **1409949-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15396** RunNo: **21309**

Prep Date: **9/19/2014** Analysis Date: **9/20/2014** SeqNo: **623192** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.35	0	89.7	40.1	152			
Surr: DNOP	4.4		5.035		86.7	57.9	140			

Sample ID **1409949-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15396** RunNo: **21309**

Prep Date: **9/19/2014** Analysis Date: **9/20/2014** SeqNo: **623193** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	49.90	0	95.6	40.1	152	5.42	32.1	
Surr: DNOP	4.6		4.990		92.0	57.9	140	0	0	

Sample ID **1409854-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15363** RunNo: **21369**

Prep Date: **9/18/2014** Analysis Date: **9/22/2014** SeqNo: **624223** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		4.931		90.7	57.9	140			

Sample ID **1409854-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**

Client ID: **BatchQC** Batch ID: **15363** RunNo: **21369**

Prep Date: **9/18/2014** Analysis Date: **9/22/2014** SeqNo: **624224** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		4.970		96.5	57.9	140	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
E	Value above quantitation range
J	Analyte detected below quantitation limits
O	RSD is greater than RSDlimit
R	RPD outside accepted recovery limits
S	Spike Recovery outside accepted recovery limits
B	Analyte detected in the associated Method Blank
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
P	Sample pH greater than 2.
RL	Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409951

26-Sep-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID	MB-15403	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	PBS	Batch ID:	15403	RunNo:	21348				
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623436	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.9	80	120			

Sample ID	LCS-15403	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	LCSS	Batch ID:	15403	RunNo:	21348				
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623441	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.5	65.8	139			
Surr: BFB	910		1000		91.0	80	120			

Sample ID	1409949-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	BatchQC	Batch ID:	15403	RunNo:	21348				
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623508	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	24.20	0	105	71.8	132			
Surr: BFB	950		968.1		97.7	80	120			

Sample ID	1409949-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range				
Client ID:	BatchQC	Batch ID:	15403	RunNo:	21348				
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623517	Units:	mg/Kg		

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.8	24.13	0	107	71.8	132	1.74	20	
Surr: BFB	940		965.3		97.8	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
J	Value above quantitation range	H	Holding times for preparation or analysis exceeded
O	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RSD is greater than RSDlimit	P	Sample pH greater than 2.
S	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	Spike Recovery outside accepted recovery limits		

Client:	[redacted] g Engineering, Inc.	☒ Standard ☐ [redacted]	HALL ENVIRONMENTAL ANALYSIS LABORATORY
	Industrial Ecosystems Inc.	Project Name: JFJ Landfarm	www.hallenvironmental.com
Mailing Address:	P.O. Box 87		4901 Hawkins NE - Albuquerque, NM 87109
	Bloomfield, NM 87413	Project #:	Tel. 505-345-3975 Fax 505-345-4107
Phone #:	(505)320-1183		Analysis Request
email or Fax#:		Project Manager: Jeff Blagg	
QA/QC Package:			
☒ Standard	☐ Level 4 (Full Validation)		
☐ Other		Sampler: Jeff Blagg	
☐ EDD (Type)		On Ice: ☒ Yes ☐ No	
		Sample Temperature: .9	

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No. 1409951	TPH 8015B (GRO / DRO)	Air Bubbles (Y or N)
09/17/2014	10:10	Soil	Pile 868	4oz x 1	cool	-001	x	
09/17/2014	10:22	Soil	Pile 891	4oz x 1	cool	-002	x	
09/17/2014	10:30	Soil	Pile 800	4oz x 1	cool	-003	x	
09/17/2014	10:34	Soil	Pile 764	4oz x 1	cool	-004	x	
09/17/2014	10:40	Soil	Pile 744	4oz x 1	cool	-005	x	
09/17/2014	10:48	Soil	Pile 884	4oz x 1	cool	-006	x	
09/17/2014	10:55	Soil	Pile 886	4oz x 1	cool	-007	x	
09/17/2014	11:07	Soil	Pile 902	4oz x 1	cool	-008	x	
09/17/2014	11:18	Soil	Pile 702	4oz x 1	cool	-009	x	
09/17/2014	11:26	Soil	Pile 701	11	"	-010	x	

Date	Time	Relinquished by	Received by	Date	Time
9/18/2014	1402	Jeff Blagg	Christine Walker	9/18/14	1402
9/18/14	1857	Christine Walker		09/19/14	0700

Remarks: Bill JFJ
email results to:
marcella@industrialecosystems.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

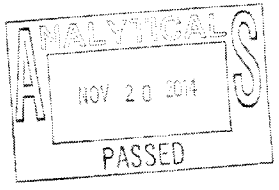
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

PILE 902

H403517-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	144		16.0	mg/kg	4	4111705	AP	17-Nov-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4111803	ms	18-Nov-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*97.5 %*	*61-154*		*4111803*	ms	*18-Nov-14*	*8021B*	



Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111704 - 1:4 DI Water										
Blank (4111704-BLK1)				Prepared & Analyzed: 17-Nov-14						
Chloride	ND	16.0	mg/kg							
LCS (4111704-BS1)				Prepared & Analyzed: 17-Nov-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4111704-BSD1)				Prepared & Analyzed: 17-Nov-14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	
Batch 4111705 - 1:4 DI Water										
Blank (4111705-BLK1)				Prepared & Analyzed: 17-Nov-14						
Chloride	ND	16.0	mg/kg							
LCS (4111705-BS1)				Prepared & Analyzed: 17-Nov-14						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (4111705-BSD1)				Prepared & Analyzed: 17-Nov-14						
Chloride	416	16.0	mg/kg	400		104	80-120	3.92	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111803 - Volatiles										
Blank (4111803-BLK1)				Prepared & Analyzed: 18-Nov-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*98.0*	*61-154*			
LCS (4111803-BS1)				Prepared & Analyzed: 18-Nov-14						
Benzene	1.76	0.050	mg/kg	2.00		88.1	77.1-114			
Toluene	1.71	0.050	mg/kg	2.00		85.4	67-114			
Ethylbenzene	1.67	0.050	mg/kg	2.00		83.7	63.5-121			
Total Xylenes	5.02	0.150	mg/kg	6.00		83.7	62.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0468*		mg/kg	*0.0500*		*93.7*	*61-154*			
LCS Dup (4111803-BSD1)				Prepared & Analyzed: 18-Nov-14						
Benzene	1.90	0.050	mg/kg	2.00		95.2	77.1-114	7.77	16.4	
Toluene	1.85	0.050	mg/kg	2.00		92.6	67-114	8.13	16.2	
Ethylbenzene	1.84	0.050	mg/kg	2.00		91.9	63.5-121	9.31	17	
Total Xylenes	5.52	0.150	mg/kg	6.00		92.1	62.4-125	9.55	17	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0482*		mg/kg	*0.0500*		*96.4*	*61-154*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2845 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Nov-14 09:26

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4111406 - General Prep - Organics										
Blank (4111406-BLK1)			Prepared & Analyzed: 14-Nov-14							
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*60.3*		mg/kg	*50.0*		*121*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*59.6*		mg/kg	*50.0*		*119*	*52.1-176*			
LCS (4111406-BS1)			Prepared & Analyzed: 14-Nov-14							
GRO C6-C10	212	10.0	mg/kg	200		106	72.5-115			
DRO >C10-C28	213	10.0	mg/kg	200		107	81.3-118			
Surrogate: 1-Chlorooctane	*62.4*		mg/kg	*50.0*		*125*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*61.0*		mg/kg	*50.0*		*122*	*52.1-176*			
LCS Dup (4111406-BSD1)			Prepared & Analyzed: 14-Nov-14							
GRO C6-C10	215	10.0	mg/kg	200		108	72.5-115	1.79	10.1	
DRO >C10-C28	211	10.0	mg/kg	200		105	81.3-118	1.12	15.3	
Surrogate: 1-Chlorooctane	*64.5*		mg/kg	*50.0*		*129*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*62.6*		mg/kg	*50.0*		*125*	*52.1-176*			

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec, NM 87410
Phone Number: 632-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition
PO# 2845
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Prod.W., 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (lee Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015B	Analyses Required: GRO 8015B	Analyses Required: BTEX 8021B	Analyses Required: Chlorides 300.0	Comments
H403517																	
1. P:6 748	11/13/14	7:20	RC	3	1	N							✓		✓	✓	
2. 836		8:00											✓		✓	✓	
3. 844		8:40											✓		✓	✓	
4. 872		9:10											✓		✓	✓	
5. 873		9:27											✓		✓	✓	
6. 805		10:05											✓		✓	✓	
7. 885		10:47											✓		✓	✓	
8. 895		11:20													✓	✓	
9. 902		12:15													✓	✓	
10.																	

6.2 e on ice

Relinquished by:	Date: 11/13/14	Time: 2:26	Received by: M. Marcus	11/13/14	Time: 2:26
Relinquished by: M. Marcus	Date: 11/13/14	Time: 2:34	Received by:	Date: 11.13.14	Time: 1934
Relinquished by:	Date: 11/13/14	Time: 1505	Received by: Marcus Clark	Date: 11/13/14	Time: 1505

Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

11:00

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

November 12, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated November 12, 2014, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-010-B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s): **886.**

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From:	Marcella Marquez <marcella@industrialecosystems.com>
Sent:	Wednesday, November 12, 2014 10:32 AM
To:	Jones, Brad A., EMNRD
Subject:	Letter to request reuse of treated soils on facility
Attachments:	Letter to request reuse of treated soils on facility.doc; Map.pdf; SKM_ 284e14111200300.pdf
Importance:	High

Brad:

Please see attached letter and corresponding documentation.

Thanks,
Marcella

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

November 12, 2014

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 886 DRO & GRO passed 09/26/14, BTEX & Chlorides passed 07/09/14

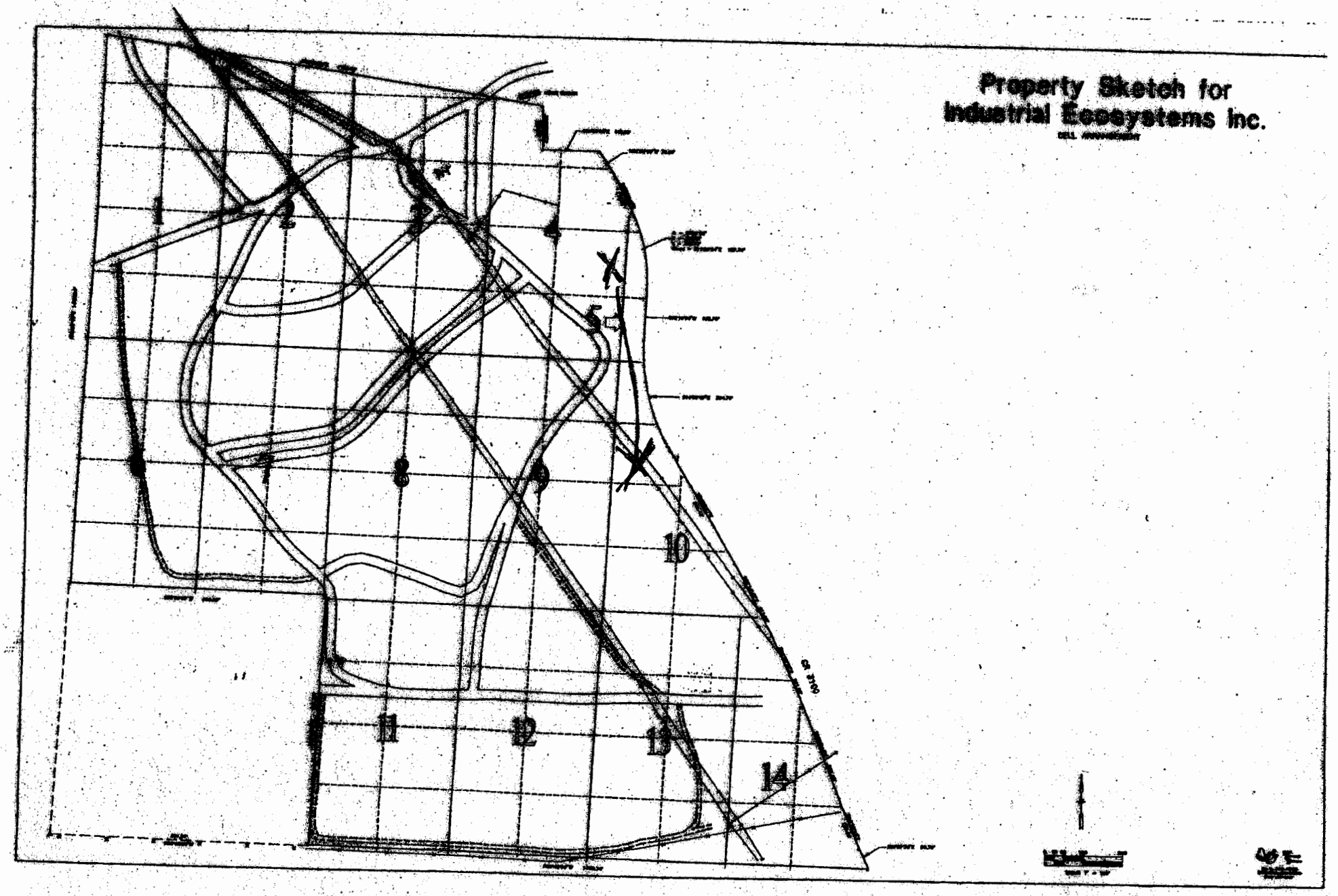
Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map

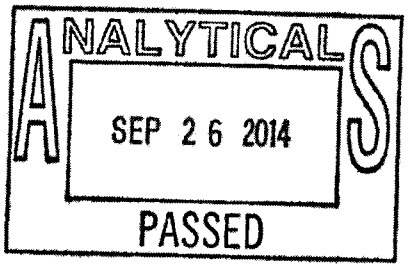

Property Sketch for
Industrial Ecosystems Inc.
X
X
5
10
11
12
13
14

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: JFJ Landfarm
Lab ID: 1409951-007 **Matrix:** SOIL

Client Sample ID: Pile 886
Collection Date: 9/17/2014 10:55:00 AM
Received Date: 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: **BCN**
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	9/22/2014 4:18:31 PM	15396
Surr: DNOP	142	57.9-140	S	%REC	1	9/22/2014 4:18:31 PM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/23/2014 3:48:52 AM	15403
Surr: BFB	81.4	80-120		%REC	1	9/23/2014 3:48:52 AM	15403



Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 26, 2014

Jeff Blagg
Blagg Engineering
P. O. Box 87
Bloomfield, NM 87413
TEL: (505) 320-1183
FAX (505) 632-3903

RE: JFJ Landfarm

OrderNo.: 1409951

Dear Jeff Blagg:

Hall Environmental Analysis Laboratory received 10 sample(s) on 9/19/2014 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

QC SUMMARY REPORT

WO#: **1409951**

Hall Environmental Analysis Laboratory, Inc.

26-Sep-14

Client: Blagg Engineering
Project: JFJ Landfarm

Sample ID **MB-15363**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **15363**	RunNo: **21269**
Prep Date: **9/18/2014**	Analysis Date: **9/18/2014**	SeqNo: **620601** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		100	57.9	140			

Sample ID **LCS-15363**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **15363**	RunNo: **21269**
Prep Date: **9/18/2014**	Analysis Date: **9/18/2014**	SeqNo: **620602** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.2		5.000		104	57.9	140			

Sample ID **MB-15396**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **PBS**	Batch ID: **15396**	RunNo: **21269**
Prep Date: **9/19/2014**	Analysis Date: **9/19/2014**	SeqNo: **621919** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.4		10.00		94.4	57.9	140			

Sample ID **LCS-15396**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **15396**	RunNo: **21269**
Prep Date: **9/19/2014**	Analysis Date: **9/19/2014**	SeqNo: **621920** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	180	10	50.00	0	354	68.6	130			S
Surr: DNOP	15		5.000		292	57.9	140			S

Sample ID **LCS-15369**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **15369**	RunNo: **21309**
Prep Date: **9/18/2014**	Analysis Date: **9/19/2014**	SeqNo: **622110** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		100	57.9	140			

Sample ID **LCS-15396**	SampType: **LCS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **LCSS**	Batch ID: **15396**	RunNo: **21269**
Prep Date: **9/19/2014**	Analysis Date: **9/19/2014**	SeqNo: **622111** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	107	68.6	130			
Surr: DNOP	5.1		5.000		103	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- O RSD is greater than RSDlimit
- P Sample pH greater than 2.
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1409951

26-Sep-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID	LCS-15372	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	15372	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	622114	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.000		102	57.9	140			

Sample ID	MB-15369	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	15369	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	622115	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9		10.00		89.3	57.9	140			

Sample ID	MB-15372	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	15372	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	622131	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		90.8	57.9	140			

Sample ID	1409878-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
t ID:	BatchQC	Batch ID:	15369	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	623164	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		4.975		103	57.9	140			

Sample ID	1409878-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	15369	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	623165	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.1		4.955		143	57.9	140	0	0	S

Sample ID	1409892-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	15372	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/20/2014	SeqNo:	623178	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		106	57.9	140			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

WO#: 1409951

Hall Environmental Analysis Laboratory, Inc.

26-Sep-14

Client: Blagg Engineering
Project: JFJ Landfarm

Sample ID **1409892-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **15372** RunNo: **21309**
Prep Date: **9/18/2014** Analysis Date: **9/20/2014** SeqNo: **623179** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		107	57.9	140	0	0	

Sample ID **1409949-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **15396** RunNo: **21309**
Prep Date: **9/19/2014** Analysis Date: **9/20/2014** SeqNo: **623192** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.35	0	89.7	40.1	152			
Surr: DNOP	4.4		5.035		86.7	57.9	140			

Sample ID **1409949-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **15396** RunNo: **21309**
Prep Date: **9/19/2014** Analysis Date: **9/20/2014** SeqNo: **623193** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	49.90	0	95.6	40.1	152	5.42	32.1	
Surr: DNOP	4.6		4.990		92.0	57.9	140	0	0	

Sample ID **1409854-001AMS** SampType: **MS** TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **15363** RunNo: **21369**
Prep Date: **9/18/2014** Analysis Date: **9/22/2014** SeqNo: **624223** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		4.931		90.7	57.9	140			

Sample ID **1409854-001AMSD** SampType: **MSD** TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **BatchQC** Batch ID: **15363** RunNo: **21369**
Prep Date: **9/18/2014** Analysis Date: **9/22/2014** SeqNo: **624224** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		4.970		96.5	57.9	140	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- O RSD is greater than RSDlimit
- P Sample pH greater than 2.
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409951**

26-Sep-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID **MB-15403**	SampType: **MBLK**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **PBS**	Batch ID: **15403**	RunNo: **21348**
Prep Date: **9/19/2014**	Analysis Date: **9/22/2014**	SeqNo: **623436** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.9	80	120			

Sample ID **LCS-15403**	SampType: **LCS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **LCSS**	Batch ID: **15403**	RunNo: **21348**
Prep Date: **9/19/2014**	Analysis Date: **9/22/2014**	SeqNo: **623441** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.5	65.8	139			
Surr: BFB	910		1000		91.0	80	120			

Sample ID **1409949-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BatchQC**	Batch ID: **15403**	RunNo: **21348**
Prep Date: **9/19/2014**	Analysis Date: **9/22/2014**	SeqNo: **623508** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	24.20	0	105	71.8	132			
Surr: BFB	950		968.1		97.7	80	120			

Sample ID **1409949-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Gasoline Range**
Client ID: **BatchQC**	Batch ID: **15403**	RunNo: **21348**
Prep Date: **9/19/2014**	Analysis Date: **9/22/2014**	SeqNo: **623517** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.8	24.13	0	107	71.8	132	1.74	20	
Surr: BFB	940		965.3		97.8	80	120	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Client:	g Engineering, Inc.
	Industrial Ecosystems Inc.
Mailing Address:	P.O. Box 87
	Bloomfield, NM 87413
Phone #:	(505)320-1183
email or Fax#:	
QA/QC Package:	
☒ Standard	☐ Level 4 (Full Validation)
☐ Other	
☐ EDD (Type)	

☒ Standard ☐ h

Project Name: JFJ Landfarm

Project #:

Project Manager: Jeff Blagg

Sampler: Jeff Blagg

On Ice: ☒ Yes ☐ No

Sample Temperature: 1.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No 1409951	Analysis Request: TPH 8015B (GRO / DRO)	Air Bubbles (Y or N)
09/17/2014	10:10	Soil	Pile 868	4oz x 1	cool	-001	x	
09/17/2014	10:22	Soil	Pile 891	4oz x 1	cool	-002	x	
09/17/2014	10:30	Soil	Pile 800	4oz x 1	cool	-003	x	
09/17/2014	10:34	Soil	Pile 764	4oz x 1	cool	-004	x	
09/17/2014	10:40	Soil	Pile 744	4oz x 1	cool	-005	x	
09/17/2014	10:48	Soil	Pile 884	4oz x 1	cool	-006	x	
09/17/2014	10:55	Soil	Pile 886	4oz x 1	cool	-007	x	
09/17/2014	11:07	Soil	Pile 902	4oz x 1	cool	-008	x	
09/17/2014	11:18	Soil	Pile 702	4oz x 1	cool	-009	x	
09/17/2014	11:26	Soil	Pile 701	11	"	-010		

Date: 9/18/2014	Time: 1402	Relinquished by: Jeff Blagg	Received by: Christina Walker	Date: 9/18/14	Time: 1402
Date: 9/18/14	Time: 1857	Relinquished by: Christina Walker	Received by:	Date: 09/19/14	Time: 0700

Remarks: Bill JFJ
email results to:
marcella@industrialecosystems.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

PILE 886
H402027-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	144		16.0	mg/kg	4	4070703	AP	09-Jul-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8260B										
Benzene*	ND		0.050	mg/kg	50	4070701	ms/	07-Jul-14	8260B	
Toluene*	ND		0.050	mg/kg	50	4070701	ms/	07-Jul-14	8260B	
Ethylbenzene*	ND		0.050	mg/kg	50	4070701	ms/	07-Jul-14	8260B	
Total Xylenes*	ND		0.150	mg/kg	50	4070701	ms/	07-Jul-14	8260B	
Total BTEX	ND		0.300	mg/kg	50	4070701	ms/	07-Jul-14	8260B	
...gate: Dibromofluoromethane			*102 %*	*61.3-142*		*4070701*	ms/	*07-Jul-14*	*8260B*	
Surrogate: Toluene-d8			*104 %*	*71.3-129*		*4070701*	ms/	*07-Jul-14*	*8260B*	
Surrogate: 4-Bromofluorobenzene			*94.1 %*	*65.7-141*		*4070701*	ms/	*07-Jul-14*	*8260B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4070702	MS	07-Jul-14	8015B	
DRO >C10-C28	152		10.0	mg/kg	1	4070702	MS	07-Jul-14	8015B	
Surrogate: 1-Chlorooctane			*115 %*	*65.2-140*		*4070702*	MS	*07-Jul-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*114 %*	*63.6-154*		*4070702*	MS	*07-Jul-14*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4070703 - 1:4 DI Water										
Blank (4070703-BLK1)				Prepared: 07-Jul-14 Analyzed: 09-Jul-14						
Chloride	ND	16.0	mg/kg							
LCS (4070703-BS1)				Prepared: 07-Jul-14 Analyzed: 09-Jul-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4070703-BSD1)				Prepared: 07-Jul-14 Analyzed: 09-Jul-14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4070701 - Volatiles										
Blank (4070701-BLK1)				Prepared: 03-Jul-14 Analyzed: 07-Jul-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: Dibromofluoromethane	*0.477*		mg/kg	*0.500*		*95.5*	*61.3-142*			
Surrogate: Toluene-d8	*0.528*		mg/kg	*0.500*		*106*	*71.3-129*			
Surrogate: 4-Bromofluorobenzene	*0.512*		mg/kg	*0.500*		*102*	*65.7-141*			
LCS (4070701-BS1)				Prepared: 03-Jul-14 Analyzed: 07-Jul-14						
Benzene	2.16	0.050	mg/kg	2.00		108	76.8-122			
Toluene	1.78	0.050	mg/kg	2.00		89.0	73.1-129			
Ethylbenzene	1.69	0.050	mg/kg	2.00		84.3	72.8-128			
m+p - Xylene	3.53	0.100	mg/kg	4.00		88.2	69.4-129			
o-Xylene	1.72	0.050	mg/kg	2.00		86.0	70.3-126			
Total Xylenes	5.25	0.150	mg/kg	6.00		87.5	72-127			
Surrogate: Dibromofluoromethane	*0.488*		mg/kg	*0.500*		*97.6*	*61.3-142*			
Surrogate: Toluene-d8	*0.494*		mg/kg	*0.500*		*98.8*	*71.3-129*			
Surrogate: 4-Bromofluorobenzene	*0.527*		mg/kg	*0.500*		*105*	*65.7-141*			
LCS Dup (4070701-BSD1)				Prepared: 03-Jul-14 Analyzed: 07-Jul-14						
Benzene	2.13	0.050	mg/kg	2.00		106	76.8-122	1.57	18.7	
Toluene	1.83	0.050	mg/kg	2.00		91.5	73.1-129	2.82	19.4	
Ethylbenzene	1.75	0.050	mg/kg	2.00		87.7	72.8-128	3.97	21.8	
m+p - Xylene	3.62	0.100	mg/kg	4.00		90.4	69.4-129	2.51	25.3	
o-Xylene	1.78	0.050	mg/kg	2.00		88.9	70.3-126	3.33	23.6	
Total Xylenes	5.40	0.150	mg/kg	6.00		89.9	72-127	2.78	23.2	
Surrogate: Dibromofluoromethane	*0.489*		mg/kg	*0.500*		*97.7*	*61.3-142*			
Surrogate: Toluene-d8	*0.500*		mg/kg	*0.500*		*99.9*	*71.3-129*			
Surrogate: 4-Bromofluorobenzene	*0.506*		mg/kg	*0.500*		*101*	*65.7-141*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4070305 - General Prep - Organics										
Blank (4070305-BLK1)				Prepared: 03-Jul-14 Analyzed: 04-Jul-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*57.8*		mg/kg	*50.0*		*116*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*63.8*		mg/kg	*50.0*		*128*	*63.6-154*			
LCS (4070305-BS1)				Prepared & Analyzed: 03-Jul-14						
GRO C6-C10	180	10.0	mg/kg	200		90.2	66.4-124			
DRO >C10-C28	193	10.0	mg/kg	200		96.4	61.6-132			
Surrogate: 1-Chlorooctane	*62.5*		mg/kg	*50.0*		*125*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*69.0*		mg/kg	*50.0*		*138*	*63.6-154*			
LCS Dup (4070305-BSD1)				Prepared & Analyzed: 03-Jul-14						
GRO C6-C10	177	10.0	mg/kg	200		88.7	66.4-124	1.72	23.4	
DRO >C10-C28	193	10.0	mg/kg	200		96.3	61.6-132	0.0794	23.1	
Surrogate: 1-Chlorooctane	*60.6*		mg/kg	*50.0*		*121*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*69.4*		mg/kg	*50.0*		*139*	*63.6-154*			
Batch 4070702 - General Prep - Organics										
Blank (4070702-BLK1)				Prepared & Analyzed: 07-Jul-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*61.0*		mg/kg	*50.0*		*122*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*64.7*		mg/kg	*50.0*		*129*	*63.6-154*			
LCS (4070702-BS1)				Prepared & Analyzed: 07-Jul-14						
GRO C6-C10	177	10.0	mg/kg	200		88.4	66.4-124			
DRO >C10-C28	192	10.0	mg/kg	200		95.8	61.6-132			
Surrogate: 1-Chlorooctane	*60.4*		mg/kg	*50.0*		*121*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*66.4*		mg/kg	*50.0*		*133*	*63.6-154*			

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4070702 - General Prep - Organics										
LCS Dup (4070702-BSD1)				Prepared & Analyzed: 07-Jul-14						
GRO C6-C10	177	10.0	mg/kg	200		88.7	66.4-124	0.325	23.4	
DRO >C10-C28	192	10.0	mg/kg	200		96.0	61.6-132	0.241	23.1	
Surrogate: 1-Chlorooctane	*61.1*		mg/kg	*50.0*		*122*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*67.2*		mg/kg	*50.0*		*134*	*63.6-154*			

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 Rd 3150
Aztec NM 87410
Phone Number: 632-1782
FAX Number: 632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 2467
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
1. P16 716	7/2/14	9:20	RC										✓	✓	✓	✓	8.8a onsite
2. " 800		7:40											✓	✓	✓	✓	
3. " 840		7:57											✓				
4. " 868		8:19											✓				
5. " 869		8:35											✓				
6. " 870		8:50											✓				
7. " 564		9:30											✓				
8. " 565		9:55											✓				
9. " 886		10:20											✓	✓	✓	✓	
10. " 864		10:45											✓	✓	✓	✓	

Relinquished by: [signature] Date: 7/2/14 Time: 11:00 Received by: [signature] Date: 7/2/14 Time: 11:00
Relinquished by: [signature] Date: 7/2/14 Time: 13:12 Received by: [signature] Date: 7/2/14 Time: 1312

* Sample Rejected [ ] Returned [ ] Disposal [ ] Storage

7/3/14 1600 FedEx 7/3/14 1600 [signature] 7/3/14 10:10

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

November 3, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated October 31, 2014, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-010-B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s): **702, 764, 800, 868, 882, and 891.**

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Friday, October 31, 2014 1:05 PM
To: Jones, Brad A., EMNRD
Subject: Request to Reuse Treated Soils (email 1 of 3)
Attachments: Letter to request reuse of treated soils on facility.doc; Map.pdf; Pile 702.pdf

Importance: High

Brad:

Please disregard the letter dated 10/27/14 and the corresponding analytical reports.

Attached please find the corrected letter dated 10/31/14 & corresponding analytical reports and map.

Thanks,
Marcella Marquez, HSE Administrator
Industrial Ecosystems, Inc.
Phone: (505) 632-1782
Fax: (505) 632-1876 or (505) 334-1003

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

November 3, 2014

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 702 DRO, BTEX & Chlorides passed 10/24/14 & GRO passed 09/19/14
- Pile 764 DRO, BTEX & Chlorides passed 10/24/14 & GRO passed 09/19/14
- Pile 800 DRO, BTEX & Chlorides passed 10/24/14 & GRO passed 09/19/14
- Pile 868 DRO, BTEX & Chlorides passed 10/24/14 & GRO passed 09/19/14
- Pile 882 DRO, GRO, BTEX & Chlorides passed 10/24/14
- Pile 891 DRO, BTEX & Chlorides passed 10/24/14 & GRO passed 09/19/14

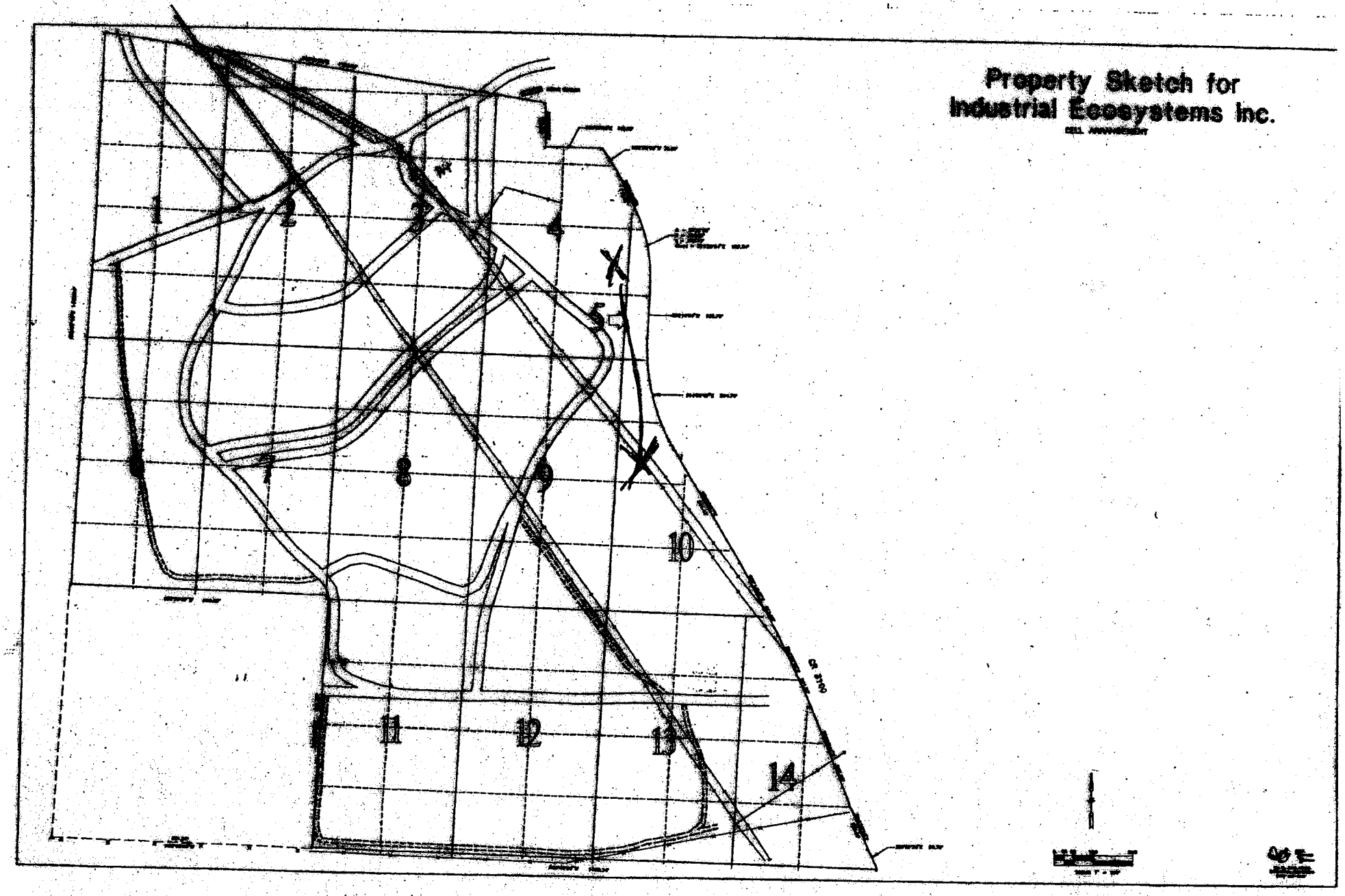
Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map


Property Sketch for
Industrial Ecosystems Inc.
1
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X
X

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

PILE #868

H403223-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	112		16.0	mg/kg	4	4102107	AP	21-Oct-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4102203	ms	22-Oct-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4102203	ms	22-Oct-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4102203	ms	22-Oct-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4102203	ms	22-Oct-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4102203	ms	22-Oct-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*61-154*		*4102203*	ms	*22-Oct-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
DRO >C10-C28	67.9		10.0	mg/kg	1	4102201	MS	23-Oct-14	8015B	
Surrogate: 1-Chlorooctane			*115 %*	*47.2-157*		*4102201*	MS	*23-Oct-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*133 %*	*52.1-176*		*4102201*	MS	*23-Oct-14*	*8015B*	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

PILE #891

H403223-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	112		16.0	mg/kg	4	4102108	AP	22-Oct-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4102203	ms	22-Oct-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4102203	ms	22-Oct-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4102203	ms	22-Oct-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4102203	ms	22-Oct-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4102203	ms	22-Oct-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*61-154*		*4102203*	ms	*22-Oct-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
DRO >C10-C28	39.7		10.0	mg/kg	1	4102201	MS	23-Oct-14	8015B	
Surrogate: 1-Chlorooctane			*120 %*	*47.2-157*		*4102201*	MS	*23-Oct-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*136 %*	*52.1-176*		*4102201*	MS	*23-Oct-14*	*8015B*	

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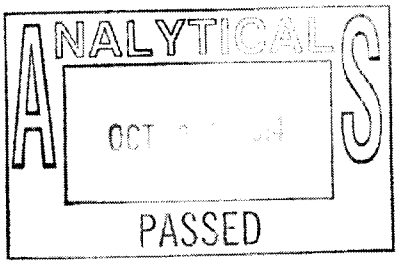
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

PILE #882

H403223-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**480**		16.0	mg/kg	4	4102107	AP	21-Oct-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*61-154*		*4102106*	ms	*22-Oct-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4102011	ms	21-Oct-14	8015B	
DRO >C10-C28	**78.6**		10.0	mg/kg	1	4102011	ms	21-Oct-14	8015B	
Surrogate: 1-Chlorooctane			*101 %*	*47.2-157*		*4102011*	ms	*21-Oct-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*115 %*	*52.1-176*		*4102011*	ms	*21-Oct-14*	*8015B*	



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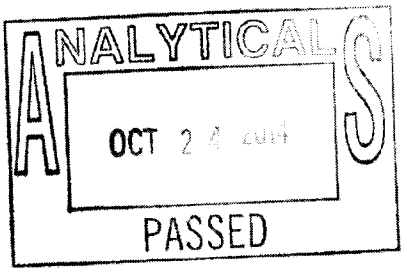
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

PILE #800

H403223-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**128**		16.0	mg/kg	4	4102107	AP	21-Oct-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*104 %*	*61-154*		*4102106*	ms	*22-Oct-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
DRO >C10-C28	**95.8**		10.0	mg/kg	1	4102011	ms	21-Oct-14	8015B	
Surrogate: 1-Chlorooctane			*97.2 %*	*47.2-157*		*4102011*	ms	*21-Oct-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*121 %*	*52.1-176*		*4102011*	ms	*21-Oct-14*	*8015B*	



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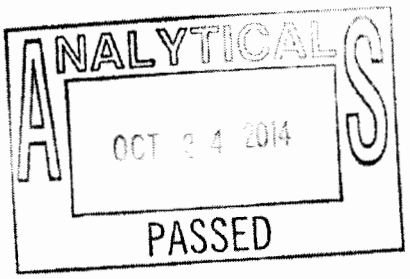
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

PILE #764

H403223-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**912**		16.0	mg/kg	4	4102107	AP	21-Oct-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*61-154*		*4102106*	ms	*22-Oct-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
DRO >C10-C28	**34.6**		10.0	mg/kg	1	4102011	ms	21-Oct-14	8015B	
Surrogate: 1-Chlorooctane			*103 %*	*47.2-157*		*4102011*	ms	*21-Oct-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*105 %*	*52.1-176*		*4102011*	ms	*21-Oct-14*	*8015B*	



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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

PILE #702

H403223-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	4102107	AP	21-Oct-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4102106	ms	22-Oct-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*61-154*		*4102106*	ms	*22-Oct-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
DRO >C10-C28	ND		10.0	mg/kg	1	4102011	ms	21-Oct-14	8015B	
Surrogate: 1-Chlorooctane			*92.8 %*	*47.2-157*		*4102011*	ms	*21-Oct-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*105 %*	*52.1-176*		*4102011*	ms	*21-Oct-14*	*8015B*	

ANALYTICAL
OCT 24 2014
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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4102107 - 1:4 DI Water										
Blank (4102107-BLK1)				Prepared & Analyzed: 21-Oct-14						
Chloride	ND	16.0	mg/kg							
LCS (4102107-BS1)				Prepared & Analyzed: 21-Oct-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4102107-BSD1)				Prepared & Analyzed: 21-Oct-14						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	
Batch 4102108 - 1:4 DI Water										
Blank (4102108-BLK1)				Prepared: 21-Oct-14 Analyzed: 22-Oct-14						
Chloride	ND	16.0	mg/kg							
LCS (4102108-BS1)				Prepared: 21-Oct-14 Analyzed: 22-Oct-14						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (4102108-BSD1)				Prepared: 21-Oct-14 Analyzed: 22-Oct-14						
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4102106 - Volatiles										
Blank (4102106-BLK1)				Prepared & Analyzed: 21-Oct-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0521*		mg/kg	*0.0500*		*104*	*61-154*			
LCS (4102106-BS1)				Prepared & Analyzed: 21-Oct-14						
Benzene	2.05	0.050	mg/kg	2.00		103	77.1-114			
Toluene	1.94	0.050	mg/kg	2.00		97.1	67-114			
Ethylbenzene	1.85	0.050	mg/kg	2.00		92.7	63.5-121			
Total Xylenes	5.56	0.150	mg/kg	6.00		92.6	62.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0490*		mg/kg	*0.0500*		*98.0*	*61-154*			
LCS Dup (4102106-BSD1)				Prepared & Analyzed: 21-Oct-14						
Benzene	1.88	0.050	mg/kg	2.00		94.0	77.1-114	8.65	16.4	
Toluene	1.76	0.050	mg/kg	2.00		88.2	67-114	9.58	16.2	
Ethylbenzene	1.69	0.050	mg/kg	2.00		84.4	63.5-121	9.35	17	
Total Xylenes	5.06	0.150	mg/kg	6.00		84.3	62.4-125	9.47	17	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0495*		mg/kg	*0.0500*		*99.0*	*61-154*			
Batch 4102203 - Volatiles										
Blank (4102203-BLK1)				Prepared & Analyzed: 22-Oct-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0508*		mg/kg	*0.0500*		*102*	*61-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4102203 - Volatiles										
LCS (4102203-BS1)				Prepared & Analyzed: 22-Oct-14						
Benzene	1.96	0.050	mg/kg	2.00		97.8	77.1-114			
Toluene	1.86	0.050	mg/kg	2.00		92.9	67-114			
Ethylbenzene	1.77	0.050	mg/kg	2.00		88.4	63.5-121			
Total Xylenes	5.23	0.150	mg/kg	6.00		87.2	62.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0485*		mg/kg	*0.0500*		*97.0*	*61-154*			
LCS Dup (4102203-BSD1)				Prepared & Analyzed: 22-Oct-14						
Benzene	1.88	0.050	mg/kg	2.00		94.1	77.1-114	3.91	16.4	
Toluene	1.75	0.050	mg/kg	2.00		87.6	67-114	5.87	16.2	
Ethylbenzene	1.67	0.050	mg/kg	2.00		83.5	63.5-121	5.72	17	
Total Xylenes	4.97	0.150	mg/kg	6.00		82.9	62.4-125	5.07	17	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0483*		mg/kg	*0.0500*		*96.6*	*61-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4102011 - General Prep - Organics										
Blank (4102011-BLK1)				Prepared: 20-Oct-14 Analyzed: 21-Oct-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*47.3*		mg/kg	*50.0*		*94.5*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*58.9*		mg/kg	*50.0*		*118*	*52.1-176*			
LCS (4102011-BS1)				Prepared: 20-Oct-14 Analyzed: 21-Oct-14						
GRO C6-C10	178	10.0	mg/kg	200		89.0	72.5-115			
DRO >C10-C28	209	10.0	mg/kg	200		105	81.3-118			
Surrogate: 1-Chlorooctane	*50.7*		mg/kg	*50.0*		*101*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*62.2*		mg/kg	*50.0*		*124*	*52.1-176*			
LCS Dup (4102011-BSD1)				Prepared: 20-Oct-14 Analyzed: 21-Oct-14						
GRO C6-C10	182	10.0	mg/kg	200		90.8	72.5-115	2.01	10.1	
DRO >C10-C28	217	10.0	mg/kg	200		108	81.3-118	3.44	15.3	
Surrogate: 1-Chlorooctane	*51.8*		mg/kg	*50.0*		*104*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*63.3*		mg/kg	*50.0*		*127*	*52.1-176*			
Batch 4102201 - General Prep - Organics										
Blank (4102201-BLK1)				Prepared & Analyzed: 22-Oct-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*45.5*		mg/kg	*50.0*		*91.1*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*57.3*		mg/kg	*50.0*		*115*	*52.1-176*			
LCS (4102201-BS1)				Prepared: 22-Oct-14 Analyzed: 23-Oct-14						
GRO C6-C10	200	10.0	mg/kg	200		99.9	72.5-115			
DRO >C10-C28	210	10.0	mg/kg	200		105	81.3-118			
Surrogate: 1-Chlorooctane	*54.1*		mg/kg	*50.0*		*108*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*57.6*		mg/kg	*50.0*		*115*	*52.1-176*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2783 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 24-Oct-14 10:52

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4102201 - General Prep - Organics										
LCS Dup (4102201-BSD1)				Prepared: 22-Oct-14 Analyzed: 23-Oct-14						
GRO C6-C10	217	10.0	mg/kg	200		108	72.5-115	8.20	10.1	
DRO >C10-C28	228	10.0	mg/kg	200		114	81.3-118	8.11	15.3	
Surrogate: 1-Chlorooctane	*60.8*		mg/kg	*50.0*		*122*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*65.4*		mg/kg	*50.0*		*131*	*52.1-176*			

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Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87413
Phone Number: 505-632-1782
Email: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 2783
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Prod.W., 5 = Oil
6 = Waste, 7 = Other (Specify)

(FOR GAL USE ONLY)
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015B	Analyses Required: GRO 8015B	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
H403223 702																	7.8C on ice
1. Pile	10/20/14		RC	3	1	N							✓		✓	✓	
2. " 704													✓		✓	✓	
3. " 800													✓		✓	✓	
4. " 882													✓	✓	✓	✓	
5. " 884													✓		✓	✓	
6. " 885													✓		✓	✓	
7. " 868													✓		✓	✓	
8. " 878													✓	✓	✓	✓	
9. " 888													✓	✓	✓	✓	
10. " 891													✓		✓	✓	

Relinquished by:	Date: 10/20/14	Time: 10:30	Received by: A. M. Marquez	Date: 10/20/14	Time: 10:30
Relinquished by:	Date: 10/20/14	Time: 1:30	Received by: Christa Clark	Date: 10/20/14	Time: 1330
Relinquished by:	Date: 10/20/14	Time: 1600	Received by: FedEx	Date: 10/20/14	Time: 1600

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: JFJ Landfarm
Lab ID: 1409951-009 **Matrix:** SOIL

Client Sample ID: Pile 702
Collection Date: 9/17/2014 11:18:00 AM
Received Date: 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	660	99		mg/Kg	10	9/22/2014 5:19:40 PM	15396
Surr: DNOP	0	57.9-140	S	%REC	10	9/22/2014 5:19:40 PM	15396
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/23/2014 6:49:06 PM	15403
Surr: BFB	105	80-120		%REC	1	9/23/2014 6:49:06 PM	15403

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: JFJ Landfarm
Lab ID: 1409951-004 **Matrix:** SOIL

Client Sample ID: Pile 764
Collection Date: 9/17/2014 10:34:00 AM
Received Date: 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	430	100		mg/Kg	10	9/22/2014 2:46:54 PM	15396
Surr: DNOP	0	57.9-140	S	%REC	10	9/22/2014 2:46:54 PM	15396
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/23/2014 2:18:36 AM	15403
Surr: BFB	80.2	80-120		%REC	1	9/23/2014 2:18:36 AM	15403

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: JFJ Landfarm
Lab ID: 1409951-003 **Matrix:** SOIL

Client Sample ID: Pile 800
Collection Date: 9/17/2014 10:30:00 AM
Received Date: 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	240	100		mg/Kg	10	9/22/2014 2:16:35 PM	15396
Surr: DNOP	0	57.9-140	S	%REC	10	9/22/2014 2:16:35 PM	15396
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.7		mg/Kg	1	9/23/2014 1:48:20 AM	15403
Surr: BFB	88.3	80-120		%REC	1	9/23/2014 1:48:20 AM	15403

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: JFJ Landfarm
Lab ID: 1409951-002 **Matrix:** SOIL

Client Sample ID: Pile 891
Collection Date: 9/17/2014 10:22:00 AM
Received Date: 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS						Analyst: **BCN**	
Diesel Range Organics (DRO)	240	10		mg/Kg	1	9/22/2014 1:46:19 PM	15396
Surr: DNOP	134	57.9-140		%REC	1	9/22/2014 1:46:19 PM	15396
EPA METHOD 8015D: GASOLINE RANGE						Analyst: **NSB**	
Gasoline Range Organics (GRO)	ND	4.8		mg/Kg	1	9/23/2014 1:18:07 AM	15403
Surr: BFB	77.7	80-120	S	%REC	1	9/23/2014 1:18:07 AM	15403

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

Analytical Report
Lab Order **1409951**
Date Reported: **9/26/2014**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Blagg Engineering
Project: JFJ Landfarm
Lab ID: 1409951-001 **Matrix:** SOIL

Client Sample ID: Pile 868
Collection Date: 9/17/2014 10:10:00 AM
Received Date: 9/19/2014 7:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8015D: DIESEL RANGE ORGANICS							Analyst: **BCN**
Diesel Range Organics (DRO)	360	100		mg/Kg	10	9/22/2014 1:16:06 PM	15396
Surr: DNOP	0	57.9-140	S	%REC	10	9/22/2014 1:16:06 PM	15396
EPA METHOD 8015D: GASOLINE RANGE							Analyst: **NSB**
Gasoline Range Organics (GRO)	ND	4.9		mg/Kg	1	9/22/2014 7:46:52 PM	15403
Surr: BFB	90.7	80-120		%REC	1	9/22/2014 7:46:52 PM	15403

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
E	Value above quantitation range	H	Holding times for preparation or analysis exceeded
J	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
O	RSD is greater than RSDlimit	P	Sample pH greater than 2.
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

WO#: 1409951

Hall Environmental Analysis Laboratory, Inc.

26-Sep-14

Client: Blagg Engineering
Project: JFJ Landfarm

Sample ID MB-15363	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: PBS	Batch ID: 15363	RunNo: 21269							
Prep Date: 9/18/2014	Analysis Date: 9/18/2014	SeqNo: 620601	Units: %REC						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	10		10.00		100	57.9	140			

Sample ID LCS-15363	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 15363	RunNo: 21269							
Prep Date: 9/18/2014	Analysis Date: 9/18/2014	SeqNo: 620602	Units: %REC						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.2		5.000		104	57.9	140			

Sample ID MB-15396	SampType: MBLK	TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: PBS	Batch ID: 15396	RunNo: 21269							
Prep Date: 9/19/2014	Analysis Date: 9/19/2014	SeqNo: 621919	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Surr: DNOP	9.4		10.00		94.4	57.9	140			

Sample ID LCS-15396	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 15396	RunNo: 21269							
Prep Date: 9/19/2014	Analysis Date: 9/19/2014	SeqNo: 621920	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	180	10	50.00	0	354	68.6	130			S
Surr: DNOP	15		5.000		292	57.9	140			S

Sample ID LCS-15369	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 15369	RunNo: 21309							
Prep Date: 9/18/2014	Analysis Date: 9/19/2014	SeqNo: 622110	Units: %REC						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.0		5.000		100	57.9	140			

Sample ID LCS-15396	SampType: LCS	TestCode: EPA Method 8015D: Diesel Range Organics							
Client ID: LCSS	Batch ID: 15396	RunNo: 21269							
Prep Date: 9/19/2014	Analysis Date: 9/19/2014	SeqNo: 622111	Units: mg/Kg						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	53	10	50.00	0	107	68.6	130			
Surr: DNOP	5.1		5.000		103	57.9	140			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- E Value above quantitation range
- J Analyte detected below quantitation limits
- O RSD is greater than RSDlimit
- R RPD outside accepted recovery limits
- S Spike Recovery outside accepted recovery limits
- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- P Sample pH greater than 2.
- RL Reporting Detection Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409951**

26-Sep-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID	LCS-15372	SampType:	LCS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	LCSS	Batch ID:	15372	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	622114	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		5.000		102	57.9	140			

Sample ID	MB-15369	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	15369	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	622115	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	8.9		10.00		89.3	57.9	140			

Sample ID	MB-15372	SampType:	MBLK	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	PBS	Batch ID:	15372	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	622131	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	9.1		10.00		90.8	57.9	140			

Sample ID	1409878-002AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
t ID:	BatchQC	Batch ID:	15369	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	623164	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.1		4.975		103	57.9	140			

Sample ID	1409878-002AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	15369	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/19/2014	SeqNo:	623165	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	7.1		4.955		143	57.9	140	0	0	S

Sample ID	1409892-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Diesel Range Organics					
Client ID:	BatchQC	Batch ID:	15372	RunNo:	21309					
Prep Date:	9/18/2014	Analysis Date:	9/20/2014	SeqNo:	623178	Units:	%REC			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		106	57.9	140			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
J	Value above quantitation range	H	Holding times for preparation or analysis exceeded
O	Analyte detected below quantitation limits	ND	Not Detected at the Reporting Limit
R	RSD is greater than RSDlimit	P	Sample pH greater than 2.
S	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	Spike Recovery outside accepted recovery limits		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409951**

26-Sep-14

Client: Blagg Engineering

Project: JFJ Landfarm

Sample ID **1409892-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **15372**	RunNo: **21309**
Prep Date: **9/18/2014**	Analysis Date: **9/20/2014**	SeqNo: **623179** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	5.3		5.000		107	57.9	140	0	0	

Sample ID **1409949-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **15396**	RunNo: **21309**
Prep Date: **9/19/2014**	Analysis Date: **9/20/2014**	SeqNo: **623192** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.35	0	89.7	40.1	152			
Surr: DNOP	4.4		5.035		86.7	57.9	140			

Sample ID **1409949-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **15396**	RunNo: **21309**
Prep Date: **9/19/2014**	Analysis Date: **9/20/2014**	SeqNo: **623193** Units: **mg/Kg**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	49.90	0	95.6	40.1	152	5.42	32.1	
Surr: DNOP	4.6		4.990		92.0	57.9	140	0	0	

Sample ID **1409854-001AMS**	SampType: **MS**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **15363**	RunNo: **21369**
Prep Date: **9/18/2014**	Analysis Date: **9/22/2014**	SeqNo: **624223** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.5		4.931		90.7	57.9	140			

Sample ID **1409854-001AMSD**	SampType: **MSD**	TestCode: **EPA Method 8015D: Diesel Range Organics**
Client ID: **BatchQC**	Batch ID: **15363**	RunNo: **21369**
Prep Date: **9/18/2014**	Analysis Date: **9/22/2014**	SeqNo: **624224** Units: **%REC**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: DNOP	4.8		4.970		96.5	57.9	140	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- O RSD is greater than RSDlimit
- P Sample pH greater than 2.
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S Spike Recovery outside accepted recovery limits

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **1409951**

26-Sep-14

Client: Blagg Engineering
Project: JFJ Landfarm

Sample ID	MB-15403	SampType:	MBLK	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	PBS	Batch ID:	15403	RunNo:	21348					
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623436	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	890		1000		88.9	80	120			

Sample ID	LCS-15403	SampType:	LCS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	LCSS	Batch ID:	15403	RunNo:	21348					
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623441	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	23	5.0	25.00	0	90.5	65.8	139			
Surr: BFB	910		1000		91.0	80	120			

Sample ID	1409949-001AMS	SampType:	MS	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	BatchQC	Batch ID:	15403	RunNo:	21348					
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623508	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25	4.8	24.20	0	105	71.8	132			
Surr: BFB	950		968.1		97.7	80	120			

Sample ID	1409949-001AMSD	SampType:	MSD	TestCode:	EPA Method 8015D: Gasoline Range					
Client ID:	BatchQC	Batch ID:	15403	RunNo:	21348					
Prep Date:	9/19/2014	Analysis Date:	9/22/2014	SeqNo:	623517	Units:	mg/Kg			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	4.8	24.13	0	107	71.8	132	1.74	20	
Surr: BFB	940		965.3		97.8	80	120	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- O RSD is greater than RSDlimit
- P Sample pH greater than 2.
- R RPD outside accepted recovery limits
- RL Reporting Detection Limit
- S Spike Recovery outside accepted recovery limits

Client:	g Engineering, Inc.	☒ Standard ☐ h	
	Industrial Ecosystems Inc.	Project Name: JFJ Landfarm	
Mailing Address:	P.O. Box 87		
	Bloomfield, NM 87413	Project #:	
Phone #:	(505)320-1183		
email or Fax#:		Project Manager: Jeff Blagg	
QA/QC Package:			
☒ Standard	☐ Level 4 (Full Validation)	Sampler: Jeff Blagg	
☐ Other		On Ice: ☒ Yes ☐ No	
☐ EDD (Type)		Sample Temperature: 4	

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No 1409951	TPH 8015B (GRO / DRO)	Air Bubbles (Y or N)
09/17/2014	10:10	Soil	Pile 868	4oz x 1	cool	001	x	
09/17/2014	10:22	Soil	Pile 891	4oz x 1	cool	002	x	
09/17/2014	10:30	Soil	Pile 800	4oz x 1	cool	003	x	
09/17/2014	10:34	Soil	Pile 764	4oz x 1	cool	004	x	
09/17/2014	10:40	Soil	Pile 744	4oz x 1	cool	005	x	
09/17/2014	10:48	Soil	Pile 884	4oz x 1	cool	006	x	
09/17/2014	10:55	Soil	Pile 886	4oz x 1	cool	007	x	
09/17/2014	11:07	Soil	Pile 902	4oz x 1	cool	008	x	
09/17/2014	11:18	Soil	Pile 702	4oz x 1	cool	009	x	
09/17/2014	11:26	Soil	Pile 701	"	"	010		

Date:	Time:	Relinquished by:	Received by:	Date	Time
9/18/2014	1402	Jeff Blagg	Christin Walker	9/18/14	1402
9/18/14	1857	Christin Walker		09/19/14	0700

Remarks: Bill JFJ
email results to:
marcella@industrialecosystems.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

October 20, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated October 20, 2014, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-010-B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s): **578, 623, 657, and 703.**

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

October 20, 2014

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 578 DRO, GRO, BTEX & Chlorides passed 10/07/14
- Pile 623 DRO, GRO, BTEX & Chlorides passed 10/07/14
- Pile 703 DRO, GRO, BTEX & Chlorides passed 10/07/14
- Pile 657 DRO, GRO, BTEX & Chlorides passed 10/07/14

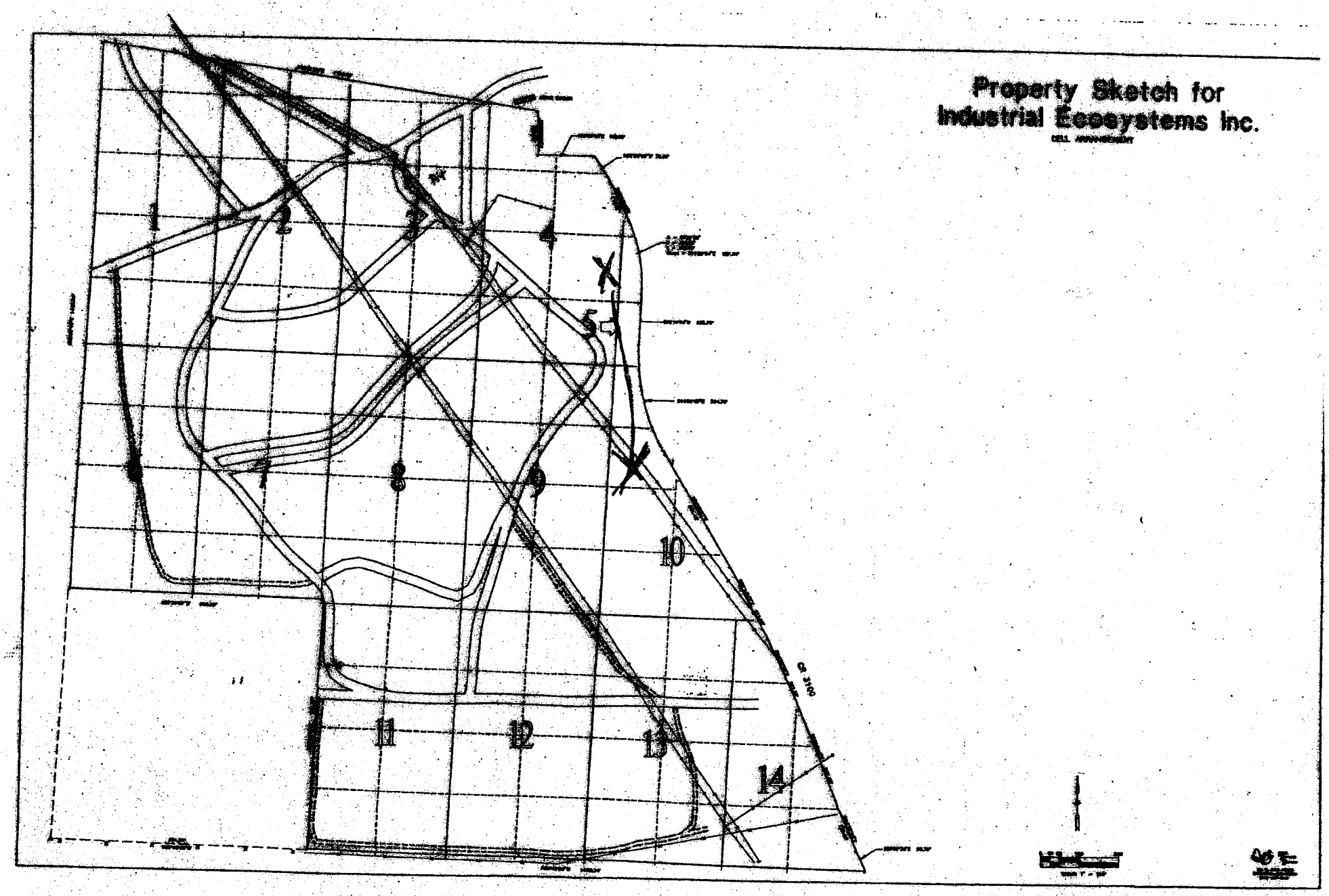
Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map


Property Sketch for
Industrial Ecosystems inc.
1
2
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14
CR 3100

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

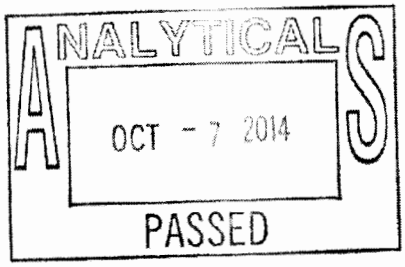
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2715 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 07-Oct-14 10:02

PILE 703

H402991-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	4100202	AP	02-Oct-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.1 %*	*61-154*		*4100302*	ms	*03-Oct-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4100601	ms	06-Oct-14	8015B	
DRO >C10-C28	ND		10.0	mg/kg	1	4100601	ms	06-Oct-14	8015B	
Surrogate: 1-Chlorooctane			*88.7 %*	*47.2-157*		*4100601*	ms	*06-Oct-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*92.5 %*	*52.1-176*		*4100601*	ms	*06-Oct-14*	*8015B*	



Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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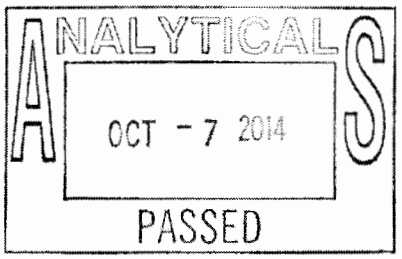
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2715 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 07-Oct-14 10:02

PILE 657

H402991-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**144**		16.0	mg/kg	4	4100203	AP	02-Oct-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*101 %*	*61-154*		*4100302*	ms	*03-Oct-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4100601	ms	06-Oct-14	8015B	
DRO >C10-C28	ND		10.0	mg/kg	1	4100601	ms	06-Oct-14	8015B	
Surrogate: 1-Chlorooctane			*89.4 %*	*47.2-157*		*4100601*	ms	*06-Oct-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*93.9 %*	*52.1-176*		*4100601*	ms	*06-Oct-14*	*8015B*	



Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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October 07, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 10/01/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2715 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 07-Oct-14 10:02

PILE 623

H402991-02 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**64.0**		16.0	mg/kg	4	4100202	AP	02-Oct-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.8 %*	*61-154*		*4100302*	ms	*03-Oct-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4100601	ms	06-Oct-14	8015B	
DRO >C10-C28	**13.8**		10.0	mg/kg	1	4100601	ms	06-Oct-14	8015B	
Surrogate: 1-Chlorooctane			*94.3 %*	*47.2-157*		*4100601*	ms	*06-Oct-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*97.9 %*	*52.1-176*		*4100601*	ms	*06-Oct-14*	*8015B*	

ANALYTICAL
OCT - 7 2014
PASSED

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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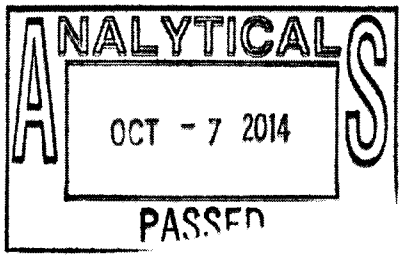
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2715 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 07-Oct-14 10:02

PILE 578

H402991-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**80.0**		16.0	mg/kg	4	4100202	AP	02-Oct-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4100302	ms	03-Oct-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*98.7 %*	*61-154*		*4100302*	ms	*03-Oct-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4100601	ms	06-Oct-14	8015B	
DRO >C10-C28	ND		10.0	mg/kg	1	4100601	ms	06-Oct-14	8015B	
Surrogate: 1-Chlorooctane			*92.2 %*	*47.2-157*		*4100601*	ms	*06-Oct-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*97.1 %*	*52.1-176*		*4100601*	ms	*06-Oct-14*	*8015B*	



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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

October 07, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 10/01/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

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Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

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This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

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Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2715 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 07-Oct-14 10:02

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 578	H402991-01	Soil	30-Sep-14 08:17	01-Oct-14 10:30
PILE 623	H402991-02	Soil	30-Sep-14 09:10	01-Oct-14 10:30
PILE 703	H402991-03	Soil	30-Sep-14 10:30	01-Oct-14 10:30
PILE 657	H402991-04	Soil	30-Sep-14 11:37	01-Oct-14 10:30

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2715 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 07-Oct-14 10:02

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4100202 - 1:4 DI Water										
Blank (4100202-BLK1)				Prepared & Analyzed: 02-Oct-14						
Chloride	ND	16.0	mg/kg							
LCS (4100202-BS1)				Prepared & Analyzed: 02-Oct-14						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (4100202-BSD1)				Prepared & Analyzed: 02-Oct-14						
Chloride	432	16.0	mg/kg	400		108	80-120	7.69	20	
Batch 4100203 - 1:4 DI Water										
Blank (4100203-BLK1)				Prepared & Analyzed: 02-Oct-14						
Chloride	ND	16.0	mg/kg							
LCS (4100203-BS1)				Prepared & Analyzed: 02-Oct-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4100203-BSD1)				Prepared & Analyzed: 02-Oct-14						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2715 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 07-Oct-14 10:02

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4100302 - Volatiles										
Blank (4100302-BLK1)				Prepared & Analyzed: 03-Oct-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*98.1*	*61-154*			
LCS (4100302-BS1)				Prepared & Analyzed: 03-Oct-14						
Benzene	1.90	0.050	mg/kg	2.00		95.2	77.1-114			
Toluene	1.83	0.050	mg/kg	2.00		91.4	67-114			
Ethylbenzene	1.71	0.050	mg/kg	2.00		85.4	63.5-121			
Total Xylenes	5.04	0.150	mg/kg	6.00		84.0	62.4-125			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0466*		mg/kg	*0.0500*		*93.2*	*61-154*			
LCS Dup (4100302-BSD1)				Prepared & Analyzed: 03-Oct-14						
Benzene	1.95	0.050	mg/kg	2.00		97.3	77.1-114	2.17	16.4	
Toluene	1.84	0.050	mg/kg	2.00		92.1	67-114	0.748	16.2	
Ethylbenzene	1.74	0.050	mg/kg	2.00		87.2	63.5-121	2.04	17	
Total Xylenes	5.17	0.150	mg/kg	6.00		86.2	62.4-125	2.57	17	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0475*		mg/kg	*0.0500*		*94.9*	*61-154*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2715 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 07-Oct-14 10:02

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4100601 - General Prep - Organics										
Blank (4100601-BLK1)				Prepared & Analyzed: 06-Oct-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*47.8*		mg/kg	*50.0*		*95.6*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*48.9*		mg/kg	*50.0*		*97.7*	*52.1-176*			
LCS (4100601-BS1)				Prepared & Analyzed: 06-Oct-14						
GRO C6-C10	181	10.0	mg/kg	200		90.5	72.5-115			
DRO >C10-C28	187	10.0	mg/kg	200		93.4	81.3-118			
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.0*		*96.1*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*52.1-176*			
LCS Dup (4100601-BSD1)				Prepared & Analyzed: 06-Oct-14						
GRO C6-C10	188	10.0	mg/kg	200		93.8	72.5-115	3.56	10.1	
DRO >C10-C28	198	10.0	mg/kg	200		99.2	81.3-118	6.02	15.3	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.0*		*100*	*47.2-157*			
Surrogate: 1-Chlorooctadecane	*52.3*		mg/kg	*50.0*		*105*	*52.1-176*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2715
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015B	Analyses Required: GRO 8015B	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
H402991																	9.8 c on ice
1. Pit 578	9/30/14	8:47	RC	3	1	N							✓	✓	✓	✓	
2. " 623	↓	9:16	↓	↓	↓	↓							✓	✓	✓	✓	
3. " 703	↓	10:30	↓	↓	↓	↓							✓	✓	✓	✓	
4. " 657	↓	11:37	↓	↓	↓	↓							✓	✓	✓	✓	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

Relinquished by:	Date: 9/30/14	Time: 2:30	Received by: M. Marquez	Date: 9/30/14	Time: 2:30
Relinquished by:	Date: 9/30/14	Time: 5:00	Received by:	Date: 9/30/14	Time: 5:00

*Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

9/30/14 1600 Kangaroo Express 9/30/14 1600
2/8/14

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

September 29, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval to Reuse Remediated Biopile Soils for the Stabilization/Solidification of Drilling Mud and Tank Bottoms and Sludge
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM,
San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated September 26, 2014, and associated analytical results to reuse the remediated soils for the stabilization and/or solidification of incoming drilling mud and tank bottoms and sludge from following biopile(s):

Pile # 568 *Pile # 898*

Based upon the information provided, the above-referenced biopiles are hereby approved for the stabilization and/or solidification of incoming drilling mud and tank bottoms and sludge.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Brad A. Jones
Environmental Engineer

BAJ/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From:	Marcella Marquez <marcella@industrialecosystems.com>
Sent:	Friday, September 26, 2014 9:53 AM
To:	Jones, Brad A., EMNRD
Subject:	1BLANK Request to Reuse Soil
Attachments:	1BLANK Request to Reuse Soil.doc; Pile 568.pdf; Pile 898.pdf
Importance:	High

Brad:

Please see attached letter and corresponding analytical reports.

Thanks,
Marcella

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

September 29, 2014

Brad Jones
Environmental Bureau
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RE: Use of reclaimed soil

Dear Brad:

Recent analytical results show that the following biopiles(s) have reached acceptable levels as required by our NMOCD permit.

Pile #	
# 568	DRO, GRO, BTEX & Chlorides Passed 09/22/14
# 898	DRO, GRO, BTEX & Chlorides Passed 09/22/14

We are seeking your approval to recycle this soil by using it to mix/solidify incoming liquid waste.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosure(s) – Analytical Reports

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS
MARCELLA MARQUEZ
49 CR 3150
AZTEC NM, 87410
Fax To: (505) 632-1876

Received:	09/17/2014	Sampling Date:	09/15/2014
Reported:	09/22/2014	Sampling Type:	Soil
Project Name:	JFJ	Sampling Condition:	Cool & Intact
Project Number:	2669	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PILE #898 (H402884-02)

BTEX 8021B mg/kg **Analyzed By: ms**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/22/2014	ND	1.81	90.3	2.00	0.512	
Toluene*	<0.050	0.050	09/22/2014	ND	1.68	83.8	2.00	1.20	
Ethylbenzene*	<0.050	0.050	09/22/2014	ND	1.56	78.1	2.00	2.19	
Total Xylenes*	<0.150	0.150	09/22/2014	ND	4.64	77.3	6.00	2.29	
Total BTEX	<0.300	0.300	09/22/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL *98.7 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/19/2014	ND	400	100	400	0.00	

TPH 8015M mg/kg **Analyzed By: ms**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2014	ND	198	99.0	200	1.15	
DRO >C10-C28	<10.0	10.0	09/18/2014	ND	189	94.4	200	9.12	

Surrogate: 1-Chlorooctane *90.6 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *92.4 %* *63.6-154*

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS
MARCELLA MARQUEZ
49 CR 3150
AZTEC NM, 87410
Fax To: (505) 632-1876

Received:	09/17/2014	Sampling Date:	09/15/2014
Reported:	09/22/2014	Sampling Type:	Soil
Project Name:	JFJ	Sampling Condition:	Cool & Intact
Project Number:	2669	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PILE #568 (H402884-01)

BTEX 8021B mg/kg **Analyzed By: ms**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/22/2014	ND	1.81	90.3	2.00	0.512	
Toluene*	<0.050	0.050	09/22/2014	ND	1.68	83.8	2.00	1.20	
Ethylbenzene*	<0.050	0.050	09/22/2014	ND	1.56	78.1	2.00	2.19	
Total Xylenes*	<0.150	0.150	09/22/2014	ND	4.64	77.3	6.00	2.29	
Total BTEX	<0.300	0.300	09/22/2014	ND					

Surrogate: 4-Bromofluorobenzene (PIL 98.9 % 89.4-126

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/19/2014	ND	400	100	400	0.00	

TPH 8015M mg/kg **Analyzed By: ms**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/18/2014	ND	198	99.0	200	1.15	
DRO >C10-C28	**12.4**	10.0	09/18/2014	ND	189	94.4	200	9.12	

Surrogate: 1-Chlorooctane 87.5 % 65.2-140

Surrogate: 1-Chlorooctadecane 92.6 % 63.6-154

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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GREEN GAL Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 Rd 3150
Aztec, NM 87410
Phone Number: 505-632-1782
FAX Number:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 2669
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015B	Analyses Required: BTEX 8021B	Analyses Required: Chlorides 300.0	Comments
H402884																4.6c on ice
1. Pile #568	09/15/14	8:54am	RC	3	1	N							✓	✓	✓	
2. Pile #898	↓	10:28	RC	3	1	N							✓	✓	✓	
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	09/15/14	2:53	TM. Marcus	09/15/14	8:54
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
TM. Marcus	09/15/14	03:50p	Christine Chair	09/15/14	16:50
Christine Chair	9/16/14	1600	Fed Ex	9/16/14	1600

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Jodi Henderson 9/17/14 10:45 3.6°c

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

August 12, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated August 12, 2014, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010-B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s): **835, 864, 870, 877, and 890.**

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Tuesday, August 12, 2014 3:21 PM
To: Jones, Brad A., EMNRD
Subject: Letter to request reuse of treated soils on facility
Attachments: Letter to request reuse of treated soils on facility.doc; Map.pdf; Pile 835.pdf; Pile 864.pdf; Pile 870.pdf; Pile 877.pdf; Pile 890.pdf

Importance: High

Brad:

Please see attached letter to reuse treated soils on the facility along with the corresponding map and analytical reports.

Thank,
Marcella

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

August 12, 2014

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 835 DRO, GRO, BTEX & Chlorides passed 08/07/14
- Pile 864 DRO, GRO, BTEX & Chlorides passed 08/07/14
- Pile 870 DRO passed 08/0714 & GRO, BTEX & Chlorides passed 06/02/14
- Pile 877 DRO, GRO, BTEX & Chlorides passed 08/07/14
- Pile 890 DRO, GRO, BTEX & Chlorides passed 08/06/14

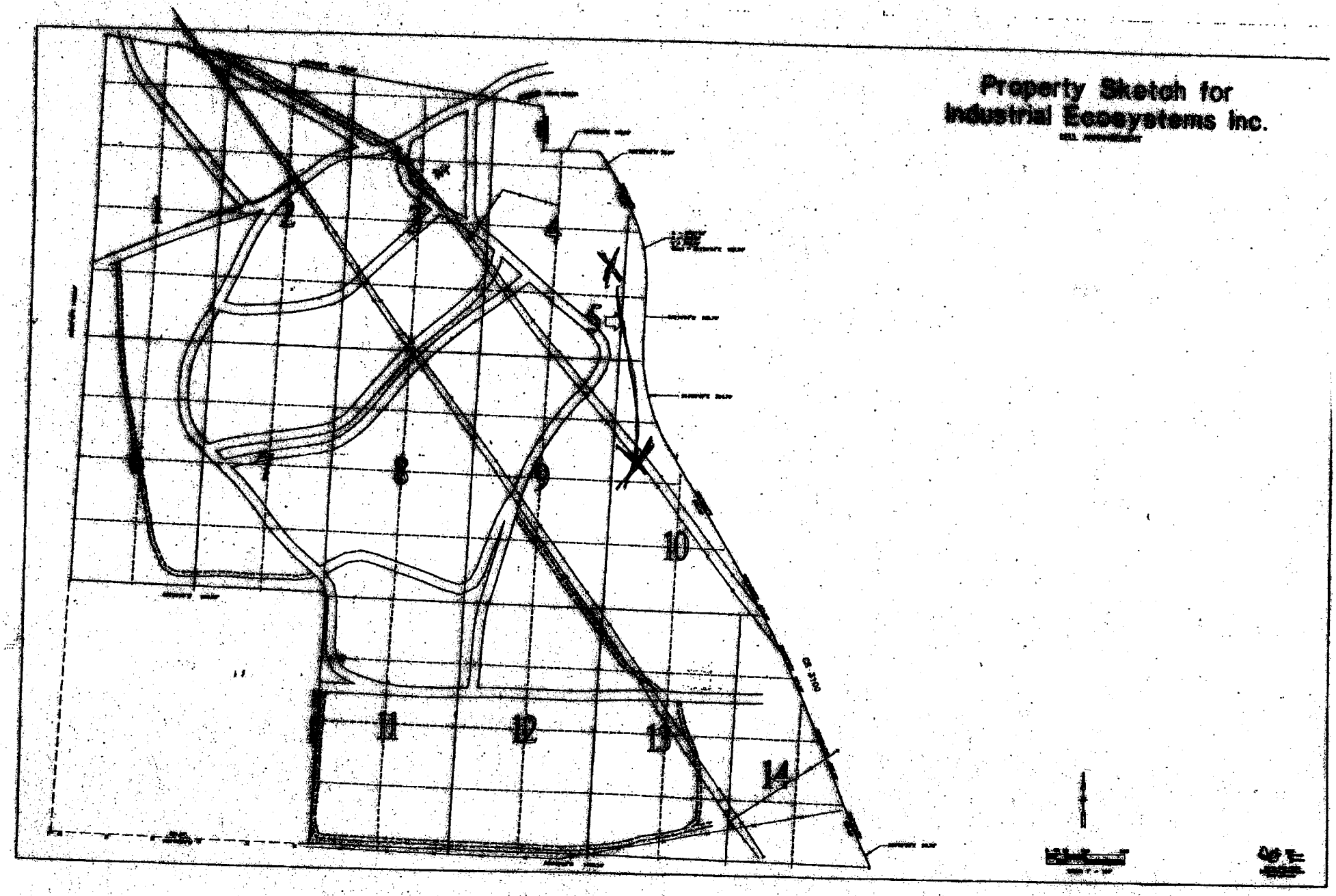
Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map


Property Sketch for
Industrial Ecosystems Inc.
10
11
12
13
14

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

PILE 835

H402363-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	ND		16.0	mg/kg	4	4080407	HM	05-Aug-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4080106	MS	02-Aug-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4080106	MS	02-Aug-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4080106	MS	02-Aug-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4080106	MS	02-Aug-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4080106	MS	02-Aug-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*96.8 %*	*89.4-126*		*4080106*	MS	*02-Aug-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		20.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
DRO >C10-C28	ND		10.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
Surrogate: 1-Chlorooctane			*88.8 %*	*65.2-140*		*4080107*	MS	*04-Aug-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*86.6 %*	*63.6-154*		*4080107*	MS	*04-Aug-14*	*8015B*	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

PILE 864

H402363-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	4080407	HM	05-Aug-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4080106	MS	02-Aug-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4080106	MS	02-Aug-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4080106	MS	02-Aug-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4080106	MS	02-Aug-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4080106	MS	02-Aug-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*97.8 %*	*89.4-126*		*4080106*	MS	*02-Aug-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
DRO >C10-C28	**65.8**		10.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
Surrogate: 1-Chlorooctane			*96.0 %*	*65.2-140*		*4080107*	MS	*04-Aug-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*109 %*	*63.6-154*		*4080107*	MS	*04-Aug-14*	*8015B*	

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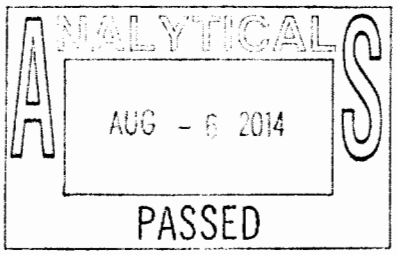
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

PILE 877

H402363-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	4080407	HM	05-Aug-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4080401	MS	04-Aug-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4080401	MS	04-Aug-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4080401	MS	04-Aug-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4080401	MS	04-Aug-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4080401	MS	04-Aug-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*96.7 %*	*89.4-126*		*4080401*	MS	*04-Aug-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
DRO >C10-C28	**13.5**		10.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
Surrogate: 1-Chlorooctane			*97.5 %*	*65.2-140*		*4080107*	MS	*04-Aug-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*105 %*	*63.6-154*		*4080107*	MS	*04-Aug-14*	*8015B*	



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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

PILE 890

H402363-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	4080407	HM	05-Aug-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4080401	MS	04-Aug-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4080401	MS	04-Aug-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4080401	MS	04-Aug-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4080401	MS	04-Aug-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4080401	MS	04-Aug-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*99.5 %*	*89.4-126*		*4080401*	MS	*04-Aug-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
DRO >C10-C28	ND		10.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
Surrogate: 1-Chlorooctane			*97.9 %*	*65.2-140*		*4080107*	MS	*04-Aug-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*107 %*	*63.6-154*		*4080107*	MS	*04-Aug-14*	*8015B*	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

PILE 870

H402363-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Petroleum Hydrocarbons by GC FID										
DRO >C10-C28	**52.0**		10.0	mg/kg	1	4080107	MS	04-Aug-14	8015B	
Surrogate: 1-Chlorooctane			*99.8 %*	*65.2-140*		*4080107*	MS	*04-Aug-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*113 %*	*63.6-154*		*4080107*	MS	*04-Aug-14*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 06, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 08/01/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 565	H402363-01	Soil	31-Jul-14 08:00	01-Aug-14 10:30
PILE 566	H402363-02	Soil	31-Jul-14 08:40	01-Aug-14 10:30
PILE 568	H402363-03	Soil	31-Jul-14 09:05	01-Aug-14 10:30
PILE 835	H402363-04	Soil	31-Jul-14 09:37	01-Aug-14 10:30
PILE 864	H402363-05	Soil	31-Jul-14 10:00	01-Aug-14 10:30
PILE 869	H402363-06	Soil	31-Jul-14 10:30	01-Aug-14 10:30
PILE 870	H402363-07	Soil	31-Jul-14 10:55	01-Aug-14 10:30
PILE 890	H402363-08	Soil	31-Jul-14 11:20	01-Aug-14 10:30
PILE 898	H402363-09	Soil	31-Jul-14 11:40	01-Aug-14 10:30
PILE 877	H402363-10	Soil	31-Jul-14 12:15	01-Aug-14 10:30

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4080407 - 1:4 DI Water										
Blank (4080407-BLK1)				Prepared & Analyzed: 05-Aug-14						
Chloride	ND	16.0	mg/kg							
LCS (4080407-BS1)				Prepared & Analyzed: 05-Aug-14						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (4080407-BSD1)				Prepared & Analyzed: 05-Aug-14						
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4080106 - Volatiles										
Blank (4080106-BLK1)				Prepared: 01-Aug-14 Analyzed: 02-Aug-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*98.0*	*89.4-126*			
LCS (4080106-BS1)				Prepared & Analyzed: 01-Aug-14						
Benzene	1.64	0.050	mg/kg	2.00		82.2	76.4-135			
Toluene	1.67	0.050	mg/kg	2.00		83.7	80.2-135			
Ethylbenzene	1.61	0.050	mg/kg	2.00		80.7	78.5-133			
Total Xylenes	5.02	0.150	mg/kg	6.00		83.7	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0493*		mg/kg	*0.0500*		*98.7*	*89.4-126*			
LCS Dup (4080106-BSD1)				Prepared & Analyzed: 01-Aug-14						
Benzene	1.90	0.050	mg/kg	2.00		95.2	76.4-135	14.7	16.4	
Toluene	1.91	0.050	mg/kg	2.00		95.6	80.2-135	13.2	16.6	
Ethylbenzene	1.85	0.050	mg/kg	2.00		92.4	78.5-133	13.6	16.1	
Total Xylenes	5.73	0.150	mg/kg	6.00		95.4	80.1-135	13.1	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0484*		mg/kg	*0.0500*		*96.8*	*89.4-126*			
Batch 4080401 - Volatiles										
Blank (4080401-BLK1)				Prepared: 04-Aug-14 Analyzed: 05-Aug-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0503*		mg/kg	*0.0500*		*101*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4080401 - Volatiles										
LCS (4080401-BS1)				Prepared & Analyzed: 04-Aug-14						
Benzene	1.65	0.050	mg/kg	2.00		82.7	76.4-135			
Toluene	1.68	0.050	mg/kg	2.00		84.1	80.2-135			
Ethylbenzene	1.66	0.050	mg/kg	2.00		83.0	78.5-133			
Total Xylenes	5.18	0.150	mg/kg	6.00		86.4	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0501*		mg/kg	*0.0500*		*100*	*89.4-126*			
LCS Dup (4080401-BSD1)				Prepared & Analyzed: 04-Aug-14						
Benzene	1.80	0.050	mg/kg	2.00		90.0	76.4-135	8.41	16.4	
Toluene	1.81	0.050	mg/kg	2.00		90.6	80.2-135	7.43	16.6	
Ethylbenzene	1.79	0.050	mg/kg	2.00		89.4	78.5-133	7.40	16.1	
Total Xylenes	5.59	0.150	mg/kg	6.00		93.1	80.1-135	7.49	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0492*		mg/kg	*0.0500*		*98.5*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2549 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Aug-14 11:51

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4080107 - General Prep - Organics										
Blank (4080107-BLK1)				Prepared: 01-Aug-14 Analyzed: 04-Aug-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*47.2*		mg/kg	*50.0*		*94.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*48.1*		mg/kg	*50.0*		*96.2*	*63.6-154*			
LCS (4080107-BS1)				Prepared: 01-Aug-14 Analyzed: 04-Aug-14						
GRO C6-C10	200	10.0	mg/kg	200		99.8	66.4-124			
DRO >C10-C28	207	10.0	mg/kg	200		104	61.6-132			
Surrogate: 1-Chlorooctane	*49.7*		mg/kg	*50.0*		*99.5*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*54.6*		mg/kg	*50.0*		*109*	*63.6-154*			
LCS Dup (4080107-BSD1)				Prepared: 01-Aug-14 Analyzed: 04-Aug-14						
GRO C6-C10	204	10.0	mg/kg	200		102	66.4-124	2.11	23.4	
DRO >C10-C28	218	10.0	mg/kg	200		109	61.6-132	4.91	23.1	
Surrogate: 1-Chlorooctane	*51.3*		mg/kg	*50.0*		*103*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*59.2*		mg/kg	*50.0*		*118*	*63.6-154*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 Rd 3150
Aztec NM 87410
Phone Number: 505-632-1982
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2549
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: 8015B DRO	Analyses Required: 8015B GRO	Analyses Required: 8021B BTEX	Analyses Required: Chlorides 300.0	Comments
1. Pile 565	7/31/14	8:00	RC	3	1	N							✓				19.5C on ice
2. " 566		8:40											✓				
3. " 568		9:05											✓				
4. " 835		9:30											✓	✓	✓	✓	
5. " 864		10:00											✓	✓	✓	✓	
6. " 869		10:30											✓				
7. " 870		10:55											✓				
8. " 890		11:20											✓	✓	✓	✓	
9. " 898		11:40											✓	✓	✓	✓	
10. " 877	↓	12:15	↓	↓	↓	↓							✓	✓	✓	✓	

Relinquished by:	Date: 7/31/14	Time: 2:25	Received by:	Date: 7-31-14	Time: 1426
Relinquished by:	Date: 07/31	Time: 1510	Received by:	Date: 7/31/14	Time: 1510

* Sample Reject: [ ] Return [ ] Dispose [ ] Store 30 Days

7/30/14 1600 Fed Ex 7-31-14

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 870

H401627-15 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**160**		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	30-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	30-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*89.4-126*		*4052903*	MS	*30-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4052901	MS	30-May-14	8015B	
DRO >C10-C28	**245**		10.0	mg/kg	1	4052901	MS	30-May-14	8015B	
Surrogate: 1-Chlorooctane			*99.8 %*	*65.2-140*		*4052901*	MS	*30-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*108 %*	*63.6-154*		*4052901*	MS	*30-May-14*	*8015B*	

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June 02, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/28/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 647	H401627-01	Soil	23-May-14 07:50	28-May-14 10:30
PILE 564	H401627-02	Soil	23-May-14 08:20	28-May-14 10:30
PILE 565	H401627-03	Soil	23-May-14 08:40	28-May-14 10:30
PILE 566	H401627-04	Soil	23-May-14 09:05	28-May-14 10:30
PILE 591	H401627-05	Soil	23-May-14 09:25	28-May-14 10:30
PILE 712	H401627-06	Soil	23-May-14 09:50	28-May-14 10:30
PILE 716	H401627-07	Soil	23-May-14 10:30	28-May-14 10:30
PILE 760	H401627-08	Soil	23-May-14 10:50	28-May-14 10:30
PILE 826	H401627-09	Soil	23-May-14 11:40	28-May-14 10:30
PILE 840	H401627-10	Soil	23-May-14 12:00	28-May-14 10:30
PILE 842	H401627-11	Soil	23-May-14 12:15	28-May-14 10:30
PILE 850	H401627-12	Soil	23-May-14 12:30	28-May-14 10:30
PILE 868	H401627-13	Soil	23-May-14 12:40	28-May-14 10:30
PILE 869	H401627-14	Soil	23-May-14 12:56	28-May-14 10:30
PILE 870	H401627-15	Soil	23-May-14 13:15	28-May-14 10:30

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052811 - 1:4 DI Water										
Blank (4052811-BLK1)				Prepared & Analyzed: 28-May-14						
Chloride	ND	16.0	mg/kg							
LCS (4052811-BS1)				Prepared & Analyzed: 28-May-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4052811-BSD1)				Prepared & Analyzed: 28-May-14						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052903 - Volatiles										
Blank (4052903-BLK1)				Prepared & Analyzed: 29-May-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0326*		mg/kg	*0.0300*		*105*	*89.4-126*			
LCS (4052903-BS1)				Prepared & Analyzed: 29-May-14						
Benzene	2.30	0.050	mg/kg	2.00		115	76.4-135			
Toluene	2.33	0.050	mg/kg	2.00		116	80.2-135			
Ethylbenzene	2.23	0.050	mg/kg	2.00		111	78.5-133			
Total Xylenes	6.96	0.150	mg/kg	6.00		116	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0320*		mg/kg	*0.0300*		*104*	*89.4-126*			
LCS Dup (4052903-BSD1)				Prepared & Analyzed: 29-May-14						
Benzene	2.26	0.050	mg/kg	2.00		113	76.4-135	1.75	16.4	
Toluene	2.26	0.050	mg/kg	2.00		113	80.2-135	2.64	16.6	
Ethylbenzene	2.18	0.050	mg/kg	2.00		109	78.5-133	2.07	16.1	
Total Xylenes	6.80	0.150	mg/kg	6.90		113	80.1-135	2.23	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0320*		mg/kg	*0.0300*		*104*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052801 - General Prep - Organics										
Blank (4052801-BLK1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*65.9*		mg/kg	*50.0*		*132*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*65.7*		mg/kg	*50.0*		*131*	*63.6-154*			
LCS (4052801-BS1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	192	10.0	mg/kg	200		96.2	66.4-124			
DRO >C10-C28	206	10.0	mg/kg	200		103	61.6-132			
Surrogate: 1-Chlorooctane	*62.4*		mg/kg	*50.0*		*125*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*62.2*		mg/kg	*50.0*		*124*	*63.6-154*			
LCS Dup (4052801-BSD1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	194	10.0	mg/kg	200		97.2	66.4-124	1.06	23.4	
DRO >C10-C28	216	10.0	mg/kg	200		108	61.6-132	4.66	23.1	
Surrogate: 1-Chlorooctane	*63.9*		mg/kg	*50.0*		*128*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*64.2*		mg/kg	*50.0*		*128*	*63.6-154*			
Batch 4052802 - General Prep - Organics										
Blank (4052802-BLK1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*47.6*		mg/kg	*50.0*		*95.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.1*		mg/kg	*50.0*		*98.2*	*63.6-154*			
LCS (4052802-BS1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	190	10.0	mg/kg	200		94.9	66.4-124			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132			
Surrogate: 1-Chlorooctane	*47.5*		mg/kg	*50.0*		*95.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.4*		mg/kg	*50.0*		*98.8*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052802 - General Prep - Organics										
LCS Dup (4052802-BSD1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	186	10.0	mg/kg	200		93.2	66.4-124	1.85	23.4	
DRO >C10-C28	198	10.0	mg/kg	200		99.2	61.6-132	0.141	23.1	
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.8*		mg/kg	*50.0*		*102*	*63.6-154*			
Batch 4052901 - General Prep - Organics										
Blank (4052901-BLK1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*49.1*		mg/kg	*50.0*		*98.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.5*		mg/kg	*50.0*		*99.0*	*63.6-154*			
LCS (4052901-BS1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	198	10.0	mg/kg	200		99.2	66.4-124			
DRO >C10-C28	213	10.0	mg/kg	200		106	61.6-132			
Surrogate: 1-Chlorooctane	*52.2*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.7*		mg/kg	*50.0*		*111*	*63.6-154*			
LCS Dup (4052901-BSD1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	199	10.0	mg/kg	200		99.3	66.4-124	0.0992	23.4	
DRO >C10-C28	212	10.0	mg/kg	200		106	61.6-132	0.379	23.1	
Surrogate: 1-Chlorooctane	*51.9*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.0*		mg/kg	*50.0*		*110*	*63.6-154*			
Batch 4053004 - General Prep - Organics										
Blank (4053004-BLK1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*45.1*		mg/kg	*50.0*		*90.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.9*		mg/kg	*50.0*		*95.8*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4053004 - General Prep - Organics										
LCS (4053004-BS1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	160	10.0	mg/kg	200		79.8	66.4-124			
DRO >C10-C28	178	10.0	mg/kg	200		89.1	61.6-132			
Surrogate: 1-Chlorooctane	*42.1*		mg/kg	*50.0*		*84.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*44.4*		mg/kg	*50.0*		*88.7*	*63.6-154*			
LCS Dup (4053004-BSD1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	172	10.0	mg/kg	200		86.1	66.4-124	7.66	23.4	
DRO >C10-C28	189	10.0	mg/kg	200		94.7	61.6-132	6.09	23.1	
Surrogate: 1-Chlorooctane	*45.6*		mg/kg	*50.0*		*91.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*46.4*		mg/kg	*50.0*		*92.8*	*63.6-154*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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GREEN GAL Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 2

Client: IEI

Contact: Marcella

Address: Hq CR 3150 Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1876

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 2367

Project Name: JFJ

Table 1. Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY

GAL JOB #

Samplers Signature: [signature]

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303

Sample ID	Collection Date	Collection Time	Misc. Collected by (Init.)	Misc. Matrix Type From Table 1	Misc. No. of Containers	Misc. Sample Filtered? Y/N	Preservative(s) Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015M	GRO 8015M	BTEX 8021B	Chloride 300.0	Comments
H401627																	
1. Pile 647	5/23/14	9:50	RC	3	1	N							✓	✓	✓	✓	
2. 564		8:20				N							✓				
3. 565		8:40											✓	✓	✓	✓	
4. 566		9:05											✓	✓	✓	✓	
5. 591		9:25											✓	✓	✓	✓	
6. 712		9:50											✓	✓	✓	✓	
7. 716		10:30											✓	✓	✓	✓	
8. 760		10:50											✓	✓	✓	✓	
9. 826		11:40											✓	✓	✓	✓	
10. 840		12:00											✓	✓	✓	✓	

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	5/23/14	1325	[signature]	5-23-14	1325
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
[signature]	5/23/14	1352	[signature]	5/23/14	1352

* Sample Reject: ( ) Return ( ) Dispose 5/30/14 (Store 30 Days) 1600 Fed Ex 5/27/14 1600 Fe. 5/29/14 10:30 4.8c #54

Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 2 of 2

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505/632-1782
FAX Number:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 2367
Project Name: JFJ

Table 1 – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

Samplers Signature:

FOR GAL USE ONLY
GAL JOB #

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015M	GRO 8015M	BTEX 8021B	Chloride 300.0	Comments
H401627																	
1. P-6 842	5/23/14	12:15	RC	3	1	N							✓	✓	✓	✓	
2. 850		12:30											✓	✓	✓	✓	
3. 868		12:40											✓	✓	✓	✓	
4. 869		12:56											✓	✓	✓	✓	
5. 870		1:15											✓	✓	✓	✓	
6.																	
7.																	
8.																	
9.																	
10.																	

Relinquished by:	Date: 5/23/14	Time: 1525	Received by:	Date: 5-23-14	Time: 1325
Relinquished by:	Date: 5/23/14	Time: 1352	Received by:	Date: 5/23/14	Time: 1352

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Christin Clare 5/27/14 1600 Fed Ex 5/27/14 1600

5/28/14 10:30 #5
Jodi Henson 4.8°C

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

July 28, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated July 25, 2014, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010-B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s):

Pile # 840

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Friday, July 25, 2014 2:43 PM
To: Jones, Brad A., EMNRD
Subject: Letter to request reuse of treated soils on facility
Attachments: Letter to request reuse of treated soils on facility.doc; Pile 840.pdf; Pile 840 2.pdf; Map.pdf

Importance: High

Brad:

See attached request to spread remediated soils along with the corresponding documentation.

Thanks,
Marcella
Industrial Ecosystems, Inc.

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

July 28, 2014

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 840 DRO passed 07/09/14, GRO, BTEX & Chlorides passed 06/02/14

Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

PILE 840

H402027-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes

Cardinal Laboratories

Petroleum Hydrocarbons by GC FID

DRO >C10-C28	37.2		10.0	mg/kg	1	4070305	MS	04-Jul-14	8015B	
Surrogate: 1-Chlorooctane			*109 %*	*65.2-140*		*4070305*	MS	*04-Jul-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*118 %*	*63.6-154*		*4070305*	MS	*04-Jul-14*	*8015B*	

ANALYTICAL
JUL - 9 2014
PASSED

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

July 09, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 07/03/14 10:10.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 716	H402027-01	Soil	02-Jul-14 07:20	03-Jul-14 10:10
PILE 800	H402027-02	Soil	02-Jul-14 07:40	03-Jul-14 10:10
PILE 840	H402027-03	Soil	02-Jul-14 07:57	03-Jul-14 10:10
PILE 868	H402027-04	Soil	02-Jul-14 08:19	03-Jul-14 10:10
PILE 869	H402027-05	Soil	02-Jul-14 08:35	03-Jul-14 10:10
PILE 870	H402027-06	Soil	02-Jul-14 08:50	03-Jul-14 10:10
PILE 564	H402027-07	Soil	02-Jul-14 09:30	03-Jul-14 10:10
PILE 565	H402027-08	Soil	02-Jul-14 09:55	03-Jul-14 10:10
PILE 886	H402027-09	Soil	02-Jul-14 10:20	03-Jul-14 10:10
PILE 864	H402027-10	Soil	02-Jul-14 10:45	03-Jul-14 10:10

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4070703 - 1:4 DI Water										
Blank (4070703-BLK1)				Prepared: 07-Jul-14 Analyzed: 09-Jul-14						
Chloride	ND	16.0	mg/kg							
LCS (4070703-BS1)				Prepared: 07-Jul-14 Analyzed: 09-Jul-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4070703-BSD1)				Prepared: 07-Jul-14 Analyzed: 09-Jul-14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

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CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

Volatile Organic Compounds by EPA Method 8260B - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4070701 - Volatiles										
Blank (4070701-BLK1)				Prepared: 03-Jul-14 Analyzed: 07-Jul-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: Dibromofluoromethane	*0.477*		mg/kg	*0.500*		*95.5*	*61.3-142*			
Surrogate: Toluene-d8	*0.528*		mg/kg	*0.500*		*106*	*71.3-129*			
Surrogate: 4-Bromofluorobenzene	*0.512*		mg/kg	*0.500*		*102*	*65.7-141*			
LCS (4070701-BS1)				Prepared: 03-Jul-14 Analyzed: 07-Jul-14						
Benzene	2.16	0.050	mg/kg	2.00		108	76.8-122			
Toluene	1.78	0.050	mg/kg	2.00		89.0	73.1-129			
Ethylbenzene	1.69	0.050	mg/kg	2.00		84.3	72.8-128			
m+p - Xylene	3.53	0.100	mg/kg	4.00		88.2	69.4-129			
o-Xylene	1.72	0.050	mg/kg	2.00		86.0	70.3-126			
Total Xylenes	5.25	0.150	mg/kg	6.00		87.5	72-127			
Surrogate: Dibromofluoromethane	*0.488*		mg/kg	*0.500*		*97.6*	*61.3-142*			
Surrogate: Toluene-d8	*0.494*		mg/kg	*0.500*		*98.8*	*71.3-129*			
Surrogate: 4-Bromofluorobenzene	*0.527*		mg/kg	*0.500*		*105*	*65.7-141*			
LCS Dup (4070701-BSD1)				Prepared: 03-Jul-14 Analyzed: 07-Jul-14						
Benzene	2.13	0.050	mg/kg	2.00		106	76.8-122	1.57	18.7	
Toluene	1.83	0.050	mg/kg	2.00		91.5	73.1-129	2.82	19.4	
Ethylbenzene	1.75	0.050	mg/kg	2.00		87.7	72.8-128	3.97	21.8	
m+p - Xylene	3.62	0.100	mg/kg	4.00		90.4	69.4-129	2.51	25.3	
o-Xylene	1.78	0.050	mg/kg	2.00		88.9	70.3-126	3.33	23.6	
Total Xylenes	5.40	0.150	mg/kg	6.00		89.9	72-127	2.78	23.2	
Surrogate: Dibromofluoromethane	*0.489*		mg/kg	*0.500*		*97.7*	*61.3-142*			
Surrogate: Toluene-d8	*0.500*		mg/kg	*0.500*		*99.9*	*71.3-129*			
Surrogate: 4-Bromofluorobenzene	*0.506*		mg/kg	*0.500*		*101*	*65.7-141*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4070305 - General Prep - Organics										
Blank (4070305-BLK1)				Prepared: 03-Jul-14 Analyzed: 04-Jul-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*57.6*		mg/kg	*50.0*		*116*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*63.8*		mg/kg	*50.0*		*128*	*63.6-154*			
LCS (4070305-BS1)				Prepared & Analyzed: 03-Jul-14						
GRO C6-C10	180	10.0	mg/kg	200		90.2	66.4-124			
DRO >C10-C28	193	10.0	mg/kg	200		96.4	61.6-132			
Surrogate: 1-Chlorooctane	*62.5*		mg/kg	*50.0*		*125*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*69.0*		mg/kg	*50.0*		*138*	*63.6-154*			
LCS Dup (4070305-BSD1)				Prepared & Analyzed: 03-Jul-14						
GRO C6-C10	177	10.0	mg/kg	200		88.7	66.4-124	1.72	23.4	
DRO >C10-C28	193	10.0	mg/kg	200		96.3	61.6-132	0.0794	23.1	
Surrogate: 1-Chlorooctane	*60.6*		mg/kg	*50.0*		*121*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*69.4*		mg/kg	*50.0*		*139*	*63.6-154*			
Batch 4070702 - General Prep - Organics										
Blank (4070702-BLK1)				Prepared & Analyzed: 07-Jul-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*61.0*		mg/kg	*50.0*		*122*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*64.7*		mg/kg	*50.0*		*129*	*63.6-154*			
LCS (4070702-BS1)				Prepared & Analyzed: 07-Jul-14						
GRO C6-C10	177	10.0	mg/kg	200		88.4	66.4-124			
DRO >C10-C28	192	10.0	mg/kg	200		95.8	61.6-132			
Surrogate: 1-Chlorooctane	*60.4*		mg/kg	*50.0*		*121*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*66.4*		mg/kg	*50.0*		*133*	*63.6-154*			

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2467 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 09-Jul-14 13:06

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4070702 - General Prep - Organics										
LCS Dup (4070702-BSD1)				Prepared & Analyzed: 07-Jul-14						
GRO C6-C10	177	10.0	mg/kg	200		88.7	66.4-124	0.325	23.4	
DRO >C10-C28	192	10.0	mg/kg	200		96.0	61.6-132	0.241	23.1	
Surrogate: 1-Chlorooctane	*61.1*		mg/kg	*50.0*		*122*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*67.2*		mg/kg	*50.0*		*134*	*63.6-154*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 Rd 3150
Aztec NM 87410
Phone Number: 632-1782
FAX Number: 632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 2467
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: Richard Mc...

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

Sample ID	Collection: Date	Collection: Time	Collected by: (Init.)	Matrix Type From Table 1	No. of Containers	Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015M	GRO 8015M	BTEX 8021B	Chloride 300.0	Comments
1. P16 716	7/2/14	7:20	RC										✓	✓	✓	✓	8.8° on ice
2. " 800		7:40											✓	✓	✓	✓	
3. " 840		7:57											✓				
4. " 868		8:19											✓				
5. " 869		8:35											✓				
6. " 870		8:50											✓				
7. " 564		9:30											✓				
8. " 565		9:55											✓				
9. " 886		10:20											✓	✓	✓	✓	
10. " 864		10:45											✓	✓	✓	✓	

Relinquished by: Richard Mc...	Date: 7/2/14	Time: 11:00	Received by: M. Mara	Date: 7/2/14	Time: 11:00
Relinquished by: M. Mara	Date: 7/2/14	Time: 13:12	Received by: Christine Clark	Date: 7/2/14	Time: 1312

* Sample Disposal: [ ] Return [ ] Dispose [ ] Store (30 Days)

Christine Clark 7/3/14 1600 FedEx 7/3/14 1600 Jeremy Perez 7/3/14 10:10

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 840

H401627-10 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	576		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	30-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	30-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*89.4-126*		*4052903*	MS	*30-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
DRO >C10-C28	103		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
Surrogate: 1-Chlorooctane			*89.7 %*	*65.2-140*		*4052802*	MS	*29-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*103 %*	*63.6-154*		*4052802*	MS	*29-May-14*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

June 02, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/28/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 647	H401627-01	Soil	23-May-14 07:50	28-May-14 10:30
PILE 564	H401627-02	Soil	23-May-14 08:20	28-May-14 10:30
PILE 565	H401627-03	Soil	23-May-14 08:40	28-May-14 10:30
PILE 566	H401627-04	Soil	23-May-14 09:05	28-May-14 10:30
PILE 591	H401627-05	Soil	23-May-14 09:25	28-May-14 10:30
PILE 712	H401627-06	Soil	23-May-14 09:50	28-May-14 10:30
PILE 716	H401627-07	Soil	23-May-14 10:30	28-May-14 10:30
PILE 760	H401627-08	Soil	23-May-14 10:50	28-May-14 10:30
PILE 826	H401627-09	Soil	23-May-14 11:40	28-May-14 10:30
PILE 840	H401627-10	Soil	23-May-14 12:00	28-May-14 10:30
PILE 842	H401627-11	Soil	23-May-14 12:15	28-May-14 10:30
PILE 850	H401627-12	Soil	23-May-14 12:30	28-May-14 10:30
PILE 868	H401627-13	Soil	23-May-14 12:40	28-May-14 10:30
PILE 869	H401627-14	Soil	23-May-14 12:56	28-May-14 10:30
PILE 870	H401627-15	Soil	23-May-14 13:15	28-May-14 10:30

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052811 - 1:4 DI Water										
Blank (4052811-BLK1)				Prepared & Analyzed: 28-May-14						
Chloride	ND	16.0	mg/kg							
LCS (4052811-BS1)				Prepared & Analyzed: 28-May-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4052811-BSD1)				Prepared & Analyzed: 28-May-14						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052903 - Volatiles										
Blank (4052903-BLK1)				Prepared & Analyzed: 29-May-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0526*		mg/kg	*0.0500*		*105*	*89.4-126*			
LCS (4052903-BS1)				Prepared & Analyzed: 29-May-14						
Benzene	2.30	0.050	mg/kg	2.00		115	76.4-135			
Toluene	2.33	0.050	mg/kg	2.00		116	80.2-135			
Ethylbenzene	2.23	0.050	mg/kg	2.00		111	78.5-133			
Total Xylenes	6.96	0.150	mg/kg	6.00		116	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0520*		mg/kg	*0.0500*		*104*	*89.4-126*			
LCS Dup (4052903-BSD1)				Prepared & Analyzed: 29-May-14						
Benzene	2.26	0.050	mg/kg	2.00		113	76.4-135	1.75	16.4	
Toluene	2.26	0.050	mg/kg	2.00		113	80.2-135	2.64	16.6	
Ethylbenzene	2.18	0.050	mg/kg	2.00		109	78.5-133	2.07	16.1	
Total Xylenes	6.80	0.150	mg/kg	6.00		113	80.1-135	2.23	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0520*		mg/kg	*0.0500*		*104*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052801 - General Prep - Organics										
Blank (4052801-BLK1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*65.9*		mg/kg	*50.0*		*132*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*65.7*		mg/kg	*50.0*		*131*	*63.6-154*			
LCS (4052801-BS1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	192	10.0	mg/kg	200		96.2	66.4-124			
DRO >C10-C28	206	10.0	mg/kg	200		103	61.6-132			
Surrogate: 1-Chlorooctane	*62.4*		mg/kg	*50.0*		*125*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*62.2*		mg/kg	*50.0*		*124*	*63.6-154*			
LCS Dup (4052801-BSD1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	194	10.0	mg/kg	200		97.2	66.4-124	1.06	23.4	
DRO >C10-C28	216	10.0	mg/kg	200		108	61.6-132	4.66	23.1	
Surrogate: 1-Chlorooctane	*63.9*		mg/kg	*50.0*		*128*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*64.2*		mg/kg	*50.0*		*128*	*63.6-154*			
Batch 4052802 - General Prep - Organics										
Blank (4052802-BLK1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*47.6*		mg/kg	*50.0*		*95.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.1*		mg/kg	*50.0*		*98.2*	*63.6-154*			
LCS (4052802-BS1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	190	10.0	mg/kg	200		94.9	66.4-124			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132			
Surrogate: 1-Chlorooctane	*47.5*		mg/kg	*50.0*		*95.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.4*		mg/kg	*50.0*		*98.8*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052802 - General Prep - Organics										
LCS Dup (4052802-BSD1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	186	10.0	mg/kg	200		93.2	66.4-124	1.85	23.4	
DRO >C10-C28	198	10.0	mg/kg	200		99.2	61.6-132	0.141	23.1	
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.8*		mg/kg	*50.0*		*102*	*63.6-154*			
Batch 4052901 - General Prep - Organics										
Blank (4052901-BLK1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*49.1*		mg/kg	*50.0*		*98.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.5*		mg/kg	*50.0*		*99.0*	*63.6-154*			
LCS (4052901-BS1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	198	10.0	mg/kg	200		99.2	66.4-124			
DRO >C10-C28	213	10.0	mg/kg	200		106	61.6-132			
Surrogate: 1-Chlorooctane	*52.2*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.7*		mg/kg	*50.0*		*111*	*63.6-154*			
LCS Dup (4052901-BSD1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	199	10.0	mg/kg	200		99.3	66.4-124	0.0992	23.4	
DRO >C10-C28	212	10.0	mg/kg	200		106	61.6-132	0.379	23.1	
Surrogate: 1-Chlorooctane	*51.9*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.0*		mg/kg	*50.0*		*110*	*63.6-154*			
Batch 4053004 - General Prep - Organics										
Blank (4053004-BLK1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*45.1*		mg/kg	*50.0*		*90.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.9*		mg/kg	*50.0*		*95.8*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4053004 - General Prep - Organics										
LCS (4053004-BS1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	160	10.0	mg/kg	200		79.8	66.4-124			
DRO >C10-C28	178	10.0	mg/kg	200		89.1	61.6-132			
Surrogate: 1-Chlorooctane	*42.1*		mg/kg	*50.0*		*84.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*44.4*		mg/kg	*50.0*		*88.7*	*63.6-154*			
LCS Dup (4053004-BSD1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	172	10.0	mg/kg	200		86.1	66.4-124	7.66	23.4	
DRO >C10-C28	189	10.0	mg/kg	200		94.7	61.6-132	6.09	23.1	
Surrogate: 1-Chlorooctane	*45.6*		mg/kg	*50.0*		*91.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*46.4*		mg/kg	*50.0*		*92.8*	*63.6-154*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 2

Client: IEI
Contact: Marcella
Address: Hq CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 2367
Project Name: JFJ

Table 1. - Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

	Sample ID	Collection Date	Collection Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: 8015M DRO	8015M GRO	8021B BTEX	Chloride 300.0	Comments
	H401627																	
1.	Pile 647	5/23/14	7:50	RC	3	1	N							✓	✓	✓	✓	
2.	564		8:20											✓				
3.	565		8:40											✓	✓	✓	✓	
4.	566		9:05											✓	✓	✓	✓	
5.	591		9:25											✓	✓	✓	✓	
6.	712		9:50											✓	✓	✓	✓	
7.	716		10:30											✓	✓	✓	✓	
8.	760		10:50											✓	✓	✓	✓	
9.	826		11:40											✓	✓	✓	✓	
10.	849	↓	12:00	↓	↓	↓	↓							✓	✓	✓	✓	

8.1C only C

Relinquished by:		Date: 5/23/14	Time: 1325	Received by:		Date: 5-23-14	Time: 1325
Relinquished by:		Date: 5/23/14	Time: 1352	Received by:		Date: 5/23/14	Time: 1352

* Sample Reject: ( ) Return ( ) Dispose ( ) Store (30 Days)

5/27/14 1600 Fed Ex 5/27/14 1600 Fe.

5/28/14 10:50 Jodi Dunson 48C #54

Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 2 of 2

Client: IEI
Contact: Marcella
Address: 495R 3150
Aztec, Nm 87410
Phone Number: 505/632-782
FAX Number:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 2367
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Collected by: (Init.)	Matrix Type From Table 1	No. of Containers	Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: 8015M DRO	8015M GRO	8021B BTEX	300.0 Chloride	Comments
H401627																	
1. P:6 842	5/23/14	12:15	RC	3	1	N							✓	✓	✓	✓	
2. 850		12:30											✓	✓	✓	✓	
3. 868		12:40											✓	✓	✓	✓	
4. 869		12:56											✓	✓	✓	✓	
5. 870		1:15											✓	✓	✓	✓	
6.																	
7.																	
8.																	
9.																	
10.																	

Relinquished by:	Date: 5/23/14	Time: 1325	Received by:	Date: 5-23-14	Time: 1325
Relinquished by:	Date: 5/23/14	Time: 1352	Received by:	Date: 5/23/14	Time: 1352

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Christin Clark 5/27/14 1600 Fed Ex 5/27/14 1600 5/28/14 10:30 #5
Jodi Henson 4.8°C

Property Sketch for
Industrial Ecosystems Inc.

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

June 3, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated June 2, 2014, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010-B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s):

Pile # 591	*Pile # 647*	*Pile # 712*	*Pile # 760*
Pile # 826	*Pile # 842*	*Pile # 850*	

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Monday, June 02, 2014 4:45 PM
To: Jones, Brad A., EMNRD
Subject: Request to Spread Soils
Attachments: Letter to request reuse of treated soils on facility.doc; Pile 591.pdf; Pile 647.pdf; Pile 712.pdf; Map.pdf

Importance: High

Brad:

Please see attached letter and corresponding documentation. There were too many files to send with one email so a second email will follow.

Thanks,
Marcella Marquez, HSE Administrator
Industrial Ecosystems, Inc.
Phone: (505) 632-1782
Fax: (505) 632-1876 or (505) 334-1003

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

June 3, 2014

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 591 DRO, GRO, BTEX & Chlorides passed 06/02/14
- Pile 647 DRO, GRO, BTEX & Chlorides passed 06/02/14
- Pile 712 DRO, GRO, BTEX & Chlorides passed 06/02/14
- Pile 760 DRO, GRO, BTEX & Chlorides passed 06/02/14
- Pile 826 DRO, GRO, BTEX & Chlorides passed 06/02/14
- Pile 842 DRO, GRO, BTEX & Chlorides passed 06/02/14
- Pile 850 DRO, GRO, BTEX & Chlorides passed 06/02/14

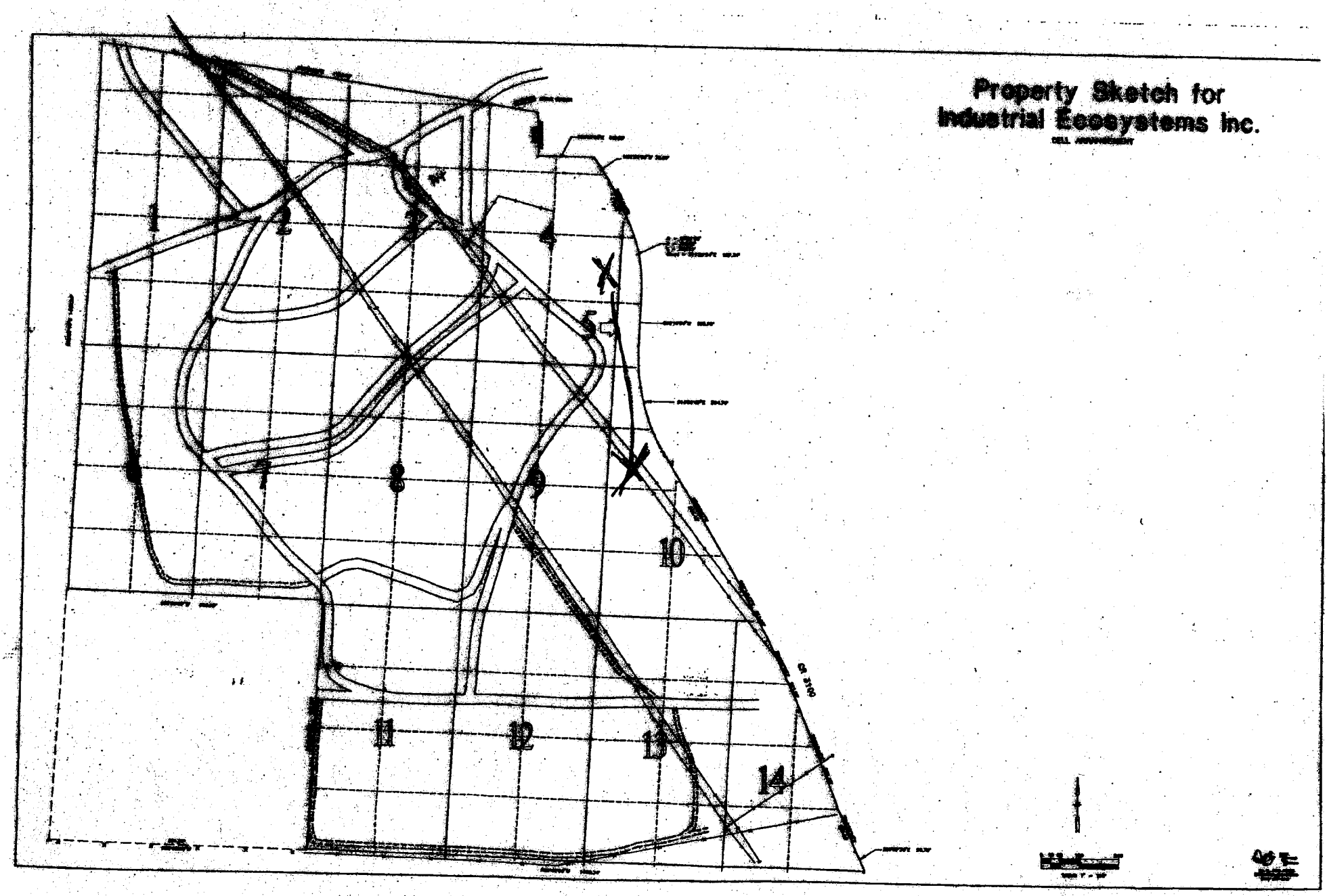
Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map


Property Sketch for
Industrial Ecosystems Inc.
1
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14

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 591

H401627-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**48.0**		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	30-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	30-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*89.4-126*		*4052903*	MS	*30-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4053004	MS	30-May-14	8015B	
DRO >C10-C28	**62.8**		10.0	mg/kg	1	4053004	MS	30-May-14	8015B	
Surrogate: 1-Chlorooctane			*93.0 %*	*65.2-140*		*4053004*	MS	*30-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*102 %*	*63.6-154*		*4053004*	MS	*30-May-14*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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June 02, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/28/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

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This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 647

H401627-01 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**192**		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	29-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	29-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	29-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	29-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	29-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*89.4-126*		*4052903*	MS	*29-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4052801	MS	28-May-14	8015B	
DRO >C10-C28	**63.3**		10.0	mg/kg	1	4052801	MS	28-May-14	8015B	
Surrogate: 1-Chlorooctane			*85.0 %*	*65.2-140*		*4052801*	MS	*28-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*88.0 %*	*63.6-154*		*4052801*	MS	*28-May-14*	*8015B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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June 02, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/28/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

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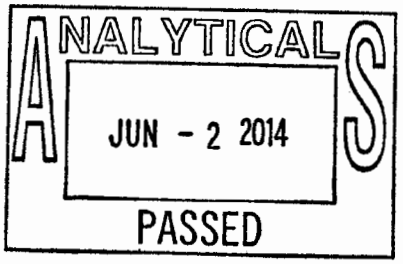
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 712

H401627-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**32.0**		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	30-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	30-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*89.4-126*		*4052903*	MS	*30-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
DRO >C10-C28	ND		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
Surrogate: 1-Chlorooctane			*99.7 %*	*65.2-140*		*4052802*	MS	*29-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*103 %*	*63.6-154*		*4052802*	MS	*29-May-14*	*8015B*	



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Celey D. Keene, Lab Director/Quality Manager

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June 02, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/28/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

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Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 760

H401627-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	144		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	30-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	30-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*89.4-126*		*4052903*	MS	*30-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
DRO >C10-C28	42.8		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
Surrogate: 1-Chlorooctane			*91.4 %*	*65.2-140*		*4052802*	MS	*29-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*96.5 %*	*63.6-154*		*4052802*	MS	*29-May-14*	*8015B*	

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 826

H401627-09 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**128**		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	30-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	30-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*107 %*	*89.4-126*		*4052903*	MS	*30-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
DRO >C10-C28	**87.2**		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
Surrogate: 1-Chlorooctane			*85.3 %*	*65.2-140*		*4052802*	MS	*29-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*91.1 %*	*63.6-154*		*4052802*	MS	*29-May-14*	*8015B*	

ANALYTICAL
JUN - 2 2014
PASSED

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

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June 02, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

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Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

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Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 842

H401627-11 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**80.0**		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	30-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	30-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*89.4-126*		*4052903*	MS	*30-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
DRO >C10-C28	**93.3**		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
Surrogate: 1-Chlorooctane			*94.3 %*	*65.2-140*		*4052802*	MS	*29-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*102 %*	*63.6-154*		*4052802*	MS	*29-May-14*	*8015B*	

ANALYTICAL
JUN - 2 2014
PASSED

Cardinal Laboratories

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

June 02, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/28/14 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

PILE 850

H401627-12 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	144		16.0	mg/kg	4	4052811	AP	29-May-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4052903	MS	30-May-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4052903	MS	30-May-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4052903	MS	30-May-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*105 %*	*89.4-126*		*4052903*	MS	*30-May-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
DRO >C10-C28	14.6		10.0	mg/kg	1	4052802	MS	29-May-14	8015B	
Surrogate: 1-Chlorooctane			*94.4 %*	*65.2-140*		*4052802*	MS	*29-May-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*98.1 %*	*63.6-154*		*4052802*	MS	*29-May-14*	*8015B*	

ANALYTICAL
JUN - 2 2014
PASSED

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June 02, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

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Method EPA 524.4	Regulated VOCs (V1, V2, V3)

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Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 647	H401627-01	Soil	23-May-14 07:50	28-May-14 10:30
PILE 564	H401627-02	Soil	23-May-14 08:20	28-May-14 10:30
PILE 565	H401627-03	Soil	23-May-14 08:40	28-May-14 10:30
PILE 566	H401627-04	Soil	23-May-14 09:05	28-May-14 10:30
PILE 591	H401627-05	Soil	23-May-14 09:25	28-May-14 10:30
PILE 712	H401627-06	Soil	23-May-14 09:50	28-May-14 10:30
PILE 716	H401627-07	Soil	23-May-14 10:30	28-May-14 10:30
PILE 760	H401627-08	Soil	23-May-14 10:50	28-May-14 10:30
PILE 826	H401627-09	Soil	23-May-14 11:40	28-May-14 10:30
PILE 840	H401627-10	Soil	23-May-14 12:00	28-May-14 10:30
PILE 842	H401627-11	Soil	23-May-14 12:15	28-May-14 10:30
PILE 850	H401627-12	Soil	23-May-14 12:30	28-May-14 10:30
PILE 868	H401627-13	Soil	23-May-14 12:40	28-May-14 10:30
PILE 869	H401627-14	Soil	23-May-14 12:56	28-May-14 10:30
PILE 870	H401627-15	Soil	23-May-14 13:15	28-May-14 10:30

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INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052811 - 1:4 DI Water										
Blank (4052811-BLK1)				Prepared & Analyzed: 28-May-14						
Chloride	ND	16.0	mg/kg							
LCS (4052811-BS1)				Prepared & Analyzed: 28-May-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4052811-BSD1)				Prepared & Analyzed: 28-May-14						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052903 - Volatiles										
Blank (4052903-BLK1)				Prepared & Analyzed: 29-May-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0526*		mg/kg	*0.0500*		*105*	*89.4-126*			
LCS (4052903-BS1)				Prepared & Analyzed: 29-May-14						
Benzene	2.30	0.050	mg/kg	2.00		115	76.4-135			
Toluene	2.33	0.050	mg/kg	2.00		116	80.2-135			
Ethylbenzene	2.23	0.050	mg/kg	2.00		111	78.5-133			
Total Xylenes	6.96	0.150	mg/kg	6.00		116	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0520*		mg/kg	*0.0500*		*104*	*89.4-126*			
LCS Dup (4052903-BSD1)				Prepared & Analyzed: 29-May-14						
Benzene	2.26	0.050	mg/kg	2.00		113	76.4-135	1.75	16.4	
Toluene	2.26	0.050	mg/kg	2.00		113	80.2-135	2.64	16.6	
Ethylbenzene	2.18	0.050	mg/kg	2.00		109	78.5-133	2.07	16.1	
Total Xylenes	6.80	0.150	mg/kg	6.00		113	80.1-135	2.23	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0520*		mg/kg	*0.0500*		*104*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052801 - General Prep - Organics										
Blank (4052801-BLK1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*65.9*		mg/kg	*50.0*		*132*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*65.7*		mg/kg	*50.0*		*131*	*63.6-154*			
LCS (4052801-BS1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	192	10.0	mg/kg	200		96.2	66.4-124			
DRO >C10-C28	206	10.0	mg/kg	200		103	61.6-132			
Surrogate: 1-Chlorooctane	*62.4*		mg/kg	*50.0*		*125*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*62.2*		mg/kg	*50.0*		*124*	*63.6-154*			
LCS Dup (4052801-BSD1)				Prepared & Analyzed: 28-May-14						
GRO C6-C10	194	10.0	mg/kg	200		97.2	66.4-124	1.06	23.4	
DRO >C10-C28	216	10.0	mg/kg	200		108	61.6-132	4.66	23.1	
Surrogate: 1-Chlorooctane	*63.9*		mg/kg	*50.0*		*128*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*64.2*		mg/kg	*50.0*		*128*	*63.6-154*			
Batch 4052802 - General Prep - Organics										
Blank (4052802-BLK1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*47.6*		mg/kg	*50.0*		*95.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.1*		mg/kg	*50.0*		*98.2*	*63.6-154*			
LCS (4052802-BS1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	190	10.0	mg/kg	200		94.9	66.4-124			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132			
Surrogate: 1-Chlorooctane	*47.5*		mg/kg	*50.0*		*95.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.4*		mg/kg	*50.0*		*98.8*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4052802 - General Prep - Organics										
LCS Dup (4052802-BSD1)				Prepared: 28-May-14 Analyzed: 29-May-14						
GRO C6-C10	186	10.0	mg/kg	200		93.2	66.4-124	1.85	23.4	
DRO >C10-C28	198	10.0	mg/kg	200		99.2	61.6-132	0.141	23.1	
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.8*		mg/kg	*50.0*		*102*	*63.6-154*			
Batch 4052901 - General Prep - Organics										
Blank (4052901-BLK1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*49.1*		mg/kg	*50.0*		*98.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.5*		mg/kg	*50.0*		*99.0*	*63.6-154*			
LCS (4052901-BS1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	198	10.0	mg/kg	200		99.2	66.4-124			
DRO >C10-C28	213	10.0	mg/kg	200		106	61.6-132			
Surrogate: 1-Chlorooctane	*52.2*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.7*		mg/kg	*50.0*		*111*	*63.6-154*			
LCS Dup (4052901-BSD1)				Prepared & Analyzed: 29-May-14						
GRO C6-C10	199	10.0	mg/kg	200		99.3	66.4-124	0.0992	23.4	
DRO >C10-C28	212	10.0	mg/kg	200		106	61.6-132	0.379	23.1	
Surrogate: 1-Chlorooctane	*51.9*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.0*		mg/kg	*50.0*		*110*	*63.6-154*			
Batch 4053004 - General Prep - Organics										
Blank (4053004-BLK1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*45.1*		mg/kg	*50.0*		*90.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.9*		mg/kg	*50.0*		*95.8*	*63.6-154*			

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INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2367 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 02-Jun-14 11:43

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4053004 - General Prep - Organics										
LCS (4053004-BS1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	160	10.0	mg/kg	200		79.8	66.4-124			
DRO >C10-C28	178	10.0	mg/kg	200		89.1	61.6-132			
Surrogate: 1-Chlorooctane	*42.1*		mg/kg	*50.0*		*84.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*44.4*		mg/kg	*50.0*		*88.7*	*63.6-154*			
LCS Dup (4053004-BSD1)				Prepared & Analyzed: 30-May-14						
GRO C6-C10	172	10.0	mg/kg	200		86.1	66.4-124	7.66	23.4	
DRO >C10-C28	189	10.0	mg/kg	200		94.7	61.6-132	6.09	23.1	
Surrogate: 1-Chlorooctane	*45.6*		mg/kg	*50.0*		*91.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*46.4*		mg/kg	*50.0*		*92.8*	*63.6-154*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 2

Client: IEI
Contact: Marcella
Address: 46 CR 3150 Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2367
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	GRO 8015M	BTEX 8021B	Chloride 300.0	Comments
	H401627																	
1.	Pile 647	5/23/14	7:50	RC	3	1	N							✓	✓	✓	✓	
2.	564		8:20											✓				
3.	565		8:40											✓	✓	✓	✓	
4.	566		9:05											✓	✓	✓	✓	
5.	591		9:25											✓	✓	✓	✓	
6.	712		9:50											✓	✓	✓	✓	
7.	716		10:30											✓	✓	✓	✓	
8.	762		10:50											✓	✓	✓	✓	
9.	822		11:40											✓	✓	✓	✓	
10.	840	↓	12:00	↓	↓	↓	↓							✓	✓	✓	✓	

18.1 c only a c

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	5/23/14	7:25		5-23-14	1725
	5/23/14	7352		5/23/14	7352

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

5/27/14 1600 FedEx 5/27/14 1600 Re. 5/29/14 10:50 #54

Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 2 of 2

Client: IEI
Contact: Marcella
Address: 79 CR 3150
Aztec, Nm 87410
Phone Number: 505/632-1782
FAX Number:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2367
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
H401627																	
1. P-6 842	5/23/14	12:15	RC	3	1	N							✓	✓	✓	✓	
2. 850		12:30											✓	✓	✓	✓	
3. 868		12:40											✓	✓	✓	✓	
4. 869		12:50											✓	✓	✓	✓	
5. 870		1:15											✓	✓	✓	✓	
6.																	
7.																	
8.																	
9.																	
10.																	

Relinquished by: [signature] Date: 5/23/14 Time: 1525 Received by: [signature] Date: 5-23-14 Time: 1325
Relinquished by: [signature] Date: 5/23/14 Time: 1352 Received by: [signature] Date: 5/23/14 Time: 7352

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Christin Clare 5/27/14 1600 Fed Ex 5/27/14 1600 5/28/14 10:30 #54
Jodi Henson 4.8°C

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

May 12, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated May 8, 2014, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010-B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has previously reviewed the analytical results to reuse the remediated soils from the following biopile(s):

Pile # 854 *Pile # 871*

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Thursday, May 08, 2014 3:41 PM
To: Jones, Brad A., EMNRD
Subject: Letter to request reuse of treated soils on facility
Attachments: Letter to request reuse of treated soils on facility.doc; Map.pdf; 0998_0001.pdf

Importance: High

Brad:

Please see attached letter.

Thanks,
Marcella
Industrial Ecosysystems, Inc.

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

May 12, 2014

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

On 04/22/14 we received approval from Jami Bailey to reuse Pile #s 854, 871 & 874 off-site at the old Southwest Water Disposal site (see attached).

Pile number 874 was taken off-site for reuse. However, Pile # 854 & Pile # 871 were not needed. This letter is to request approval to reuse/recycle Pile # 854 & # 871 within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map). The division already has copies of the analytical reports for these piles.

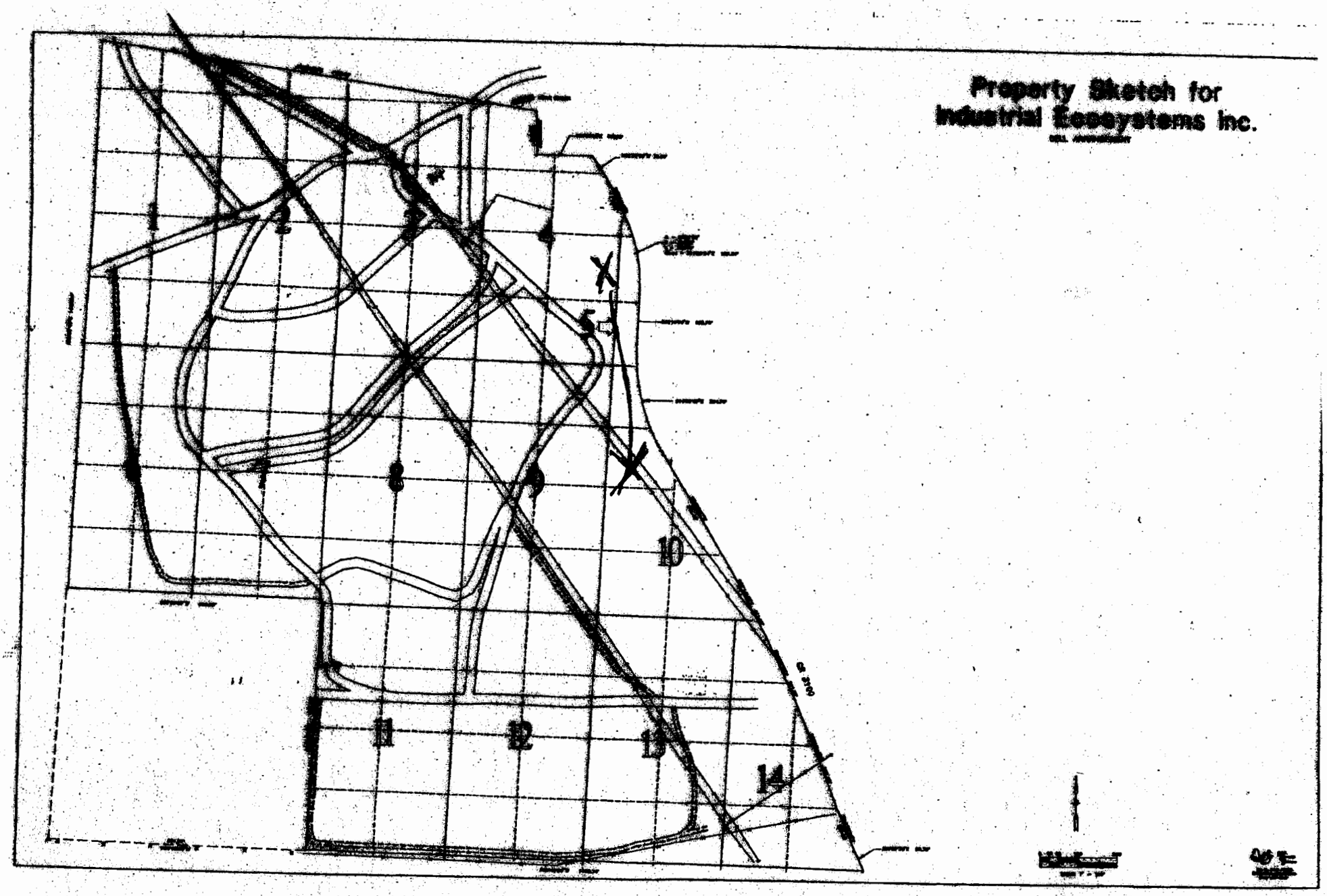
Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Map


Property Sketch for
Industrial Ecosystems Inc.
10
11
12
13
14

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

RECEIVED

Jami Bailey
Director
Oil Conservation Division

April 22, 2014

Mr. Terry Lattin
Industrial Ecosystems Inc.
Box 2043
Farmington, NM 87499

RE: Request for Approval of Remediated Soil Reuse from JFJ Landfarm -- Permit NM1-10-B

Dear Mr. Lattin,

The Oil Conservation Division (OCD) has reviewed Industrial Ecosystems Inc.'s (IEI's) request of April 15, 2014 for the off-site reuse of remediated soils from your permitted JFJ Landfarm. Specifically, approximately 3,000 cubic yards from Piles 854, 871, and 874 to be used as soil amendment to support vegetative cover at the former Southwest Water Disposal site located in Unit Letters N and O of Section 32, Township 30 North, Range 9 West north of Blanco, NM in San Juan County supported by the OCD under our Reclamation Fund (RECR-28). The OCD has reviewed the soil analyses provided and hereby approves your request with the following understandings and conditions:

- IEI has demonstrated that the soils to be reused satisfy the benzene, total BTEX, and TPH concentrations specified in Condition 17 of the Landfarm and Composting Operations sections of your February 3, 2004 surface waste management facility permit NM1-10-B.

- OCD continues to have legal authority from the owner of the reuse site for the emplacement of the remediated soils.

- OCD shall ensure the soils are reused in a manner that is protective of groundwater, surface water, human health, and the environment.

Approval of this request does not relieve IEI or JFJ Landfarm, LLC of liability should operations result in the pollution of surface water, groundwater, or the environment. Nor does it relieve you of responsibility to comply with other applicable rules and regulations.

Respectfully,

Jami Bailey
Director

JB/jeg

cc: OCD District III Office, Aztec

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

April 23, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated April 23, 2014, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s):

Pile # 801

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From:	Marcella Marquez <marcella@industrialecosystems.com>
Sent:	Wednesday, April 23, 2014 10:51 AM
To:	Jones, Brad A., EMNRD
Subject:	Letter to request reuse of treated soils on facility
Attachments:	Letter to request reuse of treated soils on facility.doc; Map.pdf; 0958_0001.pdf
Importance:	High

Brad:

Please see attached letter and corresponding documentation.

Thanks,
Marcella
Industrial Ecosystems, Inc.

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

April 23, 2014

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 801 DRO, GRO, BTEX & Chlorides passed 04/10/14

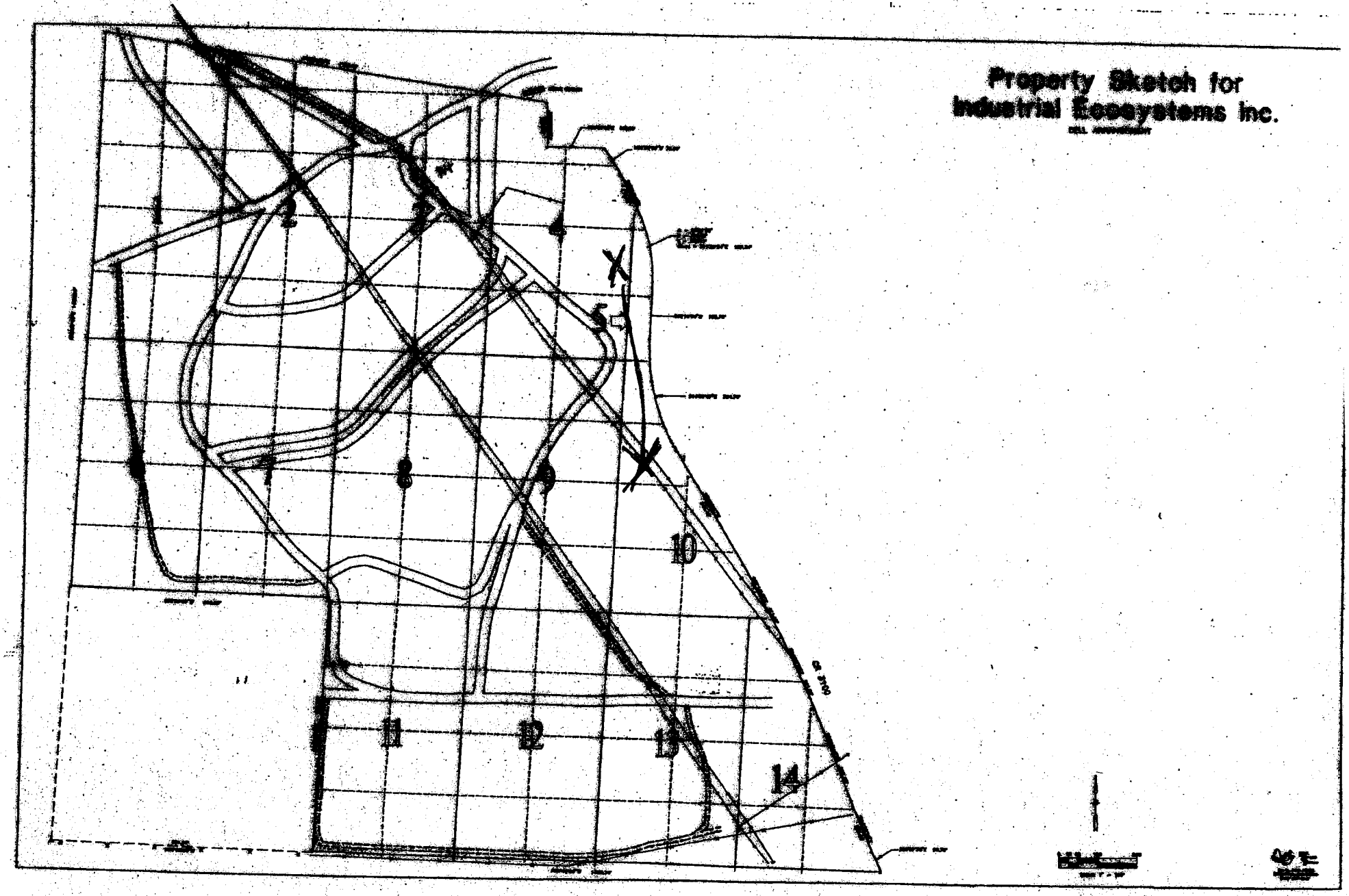
Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map


Property Sketch for
Industrial Ecosystems inc.
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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

April 10, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 04/04/14 11:50.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Total Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Cardinal Laboratories is accredited through the State of New Mexico Environment Department for:

Method SM 9223-B	Total Coliform and E. coli (Colilert MMO-MUG)
Method EPA 524.2	Regulated VOCs and Total Trihalomethanes (TTHM)
Method EPA 552.2	Total Haloacetic Acids (HAA-5)

Accreditation applies to public drinking water matrices for State of Colorado and New Mexico.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene
Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2242 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Apr-14 16:11

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 36	H401029-01	Soil	03-Apr-14 08:20	04-Apr-14 11:50
PILE 45	H401029-02	Soil	03-Apr-14 08:45	04-Apr-14 11:50
PILE 594	H401029-03	Soil	03-Apr-14 09:10	04-Apr-14 11:50
PILE 764	H401029-04	Soil	03-Apr-14 09:30	04-Apr-14 11:50
PILE 801	H401029-05	Soil	03-Apr-14 09:50	04-Apr-14 11:50
PILE 826	H401029-06	Soil	03-Apr-14 10:20	04-Apr-14 11:50
PILE 844	H401029-07	Soil	03-Apr-14 10:40	04-Apr-14 11:50
PILE 854	H401029-08	Soil	03-Apr-14 10:55	04-Apr-14 11:50
PILE 871	H401029-09	Soil	03-Apr-14 11:25	04-Apr-14 11:50
PILE 874	H401029-10	Soil	03-Apr-14 11:50	04-Apr-14 11:50

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

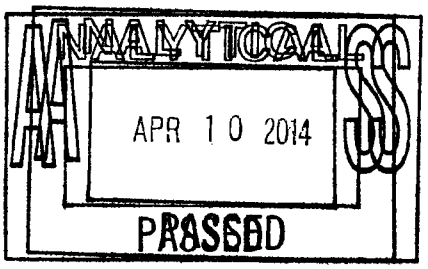
Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2242 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Apr-14 16:11

PILE 801

H401029-05 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	336		16.0	mg/kg	4	4040910	AP	09-Apr-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4040803	MS	08-Apr-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4040803	MS	08-Apr-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4040803	MS	08-Apr-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4040803	MS	08-Apr-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4040803	MS	08-Apr-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*117 %*	*89.4-126*		*4040803*	MS	*08-Apr-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4040703	ms	07-Apr-14	8015B	
DRO >C10-C28	23.3		10.0	mg/kg	1	4040703	ms	07-Apr-14	8015B	
Surrogate: 1-Chlorooctane			*95.9 %*	*65.2-140*		*4040703*	ms	*07-Apr-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*91.6 %*	*63.6-154*		*4040703*	ms	*07-Apr-14*	*8015B*	



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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2242 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Apr-14 16:11

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4040910 - 1:4 DI Water										
Blank (4040910-BLK1)				Prepared & Analyzed: 09-Apr-14						
Chloride	ND	16.0	mg/kg							
LCS (4040910-BS1)				Prepared & Analyzed: 09-Apr-14						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (4040910-BSD1)				Prepared & Analyzed: 09-Apr-14						
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2242 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Apr-14 16:11

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4040803 - Volatiles										
Blank (4040803-BLK1)				Prepared & Analyzed: 08-Apr-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0584*		mg/kg	*0.0500*		*117*	*89.4-126*			
LCS (4040803-BS1)				Prepared & Analyzed: 08-Apr-14						
Benzene	2.50	0.050	mg/kg	2.00		125	76.4-135			
Toluene	2.33	0.050	mg/kg	2.00		116	80.2-135			
Ethylbenzene	2.22	0.050	mg/kg	2.00		111	78.5-133			
Total Xylenes	6.37	0.150	mg/kg	6.00		106	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0574*		mg/kg	*0.0500*		*115*	*89.4-126*			
LCS Dup (4040803-BSD1)				Prepared & Analyzed: 08-Apr-14						
Benzene	2.53	0.050	mg/kg	2.00		127	76.4-135	1.27	16.4	
Toluene	2.36	0.050	mg/kg	2.00		118	80.2-135	1.56	16.6	
Ethylbenzene	2.26	0.050	mg/kg	2.00		113	78.5-133	1.44	16.1	
Total Xylenes	6.46	0.150	mg/kg	6.00		108	80.1-135	1.34	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0571*		mg/kg	*0.0500*		*114*	*89.4-126*			

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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2242 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Apr-14 16:11

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4040701 - General Prep - Organics										
Blank (4040701-BLK1)				Prepared & Analyzed: 07-Apr-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*61.2*		mg/kg	*50.0*		*122*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*56.1*		mg/kg	*50.0*		*112*	*63.6-154*			
LCS (4040701-BS1)				Prepared & Analyzed: 07-Apr-14						
GRO C6-C10	190	10.0	mg/kg	200		94.9	66.4-124			
DRO >C10-C28	197	10.0	mg/kg	200		98.4	61.6-132			
Surrogate: 1-Chlorooctane	*65.0*		mg/kg	*50.0*		*130*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*62.2*		mg/kg	*50.0*		*124*	*63.6-154*			
LCS Dup (4040701-BSD1)				Prepared & Analyzed: 07-Apr-14						
GRO C6-C10	197	10.0	mg/kg	200		98.5	66.4-124	3.72	23.4	
DRO >C10-C28	206	10.0	mg/kg	200		103	61.6-132	4.49	23.1	
Surrogate: 1-Chlorooctane	*67.9*		mg/kg	*50.0*		*136*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*62.6*		mg/kg	*50.0*		*125*	*63.6-154*			
Batch 4040703 - General Prep - Organics										
Blank (4040703-BLK1)				Prepared & Analyzed: 07-Apr-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*58.5*		mg/kg	*50.0*		*117*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*53.7*		mg/kg	*50.0*		*107*	*63.6-154*			
LCS (4040703-BS1)				Prepared & Analyzed: 07-Apr-14						
GRO C6-C10	196	10.0	mg/kg	200		98.1	66.4-124			
DRO >C10-C28	211	10.0	mg/kg	200		105	61.6-132			
Surrogate: 1-Chlorooctane	*54.6*		mg/kg	*50.0*		*109*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.5*		mg/kg	*50.0*		*101*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2242 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Apr-14 16:11

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4040703 - General Prep - Organics										
LCS Dup (4040703-BSD1)				Prepared & Analyzed: 07-Apr-14						
GRO C6-C10	199	10.0	mg/kg	200		99.7	66.4-124	1.61	23.4	
DRO >C10-C28	216	10.0	mg/kg	200		108	61.6-132	2.34	23.1	
Surrogate: 1-Chlorooctane	55.6		mg/kg	*50.0*		*111*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	52.6		mg/kg	*50.0*		*105*	*63.6-154*			

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Notes and Definitions

S-06	The recovery of this surrogate is outside control limits due to sample dilution required from high analyte concentration and/or matrix interference's.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: N. I.E.I.
Contact: Marcella
Address: 49 cr 3150
Aztec, Nm 87410
Phone Number: 505 632-1782
FAX Number:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2242
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	GRO 8015M	BTEX 8021B	Chlorides 300.0	Comments
	H401029																	
1.	Pile 36	4/3/14	8:20	RC	3	1	N							✓	✓	✓	✓	6.8c on ice
2.	Pile 45		8:45											✓	✓	✓	✓	
3.	Pile 594		9:10											✓	✓	✓	✓	
4.	Pile 764		9:30											✓	✓	✓	✓	
5.	Pile 801		9:50											✓	✓	✓	✓	
6.	Pile 82		10:20											✓	✓	✓	✓	
7.	Pile 844		10:40											✓	✓	✓	✓	
8.	Pile 854		10:56											✓	✓	✓	✓	
9.	Pile 871		11:25											✓	✓	✓	✓	
10.	Pile 874		11:50											✓	✓	✓	✓	

Relinquished by:		Date: 04/03/14	Time: 2:55	Received by:	Time: 14:56
Relinquished by:		Date: 4-3-14	Time: 3:15	Received by:	Time: 15:15

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Chantin Clark 4/3/14 1600 FedEx 4/3/14 1600 4/4/14

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

April 2, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated April 2, 2014, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s):

Pile # 773

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From:	Marcella Marquez <marcella@industrialecosystems.com>
Sent:	Wednesday, April 02, 2014 10:18 AM
To:	Jones, Brad A., EMNRD
Subject:	Letter to request reuse of treated soils on facility
Attachments:	Letter to request reuse of treated soils on facility.doc; Pile 773.pdf; Map.pdf
Importance:	High

Brad:

Please see attached letter and analytical report regarding reusing remediated soils on-site.

Thanks,
Marcella
Industrial Ecosystems, Inc.

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

April 2, 2014

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 773 DRO, GRO, BTEX & Chlorides passed 02/10/14

Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2078 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Feb-14 13:45

PILE 773

H400390-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories										
Inorganic Compounds										
Chloride	**368**		16.0	mg/kg	4	4020713	AP	10-Feb-14	4500-Cl-B	
Volatile Organic Compounds by EPA Method 8021										
Benzene*	ND		0.050	mg/kg	50	4020609	MS	07-Feb-14	8021B	
Toluene*	ND		0.050	mg/kg	50	4020609	MS	07-Feb-14	8021B	
Ethylbenzene*	ND		0.050	mg/kg	50	4020609	MS	07-Feb-14	8021B	
Total Xylenes*	ND		0.150	mg/kg	50	4020609	MS	07-Feb-14	8021B	
Total BTEX	ND		0.300	mg/kg	50	4020609	MS	07-Feb-14	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			*117 %*	*89.4-126*		*4020609*	MS	*07-Feb-14*	*8021B*	
Petroleum Hydrocarbons by GC FID										
GRO C6-C10	ND		10.0	mg/kg	1	4020608	ms	07-Feb-14	8015B	
DRO >C10-C28	**15.8**		10.0	mg/kg	1	4020608	ms	07-Feb-14	8015B	
Surrogate: 1-Chlorooctane			*106 %*	*65.2-140*		*4020608*	ms	*07-Feb-14*	*8015B*	
Surrogate: 1-Chlorooctadecane			*112 %*	*63.6-154*		*4020608*	ms	*07-Feb-14*	*8015B*	

ANALYTICAL
FEB 10 2014
PASSED

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February 10, 2014

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 02/07/14 11:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2078 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Feb-14 13:45

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 36	H400390-01	Soil	06-Feb-14 10:10	07-Feb-14 11:15
PILE 45	H400390-02	Soil	06-Feb-14 10:30	07-Feb-14 11:15
PILE 501	H400390-03	Soil	06-Feb-14 10:50	07-Feb-14 11:15
PILE 773	H400390-04	Soil	06-Feb-14 11:20	07-Feb-14 11:15
PILE 777	H400390-05	Soil	06-Feb-14 11:45	07-Feb-14 11:15
PILE 784	H400390-06	Soil	06-Feb-14 12:40	07-Feb-14 11:15
PILE 802	H400390-07	Soil	06-Feb-14 13:16	07-Feb-14 11:15
PILE 822	H400390-08	Soil	06-Feb-14 13:30	07-Feb-14 11:15
PILE 824	H400390-09	Soil	06-Feb-14 13:45	07-Feb-14 11:15
PILE 856	H400390-10	Soil	06-Feb-14 14:00	07-Feb-14 11:15

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2078 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Feb-14 13:45

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4020713 - 1:4 DI Water										
Blank (4020713-BLK1)				Prepared & Analyzed: 07-Feb-14						
Chloride	ND	16.0	mg/kg							
LCS (4020713-BS1)				Prepared & Analyzed: 07-Feb-14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4020713-BSD1)				Prepared & Analyzed: 07-Feb-14						
Chloride	416	16.0	mg/kg	400		104	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2078 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Feb-14 13:45

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4020609 - Volatiles										
Blank (4020609-BLK1)				Prepared: 06-Feb-14 Analyzed: 07-Feb-14						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0579*		mg/kg	*0.0500*		*116*	*89.4-126*			
LCS (4020609-BS1)				Prepared: 06-Feb-14 Analyzed: 07-Feb-14						
Benzene	2.43	0.050	mg/kg	2.00		122	76.4-135			
Toluene	2.40	0.050	mg/kg	2.00		120	80.2-135			
Ethylbenzene	2.39	0.050	mg/kg	2.00		120	78.5-133			
Total Xylenes	7.06	0.150	mg/kg	6.00		118	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0597*		mg/kg	*0.0500*		*119*	*89.4-126*			
LCS Dup (4020609-BSD1)				Prepared: 06-Feb-14 Analyzed: 07-Feb-14						
Benzene	2.51	0.050	mg/kg	2.00		126	76.4-135	3.13	16.4	
Toluene	2.46	0.050	mg/kg	2.00		123	80.2-135	2.55	16.6	
Ethylbenzene	2.44	0.050	mg/kg	2.00		122	78.5-133	2.18	16.1	
Total Xylenes	7.15	0.150	mg/kg	6.00		119	80.1-135	1.17	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0581*		mg/kg	*0.0500*		*116*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 2078 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 10-Feb-14 13:45

Petroleum Hydrocarbons by GC FID - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4020608 - General Prep - Organics										
Blank (4020608-BLK1)				Prepared: 06-Feb-14 Analyzed: 07-Feb-14						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*48.8*		mg/kg	*50.0*		*97.6*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*51.1*		mg/kg	*50.0*		*102*	*63.6-154*			
LCS (4020608-BS1)				Prepared: 06-Feb-14 Analyzed: 07-Feb-14						
GRO C6-C10	197	10.0	mg/kg	200		98.3	66.4-124			
DRO >C10-C28	193	10.0	mg/kg	200		96.5	61.6-132			
Surrogate: 1-Chlorooctane	*50.5*		mg/kg	*50.0*		*101*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*52.4*		mg/kg	*50.0*		*105*	*63.6-154*			
LCS Dup (4020608-BSD1)				Prepared: 06-Feb-14 Analyzed: 07-Feb-14						
GRO C6-C10	209	10.0	mg/kg	200		105	66.4-124	6.22	23.4	
DRO >C10-C28	194	10.0	mg/kg	200		97.0	61.6-132	0.485	23.1	
Surrogate: 1-Chlorooctane	*49.4*		mg/kg	*50.0*		*98.7*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*48.9*		mg/kg	*50.0*		*97.8*	*63.6-154*			

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

S-04	The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

RUSH Please

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: I.E.I
Contact: Marcella
Address: 49 CR 3150
Aztec, NM 87410
Phone Number: 505.632.1782
Email: Marcella@industrialecosystems.com

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 2078
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

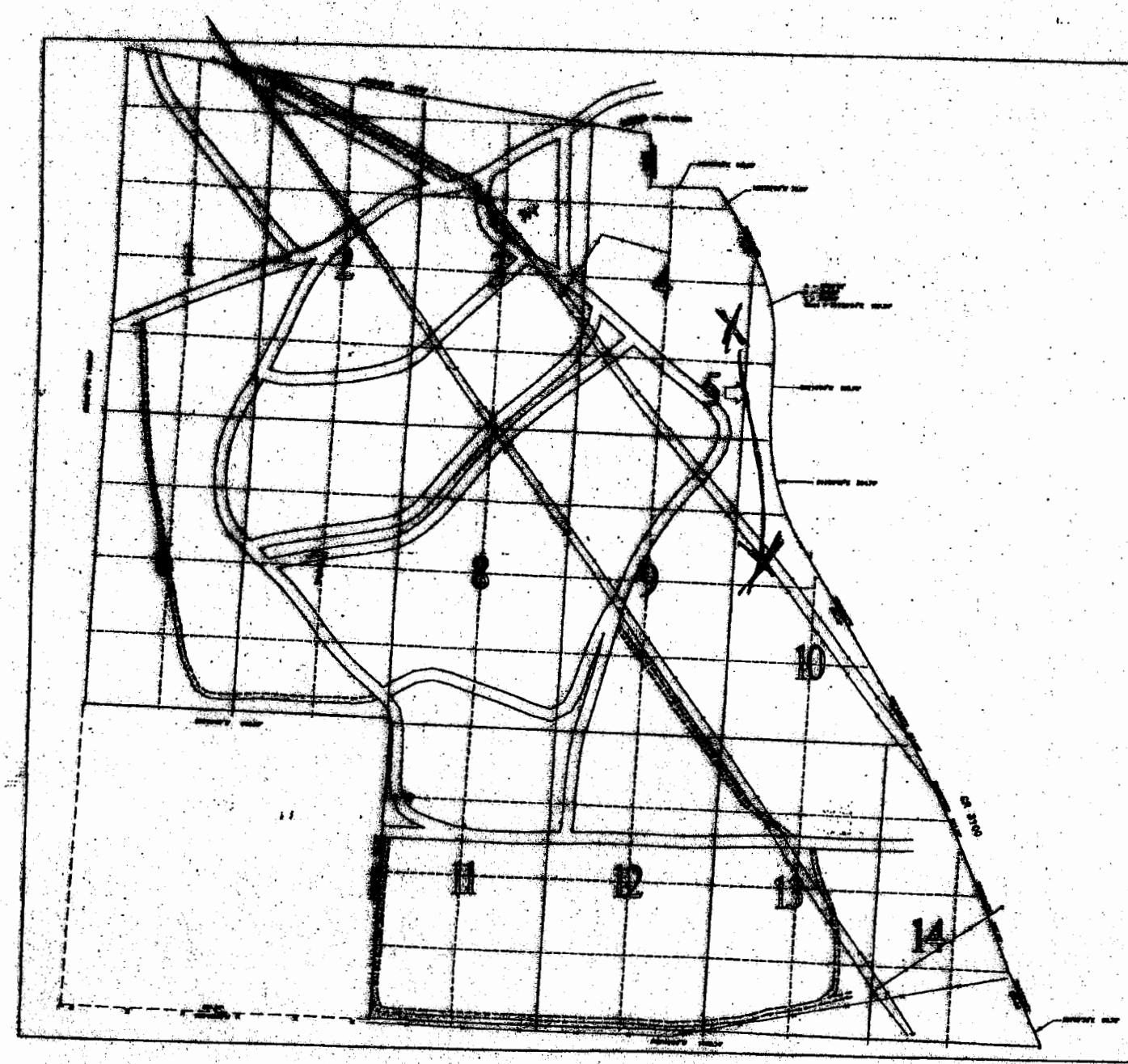
Sample ID	Collection: Date	Collection: Time	Collected by: (Init.)	Matrix Type From Table 1	No. of Containers	Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: TPH-418.1	DRO/GRO-8015M	BTEX-8021B	Chloride-300.0	Comments
H40039D																	
1. P.G 36	2/6/14	10:10	RC	3	1	N							✓	✓	✓	✓	
2. 45		10:30											✓	✓	✓	✓	
3. 501		10:50											✓	✓	✓	✓	
4. 773		11:20											✓	✓	✓	✓	
5. 777		11:45											✓	✓	✓	✓	
6. 784		12:40											✓	✓	✓	✓	
7. 802		1:16											✓	✓	✓	✓	
8. 822		1:30											✓	✓	✓	✓	
9. 824		1:45											✓	✓	✓	✓	
10. 856		2:00											✓	✓	✓	✓	

6.3c on ice

Relinquished by:	Date: 2-6-14	Time: 2:10	Received by: M. Magee	Date: 2/6/14	Time: 2:10
Relinquished by: M. Magee	Date: 2/6/14	Time: 4:30	Received by: Christine Clark	Date: 2/6/14	Time: 4:30

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Christine Clark 2/6/14 1600 ~~Kangaroo~~ FedEx 2/6/14 1600 3.2°C
Jodi Henson 2/7/14 11:15



Property Sketch for
Industrial Ecosystems Inc.

Jones, Brad A., EMNRD

From: Jones, Brad A., EMNRD
Sent: Thursday, January 23, 2014 5:05 PM
To: 'Marcella Marquez'
Subject: RE: Correction
Attachments: 2014 0114 Reuse Request Piles corrected 687, 723, 769, 771, 814, 819, 828.pdf

Marcella,

Sorry about the typo. Here's the fix. A hardcopy will placed in the mail.

Brad

Brad A. Jones
Environmental Engineer
Environmental Bureau
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505
E-mail: brad.a.jones@state.nm.us
Office: (505) 476-3487
Fax: (505) 476-3462

From: Marcella Marquez [mailto:marcella@industrialecosystems.com]
Sent: Wednesday, January 22, 2014 3:48 PM
To: Jones, Brad A., EMNRD
Subject: Correction
Importance: High

Brad:

I received your reply letter dated 01/14/14 regarding my request to reuse treated soils on-site. Can you please revise the letter to show the correct Pile # 687 (not 689)?

Thanks,
Marcella Marquez, HSE Administrator
Industrial Ecosystems, Inc.
Phone: (505) 632-1782
Fax: (505) 632-1876 or (505) 334-1003

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

January 14, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated January 9, 2014, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s):

Pile # ~~689~~ 687	*Pile # 723*	*Pile # 769*	*Pile # 771*
Pile # 814	*Pile # 819*	*Pile # 828*	

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

January 14, 2014

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
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Pile # 689	*Pile # 723*	*Pile # 769*	*Pile # 771*
Pile # 814	*Pile # 819*	*Pile # 828*	

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If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Thursday, January 09, 2014 4:26 PM
To: Jones, Brad A., EMNRD
Subject: Request to spread Treated Soils
Attachments: Letter to request reuse of treated soils on facility.doc; 687.pdf; 723.pdf; 769.pdf; 771.pdf; 814.pdf; 819.pdf; 828.pdf; Map.pdf

Importance: High

Brad:

Please see attached letter to spread remediated soils, along with the analytical reports and map of area where the soils will be spread.

Thanks,
Marcella Marquez, HSE Administrator
Industrial Ecosystems, Inc.
Phone: (505) 632-1782
Fax: (505) 632-1876 or (505) 334-1003

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

January 14, 2014

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 687 DRO, GRO, BTEX & Chlorides passed 01/06/14
- Pile 723 DRO, GRO, BTEX & Chlorides passed 01/06/14
- Pile 769 DRO, GRO, BTEX & Chlorides passed 01/06/14
- Pile 771 DRO, GRO, BTEX & Chlorides passed 01/06/14
- Pile 814 DRO passed 01/06/14, GRO, BTEX & Chlorides passed 07/25/12
- Pile 819 DRO, GRO, BTEX & Chlorides passed 01/06/14
- Pile 828 DRO, GRO, BTEX & Chlorides passed 01/06/14

Please let me know if you have any questions or if any additional information is needed.

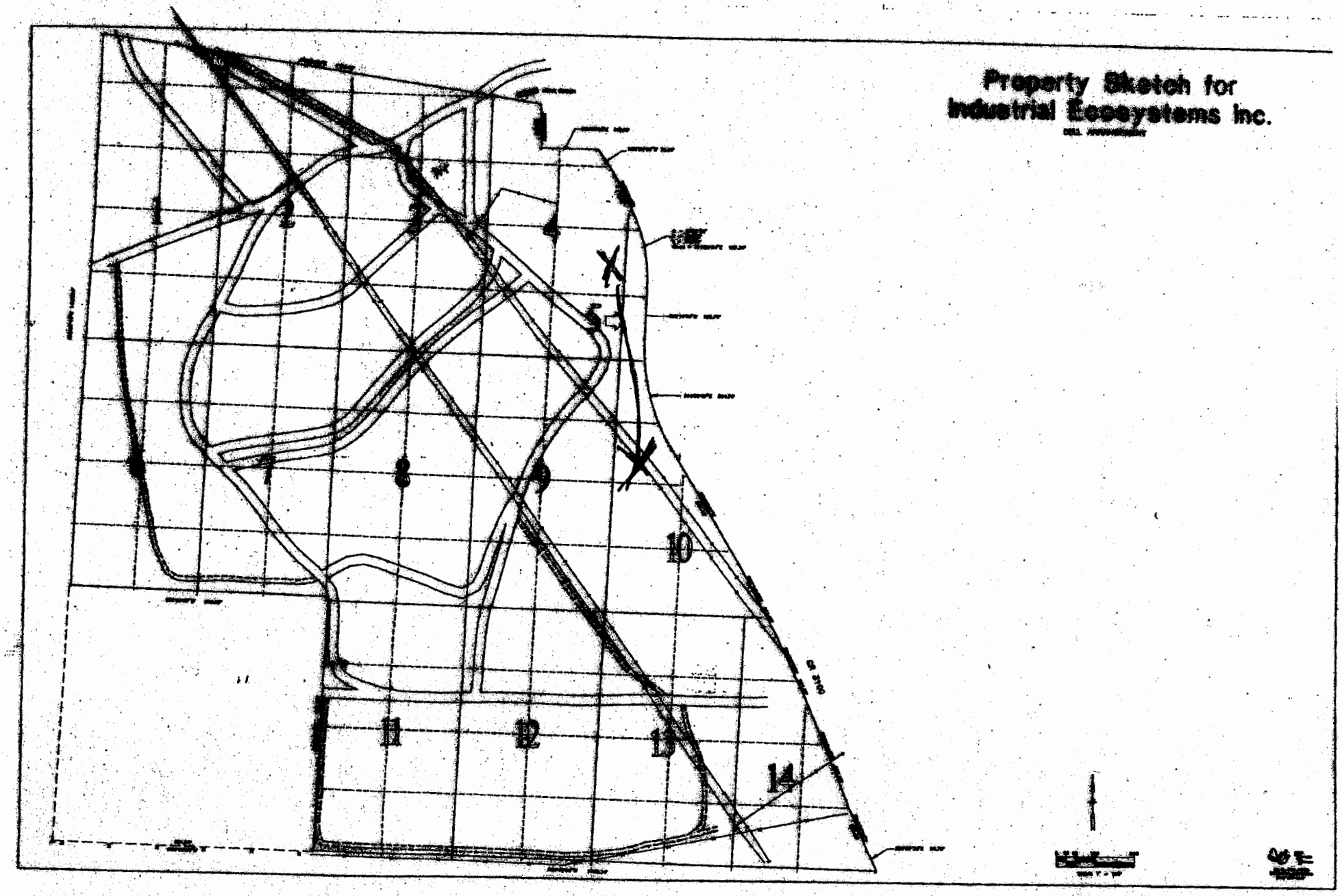
Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map

Property Sketch for
Industrial Ecosystems Inc.



Green Analytical Laboratories

75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

06 January 2014

Marcella Marquez
Industrial Ecosystems Inc.
49 CR 3150
Aztec, NM 87410
RE: BTEX/TPH, Cl

Enclosed are the results of analyses for samples received by the laboratory on 12/19/13 12:34.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt

Debbie Zufelt
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. Our NELAP accreditation can be viewed at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water

Green Analytical Laboratories
dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303
www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Subcontracted – **Cardinal Laboratories**

Pile 687

1312167-01 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Inorganic Compounds									
Chloride	<16.0	16.0		mg/kg	4	01/06/14	4500-Cl-B		AP
Volatile Organic Compounds by EPA Method 8021									
Surrogate: 4-Bromofluorobenzene (PID)			*102 %*	*89.4-126*		*01/02/14*	*8021B*		MS
Benzene*	<0.050	0.050	0.007	mg/kg	50	01/02/14	8021B		MS
Ethylbenzene*	<0.050	0.050	0.010	mg/kg	50	01/02/14	8021B		MS
Toluene*	<0.050	0.050	0.009	mg/kg	50	01/02/14	8021B		MS
Total BTEX	<0.300	0.300		mg/kg	50	01/02/14	8021B		MS
Total Xylenes*	<0.150	0.150	0.026	mg/kg	50	01/02/14	8021B		MS
Petroleum Hydrocarbons by GC FID									
Surrogate: 1-Chlorooctadecane			*92.4 %*	*63.6-154*		*12/28/13*	*8015B*		ms
Surrogate: 1-Chlorooctane			*93.7 %*	*65.2-140*		*12/28/13*	*8015B*		ms
DRO >C10-C28	<10.0	10.0	1.97	mg/kg	1	12/28/13	8015B		ms
GRO C6-C10	<10.0	10.0	1.28	mg/kg	1	12/28/13	8015B		ms

ANALYTICAL
JAN - 6 2014
PASSED

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pile 687	1312167-01	Solid	12/19/13 07:30	12/19/13 12:34
Pile 723	1312167-02	Solid	12/19/13 08:00	12/19/13 12:34
Pile 769	1312167-03	Solid	12/19/13 08:20	12/19/13 12:34
Pile 771	1312167-04	Solid	12/19/13 08:40	12/19/13 12:34
Pile 814	1312167-05	Solid	12/19/13 09:25	12/19/13 12:34
Pile 819	1312167-06	Solid	12/19/13 09:50	12/19/13 12:34
Pile 828	1312167-07	Solid	12/19/13 10:30	12/19/13 12:34

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Inorganic Compounds - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010607 - 1:4 DI Water										
Blank (4010607-BLK1)				Prepared & Analyzed: 01/06/14						
Chloride	ND	16.0	mg/kg							
LCS (4010607-BS1)				Prepared & Analyzed: 01/06/14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4010607-BSD1)				Prepared & Analyzed: 01/06/14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303
www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010204 - Volatiles										
Blank (4010204-BLK1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0507*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
LCS (4010204-BS1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0510*		mg/kg	*0.0500*		*102*	*89.4-126*			
Benzene	1.85	0.050	mg/kg	2.00		92.7	76.4-135			
Ethylbenzene	1.91	0.050	mg/kg	2.00		95.3	78.5-133			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Total Xylenes	5.55	0.150	mg/kg	6.00		92.6	80.1-135			
LCS Dup (4010204-BSD1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0506*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	1.94	0.050	mg/kg	2.00		96.9	76.4-135	4.48	16.4	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.3	78.5-133	3.12	16.1	
Toluene	1.97	0.050	mg/kg	2.00		98.5	80.2-135	3.83	16.6	
Total Xylenes	5.72	0.150	mg/kg	6.00		95.4	80.1-135	3.00	15.8	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3122704 - General Prep - Organics										
LCS (3122704-BS1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*52.5*		mg/kg	*50.0*		*105*	*63.6-154*			
Surrogate: 1-Chlorooctane	*53.7*		mg/kg	*50.0*		*107*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		91.9	61.6-132			
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124			
Total TPH C6-C28	373	10.0	mg/kg	400		93.2	69.7-122			
LCS Dup (3122704-BSD1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*54.8*		mg/kg	*50.0*		*110*	*63.6-154*			
Surrogate: 1-Chlorooctane	*56.5*		mg/kg	*50.0*		*113*	*65.2-140*			
DRO >C10-C28	204	10.0	mg/kg	200		102	61.6-132	10.3	23.1	
GRO C6-C10	200	10.0	mg/kg	200		99.8	66.4-124	5.41	23.4	
Total TPH C6-C28	403	10.0	mg/kg	400		101	69.7-122	7.83	20.6	
Batch 3123004 - General Prep - Organics										
Blank (3123004-BLK1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*46.6*		mg/kg	*50.0*		*93.3*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.8*	*65.2-140*			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
LCS (3123004-BS1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*48.0*		mg/kg	*50.0*		*96.0*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.0*		mg/kg	*50.0*		*92.0*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		92.2	61.6-132			
GRO C6-C10	175	10.0	mg/kg	200		87.7	66.4-124			
Total TPH C6-C28	360	10.0	mg/kg	400		89.9	69.7-122			

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3123004 - General Prep - Organics										
LCS Dup (3123004-BSD1)	Prepared & Analyzed: 12/30/13									
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.7*	*63.6-154*			
Surrogate: 1-Chlorooctane	*49.9*		mg/kg	*50.0*		*99.8*	*65.2-140*			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132	7.36	23.1	
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124	7.64	23.4	
Total TPH C6-C28	388	10.0	mg/kg	400		97.0	69.7-122	7.50	20.6	

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
	*Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

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CHAIN OF CUSTODY RECORD

Green Analytical Laboratories

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: (505)632-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1961
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB # 312-167

Samplers Signature: Rick Rek

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
1. Pile 687	12/19/13	7:30	RC	3	1	N							✓	✓	✓	4°C on ice
2. Pile 723	"	8:00	"	"	"	"							✓	✓	✓	
3. Pile 769		8:20											✓	✓	✓	
4. Pile 771		8:40											✓	✓	✓	
5. Pile 814		9:25											✓			
6. Pile 819		9:50											✓	✓	✓	
7. Pile 828	↓	10:30	↓	↓	↓	↓							✓	✓	✓	
8.																
9.																
10.																

Relinquished by: Rick Rek Date: 12/19/13 Time: 10:40
Relinquished by: M. Boone Date: 12/19/13 Time: 12:54p
Received by: Michael Valentine Date: 12-19-13 Time: 19:34

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

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www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Subcontracted – **Cardinal Laboratories**

Pile 723

1312167-02 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Inorganic Compounds									
Chloride	**128**	16.0		mg/kg	4	01/06/14	4500-Cl-B		AP
Volatile Organic Compounds by EPA Method 8021									
Surrogate: 4-Bromofluorobenzene (PID)			*106 %*	*89.4-126*		*01/02/14*	*8021B*		MS
Benzene*	<0.050	0.050	0.007	mg/kg	50	01/02/14	8021B		MS
Ethylbenzene*	<0.050	0.050	0.010	mg/kg	50	01/02/14	8021B		MS
Toluene*	<0.050	0.050	0.009	mg/kg	50	01/02/14	8021B		MS
Total BTEX	<0.300	0.300		mg/kg	50	01/02/14	8021B		MS
Total Xylenes*	<0.150	0.150	0.026	mg/kg	50	01/02/14	8021B		MS
Petroleum Hydrocarbons by GC FID									
Surrogate: 1-Chlorooctadecane			*126 %*	*63.6-154*		*12/28/13*	*8015B*		ms
Surrogate: 1-Chlorooctane			*104 %*	*65.2-140*		*12/28/13*	*8015B*		ms
DRO >C10-C28	**20.7**	10.0	1.97	mg/kg	1	12/28/13	8015B		ms
GRO C6-C10	<10.0	10.0	1.28	mg/kg	1	12/28/13	8015B		ms

ANALYTICAL
JAN - 6 2014
PASSED

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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Green Analytical Laboratories

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Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

06 January 2014

Marcella Marquez
Industrial Ecosystems Inc.
49 CR 3150
Aztec, NM 87410
RE: BTEX/TPH, Cl

Enclosed are the results of analyses for samples received by the laboratory on 12/19/13 12:34.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt

Debbie Zufelt
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. Our NELAP accreditation can be viewed at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pile 687	1312167-01	Solid	12/19/13 07:30	12/19/13 12:34
Pile 723	1312167-02	Solid	12/19/13 08:00	12/19/13 12:34
Pile 769	1312167-03	Solid	12/19/13 08:20	12/19/13 12:34
Pile 771	1312167-04	Solid	12/19/13 08:40	12/19/13 12:34
Pile 814	1312167-05	Solid	12/19/13 09:25	12/19/13 12:34
Pile 819	1312167-06	Solid	12/19/13 09:50	12/19/13 12:34
Pile 828	1312167-07	Solid	12/19/13 10:30	12/19/13 12:34

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Inorganic Compounds - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010607 - 1:4 DI Water										
Blank (4010607-BLK1)				Prepared & Analyzed: 01/06/14						
Chloride	ND	16.0	mg/kg							
LCS (4010607-BS1)				Prepared & Analyzed: 01/06/14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4010607-BSD1)				Prepared & Analyzed: 01/06/14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

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Debbie Zufelt, Reports Manager

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010204 - Volatiles										
Blank (4010204-BLK1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0507*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
LCS (4010204-BS1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0510*		mg/kg	*0.0500*		*102*	*89.4-126*			
Benzene	1.85	0.050	mg/kg	2.00		92.7	76.4-135			
Ethylbenzene	1.91	0.050	mg/kg	2.00		95.3	78.5-133			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Total Xylenes	5.55	0.150	mg/kg	6.00		92.6	80.1-135			
LCS Dup (4010204-BSD1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0506*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	1.94	0.050	mg/kg	2.00		96.9	76.4-135	4.48	16.4	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.3	78.5-133	3.12	16.1	
Toluene	1.97	0.050	mg/kg	2.00		98.5	80.2-135	3.83	16.6	
Total Xylenes	5.72	0.150	mg/kg	6.00		95.4	80.1-135	3.00	15.8	

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3122704 - General Prep - Organics										
LCS (3122704-BS1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*52.5*		mg/kg	*50.0*		*105*	*63.6-154*			
Surrogate: 1-Chlorooctane	*53.7*		mg/kg	*50.0*		*107*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		91.9	61.6-132			
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124			
Total TPH C6-C28	373	10.0	mg/kg	400		93.2	69.7-122			
LCS Dup (3122704-BSD1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*54.8*		mg/kg	*50.0*		*110*	*63.6-154*			
Surrogate: 1-Chlorooctane	*56.5*		mg/kg	*50.0*		*113*	*65.2-140*			
DRO >C10-C28	204	10.0	mg/kg	200		102	61.6-132	10.3	23.1	
GRO C6-C10	200	10.0	mg/kg	200		99.8	66.4-124	5.41	23.4	
Total TPH C6-C28	403	10.0	mg/kg	400		101	69.7-122	7.83	20.6	
Batch 3123004 - General Prep - Organics										
Blank (3123004-BLK1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*46.6*		mg/kg	*50.0*		*93.3*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.8*	*65.2-140*			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
LCS (3123004-BS1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*48.0*		mg/kg	*50.0*		*96.0*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.0*		mg/kg	*50.0*		*92.0*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		92.2	61.6-132			
GRO C6-C10	175	10.0	mg/kg	200		87.7	66.4-124			
Total TPH C6-C28	360	10.0	mg/kg	400		89.9	69.7-122			

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49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3123004 - General Prep - Organics										
LCS Dup (3123004-BSD1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.7*	*63.6-154*			
Surrogate: 1-Chlorooctane	*49.9*		mg/kg	*50.0*		*99.8*	*65.2-140*			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132	7.36	23.1	
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124	7.64	23.4	
Total TPH C6-C28	388	10.0	mg/kg	400		97.0	69.7-122	7.50	20.6	

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Notes and Definitions

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ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
	*Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: (505)632-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 1961
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB # 13IE-167

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection Date	Collection Time	Collected by: (Init.)	Matrix Type From Table 1	No. of Containers	Sample Filtered ? Y/N	Preservative(s) Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO/GRO 8015M	BTEX 8021B	Chloride 300.0	Comments
1. Pile 687	12/19/13	7:30	RC	3	1	N							✓	✓	✓	4°C on ice
2. Pile 723		8:00											✓	✓	✓	
3. Pile 769		8:20											✓	✓	✓	
4. Pile 771		8:40											✓	✓	✓	
5. Pile 814		9:25											✓			
6. Pile 819		9:50											✓	✓	✓	
7. Pile 828		10:30											✓	✓	✓	
8.																
9.																
10.																

Relinquished by: Date: 12/19/13 Time: 10:40
Relinquished by: Date: 12/19/13 Time: 1236
Received by: Date: 12/20/13 Time: 10:40a
Received by: Date: 12-19-13 Time: 1734

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Subcontracted – **Cardinal Laboratories**

Pile 769

1312167-03 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Inorganic Compounds									
Chloride	**272**	16.0		mg/kg	4	01/06/14	4500-Cl-B		AP
Volatile Organic Compounds by EPA Method 8021									
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*89.4-126*		*01/02/14*	*8021B*		MS
Benzene*	<0.050	0.050	0.007	mg/kg	50	01/02/14	8021B		MS
Ethylbenzene*	<0.050	0.050	0.010	mg/kg	50	01/02/14	8021B		MS
Toluene*	<0.050	0.050	0.009	mg/kg	50	01/02/14	8021B		MS
Total BTEX	<0.300	0.300		mg/kg	50	01/02/14	8021B		MS
Total Xylenes*	<0.150	0.150	0.026	mg/kg	50	01/02/14	8021B		MS
Petroleum Hydrocarbons by GC FID									
Surrogate: 1-Chlorooctadecane			*115 %*	*63.6-154*		*12/28/13*	*8015B*		ms
Surrogate: 1-Chlorooctane			*102 %*	*65.2-140*		*12/28/13*	*8015B*		ms
DRO >C10-C28	**83.8**	10.0	1.97	mg/kg	1	12/28/13	8015B		ms
GRO C6-C10	<10.0	10.0	1.28	mg/kg	1	12/28/13	8015B		ms

ANALYTICAL
JAN - 6 2014
PASSED

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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06 January 2014

Marcella Marquez
Industrial Ecosystems Inc.
49 CR 3150
Aztec, NM 87410

RE: BTEX/TPH, Cl

Enclosed are the results of analyses for samples received by the laboratory on 12/19/13 12:34.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt

Debbie Zufelt
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. Our NELAP accreditation can be viewed at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pile 687	1312167-01	Solid	12/19/13 07:30	12/19/13 12:34
Pile 723	1312167-02	Solid	12/19/13 08:00	12/19/13 12:34
Pile 769	1312167-03	Solid	12/19/13 08:20	12/19/13 12:34
Pile 771	1312167-04	Solid	12/19/13 08:40	12/19/13 12:34
Pile 814	1312167-05	Solid	12/19/13 09:25	12/19/13 12:34
Pile 819	1312167-06	Solid	12/19/13 09:50	12/19/13 12:34
Pile 828	1312167-07	Solid	12/19/13 10:30	12/19/13 12:34

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Inorganic Compounds - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010607 - 1:4 DI Water										
Blank (4010607-BLK1)				Prepared & Analyzed: 01/06/14						
Chloride	ND	16.0	mg/kg							
LCS (4010607-BS1)				Prepared & Analyzed: 01/06/14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4010607-BSD1)				Prepared & Analyzed: 01/06/14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010204 - Volatiles										
Blank (4010204-BLK1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0507*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
LCS (4010204-BS1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0510*		mg/kg	*0.0500*		*102*	*89.4-126*			
Benzene	1.85	0.050	mg/kg	2.00		92.7	76.4-135			
Ethylbenzene	1.91	0.050	mg/kg	2.00		95.3	78.5-133			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Total Xylenes	5.55	0.150	mg/kg	6.00		92.6	80.1-135			
LCS Dup (4010204-BSD1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0506*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	1.94	0.050	mg/kg	2.00		96.9	76.4-135	4.48	16.4	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.3	78.5-133	3.12	16.1	
Toluene	1.97	0.050	mg/kg	2.00		98.5	80.2-135	3.83	16.6	
Total Xylenes	5.72	0.150	mg/kg	6.00		95.4	80.1-135	3.00	15.8	

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3122704 - General Prep - Organics										
LCS (3122704-BS1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*52.5*		mg/kg	*50.0*		*105*	*63.6-154*			
Surrogate: 1-Chlorooctane	*53.7*		mg/kg	*50.0*		*107*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		91.9	61.6-132			
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124			
Total TPH C6-C28	373	10.0	mg/kg	400		93.2	69.7-122			
LCS Dup (3122704-BSD1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*54.8*		mg/kg	*50.0*		*110*	*63.6-154*			
Surrogate: 1-Chlorooctane	*56.5*		mg/kg	*50.0*		*113*	*65.2-140*			
DRO >C10-C28	204	10.0	mg/kg	200		102	61.6-132	10.3	23.1	
GRO C6-C10	200	10.0	mg/kg	200		99.8	66.4-124	5.41	23.4	
Total TPH C6-C28	403	10.0	mg/kg	400		101	69.7-122	7.83	20.6	
Batch 3123004 - General Prep - Organics										
Blank (3123004-BLK1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*46.6*		mg/kg	*50.0*		*93.3*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.8*	*65.2-140*			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
LCS (3123004-BS1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*48.0*		mg/kg	*50.0*		*96.0*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.0*		mg/kg	*50.0*		*92.0*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		92.2	61.6-132			
GRO C6-C10	175	10.0	mg/kg	200		87.7	66.4-124			
Total TPH C6-C28	360	10.0	mg/kg	400		89.9	69.7-122			

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Debbie Zufelt, Reports Manager

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3123004 - General Prep - Organics										
LCS Dup (3123004-BSD1)	Prepared & Analyzed: 12/30/13									
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.7*	*63.6-154*			
Surrogate: 1-Chlorooctane	*49.9*		mg/kg	*50.0*		*99.8*	*65.2-140*			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132	7.36	23.1	
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124	7.64	23.4	
Total TPH C6-C28	388	10.0	mg/kg	400		97.0	69.7-122	7.50	20.6	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
	*Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: (505)632-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 1961
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB # 1312-167

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
1. Pile 687	12/19/13	7:30	RC	3	1	N							✓	✓	✓	4°C on ice
2. Pile 723	"	8:00	"	"	"	"							✓	✓	✓	
3. Pile 769	"	8:20	"	"	"	"							✓	✓	✓	
4. Pile 771	"	8:40	"	"	"	"							✓	✓	✓	
5. Pile 814	"	9:25	"	"	"	"							✓			
6. Pile 819	"	9:50	"	"	"	"							✓	✓	✓	
7. Pile 828	"	10:30	"	"	"	"							✓	✓	✓	
8.																
9.																
10.																

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	12/19/13	10:40		12/19/13	10:40a
	12/19/13	1224p		12-19-13	1734

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Subcontracted – **Cardinal Laboratories**

Pile 771

1312167-04 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Inorganic Compounds									
Chloride	<16.0	16.0		mg/kg	4	01/06/14	4500-Cl-B		AP
Volatile Organic Compounds by EPA Method 8021									
Surrogate: 4-Bromofluorobenzene (PID)			*104 %*	*89.4-126*		*01/02/14*	*8021B*		MS
Benzene*	<0.050	0.050	0.007	mg/kg	50	01/02/14	8021B		MS
Ethylbenzene*	<0.050	0.050	0.010	mg/kg	50	01/02/14	8021B		MS
Toluene*	<0.050	0.050	0.009	mg/kg	50	01/02/14	8021B		MS
Total BTEX	<0.300	0.300		mg/kg	50	01/02/14	8021B		MS
Total Xylenes*	<0.150	0.150	0.026	mg/kg	50	01/02/14	8021B		MS
Petroleum Hydrocarbons by GC FID									
Surrogate: 1-Chlorooctadecane			*82.4 %*	*63.6-154*		*12/28/13*	*8015B*		ms
Surrogate: 1-Chlorooctane			*86.7 %*	*65.2-140*		*12/28/13*	*8015B*		ms
DRO >C10-C28	<10.0	10.0	1.97	mg/kg	1	12/28/13	8015B		ms
GRO C6-C10	<10.0	10.0	1.28	mg/kg	1	12/28/13	8015B		ms

ANALYTICAL
JAN - 6 2014
PASSED

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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Durango, CO 81303
970.247.4220 Phone
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06 January 2014

Marcella Marquez
Industrial Ecosystems Inc.
49 CR 3150
Aztec, NM 87410

RE: BTEX/TPH, Cl

Enclosed are the results of analyses for samples received by the laboratory on 12/19/13 12:34.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt

Debbie Zufelt
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. Our NELAP accreditation can be viewed at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

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Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pile 687	1312167-01	Solid	12/19/13 07:30	12/19/13 12:34
Pile 723	1312167-02	Solid	12/19/13 08:00	12/19/13 12:34
Pile 769	1312167-03	Solid	12/19/13 08:20	12/19/13 12:34
Pile 771	1312167-04	Solid	12/19/13 08:40	12/19/13 12:34
Pile 814	1312167-05	Solid	12/19/13 09:25	12/19/13 12:34
Pile 819	1312167-06	Solid	12/19/13 09:50	12/19/13 12:34
Pile 828	1312167-07	Solid	12/19/13 10:30	12/19/13 12:34

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Inorganic Compounds - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010607 - 1:4 DI Water										
Blank (4010607-BLK1)				Prepared & Analyzed: 01/06/14						
Chloride	ND	16.0	mg/kg							
LCS (4010607-BS1)				Prepared & Analyzed: 01/06/14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4010607-BSD1)				Prepared & Analyzed: 01/06/14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010204 - Volatiles										
Blank (4010204-BLK1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0507*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
LCS (4010204-BS1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0510*		mg/kg	*0.0500*		*102*	*89.4-126*			
Benzene	1.85	0.050	mg/kg	2.00		92.7	76.4-135			
Ethylbenzene	1.91	0.050	mg/kg	2.00		95.3	78.5-133			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Total Xylenes	5.55	0.150	mg/kg	6.00		92.6	80.1-135			
LCS Dup (4010204-BSD1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0506*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	1.94	0.050	mg/kg	2.00		96.9	76.4-135	4.48	16.4	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.3	78.5-133	3.12	16.1	
Toluene	1.97	0.050	mg/kg	2.00		98.5	80.2-135	3.83	16.6	
Total Xylenes	5.72	0.150	mg/kg	6.00		95.4	80.1-135	3.00	15.8	

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3122704 - General Prep - Organics										
LCS (3122704-BS1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*52.5*		mg/kg	*50.0*		*105*	*63.6-154*			
Surrogate: 1-Chlorooctane	*53.7*		mg/kg	*50.0*		*107*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		91.9	61.6-132			
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124			
Total TPH C6-C28	373	10.0	mg/kg	400		93.2	69.7-122			
LCS Dup (3122704-BSD1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*54.8*		mg/kg	*50.0*		*110*	*63.6-154*			
Surrogate: 1-Chlorooctane	*56.5*		mg/kg	*50.0*		*113*	*65.2-140*			
DRO >C10-C28	204	10.0	mg/kg	200		102	61.6-132	10.3	23.1	
GRO C6-C10	200	10.0	mg/kg	200		99.8	66.4-124	5.41	23.4	
Total TPH C6-C28	403	10.0	mg/kg	400		101	69.7-122	7.83	20.6	
Batch 3123004 - General Prep - Organics										
Blank (3123004-BLK1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*46.6*		mg/kg	*50.0*		*93.3*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.8*	*65.2-140*			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
LCS (3123004-BS1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*48.0*		mg/kg	*50.0*		*96.0*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.0*		mg/kg	*50.0*		*92.0*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		92.2	61.6-132			
GRO C6-C10	175	10.0	mg/kg	200		87.7	66.4-124			
Total TPH C6-C28	360	10.0	mg/kg	400		89.9	69.7-122			

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3123004 - General Prep - Organics										
LCS Dup (3123004-BSD1)	Prepared & Analyzed: 12/30/13									
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.7*	*63.6-154*			
Surrogate: 1-Chlorooctane	*49.9*		mg/kg	*50.0*		*99.8*	*65.2-140*			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132	7.36	23.1	
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124	7.64	23.4	
Total TPH C6-C28	388	10.0	mg/kg	400		97.0	69.7-122	7.50	20.6	

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
	*Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: (505)632-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1961
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB # 312-167

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO/GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
1. Pile 687	12/19/13	7:30	RC	3	1	N							✓	✓	✓	4°C on ice
2. Pile 723		8:00											✓	✓	✓	
3. Pile 769		8:20											✓	✓	✓	
4. Pile 771		8:40											✓	✓	✓	
5. Pile 814		9:25											✓			
6. Pile 819		9:50											✓	✓	✓	
7. Pile 828	↓	10:30	↓	↓	↓	↓							✓	✓	✓	
8.																
9.																
10.																

Relinquished by: [signature] Date: 12/19/13 Time: 10:40
Received by: [signature] Date: 12/19/13 Time: 1234
Relinquished by: [signature] Date: 12/19/13 Time: 1234
Received by: Michael Valentine Date: 12-19-13 Time: 1734

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Subcontracted – **Cardinal Laboratories**

Pile 814

1312167-05 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Petroleum Hydrocarbons by GC FID									
Surrogate: 1-Chlorooctadecane			*125 %*	*63.6-154*		*12/30/13*	*8015B*		ms
Surrogate: 1-Chlorooctane			*107 %*	*65.2-140*		*12/30/13*	*8015B*		ms
DRO >C10-C28	**99.6**	10.0	1.97	mg/kg	1	12/30/13	8015B		ms
GRO C6-C10	<10.0	10.0	1.28	mg/kg	1	12/30/13	8015B		ms

ANALYTICAL
JAN - 6 2014
PASSED

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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06 January 2014

Marcella Marquez
Industrial Ecosystems Inc.
49 CR 3150
Aztec, NM 87410

RE: BTEX/TPH, Cl

Enclosed are the results of analyses for samples received by the laboratory on 12/19/13 12:34.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt

Debbie Zufelt
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. Our NELAP accreditation can be viewed at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pile 687	1312167-01	Solid	12/19/13 07:30	12/19/13 12:34
Pile 723	1312167-02	Solid	12/19/13 08:00	12/19/13 12:34
Pile 769	1312167-03	Solid	12/19/13 08:20	12/19/13 12:34
Pile 771	1312167-04	Solid	12/19/13 08:40	12/19/13 12:34
Pile 814	1312167-05	Solid	12/19/13 09:25	12/19/13 12:34
Pile 819	1312167-06	Solid	12/19/13 09:50	12/19/13 12:34
Pile 828	1312167-07	Solid	12/19/13 10:30	12/19/13 12:34

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Inorganic Compounds - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010607 - 1:4 DI Water										
Blank (4010607-BLK1)				Prepared & Analyzed: 01/06/14						
Chloride	ND	16.0	mg/kg							
LCS (4010607-BS1)				Prepared & Analyzed: 01/06/14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4010607-BSD1)				Prepared & Analyzed: 01/06/14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010204 - Volatiles										
Blank (4010204-BLK1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0507*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
LCS (4010204-BS1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0510*		mg/kg	*0.0500*		*102*	*89.4-126*			
Benzene	1.85	0.050	mg/kg	2.00		92.7	76.4-135			
Ethylbenzene	1.91	0.050	mg/kg	2.00		95.3	78.5-133			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Total Xylenes	5.55	0.150	mg/kg	6.00		92.6	80.1-135			
LCS Dup (4010204-BSD1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0506*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	1.94	0.050	mg/kg	2.00		96.9	76.4-135	4.48	16.4	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.3	78.5-133	3.12	16.1	
Toluene	1.97	0.050	mg/kg	2.00		98.5	80.2-135	3.83	16.6	
Total Xylenes	5.72	0.150	mg/kg	6.00		95.4	80.1-135	3.00	15.8	

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3122704 - General Prep - Organics										
LCS (3122704-BS1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*52.5*		mg/kg	*50.0*		*105*	*63.6-154*			
Surrogate: 1-Chlorooctane	*53.7*		mg/kg	*50.0*		*107*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		91.9	61.6-132			
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124			
Total TPH C6-C28	373	10.0	mg/kg	400		93.2	69.7-122			
LCS Dup (3122704-BSD1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*54.8*		mg/kg	*50.0*		*110*	*63.6-154*			
Surrogate: 1-Chlorooctane	*56.5*		mg/kg	*50.0*		*113*	*65.2-140*			
DRO >C10-C28	204	10.0	mg/kg	200		102	61.6-132	10.3	23.1	
GRO C6-C10	200	10.0	mg/kg	200		99.8	66.4-124	5.41	23.4	
Total TPH C6-C28	403	10.0	mg/kg	400		101	69.7-122	7.83	20.6	
Batch 3123004 - General Prep - Organics										
Blank (3123004-BLK1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*46.6*		mg/kg	*50.0*		*93.3*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.8*	*65.2-140*			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
LCS (3123004-BS1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*48.0*		mg/kg	*50.0*		*96.0*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.0*		mg/kg	*50.0*		*92.0*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		92.2	61.6-132			
GRO C6-C10	175	10.0	mg/kg	200		87.7	66.4-124			
Total TPH C6-C28	360	10.0	mg/kg	400		89.9	69.7-122			

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dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303
www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3123004 - General Prep - Organics										
LCS Dup (3123004-BSD1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.7*	*63.6-154*			
Surrogate: 1-Chlorooctane	*49.9*		mg/kg	*50.0*		*99.8*	*65.2-140*			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132	7.36	23.1	
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124	7.64	23.4	
Total TPH C6-C28	388	10.0	mg/kg	400		97.0	69.7-122	7.50	20.6	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
	*Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: (505)632-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 1961
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB # 312-167

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO/GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
1.	Pile 687	12/19/13	7:30	RC	3	1	N							✓	✓	✓	4°C on ice
2.	Pile 723	"	8:00	"	"	"	"							✓	✓	✓	
3.	Pile 769	"	8:20	"	"	"	"							✓	✓	✓	
4.	Pile 771	"	8:40	"	"	"	"							✓	✓	✓	
5.	Pile 814	"	9:25	"	"	"	"							✓			
6.	Pile 819	"	9:50	"	"	"	"							✓	✓	✓	
7.	Pile 828	"	10:30	"	"	"	"							✓	✓	✓	
8.																	
9.																	
10.																	

Relinquished by: [signature] Date: 12/19/13 Time: 10:40
Relinquished by: [signature] Date: 12/19/13 Time: 12:40
Received by: Mariah Valentine Date: 12/20/13 Time: 10:40a
Received by: [signature] Date: 12-19-13 Time: 1234

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

PILE 814

H201672-10 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	80.0	16.0	mg/kg	4	2072304	HM	23-Jul-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	2072306	MS	24-Jul-12	8015M	
DRO >C10-C28	236	10.0	mg/kg	1	2072306	MS	24-Jul-12	8015M	
Surrogate: 1-Chlorooctane		*85.9 %*	*65.2-140*		*2072306*	MS	*24-Jul-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*111 %*	*63.6-154*		*2072306*	MS	*24-Jul-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	2072403	AP	24-Jul-12	8021B	
Toluene*	ND	0.050	mg/kg	50	2072403	AP	24-Jul-12	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	2072403	AP	24-Jul-12	8021B	
Total Xylenes*	ND	0.150	mg/kg	50	2072403	AP	24-Jul-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*101 %*	*89.4-126*		*2072403*	AP	*24-Jul-12*	*8021B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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July 25, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 07/20/12 10:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 13	H201672-01	Soil	19-Jul-12 06:40	20-Jul-12 10:35
PILE 14	H201672-02	Soil	19-Jul-12 07:10	20-Jul-12 10:35
PILE 603	H201672-03	Soil	19-Jul-12 07:35	20-Jul-12 10:35
PILE 633	H201672-04	Soil	19-Jul-12 07:40	20-Jul-12 10:35
PILE 752	H201672-05	Soil	19-Jul-12 08:20	20-Jul-12 10:35
PILE 755	H201672-06	Soil	19-Jul-12 09:00	20-Jul-12 10:35
PILE 761	H201672-07	Soil	19-Jul-12 09:40	20-Jul-12 10:35
PILE 790	H201672-08	Soil	19-Jul-12 10:15	20-Jul-12 10:35
PILE 791	H201672-09	Soil	19-Jul-12 10:30	20-Jul-12 10:35
PILE 814	H201672-10	Soil	19-Jul-12 11:10	20-Jul-12 10:35

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2072304 - 1:4 DI Water										
Blank (2072304-BLK1)				Prepared & Analyzed: 23-Jul-12						
Chloride	ND	16.0	mg/kg							
LCS (2072304-BS1)				Prepared & Analyzed: 23-Jul-12						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (2072304-BSD1)				Prepared & Analyzed: 23-Jul-12						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2072306 - General Prep - Organics										
Blank (2072306-BLK1)				Prepared & Analyzed: 23-Jul-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*38.6*		mg/kg	*50.0*		*77.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*51.3*		mg/kg	*50.0*		*103*	*63.6-154*			
LCS (2072306-BS1)				Prepared & Analyzed: 23-Jul-12						
GRO C6-C10	169	10.0	mg/kg	200		84.3	66.4-124		23.4	
DRO >C10-C28	181	10.0	mg/kg	200		90.4	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*42.7*		mg/kg	*50.0*		*85.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*54.7*		mg/kg	*50.0*		*109*	*63.6-154*			
LCS Dup (2072306-BSD1)				Prepared & Analyzed: 23-Jul-12						
GRO C6-C10	174	10.0	mg/kg	200		87.1	66.4-124	3.19	23.4	
DRO >C10-C28	180	10.0	mg/kg	200		89.8	61.6-132	0.622	23.1	
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.0*		*88.8*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.1*		mg/kg	*50.0*		*110*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2072403 - Volatiles										
Blank (2072403-BLK1)				Prepared & Analyzed: 24-Jul-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0519*		mg/kg	*0.0500*		*104*	*89.4-126*			
LCS (2072403-BS1)				Prepared & Analyzed: 24-Jul-12						
Benzene	1.87	0.050	mg/kg	2.00		93.6	80.7-116			
Toluene	1.91	0.050	mg/kg	2.00		95.5	89.7-121			
thylbenzene	1.97	0.050	mg/kg	2.00		98.4	91.4-124			
Total Xylenes	6.00	0.150	mg/kg	6.00		100	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0525*		mg/kg	*0.0500*		*105*	*89.4-126*			
LCS Dup (2072403-BSD1)				Prepared & Analyzed: 24-Jul-12						
Benzene	1.83	0.050	mg/kg	2.00		91.7	80.7-116	2.04	16.4	
Toluene	1.83	0.050	mg/kg	2.00		91.7	89.7-121	4.10	16.6	
Ethylbenzene	1.87	0.050	mg/kg	2.00		93.4	91.4-124	5.17	16.1	
Total Xylenes	5.64	0.150	mg/kg	6.00		94.0	93.4-130	6.27	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0517*		mg/kg	*0.0500*		*103*	*89.4-126*			

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: HM LET

Contact: Marcella

Address: 4C CR 3150

Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1782

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 701

Project Name: JFJ

Samplers Signature:

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY

GAL JOB #

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered? Y/N	Preservative(s): Unpreserved (Env. Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO	Analyses Required: GRO	Analyses Required: BTEX	Analyses Required: Chlorides	Comments
H2016772																	
1. Pile 13	7/11/12	6:40	MC	3	1								✓	✓	✓	✓	2 27.6 on 10
2. Pile 14		7:10											✓	✓	✓	✓	
3. Pile 603		7:35											✓	✓	✓	✓	
4. Pile 633		7:40											✓	✓	✓	✓	
5. Pile 752		8:20											✓	✓			
6. Pile 755		9:00											✓	✓	✓	✓	
7. Pile 761		9:40											✓	✓	✓	✓	
8. Pile 790		10:15											✓	✓	✓	✓	
9. Pile 791		10:30											✓	✓	✓	✓	
10. Pile 814	✓	11:10	✓	✓	✓								✓	✓	✓	✓	

Relinquished by:		Date: 7/19/12	Time: 5:00	Received by:	Date: 7/19/12
Relinquished by:		Date: 7-19-12	Time: 7:36	Received by:	Date: 7/19/12

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Fed EX

5.5°C #26

7/20/12

GAL Green Analytical Laboratories

dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Subcontracted – **Cardinal Laboratories**

Pile 819

1312167-06 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Inorganic Compounds									
Chloride	144	16.0		mg/kg	4	01/06/14	4500-Cl-B		AP
Volatile Organic Compounds by EPA Method 8021									
Surrogate: 4-Bromofluorobenzene (PID)			*103 %*	*89.4-126*		*01/02/14*	*8021B*		MS
Benzene*	<0.050	0.050	0.007	mg/kg	50	01/02/14	8021B		MS
Ethylbenzene*	<0.050	0.050	0.010	mg/kg	50	01/02/14	8021B		MS
Toluene*	<0.050	0.050	0.009	mg/kg	50	01/02/14	8021B		MS
Total BTEX	<0.300	0.300		mg/kg	50	01/02/14	8021B		MS
Total Xylenes*	<0.150	0.150	0.026	mg/kg	50	01/02/14	8021B		MS
Petroleum Hydrocarbons by GC FID									
Surrogate: 1-Chlorooctadecane			*93.4 %*	*63.6-154*		*12/30/13*	*8015B*		ms
Surrogate: 1-Chlorooctane			*94.7 %*	*65.2-140*		*12/30/13*	*8015B*		ms
DRO >C10-C28	<10.0	10.0	1.97	mg/kg	1	12/30/13	8015B		ms
GRO C6-C10	<10.0	10.0	1.28	mg/kg	1	12/30/13	8015B		ms

ANALYTICAL
JAN - 6 2014
PASSED

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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Green Analytical Laboratories

75 Suttle Street
Durango, CO 81303
970.247.4220 Phone
970.247.4227 Fax
www.greenanalytical.com

06 January 2014

Marcella Marquez
Industrial Ecosystems Inc.
49 CR 3150
Aztec, NM 87410
RE: BTEX/TPH, Cl

Enclosed are the results of analyses for samples received by the laboratory on 12/19/13 12:34.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt

Debbie Zufelt
Reports Manager

All accredited analytes contained in this report are denoted by an asterisk (*). For a complete list of accredited analytes please do not hesitate to contact us via any of the contact information contained in this report. Our NELAP accreditation can be viewed at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Green Analytical Laboratories is NELAP accredited through the Texas Commission on Environmental Quality. Accreditation applies to drinking water and non-potable water matrices for trace metals and a variety of inorganic parameters. Green Analytical Laboratories is also accredited through the Colorado Department of Public Health and Environment and EPA region 8 for trace metals, Cyanide, Fluoride, Nitrate, and Nitrite in drinking water.

Our affiliate laboratory, Cardinal Laboratories, is also NELAP accredited through the Texas Commission on Environmental Quality for a variety of organic constituents in drinking water, non-potable water and solid matrices. Cardinal is also accredited for regulated VOCs, TTHM, and HAA-5 in drinking water

Green Analytical Laboratories
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www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Pile 687	1312167-01	Solid	12/19/13 07:30	12/19/13 12:34
Pile 723	1312167-02	Solid	12/19/13 08:00	12/19/13 12:34
Pile 769	1312167-03	Solid	12/19/13 08:20	12/19/13 12:34
Pile 771	1312167-04	Solid	12/19/13 08:40	12/19/13 12:34
Pile 814	1312167-05	Solid	12/19/13 09:25	12/19/13 12:34
Pile 819	1312167-06	Solid	12/19/13 09:50	12/19/13 12:34
Pile 828	1312167-07	Solid	12/19/13 10:30	12/19/13 12:34

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49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Inorganic Compounds - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010607 - 1:4 DI Water										
Blank (4010607-BLK1)				Prepared & Analyzed: 01/06/14						
Chloride	ND	16.0	mg/kg							
LCS (4010607-BS1)				Prepared & Analyzed: 01/06/14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4010607-BSD1)				Prepared & Analyzed: 01/06/14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010204 - Volatiles										
Blank (4010204-BLK1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0507*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
LCS (4010204-BS1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0510*		mg/kg	*0.0500*		*102*	*89.4-126*			
Benzene	1.85	0.050	mg/kg	2.00		92.7	76.4-135			
Ethylbenzene	1.91	0.050	mg/kg	2.00		95.3	78.5-133			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Total Xylenes	5.55	0.150	mg/kg	6.00		92.6	80.1-135			
LCS Dup (4010204-BSD1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0506*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	1.94	0.050	mg/kg	2.00		96.9	76.4-135	4.48	16.4	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.3	78.5-133	3.12	16.1	
Toluene	1.97	0.050	mg/kg	2.00		98.5	80.2-135	3.83	16.6	
Total Xylenes	5.72	0.150	mg/kg	6.00		95.4	80.1-135	3.00	15.8	

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Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3122704 - General Prep - Organics										
LCS (3122704-BS1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*52.5*		mg/kg	*50.0*		*105*	*63.6-154*			
Surrogate: 1-Chlorooctane	*53.7*		mg/kg	*50.0*		*107*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		91.9	61.6-132			
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124			
Total TPH C6-C28	373	10.0	mg/kg	400		93.2	69.7-122			
LCS Dup (3122704-BSD1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*54.8*		mg/kg	*50.0*		*110*	*63.6-154*			
Surrogate: 1-Chlorooctane	*56.5*		mg/kg	*50.0*		*113*	*65.2-140*			
DRO >C10-C28	204	10.0	mg/kg	200		102	61.6-132	10.3	23.1	
GRO C6-C10	200	10.0	mg/kg	200		99.8	66.4-124	5.41	23.4	
Total TPH C6-C28	403	10.0	mg/kg	400		101	69.7-122	7.83	20.6	
Batch 3123004 - General Prep - Organics										
Blank (3123004-BLK1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*46.6*		mg/kg	*50.0*		*93.3*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.8*	*65.2-140*			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
LCS (3123004-BS1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*48.0*		mg/kg	*50.0*		*96.0*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.0*		mg/kg	*50.0*		*92.0*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		92.2	61.6-132			
GRO C6-C10	175	10.0	mg/kg	200		87.7	66.4-124			
Total TPH C6-C28	360	10.0	mg/kg	400		89.9	69.7-122			

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49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3123004 - General Prep - Organics										
LCS Dup (3123004-BSD1)			Prepared & Analyzed: 12/30/13							
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.7*	*63.6-154*			
Surrogate: 1-Chlorooctane	*49.9*		mg/kg	*50.0*		*99.8*	*65.2-140*			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132	7.36	23.1	
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124	7.64	23.4	
Total TPH C6-C28	388	10.0	mg/kg	400		97.0	69.7-122	7.50	20.6	

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49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
	*Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: (505)632-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 1961
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB # 312-167

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO/GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
1. Pile 687	12/19/13	7:30	RC	3	1	N							✓	✓	✓	4°C on ice
2. Pile 723	"	8:00	"	"	"	"							✓	✓	✓	
3. Pile 769	"	8:20	"	"	"	"							✓	✓	✓	
4. Pile 771	"	8:40	"	"	"	"							✓	✓	✓	
5. Pile 814	"	9:25	"	"	"	"							✓			
6. Pile 819	"	9:50	"	"	"	"							✓	✓	✓	
7. Pile 828	"	10:30	"	"	"	"							✓	✓	✓	
8.																
9.																
10.																

Relinquished by: [signature] Date: 12/19/13 Time: 10:40 Received by: [signature]
Relinquished by: [signature] Date: 12/19/13 Time: 12:40 Received by: Michael Valentine Date: 12/20/13 Time: 10:40a
Date: 12-19-13 Time: 17:34

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

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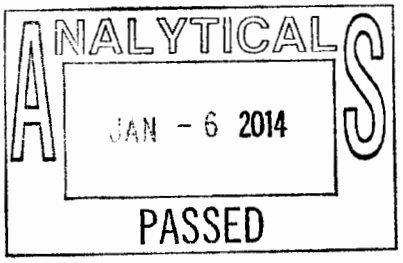
Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Subcontracted – **Cardinal Laboratories**

Pile 828

1312167-07 (Solid)

Analyte	Result	RL	MDL	Units	Dilution	Analyzed	Method	Notes	Analyst
Inorganic Compounds									
Chloride	<16.0	16.0		mg/kg	4	01/06/14	4500-Cl-B		AP
Volatile Organic Compounds by EPA Method 8021									
Surrogate: 4-Bromofluorobenzene (PID)			*122 %*	*89.4-126*		*01/02/14*	*8021B*		MS
Benzene*	<0.050	0.050	0.007	mg/kg	50	01/02/14	8021B		MS
Ethylbenzene*	<0.050	0.050	0.010	mg/kg	50	01/02/14	8021B		MS
Toluene*	<0.050	0.050	0.009	mg/kg	50	01/02/14	8021B		MS
Total BTEX	<0.300	0.300		mg/kg	50	01/02/14	8021B		MS
Total Xylenes*	<0.150	0.150	0.026	mg/kg	50	01/02/14	8021B		MS
Petroleum Hydrocarbons by GC FID									
Surrogate: 1-Chlorooctadecane			*87.5 %*	*63.6-154*		*12/30/13*	*8015B*		ms
Surrogate: 1-Chlorooctane			*92.4 %*	*65.2-140*		*12/30/13*	*8015B*		ms
DRO >C10-C28	**14.0**	10.0	1.97	mg/kg	1	12/30/13	8015B		ms
GRO C6-C10	<10.0	10.0	1.28	mg/kg	1	12/30/13	8015B		ms



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www.greenanalytical.com

06 January 2014

Marcella Marquez
Industrial Ecosystems Inc.
49 CR 3150
Aztec, NM 87410

RE: BTEX/TPH, Cl

Enclosed are the results of analyses for samples received by the laboratory on 12/19/13 12:34.
If you need any further assistance, please feel free to contact me.

Sincerely,

Debbie Zufelt

Debbie Zufelt
Reports Manager

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Pile 771	1312167-04	Solid	12/19/13 08:40	12/19/13 12:34
Pile 814	1312167-05	Solid	12/19/13 09:25	12/19/13 12:34
Pile 819	1312167-06	Solid	12/19/13 09:50	12/19/13 12:34
Pile 828	1312167-07	Solid	12/19/13 10:30	12/19/13 12:34

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49 CR 3150	Project Name / Number: JFJ	**Reported:**
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Inorganic Compounds - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010607 - 1:4 DI Water										
Blank (4010607-BLK1)				Prepared & Analyzed: 01/06/14						
Chloride	ND	16.0	mg/kg							
LCS (4010607-BS1)				Prepared & Analyzed: 01/06/14						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (4010607-BSD1)				Prepared & Analyzed: 01/06/14						
Chloride	400	16.0	mg/kg	400		100	80-120	3.92	20	

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49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4010204 - Volatiles										
Blank (4010204-BLK1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0507*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
LCS (4010204-BS1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0510*		mg/kg	*0.0500*		*102*	*89.4-126*			
Benzene	1.85	0.050	mg/kg	2.00		92.7	76.4-135			
Ethylbenzene	1.91	0.050	mg/kg	2.00		95.3	78.5-133			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Total Xylenes	5.55	0.150	mg/kg	6.00		92.6	80.1-135			
LCS Dup (4010204-BSD1)				Prepared & Analyzed: 01/02/14						
Surrogate: 4-Bromofluorobenzene (PID)	*0.0506*		mg/kg	*0.0500*		*101*	*89.4-126*			
Benzene	1.94	0.050	mg/kg	2.00		96.9	76.4-135	4.48	16.4	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.3	78.5-133	3.12	16.1	
Toluene	1.97	0.050	mg/kg	2.00		98.5	80.2-135	3.83	16.6	
Total Xylenes	5.72	0.150	mg/kg	6.00		95.4	80.1-135	3.00	15.8	

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Debbie Zufelt

Debbie Zufelt, Reports Manager

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Green Analytical Laboratories

dzufelt@greenanalytical.com p: 970.247.4220 f: 970.247.4227 75 Suttle Street Durango, CO 81303

www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3122704 - General Prep - Organics										
LCS (3122704-BS1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*52.5*		mg/kg	*50.0*		*105*	*63.6-154*			
Surrogate: 1-Chlorooctane	*53.7*		mg/kg	*50.0*		*107*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		91.9	61.6-132			
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124			
Total TPH C6-C28	373	10.0	mg/kg	400		93.2	69.7-122			
LCS Dup (3122704-BSD1)				Prepared & Analyzed: 12/27/13						
Surrogate: 1-Chlorooctadecane	*54.8*		mg/kg	*50.0*		*110*	*63.6-154*			
Surrogate: 1-Chlorooctane	*56.5*		mg/kg	*50.0*		*113*	*65.2-140*			
DRO >C10-C28	204	10.0	mg/kg	200		102	61.6-132	10.3	23.1	
GRO C6-C10	200	10.0	mg/kg	200		99.8	66.4-124	5.41	23.4	
Total TPH C6-C28	403	10.0	mg/kg	400		101	69.7-122	7.83	20.6	
Batch 3123004 - General Prep - Organics										
Blank (3123004-BLK1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*46.6*		mg/kg	*50.0*		*93.3*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.9*		mg/kg	*50.0*		*93.8*	*65.2-140*			
DRO >C10-C28	ND	10.0	mg/kg							
EXT DRO >C28-C35	ND	10.0	mg/kg							
GRO C6-C10	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
LCS (3123004-BS1)				Prepared & Analyzed: 12/30/13						
Surrogate: 1-Chlorooctadecane	*48.0*		mg/kg	*50.0*		*96.0*	*63.6-154*			
Surrogate: 1-Chlorooctane	*46.0*		mg/kg	*50.0*		*92.0*	*65.2-140*			
DRO >C10-C28	184	10.0	mg/kg	200		92.2	61.6-132			
GRO C6-C10	175	10.0	mg/kg	200		87.7	66.4-124			
Total TPH C6-C28	360	10.0	mg/kg	400		89.9	69.7-122			

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Petroleum Hydrocarbons by GC FID - Quality Control

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3123004 - General Prep - Organics										
LCS Dup (3123004-BSD1)	Prepared & Analyzed: 12/30/13									
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.7*	*63.6-154*			
Surrogate: 1-Chlorooctane	*49.9*		mg/kg	*50.0*		*99.8*	*65.2-140*			
DRO >C10-C28	199	10.0	mg/kg	200		99.3	61.6-132	7.36	23.1	
GRO C6-C10	189	10.0	mg/kg	200		94.6	66.4-124	7.64	23.4	
Total TPH C6-C28	388	10.0	mg/kg	400		97.0	69.7-122	7.50	20.6	

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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www.GreenAnalytical.com

Industrial Ecosystems Inc.	Project: BTEX/TPH, Cl	
49 CR 3150	Project Name / Number: JFJ	**Reported:**
Aztec NM, 87410	Project Manager: Marcella Marquez	01/06/14 16:40

Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
	*Results reported on as received basis unless designated as dry.
RPD	Relative Percent Difference
LCS	Laboratory Control Sample (Blank Spike)
RL	Report Limit
MDL	Method Detection Limit

Green Analytical Laboratories

Debbie Zufelt

Debbie Zufelt, Reports Manager

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: (505)632-1782
Email:

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 1961
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB # 312-167

Samplers Signature: Rich Rich

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO/GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
1. Pile 687	12/19/13	7:30	RC	3	1	N							✓	✓	✓	4°C on ice
2. Pile 723		8:00											✓	✓	✓	
3. Pile 769		8:20											✓	✓	✓	
4. Pile 771		8:40											✓	✓	✓	
5. Pile 814		9:25											✓			
6. Pile 819		9:50											✓	✓	✓	
7. Pile 828		10:30											✓	✓	✓	
8.																
9.																
10.																

Relinquished by: Rich Rich — Date: 12/19/13 — Time: 10:40
Relinquished by: M. Boone — Date: 12/19/13 — Time: 1234p
Received by: M. Marco
Received by: Michael Valentine — Date: 12/20/13 — Time: 10:40a
Date: 12-19-13 — Time: 1734

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

September 30, 2013

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated September 24, 2013, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s):

Pile # 772 *Pile # 820* *Pile # 833*

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Tuesday, September 24, 2013 11:02 AM
To: Jones, Brad A., EMNRD
Attachments: 0247_0001.pdf; Map.pdf; Pile 772.pdf; Pile 820.pdf; Pile 833.pdf

Importance: High

Brad:

Please see attached letter requesting to reuse treated soils along with the map and analytical reports.

Thanks,
Marcella Marquez
Industrial Ecosystems, Inc.

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

September 24, 2013

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 772 DRO, GRO, BTEX & Chlorides passed 09/16/13
- Pile 820 DRO, GRO, BTEX & Chlorides passed 09/16/13
- Pile 833 DRO, GRO, BTEX & Chlorides passed 09/16/13

Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS
MARCELLA MARQUEZ
49 CR 3150
AZTEC NM, 87410
Fax To: (505) 632-1876

Received:	09/11/2013	Sampling Date:	09/10/2013
Reported:	09/16/2013	Sampling Type:	Soil
Project Name:	JFJ	Sampling Condition:	Cool & Intact
Project Number:	1699	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PILE #772 (H302198-01)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/12/2013	ND	2.21	110	2.00	3.41	
Toluene*	<0.050	0.050	09/12/2013	ND	2.24	112	2.00	3.30	
Ethylbenzene*	<0.050	0.050	09/12/2013	ND	2.27	114	2.00	3.78	
Total Xylenes*	<0.150	0.150	09/12/2013	ND	6.83	114	6.00	3.82	
Total BTEX	<0.300	0.300	09/12/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID *102 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**16.0**	16.0	09/12/2013	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/13/2013	ND	202	101	200	1.28	
DRO >C10-C28	**10.6**	10.0	09/13/2013	ND	198	98.9	200	0.838	

Surrogate: 1-Chlorooctane *80.2 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *83.5 %* *63.6-154*

ANALYTICALS SEP 16 2013 PASSED

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

September 16, 2013

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 09/11/13 10:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: I.E.I.
Contact: Marella
Address: 49 CR 3150
Aztec NM 87413
Phone Number: (505) 632-1782
Email: (505) 632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1699
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB # _____

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
H302198																	
1. Pit #772	9/10/13	7:10	CT	3	1	N							✓	✓	✓	✓	
2. Pit #775	9/10/13	7:30	"	"	"	"							✓	✓	✓	✓	
3. Pit #814	9/10/13	7:45	"	"	"	"							✓	✓	✓	✓	
4. Pit #820	9/10/13	8:15	"	"	"	"							✓	✓	✓	✓	
5. Pit #828	9/10/13	8:45	"	"	"	"							✓	✓	✓	✓	
6. Pit #833	9/10/13	9:25	"	"	"	"							✓	✓	✓	✓	
7.																	
8.																	
9.																	
10.																	

Lab QC on ice

Relinquished by:	Date	Time	Received by	Date	Time
	9/10/13	10:00	M. Maez	9/10/13	10:00
M. Maez	9/10/13	11:56	Christine Clark	9/10/13	11:56
			Kathy Perry	9/11/13	10:15

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

1.8° HCl

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS
MARCELLA MARQUEZ
49 CR 3150
AZTEC NM, 87410
Fax To: (505) 632-1876

Received:	09/11/2013	Sampling Date:	09/10/2013
Reported:	09/16/2013	Sampling Type:	Soil
Project Name:	JFJ	Sampling Condition:	Cool & Intact
Project Number:	1699	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PILE #820 (H302198-04)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2013	ND	2.05	103	2.00	0.141	
Toluene*	**0.070**	0.050	09/13/2013	ND	2.19	110	2.00	1.10	
Ethylbenzene*	<0.050	0.050	09/13/2013	ND	2.30	115	2.00	1.19	
Total Xylenes*	<0.150	0.150	09/13/2013	ND	6.96	116	6.00	1.34	
Total BTEX	<0.300	0.300	09/13/2013	ND					

Surrogate: 4-Bromofluorobenzene (PID *106 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**112**	16.0	09/12/2013	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/12/2013	ND	202	101	200	1.28	
DRO >C10-C28	<10.0	10.0	09/12/2013	ND	198	98.9	200	0.838	

Surrogate: 1-Chlorooctane *86.1 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *90.1 %* *63.6-154*

ANALYTICAL SEP 16 2013 PASSED

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 16, 2013

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 09/11/13 10:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 1

Green Analytical Laboratories

Client: I.E.I.
Contact: Marella
Address: 49 CR 3150
Aztec NM 87413
Phone Number: (505) 632-1782
Email: (505) 632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1699
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
H302198																	
1. Pit #772	9/10/13	7:10	CT	3	1	N							✓	✓	✓	✓	
2. Pit #775	9/10/13	7:30	"	"	"	"							✓	✓	✓	✓	
3. Pit #814	9/10/13	7:45	"	"	"	"							✓	✓	✓	✓	
4. Pit #820	9/10/13	8:15	"	"	"	"							✓	✓	✓	✓	
5. Pit #828	9/10/13	8:45	"	"	"	"							✓	✓	✓	✓	
6. Pit #833	9/10/13	9:25	"	"	"	"							✓	✓	✓	✓	
7.																	
8.																	
9.																	
10.																	

Relinquished by: [signature] Date: 9/10/13 Time: 10:00 Received by: M. Marella
Relinquished by: M. Marella Date: 9/10/13 Time: 11:56 Received by: [signature] Date: 9/10/13 Time: 11:56
9/11/13 10:15

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Page 1 of 3

Temp on ice
1.8° HCl

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS
MARCELLA MARQUEZ
49 CR 3150
AZTEC NM, 87410
Fax To: (505) 632-1876

Received:	09/11/2013	Sampling Date:	09/10/2013
Reported:	09/16/2013	Sampling Type:	Soil
Project Name:	JFJ	Sampling Condition:	Cool & Intact
Project Number:	1699	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PILE #833 (H302198-06)

BTEX 8021B mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	09/13/2013	ND	2.05	103	2.00	0.141	
Toluene*	**0.050**	0.050	09/13/2013	ND	2.19	110	2.00	1.10	
Ethylbenzene*	<0.050	0.050	09/13/2013	ND	2.30	115	2.00	1.19	
Total Xylenes*	<0.150	0.150	09/13/2013	ND	6.96	116	6.00	1.34	
Total BTEX	<0.300	0.300	09/13/2013	ND					

Surrogate: 4-Bromofluorobenzene (PIL *109 %* *89.4-126*

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**64.0**	16.0	09/12/2013	ND	400	100	400	3.92	

TPH 8015M mg/kg **Analyzed By: MS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	09/12/2013	ND	202	101	200	1.28	
DRO >C10-C28	<10.0	10.0	09/12/2013	ND	198	98.9	200	0.838	

Surrogate: 1-Chlorooctane *86.1 %* *65.2-140*

Surrogate: 1-Chlorooctadecane *97.4 %* *63.6-154*

ANALYTICAL
SEP 16 2013
PASSED

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 16, 2013

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 09/11/13 10:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: I.E.I.
Contact: Marella
Address: 49 CR 3150
Aztec NM 87413
Phone Number: (505) 632-1782
Email: (505) 632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 1699
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

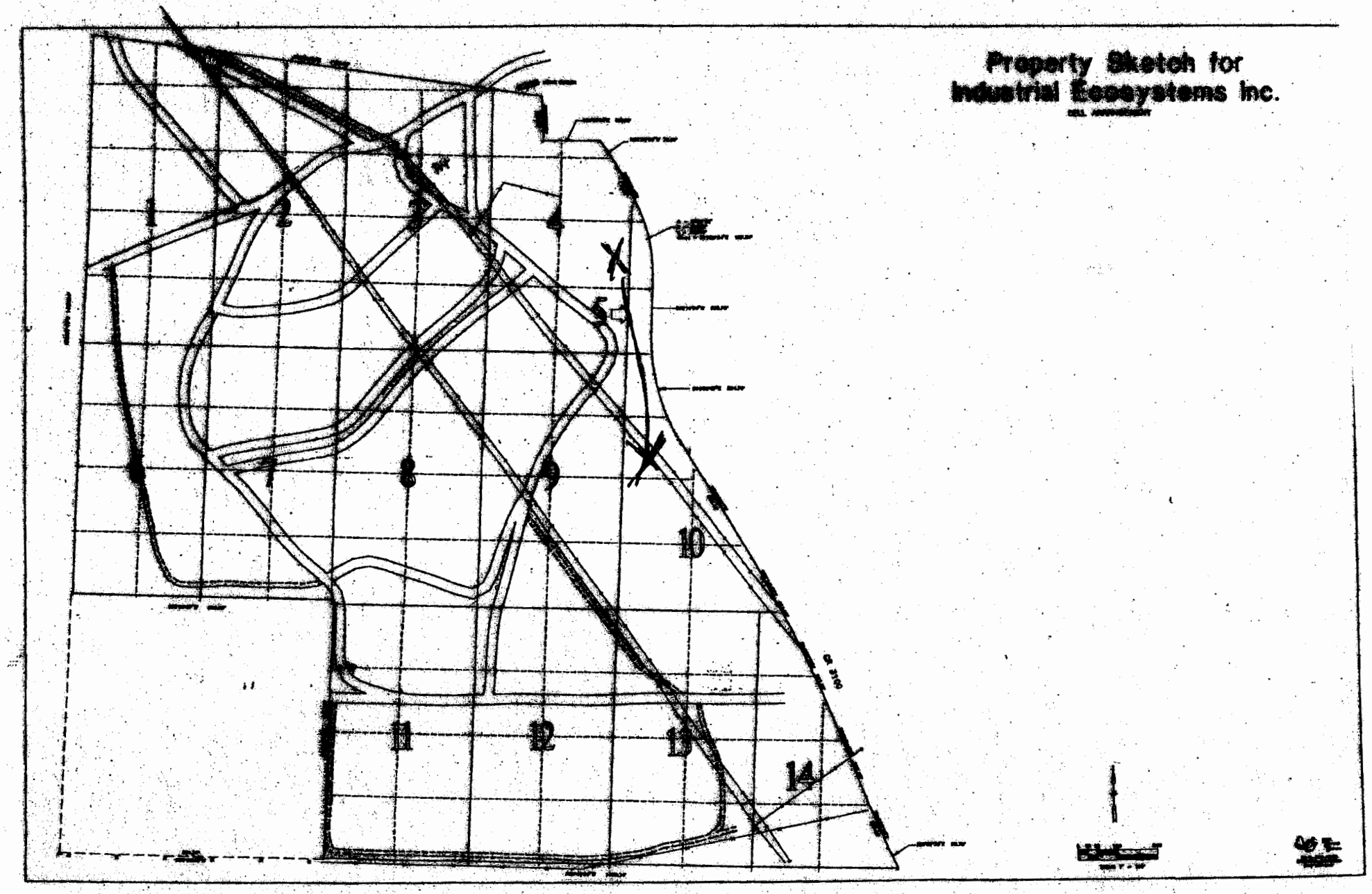
Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
H302198																	
1. Pit #772	9/10/13	7:10	CT	3	1	N							✓	✓	✓	✓	
2. Pit #775	9/10/13	7:30											✓	✓	✓	✓	
3. Pit #819	9/10/13	7:45											✓	✓	✓	✓	
4. Pit #820	9/10/13	8:15											✓	✓	✓	✓	
5. Pit #828	9/10/13	8:45											✓	✓	✓	✓	
6. Pit #833	9/10/13	9:25											✓	✓	✓	✓	
7.																	
8.																	
9.																	
10.																	

Relinquished by: [signature] Date: 9/10/13 Time: 18:00 Received by: M. Morgan Date: 9/10/13 Time: 10:00
Relinquished by: M. Morgan Date: 9/10/13 Time: 11:56 Received by: [signature] Date: 9/10/13 Time: 11:56
[signature] 9/11/13 10:15

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Lab use only
1.8°, HCl


Property Sketch for
Industrial Ecosystems Inc.
1
2
3
4
5
10
11
12
13
14

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary-Designate

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey, Division Director
Oil Conservation Division

June 24, 2013

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated June 21, 2013, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s):

Pile # 747	*Pile # 763*	*Pile # 785*	*Pile # 825*
Pile # 713	*Pile # 761*	*Pile # 792*	*Pile # 789*

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Friday, June 21, 2013 9:54 AM
To: Jones, Brad A., EMNRD
Subject: Letter to request reuse of treated soils on facility
Attachments: Letter to request reuse of treated soils on facility.doc; Pile 747.pdf; Pile 763.pdf; Pile 825.pdf; Pile 713.pdf; Pile 761.pdf; Pile 792.pdf; Pile 789.pdf; Map.pdf; Pile 785.pdf

Importance: High

Brad:

Please see attached letter, analytical reports and map. Let me know if you have any questions or if additional information is needed.

Thanks,
Marcella

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

June 24, 2013

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 747 DRO, GRO, BTEX & Chlorides passed 12/20/12
- Pile 763 DRO Passed 12/20/12, GRO, BTEX & Chlorides passed 06/21/11
- Pile 785 DRO, GRO, BTEX & Chlorides passed 12/20/12
- Pile 825 DRO, GRO, BTEX & Chlorides passed 12/20/12
- Pile 713 DRO passed 06/06/13, GRO, BTEX & Chlorides passed 12/20/12
- Pile 761 DRO, GRO, BTEX & Chlorides passed 06/06/13
- Pile 792 DRO passed 06/06/13, GRO, BTEX & Chlorides passed 12/20/12
- Pile 789 DRO passed 06/06/13, GRO, BTEX, Chlorides passed 09/28/12

Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #747

H203007-07 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	ND	16.0	mg/kg	4	2121911	HM	19-Dec-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
DRO >C10-C28	65.4	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*75.8 %*	*65.2-140*		*2121701*	MS	*18-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*84.1 %*	*63.6-154*		*2121701*	MS	*18-Dec-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Toluene*	0.101	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total Xylenes*	ND	0.150	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total BTEX	ND	0.300	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*117 %*	*89.4-126*		*2121901*	AP	*19-Dec-12*	*8021B*	

ANALYTICAL DEC 20 2012 PASSED

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 2

Client: I.E.I

Contact: Marcella

Address: 49 CR 3150
Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047

Project Name: JFJ Samples

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S. A. Alcup

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	GRO 8015M	BTEX 8021B	Chloride 300.0	Comments
	H2D3007																	13.7 c
01	1. Pile #132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 773		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S. A. Alcup	Date: 12/12/12	Time: 12:30	Received by: M. Morgan	Date: 12/12/12	Time: 12:30
Relinquished by: M. Morgan	Date: 12/13/12	Time: 15:00	Received by: Kristen Clark	Date: 12/13/12	Time: 730

Jodi Henson 12/14/12 11:00
#210 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CHAIN OF CUSTODY RECORD

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S. Alvarez

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015m	GRO 8015m	BTEX 8021B	Chloride 300.0	Comments
	H203007																	
11	1. Pile #763	12/11/12	10:30	SA	3	1	N							✓				13.7 c onica
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S. Alvarez	Date: 12/12/12	Time: 12:30	Received by: M. Magnes	Date: 12/12/12	Time: 18:20
Relinquished by: M. Davis	Date: 12/13/12	Time: 13:00	Received by: Kristen Clarke	Date: 12/13/12	Time: 1300
			Jodi Stenson	12/14/12	11:00

#26 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #763

H203007-11 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Organic Compounds									
DRO >C10-C28	**48.2**	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*83.9 %*	*65.2-140*		*2121701*	MS	*18-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*98.2 %*	*63.6-154*		*2121701*	MS	*18-Dec-12*	*8015M*	

ANALYTICALS
DEC 20 2012
PASSED

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December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)	Prepared & Analyzed: 19-Dec-12									
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.0*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Client: I.E.I
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ Samples

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S. A. Alonzo

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015M	GRO 8015M	BTEX 8021B	Chloride 300.0	Comments
	H203007																	13.7 c
01	1. Pit # 132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 773		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S. A. Alonzo	Date: 12/12/12	Time: 12:30	Received by: M. Morgan	Date: 12/12/12	Time: 12:30
Relinquished by: M. Morgan	Date: 12/13/12	Time: 15:00	Received by: Christy Clark	Date: 12/13/12	Time: 730
			Jodi Henson	12/14/12	11:00

#210 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CHAIN OF CUSTODY RECORD

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S A Alvey

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015m	Analyses Required: GRO 8015m	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H203007																	13.7 conical
11	1. Pit 6 #763	12/11/12	10:30	SA	3	1	N							✓				
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S A Alvey	Date: 12/12/12	Time: 12:30	Received by: M. Magnes	Date: 12/12/12	Time: 1820
Relinquished by: M. Jones	Date: 12/13/12	Time: 13:00	Received by: Jodi Stenson	Date: 12/13/12	Time: 1300

12/14/12 11:00
#26 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS
MARCELLA MARQUEZ
49 CR 3150
AZTEC NM, 87410
Fax To: (505) 632-1876

Received:	06/22/2011	Sampling Date:	06/21/2011
Reported:	06/28/2011	Sampling Type:	Soil
Project Name:	JFJ	Sampling Condition:	Cool & Intact
Project Number:	9780	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PILE 763 (H101287-04)

BTEX 8260B mg/kg Analyzed By: CMS

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	06/23/2011	ND	2.10	105	2.00	21.9	
Toluene*	<0.050	0.050	06/23/2011	ND	2.01	101	2.00	20.1	
Ethylbenzene*	<0.050	0.050	06/23/2011	ND	1.94	97.2	2.00	23.2	
Total Xylenes*	<0.150	0.150	06/23/2011	ND	5.84	97.4	6.00	24.8	

Surrogate: Dibromofluoromethane	*83.9 %*	*80-120*
Surrogate: Toluene-d8	*102 %*	*80-120*
Surrogate: 4-Bromofluorobenzene	*106 %*	*80-120*

Chloride, SM4500Cl-B mg/kg Analyzed By: HM

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**48.0**	16.0	06/22/2011	ND	464	116	400	7.14	

TPH 8015M mg/kg Analyzed By: ab

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
GRO C6-C10	<10.0	10.0	06/24/2011	ND	171	85.4	200	5.18	
DRO >C10-C28	**200**	10.0	06/24/2011	ND	170	85.1	200	5.11	

Surrogate: 1-Chlorooctane	*86.0 %*	*70-130*
Surrogate: 1-Chlorooctadecane	*105 %*	*70-130*

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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June 28, 2011

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RECEIVED
JUN 28 2011

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 06/22/11 10:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec, NM 87410
Phone Number: 632-1782
FAX Number: 632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 9780
Project Name: JFJ Sampling

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: 9780 Clyde Rodgers

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H10287																	
1	1. Pile # 586	06/21/11	9:25a	CT	3	1	N							✓			✓	
2	2. Pile # 743	↓	9:50a	↓	↓	↓	↓							✓	✓	✓	✓	
3	3. Pile # 747		10:21a											✓	✓	✓	✓	
4	4. Pile # 763		11:05a											✓	✓	✓	✓	
5	5. Pile # 765		11:45a											✓	✓	✓	✓	
	6.																	
	7.																	
	8.																	
	9.																	
	10.																	

Relinquished by: Clyde Rodgers	Date: 6/21/11	Time: 11:50	Received by: L.M. Marquez	Date: 06/21/11	Time: 11:51
Relinquished by: L.M. Marquez	Date: 06/21/11	Time: 11:51	Received by: Teresa MacDonald	Date: 6-21-11	Time: 11:52

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Teresa MacDonald 6-21-11 14:30 Christa Clark 6/21/11

Page 1 of 1

Cool Shipson 5°C 6/23/11 10:30 #26

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #785

H203007-14 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	**224**	16.0	mg/kg	4	2121911	HM	19-Dec-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	2121903	MS	19-Dec-12	8015M	
DRO >C10-C28	**35.5**	10.0	mg/kg	1	2121903	MS	19-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*85.8 %*	*65.2-140*		*2121903*	MS	*19-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*101 %*	*63.6-154*		*2121903*	MS	*19-Dec-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Toluene*	ND	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total Xylenes*	ND	0.150	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total BTEX	ND	0.300	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*115 %*	*89.4-126*		*2121901*	AP	*19-Dec-12*	*8021B*	

ANALYTICAL
DEC 20 2012
PASSED

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Client: I.E.I

Contact: Marcella

Address: 49 CR 3150

Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1876

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 1047

Project Name: JFJ Samples

Table 1. – Matrix Type

1 = Surface Water, 2 = Ground Water

3 = Soil/Sediment, 4 = Rinsate, 5 = Oil

6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY

GAL JOB #

Samplers Signature: S A Alsup

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H2D3007																	13.7 c
01	1. Pit # 132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 713		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S A Alsup	Date: 12/12/12	Time: 12:30	Received by: M. Morgan	Date: 12/12/12	Time: 12:30
Relinquished by: M. Morgan	Date: 12/13/12	Time: 15:00	Received by: Christie Clark	Date: 12/13/12	Time: 7:30
			Jodi Henson	12/14/12	11:00

#210 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CHAIN OF CUSTODY RECORD

Green Analytical Laboratories

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S A Alvey

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015m	GRO 8015m	BTEX 8021B	Chloride 300.0	Comments
	H203007																	13.7 conical
11	1. Pile #763	12/11/12	10:30	SA	3	1	N							✓				
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S A Alvey	Date: 12/12/12	Time: 12:30	Received by: A. M. Marquez	Date: 12/12/12	Time: 18:30
Relinquished by: M. Jones	Date: 12/13/12	Time: 13:00	Received by: Jodi Henson	Date: 12/13/12	Time: 1300

12/14/12 11:00
#2640

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #825

H203007-20 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	**352**	16.0	mg/kg	4	2121911	HM	19-Dec-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	2121903	MS	19-Dec-12	8015M	
DRO >C10-C28	ND	10.0	mg/kg	1	2121903	MS	19-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*82.4 %*	*65.2-140*		*2121903*	MS	*19-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*90.9 %*	*63.6-154*		*2121903*	MS	*19-Dec-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Toluene*	ND	0.050	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Total Xylenes*	ND	0.150	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Total BTEX	ND	0.300	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*116 %*	*89.4-126*		*2121901*	AP	*20-Dec-12*	*8021B*	

ANALYTICAL RECEIVED DEC 21 2012 PASSED

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December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Celey D. Keene, Lab Director/Quality Manager

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

Cardinal Laboratories

*=Accredited Analyte

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)	Prepared & Analyzed: 19-Dec-12									
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Client: I.E.I

Contact: Marcella

Address: 49 CR 3150

Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1876

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 1047

Project Name: JFJ Samples

Table 1. – Matrix Type

1 = Surface Water, 2 = Ground Water

3 = Soil/Sediment, 4 = Rinsate, 5 = Oil

6 = Waste, 7 = Other (Specify) ____

Samplers Signature: S A Allen

FOR GAL USE ONLY

GAL JOB #

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H2D3007																	13.7 c
01	1. Pit #132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 713		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S A Allen	Date: 12/12/12	Time: 12:30	Received by: M. Morgan	Date: 12/12/12	Time: 12:30
Relinquished by: M. Morgan	Date: 12/13/12	Time: 15:00	Received by: Christie Clark	Date: 12/13/12	Time: 730
			Jodi Henson	12/14/12	11:00

#210 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CHAIN OF CUSTODY RECORD

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec, NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S & Alvey

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015m	GRO 8015m	BTEX 8021B	Chloride 300.0	Comments
	H203007																	13.7 conica
11	1. Pit #763	12/11/12	10:30	SA	3	1	N							✓				
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S & Alvey	Date: 12/12/12	Time: 12:30	Received by: A. M. Maggie	Date: 12/12/12	Time: 18:20
Relinquished by: M. Davis	Date: 12/13/12	Time: 13:00	Received by: Jodi Henson	Date: 12/13/12	Time: 1300

12/14/12 11:00
#26 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

PILE #713

H301279-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Organic Compounds									
DRO >C10-C28	**49.1**	10.0	**mg/kg**	1	3060501	MS	05-Jun-13	8015M	
Surrogate: 1-Chlorooctane		*103 %*	*65.2-140*		*3060501*	MS	*05-Jun-13*	*8015M*	
Surrogate: 1-Chlorooctadecane		*102 %*	*63.6-154*		*3060501*	MS	*05-Jun-13*	*8015M*	

ANALYTICAL JUN - 6 2013 PASSED

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Celey D. Keene, Lab Director/Quality Manager

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June 06, 2013

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/31/13 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #713	H301279-01	Soil	30-May-13 11:20	31-May-13 10:30
PILE #761	H301279-02	Soil	30-May-13 11:30	31-May-13 10:30
PILE #789	H301279-03	Soil	30-May-13 11:35	31-May-13 10:30
PILE #792	H301279-04	Soil	30-May-13 11:45	31-May-13 10:30
PILE #822	H301279-05	Soil	30-May-13 11:55	31-May-13 10:30

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060308 - 1:4 DI Water										
Blank (3060308-BLK1)				Prepared & Analyzed: 03-Jun-13						
Chloride	ND	16.0	mg/kg							
LCS (3060308-BS1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3060308-BSD1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	
Batch 3060309 - 1:4 DI Water										
Blank (3060309-BLK1)				Prepared & Analyzed: 03-Jun-13						
Chloride	ND	16.0	mg/kg							
LCS (3060309-BS1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3060309-BSD1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060501 - General Prep - Organics										
Blank (3060501-BLK1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*46.8*		mg/kg	*50.0*		*93.6*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.7*		mg/kg	*50.0*		*101*	*63.6-154*			
LCS (3060501-BS1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	195	10.0	mg/kg	200		97.6	66.4-124			
DRO >C10-C28	197	10.0	mg/kg	200		98.7	61.6-132			
Surrogate: 1-Chlorooctane	*50.4*		mg/kg	*50.0*		*101*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*52.7*		mg/kg	*50.0*		*105*	*63.6-154*			
LCS Dup (3060501-BSD1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	198	10.0	mg/kg	200		99.0	66.4-124	1.42	23.4	
DRO >C10-C28	203	10.0	mg/kg	200		101	61.6-132	2.74	23.1	
Surrogate: 1-Chlorooctane	*51.8*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*56.1*		mg/kg	*50.0*		*112*	*63.6-154*			
Batch 3060503 - General Prep - Organics										
Blank (3060503-BLK1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*52.7*		mg/kg	*50.0*		*105*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*53.8*		mg/kg	*50.0*		*108*	*63.6-154*			
LCS (3060503-BS1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	212	10.0	mg/kg	200		106	66.4-124			
DRO >C10-C28	222	10.0	mg/kg	200		111	61.6-132			
Surrogate: 1-Chlorooctane	*57.3*		mg/kg	*50.0*		*115*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*58.9*		mg/kg	*50.0*		*118*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Leve	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060503 - General Prep - Organics										
LCS Dup (3060503-BSD1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	3.07	23.4	
DRO >C10-C28	214	10.0	mg/kg	200		107	61.6-132	3.64	23.1	
Surrogate: 1-Chlorooctane	*54.7*		mg/kg	*50.0*		*109*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.6*		mg/kg	*50.0*		*111*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060402 - Volatiles										
Blank (3060402-BLK1)				Prepared & Analyzed: 04-Jun-13						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*99.2*	*89.4-126*			
LCS (3060402-BS1)				Prepared: 04-Jun-13 Analyzed: 06-Jun-13						
Benzene	2.11	0.050	mg/kg	2.00		105	76.4-135			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Ethylbenzene	2.00	0.050	mg/kg	2.00		100	78.5-133			
Total Xylenes	5.86	0.150	mg/kg	6.00		97.7	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0590*		mg/kg	*0.0500*		*118*	*89.4-126*			
LCS Dup (3060402-BSD1)				Prepared & Analyzed: 04-Jun-13						
Benzene	2.43	0.050	mg/kg	2.00		121	76.4-135	14.1	16.4	
Toluene	2.20	0.050	mg/kg	2.00		110	80.2-135	14.7	16.6	
Ethylbenzene	2.38	0.050	mg/kg	2.00		119	78.5-133	17.2	16.1	
Total Xylenes	6.87	0.150	mg/kg	6.00		114	80.1-135	15.8	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0491*		mg/kg	*0.0500*		*98.2*	*89.4-126*			
Batch 3060502 - Volatiles										
Blank (3060502-BLK1)				Prepared & Analyzed: 05-Jun-13						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0605*		mg/kg	*0.0500*		*121*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060502 - Volatiles										
LCS (3060502-BS1)				Prepared & Analyzed: 05-Jun-13						
Benzene	2.24	0.050	mg/kg	2.00		112	76.4-135			
Toluene	2.02	0.050	mg/kg	2.00		101	80.2-135			
Ethylbenzene	2.19	0.050	mg/kg	2.00		109	78.5-133			
Total Xylenes	6.37	0.150	mg/kg	6.00		106	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0587*		mg/kg	*0.0500*		*117*	*89.4-126*			
LCS Dup (3060502-BSD1)				Prepared & Analyzed: 05-Jun-13						
Benzene	2.10	0.050	mg/kg	2.00		105	76.4-135	6.40	16.4	
Toluene	1.84	0.050	mg/kg	2.00		92.1	80.2-135	9.20	16.6	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.7	78.5-133	10.4	16.1	
Total Xylenes	5.83	0.150	mg/kg	6.00		97.2	80.1-135	8.90	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0583*		mg/kg	*0.0500*		*117*	*89.4-126*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Industrial Ecosystems

Contact: Marcella

Address: 49 CR 3150
Aztec, NM 87410

Phone Number: 505-632-1782

Email: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1428

Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: TPH 8015M DRO	Analyses Required: 8015M GRO	Analyses Required: BTEX 8021B	Analyses Required: Chlorides 300	Comments
H301279																	18.1 conical
1. Pile 713	5/30	11:20	CT	3	1	N							✓				
2. Pile 761		11:30											✓	✓	✓	✓	
3. Pile 789		11:35											✓				
4. Pile 792		11:45											✓				
5. Pile 822		11:55											✓	✓	✓	✓	
6.																	
7.																	
8.																	
9.																	
10.																	

Relinquished by:	Date: 05/30/13	Time: 12:01 p	Received by:	Date: 05/30/13	Time: 12:01
Relinquished by:	Date: 05/30/13	Time: 12:20p	Received by:	Date: 5/30/13	Time: 1220
			Jodi Henson 4°		5/31/13 10:30 #54

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #713

H203007-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	**592**	16.0	mg/kg	4	2121911	HM	19-Dec-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
DRO >C10-C28	**105**	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*76.5 %*	*65.2-140*		*2121701*	MS	*18-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*89.2 %*	*63.6-154*		*2121701*	MS	*18-Dec-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Toluene*	**0.141**	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total Xylenes*	**0.357**	0.150	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total BTEX	**0.498**	0.300	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*119 %*	*89.4-126*		*2121901*	AP	*19-Dec-12*	*8021B*	

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December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds • Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Client: I.E.I

Contact: Marcella

Address: 49 CR 3150

Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1876

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 1047

Project Name: JFJ Samples

Table 1. – Matrix Type

1 = Surface Water, 2 = Ground Water

3 = Soil/Sediment, 4 = Rinsate, 5 = Oil

6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY

GAL JOB #

Samplers Signature: S A Alcaya

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H2D3007																	13.7 c
01	1. Pit # 132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 773		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S A Alcaya	Date: 12/12/12	Time: 12:30	Received by: M. Monroe	Date: 12/12/12	Time: 12:30
Relinquished by: M. Monroe	Date: 12/13/12	Time: 15:00	Received by: Christy Clark	Date: 12/13/12	Time: 730
			Jodi Henson	12/14/12	11:00

#210 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CHAIN OF CUSTODY RECORD

Page 2 of 2

GAL Analytical Laboratories

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S.L. Alvey

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015m	GRO 8015m	BTEX 8021B	Chloride 300.0	Comments
	H203007																	137 conical
11	1. Pit #763	12/11/12	10:30	SA	3	1	N							✓				
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S.L. Alvey	Date: 12/12/12	Time: 12:30	Received by: A. M. Marquez	Date: 12/12/12	Time: 18:20
Relinquished by: M. Davis	Date: 12/13/12	Time: 13:00	Received by: Kristen Olson	Date: 12/13/12	Time: 1300

Jodi Denson 12/14/12 11:00 #26 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

PILE #761

H301279-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	**192**	16.0	mg/kg	4	3060308	DW	03-Jun-13	4500-Cl-B	
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	3060501	MS	05-Jun-13	8015M	
DRO >C10-C28	**23.4**	10.0	mg/kg	1	3060501	MS	05-Jun-13	8015M	
Surrogate: 1-Chlorooctane		*98.5 %*	*65.2-140*		*3060501*	MS	*05-Jun-13*	*8015M*	
Surrogate: 1-Chlorooctadecane		*106 %*	*63.6-154*		*3060501*	MS	*05-Jun-13*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	3060402	AP	05-Jun-13	8021B	
Toluene*	ND	0.050	mg/kg	50	3060402	AP	05-Jun-13	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	3060402	AP	05-Jun-13	8021B	
Total Xylenes*	ND	0.150	mg/kg	50	3060402	AP	05-Jun-13	8021B	
Total BTEX	ND	0.300	mg/kg	50	3060402	AP	05-Jun-13	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*100 %*	*89.4-126*		*3060402*	AP	*05-Jun-13*	*8021B*	

ANALYTICAL
JUN - 6 2013
PASSED

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Celey D. Keene, Lab Director/Quality Manager

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June 06, 2013

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/31/13 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #713	H301279-01	Soil	30-May-13 11:20	31-May-13 10:30
PILE #761	H301279-02	Soil	30-May-13 11:30	31-May-13 10:30
PILE #789	H301279-03	Soil	30-May-13 11:35	31-May-13 10:30
PILE #792	H301279-04	Soil	30-May-13 11:45	31-May-13 10:30
PILE #822	H301279-05	Soil	30-May-13 11:55	31-May-13 10:30

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060308 - 1:4 DI Water										
Blank (3060308-BLK1)				Prepared & Analyzed: 03-Jun-13						
Chloride	ND	16.0	mg/kg							
LCS (3060308-BS1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3060308-BSD1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	
Batch 3060309 - 1:4 DI Water										
Blank (3060309-BLK1)				Prepared & Analyzed: 03-Jun-13						
Chloride	ND	16.0	mg/kg							
LCS (3060309-BS1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3060309-BSD1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060501 - General Prep - Organics										
Blank (3060501-BLK1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*46.8*		mg/kg	*50.0*		*93.6*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.7*		mg/kg	*50.0*		*101*	*63.6-154*			
LCS (3060501-BS1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	195	10.0	mg/kg	200		97.6	66.4-124			
DRO >C10-C28	197	10.0	mg/kg	200		98.7	61.6-132			
Surrogate: 1-Chlorooctane	*50.4*		mg/kg	*50.0*		*101*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*52.7*		mg/kg	*50.0*		*105*	*63.6-154*			
LCS Dup (3060501-BSD1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	198	10.0	mg/kg	200		99.0	66.4-124	1.42	23.4	
DRO >C10-C28	203	10.0	mg/kg	200		101	61.6-132	2.74	23.1	
Surrogate: 1-Chlorooctane	*51.8*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*56.1*		mg/kg	*50.0*		*112*	*63.6-154*			
Batch 3060503 - General Prep - Organics										
Blank (3060503-BLK1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*52.7*		mg/kg	*50.0*		*105*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*53.8*		mg/kg	*50.0*		*108*	*63.6-154*			
LCS (3060503-BS1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	212	10.0	mg/kg	200		106	66.4-124			
DRO >C10-C28	222	10.0	mg/kg	200		111	61.6-132			
Surrogate: 1-Chlorooctane	*57.3*		mg/kg	*50.0*		*115*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*58.9*		mg/kg	*50.0*		*118*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060503 - General Prep - Organics										
LCS Dup (3060503-BSD1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	3.07	23.4	
DRO >C10-C28	214	10.0	mg/kg	200		107	61.6-132	3.64	23.1	
Surrogate: 1-Chlorooctane	*54.7*		mg/kg	*50.0*		*109*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.6*		mg/kg	*50.0*		*111*	*63.6-154*			

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060402 - Volatiles										
Blank (3060402-BLK1)				Prepared & Analyzed: 04-Jun-13						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*99.2*	*89.4-126*			
LCS (3060402-BS1)				Prepared: 04-Jun-13 Analyzed: 06-Jun-13						
Benzene	2.11	0.050	mg/kg	2.00		105	76.4-135			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Ethylbenzene	2.00	0.050	mg/kg	2.00		100	78.5-133			
Total Xylenes	5.86	0.150	mg/kg	6.00		97.7	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0590*		mg/kg	*0.0500*		*118*	*89.4-126*			
LCS Dup (3060402-BSD1)				Prepared & Analyzed: 04-Jun-13						
Benzene	2.43	0.050	mg/kg	2.00		121	76.4-135	14.1	16.4	
Toluene	2.20	0.050	mg/kg	2.00		110	80.2-135	14.7	16.6	
Ethylbenzene	2.38	0.050	mg/kg	2.00		119	78.5-133	17.2	16.1	
Total Xylenes	6.87	0.150	mg/kg	6.00		114	80.1-135	15.8	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0491*		mg/kg	*0.0500*		*98.2*	*89.4-126*			
Batch 3060502 - Volatiles										
Blank (3060502-BLK1)				Prepared & Analyzed: 05-Jun-13						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0605*		mg/kg	*0.0500*		*121*	*89.4-126*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060502 - Volatiles										
LCS (3060502-BS1)				Prepared & Analyzed: 05-Jun-13						
Benzene	2.24	0.050	mg/kg	2.00		112	76.4-135			
Toluene	2.02	0.050	mg/kg	2.00		101	80.2-135			
Ethylbenzene	2.19	0.050	mg/kg	2.00		109	78.5-133			
Total Xylenes	6.37	0.150	mg/kg	6.00		106	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0587*		mg/kg	*0.0500*		*117*	*89.4-126*			
LCS Dup (3060502-BSD1)				Prepared & Analyzed: 05-Jun-13						
Benzene	2.10	0.050	mg/kg	2.00		105	76.4-135	6.40	16.4	
Toluene	1.84	0.050	mg/kg	2.00		92.1	80.2-135	9.20	16.6	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.7	78.5-133	10.4	16.1	
Total Xylenes	5.83	0.150	mg/kg	6.00		97.2	80.1-135	8.90	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0583*		mg/kg	*0.0500*		*117*	*89.4-126*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Industrial Ecosystems
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505 632-1782
Email: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 1428
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chlorides 300	Comments
H301279																	18.1 c on ice
1. Pile 713	5/30	11:20	CT	3	1	N							✓				
2. Pile 761		11:30											✓	✓	✓	✓	
3. Pile 789		11:35											✓				
4. Pile 792		11:45											✓				
5. Pile 822		11:55											✓	✓	✓	✓	
6.																	
7.																	
8.																	
9.																	
10.																	

Relinquished by:	Date: 05/30/13	Time: 12:01	Received by:	Date: 05/30/13	Time: 12:01
Relinquished by:	Date: 05/30/13	Time: 12:20	Received by:	Date: 5/30/13	Time: 12:20

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

5/31/13 10:30
#54

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

PILE #792

H301279-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Organic Compounds									
DRO >C10-C28	**13.1**	10.0	mg/kg	1	3060503	MS	05-Jun-13	8015M	
Surrogate: 1-Chlorooctane		*103 %*	*65.2-140*		*3060503*	MS	*05-Jun-13*	*8015M*	
Surrogate: 1-Chlorooctadecane		*108 %*	*63.6-154*		*3060503*	MS	*05-Jun-13*	*8015M*	

ANALYTICAL
JUN - 6 2013
PASSED

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June 06, 2013

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/31/13 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #713	H301279-01	Soil	30-May-13 11:20	31-May-13 10:30
PILE #761	H301279-02	Soil	30-May-13 11:30	31-May-13 10:30
PILE #789	H301279-03	Soil	30-May-13 11:35	31-May-13 10:30
PILE #792	H301279-04	Soil	30-May-13 11:45	31-May-13 10:30
PILE #822	H301279-05	Soil	30-May-13 11:55	31-May-13 10:30

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060308 - 1:4 DI Water										
Blank (3060308-BLK1)				Prepared & Analyzed: 03-Jun-13						
Chloride	ND	16.0	mg/kg							
LCS (3060308-BS1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3060308-BSD1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	
Batch 3060309 - 1:4 DI Water										
Blank (3060309-BLK1)				Prepared & Analyzed: 03-Jun-13						
Chloride	ND	16.0	mg/kg							
LCS (3060309-BS1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3060309-BSD1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060501 - General Prep - Organics										
Blank (3060501-BLK1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*46.8*		mg/kg	*50.0*		*93.6*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.7*		mg/kg	*50.0*		*101*	*63.6-154*			
LCS (3060501-BS1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	195	10.0	mg/kg	200		97.6	66.4-124			
DRO >C10-C28	197	10.0	mg/kg	200		98.7	61.6-132			
Surrogate: 1-Chlorooctane	*50.4*		mg/kg	*50.0*		*101*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*52.7*		mg/kg	*50.0*		*105*	*63.6-154*			
LCS Dup (3060501-BSD1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	198	10.0	mg/kg	200		99.0	66.4-124	1.42	23.4	
DRO >C10-C28	203	10.0	mg/kg	200		101	61.6-132	2.74	23.1	
Surrogate: 1-Chlorooctane	*51.8*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*56.1*		mg/kg	*50.0*		*112*	*63.6-154*			
Batch 3060503 - General Prep - Organics										
Blank (3060503-BLK1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*52.7*		mg/kg	*50.0*		*105*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*53.8*		mg/kg	*50.0*		*108*	*63.6-154*			
LCS (3060503-BS1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	212	10.0	mg/kg	200		106	66.4-124			
DRO >C10-C28	222	10.0	mg/kg	200		111	61.6-132			
Surrogate: 1-Chlorooctane	*57.3*		mg/kg	*50.0*		*115*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*58.9*		mg/kg	*50.0*		*118*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060503 - General Prep - Organics										
LCS Dup (3060503-BSD1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	3.07	23.4	
DRO >C10-C28	214	10.0	mg/kg	200		107	61.6-132	3.64	23.1	
Surrogate: 1-Chlorooctane	*54.7*		mg/kg	*50.0*		*109*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.6*		mg/kg	*50.0*		*111*	*63.6-154*			

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INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060402 - Volatiles										
Blank (3060402-BLK1)				Prepared & Analyzed: 04-Jun-13						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*99.2*	*89.4-126*			
LCS (3060402-BS1)				Prepared: 04-Jun-13 Analyzed: 06-Jun-13						
Benzene	2.11	0.050	mg/kg	2.00		105	76.4-135			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Ethylbenzene	2.00	0.050	mg/kg	2.00		100	78.5-133			
Total Xylenes	5.86	0.150	mg/kg	6.00		97.7	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0590*		mg/kg	*0.0500*		*118*	*89.4-126*			
LCS Dup (3060402-BSD1)				Prepared & Analyzed: 04-Jun-13						
Benzene	2.43	0.050	mg/kg	2.00		121	76.4-135	14.1	16.4	
Toluene	2.20	0.050	mg/kg	2.00		110	80.2-135	14.7	16.6	
Ethylbenzene	2.38	0.050	mg/kg	2.00		119	78.5-133	17.2	16.1	
Total Xylenes	6.87	0.150	mg/kg	6.00		114	80.1-135	15.8	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0491*		mg/kg	*0.0500*		*98.2*	*89.4-126*			
Batch 3060502 - Volatiles										
Blank (3060502-BLK1)				Prepared & Analyzed: 05-Jun-13						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0605*		mg/kg	*0.0500*		*121*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060502 - Volatiles										
LCS (3060502-BS1)				Prepared & Analyzed: 05-Jun-13						
Benzene	2.24	0.050	mg/kg	2.00		112	76.4-135			
Toluene	2.02	0.050	mg/kg	2.00		101	80.2-135			
Ethylbenzene	2.19	0.050	mg/kg	2.00		109	78.5-133			
Total Xylenes	6.37	0.150	mg/kg	6.00		106	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0587*		mg/kg	*0.0500*		*117*	*89.4-126*			
LCS Dup (3060502-BSD1)				Prepared & Analyzed: 05-Jun-13						
Benzene	2.10	0.050	mg/kg	2.00		105	76.4-135	6.40	16.4	
Toluene	1.84	0.050	mg/kg	2.00		92.1	80.2-135	9.20	16.6	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.7	78.5-133	10.4	16.1	
Total Xylenes	5.83	0.150	mg/kg	6.00		97.2	80.1-135	8.90	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0583*		mg/kg	*0.0500*		*117*	*89.4-126*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: Industrial Ecosystems

Contact: Marcella

Address: 49 CR 3150
Aztec, NM 87410

Phone Number: 505-632-1782

Email: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1428

Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (lab Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chlorides 300	Comments
H301279																	
1. Pile 713	5/30	11:20	CT	3	1	N							✓				
2. Pile 761		11:30											✓	✓	✓	✓	
3. Pile 789		11:35											✓				
4. Pile 792		11:45											✓				
5. Pile 822	↓	11:55	↓	↓	↓	↓							✓	✓	✓	✓	
6.																	
7.																	
8.																	
9.																	
10.																	

Comments: 18 containers

Relinquished by:	Date: 05/30/13	Time: 12:01	Received by:	Date: 05/30/13	Time: 12:01
Relinquished by:	Date: 05/29/13	Time: 12:20	Received by:	Date: 5/30/13	Time: 12:20

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Jodi Henson 5/31/13 10:30
#54

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #792

H203007-16 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	**192**	16.0	mg/kg	4	2121911	HM	19-Dec-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	2121903	MS	19-Dec-12	8015M	
DRO >C10-C28	**243**	10.0	mg/kg	1	2121903	MS	19-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*84.7 %*	*65.2-140*		*2121903*	MS	*19-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*100 %*	*63.6-154*		*2121903*	MS	*19-Dec-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Toluene*	ND	0.050	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Total Xylenes*	ND	0.150	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Total BTEX	ND	0.300	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*115 %*	*89.4-126*		*2121901*	AP	*20-Dec-12*	*8021B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Client: I.E.I

Contact: Marcella

Address: 49 CR 3150

Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1876

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 1047

Project Name: JFJ Samples

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S. A. Allen

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H2D3007																	13.7 c
01	1. Pit # 132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 773		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S. A. Allen	Date: 12/12/12	Time: 12:30	Received by: M. Morgan	Date: 12/12/12	Time: 12:30
Relinquished by: M. Morgan	Date: 12/13/12	Time: 15:00	Received by: Master Clerk	Date: 12/13/12	Time: 730
			Jodi Henson	12/14/12	11:00

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

#210 4°C

CHAIN OF CUSTODY RECORD

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S & Alvey

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015m	Analyses Required: GRO 8015m	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H203007																	13.7 c on ice
11	1. Pit 6 #763	12/12/12	10:30	SA	3	1	N							✓				
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S & Alvey	Date: 12/12/12	Time: 12:30	Received by: M. Maggie	Date: 12/12/12	Time: 12:30
Relinquished by: [illegible]	Date: 12/13/12	Time: 13:00	Received by: Jodi Henson	Date: 12/13/12	Time: 1300

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Jodi Henson 12/14/12 11:00
#26 4°C

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

PILE #789

H301279-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Organic Compounds									
DRO >C10-C28	ND	10.0	mg/kg	1	3060501	MS	05-Jun-13	8015M	
Surrogate: 1-Chlorooctane		*102 %*	*65.2-140*		*3060501*	MS	*05-Jun-13*	*8015M*	
Surrogate: 1-Chlorooctadecane		*109 %*	*63.6-154*		*3060501*	MS	*05-Jun-13*	*8015M*	

ANALYTICAL
JUN - 6 2013
PASSED

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

June 06, 2013

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 05/31/13 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #713	H301279-01	Soil	30-May-13 11:20	31-May-13 10:30
PILE #761	H301279-02	Soil	30-May-13 11:30	31-May-13 10:30
PILE #789	H301279-03	Soil	30-May-13 11:35	31-May-13 10:30
PILE #792	H301279-04	Soil	30-May-13 11:45	31-May-13 10:30
PILE #822	H301279-05	Soil	30-May-13 11:55	31-May-13 10:30

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060308 - 1:4 DI Water										
Blank (3060308-BLK1)				Prepared & Analyzed: 03-Jun-13						
Chloride	ND	16.0	mg/kg							
LCS (3060308-BS1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3060308-BSD1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	
Batch 3060309 - 1:4 DI Water										
Blank (3060309-BLK1)				Prepared & Analyzed: 03-Jun-13						
Chloride	ND	16.0	mg/kg							
LCS (3060309-BS1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (3060309-BSD1)				Prepared & Analyzed: 03-Jun-13						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Celey D. Keene, Lab Director/Quality Manager

Revised Date

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060501 - General Prep - Organics										
Blank (3060501-BLK1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*46.8*		mg/kg	*50.0*		*93.6*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.7*		mg/kg	*50.0*		*101*	*63.6-154*			
LCS (3060501-BS1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	195	10.0	mg/kg	200		97.6	66.4-124			
DRO >C10-C28	197	10.0	mg/kg	200		98.7	61.6-132			
Surrogate: 1-Chlorooctane	*50.4*		mg/kg	*50.0*		*101*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*52.7*		mg/kg	*50.0*		*105*	*63.6-154*			
LCS Dup (3060501-BSD1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	198	10.0	mg/kg	200		99.0	66.4-124	1.42	23.4	
DRO >C10-C28	203	10.0	mg/kg	200		101	61.6-132	2.74	23.1	
Surrogate: 1-Chlorooctane	*51.8*		mg/kg	*50.0*		*104*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*56.1*		mg/kg	*50.0*		*112*	*63.6-154*			
Batch 3060503 - General Prep - Organics										
Blank (3060503-BLK1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*52.7*		mg/kg	*50.0*		*105*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*53.8*		mg/kg	*50.0*		*108*	*63.6-154*			
LCS (3060503-BS1)				Prepared & Analyzed: 05-Jun-13						
GRO C6-C10	212	10.0	mg/kg	200		106	66.4-124			
DRO >C10-C28	222	10.0	mg/kg	200		111	61.6-132			
Surrogate: 1-Chlorooctane	*57.3*		mg/kg	*50.0*		*115*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*58.9*		mg/kg	*50.0*		*118*	*63.6-154*			

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060503 - General Prep - Organics										
LCS Dup (3060503-BSD1)	Prepared & Analyzed: 05-Jun-13									
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	3.07	23.4	
DRO >C10-C28	214	10.0	mg/kg	200		107	61.6-132	3.64	23.1	
Surrogate: 1-Chlorooctane	*54.7*		mg/kg	*50.0*		*109*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.6*		mg/kg	*50.0*		*111*	*63.6-154*			

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060402 - Volatiles										
Blank (3060402-BLK1)				Prepared & Analyzed: 04-Jun-13						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*ND*		mg/kg	*0.0500*		*99.2*	*89.4-126*			
LCS (3060402-BS1)				Prepared: 04-Jun-13 Analyzed: 06-Jun-13						
Benzene	2.11	0.050	mg/kg	2.00		105	76.4-135			
Toluene	1.90	0.050	mg/kg	2.00		94.8	80.2-135			
Ethylbenzene	2.00	0.050	mg/kg	2.00		100	78.5-133			
Total Xylenes	5.86	0.150	mg/kg	6.00		97.7	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0590*		mg/kg	*0.0500*		*118*	*89.4-126*			
LCS Dup (3060402-BSD1)				Prepared & Analyzed: 04-Jun-13						
Benzene	2.43	0.050	mg/kg	2.00		121	76.4-135	14.1	16.4	
Toluene	2.20	0.050	mg/kg	2.00		110	80.2-135	14.7	16.6	
Ethylbenzene	2.38	0.050	mg/kg	2.00		119	78.5-133	17.2	16.1	
Total Xylenes	6.87	0.150	mg/kg	6.00		114	80.1-135	15.8	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0491*		mg/kg	*0.0500*		*98.2*	*89.4-126*			
Batch 3060502 - Volatiles										
Blank (3060502-BLK1)				Prepared & Analyzed: 05-Jun-13						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0605*		mg/kg	*0.0500*		*121*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 1428 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 06-Jun-13 15:46

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 3060502 - Volatiles										
LCS (3060502-BS1)				Prepared & Analyzed: 05-Jun-13						
Benzene	2.24	0.050	mg/kg	2.00		112	76.4-135			
Toluene	2.02	0.050	mg/kg	2.00		101	80.2-135			
Ethylbenzene	2.19	0.050	mg/kg	2.00		109	78.5-133			
Total Xylenes	6.37	0.150	mg/kg	6.00		106	80.1-135			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0587*		mg/kg	*0.0500*		*117*	*89.4-126*			
LCS Dup (3060502-BSD1)				Prepared & Analyzed: 05-Jun-13						
Benzene	2.10	0.050	mg/kg	2.00		105	76.4-135	6.40	16.4	
Toluene	1.84	0.050	mg/kg	2.00		92.1	80.2-135	9.20	16.6	
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.7	78.5-133	10.4	16.1	
Total Xylenes	5.83	0.150	mg/kg	6.00		97.2	80.1-135	8.90	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0583*		mg/kg	*0.0500*		*117*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Green Analytical Laboratories

Client: Industrial Ecosystems
Contact: Marcella
Address: 49 CR 3150
Aztec, NM 87410
Phone Number: 505 632-1782
Email: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 1428
Project Name: JF1

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature:

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Use Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015M	GRO 8015M	BTEX 8021B	Chlorides 300	Comments
H301279																	
1. Pile 713	5/30	11:20	CT	3	1	N							✓				
2. Pile 761		11:30											✓	✓	✓	✓	
3. Pile 789		11:35											✓				
4. Pile 792		11:45											✓				
5. Pile 822	↓	11:55	↓	↓	↓	↓							✓	✓	✓	✓	
6.																	
7.																	
8.																	
9.																	
10.																	

Comments: 18.1 conica 4

Relinquished by:	Date:	Time:	Received by:	Date:	Time:
	05/30/13	12:01 p		05/30/13	12:01
	05/30/13	2:20p		5/30/13	12:20

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Jodi Henson 5/31/13 10:30
4D1 #54

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 860 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 28-Sep-12 12:36

PILE 789

H202330-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	**320**	16.0	mg/kg	4	2092803	HM	28-Sep-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	2092601	MS	26-Sep-12	8015M	
DRO >C10-C28	**178**	10.0	mg/kg	1	2092601	MS	26-Sep-12	8015M	
Surrogate: 1-Chlorooctane		*90.2 %*	*65.2-140*		*2092601*	MS	*26-Sep-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*99.4 %*	*63.6-154*		*2092601*	MS	*26-Sep-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	2092605	AP	26-Sep-12	8021B	
Toluene*	ND	0.050	mg/kg	50	2092605	AP	26-Sep-12	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	2092605	AP	26-Sep-12	8021B	
Total Xylenes*	ND	0.150	mg/kg	50	2092605	AP	26-Sep-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*99.5 %*	*89.5-126*		*2092605*	AP	*26-Sep-12*	*8021B*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

September 28, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 09/25/12 10:30.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 860 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 28-Sep-12 12:36

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 563	H202330-01	Soil	24-Sep-12 10:10	25-Sep-12 10:30
PILE 752	H202330-02	Soil	24-Sep-12 10:30	25-Sep-12 10:30
PILE 755	H202330-03	Soil	24-Sep-12 10:35	25-Sep-12 10:30
PILE 761	H202330-04	Soil	24-Sep-12 10:50	25-Sep-12 10:30
PILE 789	H202330-05	Soil	24-Sep-12 11:20	25-Sep-12 10:30
PILE 791	H202330-06	Soil	24-Sep-12 11:35	25-Sep-12 10:30
PILE 792	H202330-07	Soil	24-Sep-12 11:50	25-Sep-12 10:30
PILE 795	H202330-08	Soil	24-Sep-12 13:15	25-Sep-12 10:30
PILE 814	H202330-09	Soil	24-Sep-12 13:30	25-Sep-12 10:30
PILE 815	H202330-10	Soil	24-Sep-12 13:55	25-Sep-12 10:30

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 860 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 28-Sep-12 12:36

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2092803 - 1:4 DI Water										
Blank (2092803-BLK1)				Prepared & Analyzed: 28-Sep-12						
Chloride	ND	16.0	mg/kg							
LCS (2092803-BS1)				Prepared & Analyzed: 28-Sep-12						
Chloride	400	16.0	mg/kg	400		100	80-120			
LCS Dup (2092803-BSD1)				Prepared & Analyzed: 28-Sep-12						
Chloride	400	16.0	mg/kg	400		100	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 860 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 28-Sep-12 12:36

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2092601 - General Prep - Organics										
Blank (2092601-BLK1)				Prepared & Analyzed: 26-Sep-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*45.9*		mg/kg	*50.0*		*91.7*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.8*		mg/kg	*50.5*		*94.7*	*63.6-154*			
LCS (2092601-BS1)				Prepared & Analyzed: 26-Sep-12						
GRO C6-C10	190	10.0	mg/kg	200		95.1	66.4-124		23.4	
DRO >C10-C28	192	10.0	mg/kg	200		95.8	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.5*		mg/kg	*50.0*		*92.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.6*		mg/kg	*50.5*		*90.3*	*63.6-154*			
LCS Dup (2092601-BSD1)				Prepared & Analyzed: 26-Sep-12						
GRO C6-C10	178	10.0	mg/kg	200		88.8	66.4-124	6.93	23.4	
DRO >C10-C28	158	10.0	mg/kg	200		79.1	61.6-132	19.1	23.1	
Surrogate: 1-Chlorooctane	*43.4*		mg/kg	*50.0*		*86.8*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*41.7*		mg/kg	*50.5*		*82.6*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 860 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 28-Sep-12 12:36

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2092605 - Volatiles										
Blank (2092605-BLK1)				Prepared & Analyzed: 26-Sep-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0500*		mg/kg	*0.0500*		*100*	*89.5-126*			
LCS (2092605-BS1)				Prepared & Analyzed: 26-Sep-12						
Benzene	1.70	0.050	mg/kg	2.00		85.2	80.7-116			
Toluene	1.88	0.050	mg/kg	2.00		94.0	89.7-121			
Ethylbenzene	1.87	0.050	mg/kg	2.00		93.4	91.4-124			
Total Xylenes	5.67	0.150	mg/kg	6.00		94.6	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0498*		mg/kg	*0.0500*		*99.6*	*89.5-126*			
LCS Dup (2092605-BSD1)				Prepared & Analyzed: 26-Sep-12						
Benzene	2.03	0.050	mg/kg	2.00		102	80.7-116	17.7	16.4	
Toluene	2.25	0.050	mg/kg	2.00		112	89.7-121	17.9	16.6	
Ethylbenzene	2.23	0.050	mg/kg	2.00		111	91.4-124	17.6	16.1	
Total Xylenes	6.76	0.150	mg/kg	6.00		113	93.4-130	17.5	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0498*		mg/kg	*0.0500*		*99.6*	*89.5-126*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Client: Industrial Ecosystems

Contact: Marcella

Address: 49 CR 3150
Aztec, NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 806

Project Name: JFJ

Table 1 – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: Deb Clough

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

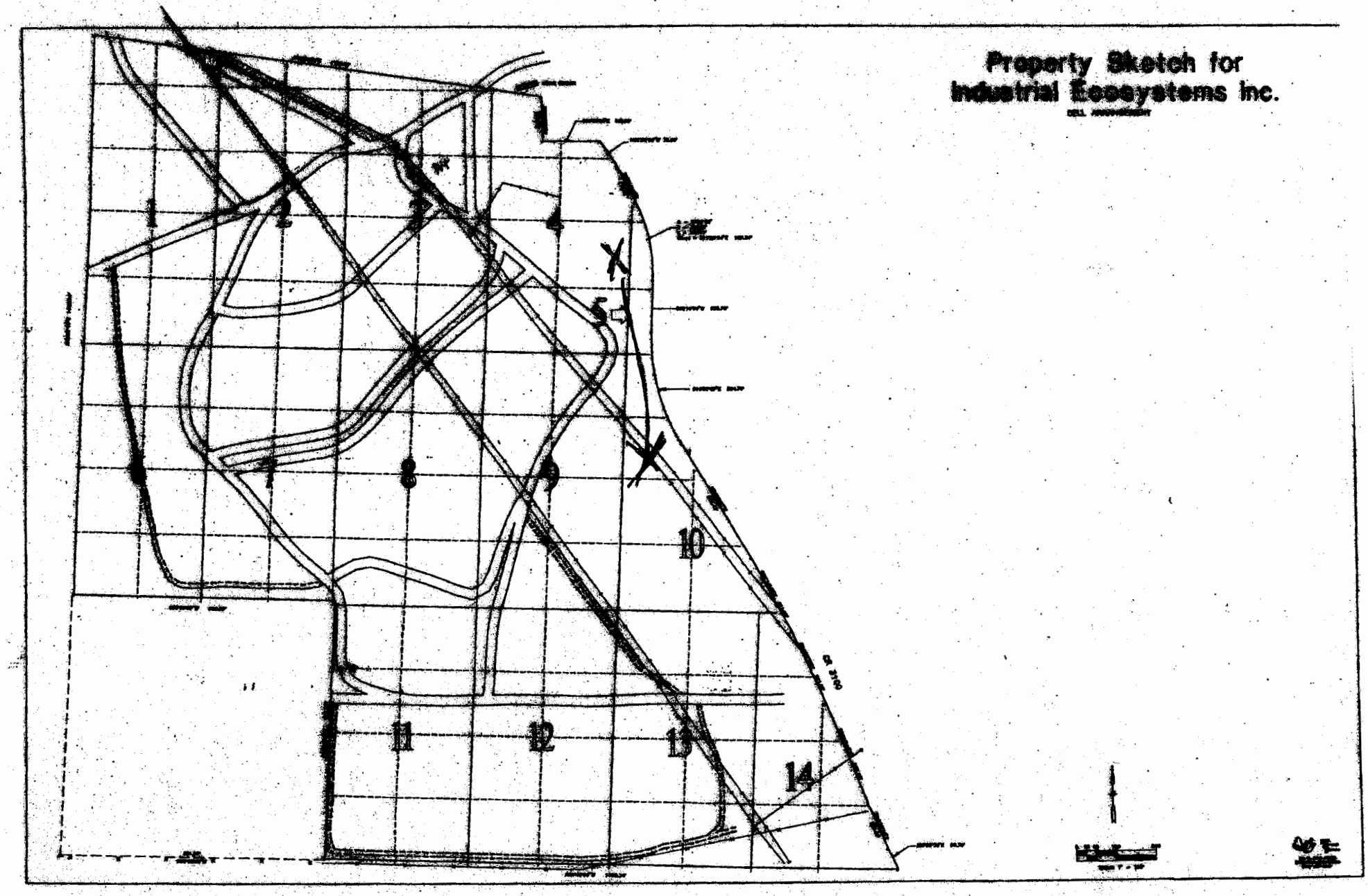
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: TRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H202330																	
1	1. Pile 563	09/24/12	10:10	SA	3	1	N							✓	✓	✓	✓	
2	2. Pile 752		10:30											✓				
3	3. Pile 755		10:35											✓				
4	4. Pile 761		10:50											✓	✓	✓	✓	
5	5. Pile 789		11:20											✓	✓	✓	✓	
6	6. Pile 791		11:35											✓				
7	7. Pile 792		11:50											✓	✓	✓	✓	
8	8. Pile 795		1:15											✓	✓	✓	✓	
9	9. Pile 814		1:30											✓				
10	10. Pile 815	↓	1:55	↓	↓	↓	↓							✓	✓	✓	✓	

Relinquished by: Deb Clough	Date: 9/24/12	Time: 2:10p	Received by: T.R. Mayes	Date: 9/24/12	Time: 2:10p
Relinquished by:	Date:	Time:	Received by:	Date:	Time:

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Jodi Henson 9/25/12
3°C #26


Property Sketch for
Industrial Ecosystems Inc.
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State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

John Bemis
Cabinet Secretary

Brett F. Woods, Ph.D.
Deputy Cabinet Secretary

Jami Bailey
Division Director
Oil Conservation Division

January 28, 2013

Ms. Marcella Marquez
JFJ Landfarm, L.L.C.
Industrial Ecosystems Inc.
Soil Reclamation Center
P.O. Box 2043
Farmington, New Mexico 87499

RE: Request for Approval of On-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM1-010-B
Location: NW/4 SE/4 of Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) email request, dated January 25, 2013, for on-site disposition of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010B) to be utilized to build up the area along the eastern boundary within the existing permitted facility property, located in NW/4 SE/4 of Section 2, Township 29 North, Range 12 West NMPM, San Juan County, New Mexico. OCD has reviewed the analytical results to reuse the remediated soils from the following biopile(s):

Pile # 132 *Pile # 595* *Pile # 629* *Pile # 752* *Pile # 755* *Pile # 813*

Based upon the information provided, the above-referenced biopiles are hereby approved for reuse with the following understandings and conditions:

1. JFJ has demonstrated that the proposed soils for reuse satisfy the TPH, BTEX, and Benzene concentrations specified in Condition 17 of the Landfarm and Composting Operations section of your February 3, 2004 surface waste management facility permit (NM1-010-B);

2. JFJ shall obtain legal authority from the surface owner prior to placement of the remediated soils for reuse;

3. JFJ shall ensure that remediated soils are reused in a manner that prevents the contamination of ground water and surface water, and protects human health and the environment; and

4. If JFJ reuses the remediated soils within the surface waste management facility permitted boundary, as proposed and considered in this approval, at closure JFJ shall comply with Conditions 2d and 2f of the Closure section of your February 3, 2004 surface waste management facility permit (NM1-010-B) in regards to the relocated soils.

Please be advised that approval of this request does not relieve JFJ of liability should operations result in pollution of surface water, ground water or the environment. Nor does approval relieve JFJ of its responsibility to comply with any other applicable governmental authority's rules and regulations.

If there are any questions regarding this matter, please do not hesitate to contact Mr. Brad A. Jones of my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Jami Bailey
Director

JB/baj

cc: OCD District III Office, Aztec

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Friday, January 25, 2013 5:00 PM
To: Jones, Brad A., EMNRD
Subject: Request to spread remediated soils
Attachments: Letter to request reuse of treated soils on facility.doc; Map.pdf; Pile 132.pdf; Pile 595.pdf; Pile 629.pdf; Pile 752 BTEX C.pdf; Pile 752 DRO.pdf; Pile 752 GRO.pdf; Pile 755 DRO.pdf; Pile 755 GRO BTEX CL.pdf; Pile 813.pdf

Importance: High

Brad:

Please see attached letter to spread remediated soils, along with the analytical reports and map of area where the soils will be spread.

Thanks,
Marcella Marquez, HSE Administrator
Industrial Ecosystems, Inc.
Phone: (505) 632-1782
Fax: (505) 632-1876 or (505) 334-1003

Industrial Ecosystems Inc.
Soil Reclamation Center

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1782
Fax: (505) 632-1876

#49 CR 3150
Aztec, NM 87410

January 28, 2013

Brad Jones, Environmental Engineer
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of Treated Soils

Dear Brad:

This letter is being submitted to you as a request to reuse/recycle treated soils. We are requesting approval to reuse/recycle treated soils within our property boundaries. The treated soils would be utilized to "build up" the East portion of the property (see attached map).

Attached you will find the analytical reports showing the treated soils have reached acceptable permit levels for the following biopiles:

- Pile 132 DRO, GRO, BTEX & Chlorides passed 12/20/12
- Pile 595 (DRO, GRO & BTEX passed 12/20/12, Chloride passed 12/19/11)
- Pile 629 DRO, GRO, BTEX & Chlorides passed 12/20/12
- Pile 752 (DRO passed 12/20/12, GRO passed 07/25/12, BTEX & Chloride 08/11/11)
- Pile 755 (DRO passed 12/20/12, GRO, BTEX & Chloride passed 07/25/12)
- Pile 813 DRO, GRO, BTEX & Chlorides passed 12/20/12

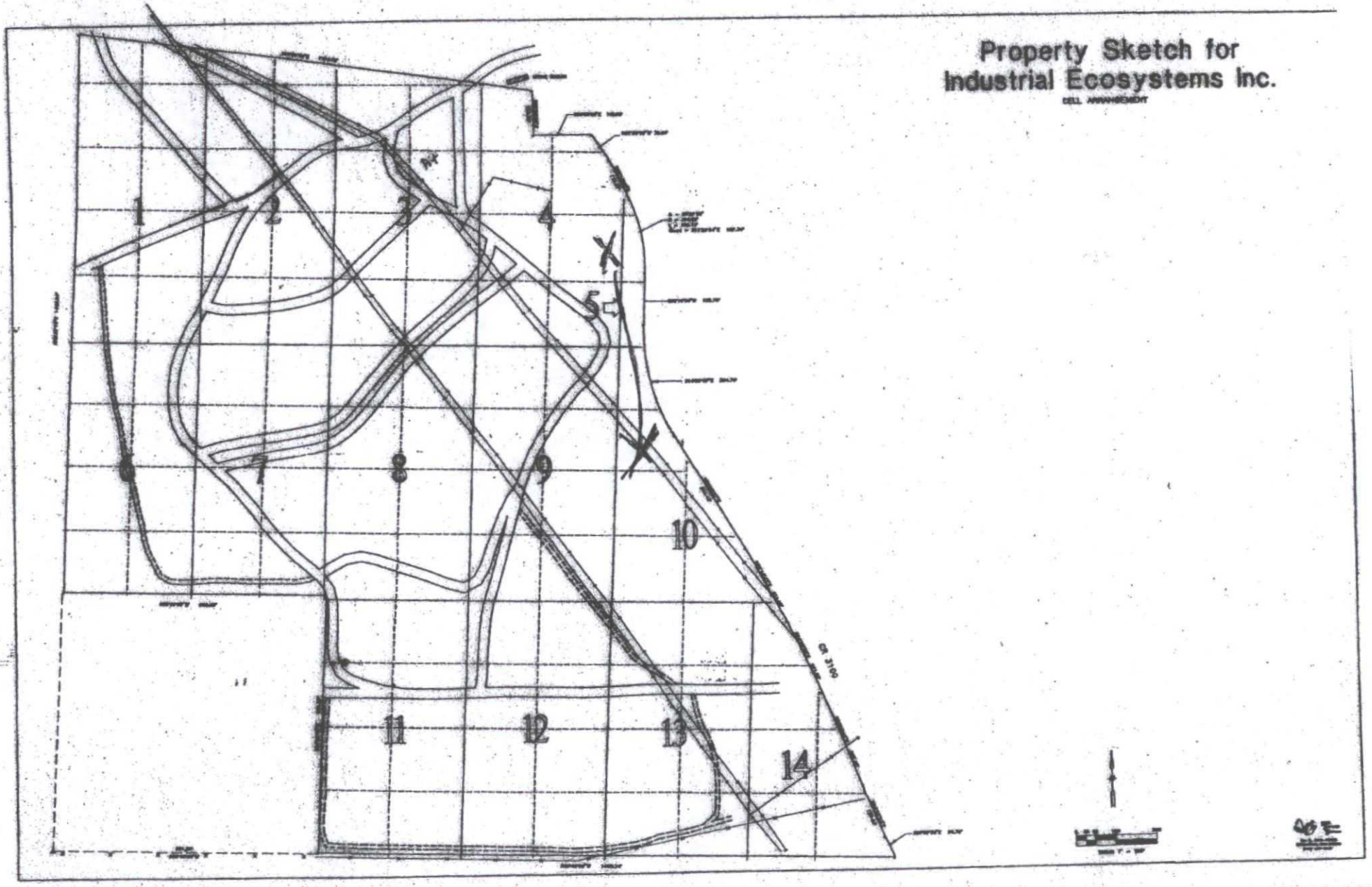
Please let me know if you have any questions or if any additional information is needed.

Respectfully Submitted,

Marcella Marquez

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports, Map


Property Sketch for
Industrial Ecosystems Inc.
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CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #132

H203007-01 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	**224**	16.0	mg/kg	4	2121911	HM	19-Dec-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	**ND**	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
DRO >C10-C28	**27.2**	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*85.2 %*	*65.2-140*		*2121701*	MS	*18-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*97.4 %*	*63.6-154*		*2121701*	MS	*18-Dec-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Toluene*	ND	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total Xylenes*	ND	0.150	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total BTEX	ND	0.300	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*113 %*	*89.4-126*		*2121901*	AP	*19-Dec-12*	*8021B*	

ANALYTICAL
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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Green Analytical Laboratories

Client: I.E.I

Contact: Marcella

Address: 49 CR 3150

Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1876

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 1047

Project Name: JFJ Samples

Table 1. – Matrix Type

1 = Surface Water, 2 = Ground Water

3 = Soil/Sediment, 4 = Rinsate, 5 = Oil

6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY

GAL JOB #

Samplers Signature: S A Alcup

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	GRO 8015M	BTEX 8021B	Chloride 300.0	Comments
	H2D3007																	13.7 c
01	1. Pit # 132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 713		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S. A Alcup	Date: 12/12/12	Time: 12:30	Received by: M. Magnes	Date: 12/12/12	Time: 12:30
Relinquished by: M. Magnes	Date: 12/13/12	Time: 15:00	Received by: Christine Clark	Date: 12/13/12	Time: 730
			Jodi Henson	12/14/12	11:00

#210 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CHAIN OF CUSTODY RECORD

Green Analytical Laboratories

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S A Alvey

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015m	Analyses Required: GRO 8015m	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H203007																	13.7 c on ice
11	1. Pile #763	12/12/12	10:30	SA	3	1	N							✓				
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S A Alvey	Date: 12/12/12	Time: 12:30	Received by: M. Marquez	Date: 12/12/12	Time: 12:30
Relinquished by: M. Pacheco	Date: 12/13/12	Time: 13:00	Received by: Kristen Laskis	Date: 12/13/12	Time: 1300
			Jodi Denson	12/14/12	11:00

#26 4°c

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #595

H203007-02 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Organic Compounds									
GRO C6-C10	**ND**	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
DRO >C10-C28	**12.1**	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*74.9 %*	*65.2-140*		*2121701*	MS	*18-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*73.1 %*	*63.6-154*		*2121701*	MS	*18-Dec-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	**ND**	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Toluene*	**0.166**	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Ethylbenzene*	**0.091**	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total Xylenes*	**0.396**	0.150	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total BTEX	**0.653**	0.300	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*114 %*	*89.4-126*		*2121901*	AP	*19-Dec-12*	*8021B*	

ANALYTICALS
DEC 20 2012
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Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Client: I.E.I

Contact: Marcella

Address: 49 CR 3150

Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1876

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 1047

Project Name: JFJ Samples

Table 1. – Matrix Type

1 = Surface Water, 2 = Ground Water

3 = Soil/Sediment, 4 = Rinsate, 5 = Oil

6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY

GAL JOB #

Samplers Signature: S. A. Alcup

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

H2D3007

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	GRO 8015M	BTEX 8021B	Chloride 300.0	Comments
01	1. Pit #132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	13.7 c on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 773		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S. A. Alcup	Date: 12/12/12	Time: 12:30	Received by: M. Morgan	Date: 12/12/12	Time: 12:30
Relinquished by: M Morgan	Date: 12/13/12	Time: 15:00	Received by: Christie Clark	Date: 12/13/12	Time: 730
			Jodi Henson	12/14/12	11:00

#210 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CHAIN OF CUSTODY RECORD

Green Analytical Laboratories

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

Samplers Signature: S A Alemka

FOR GAL USE ONLY
GAL JOB #

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015m	GRO 8015m	BTEX 8021B	Chloride 300.0	Comments
	H203007																	13.7 c on ice
11	1. Pile #763	12/11/12	10:30	SA	3	1	N							✓				
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S A Alemka	Date: 12/12/12	Time: 12:30	Received by: K. M. Maggie	Date: 12/12/12	Time: 18:20
Relinquished by: M. Davis	Date: 12/13/12	Time: 13:00	Received by: Kristen Cadra	Date: 12/13/12	Time: 1300

Jodi Stenson 12/14/12 11:00
#26 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 10180 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 19-Dec-11 13:43

PILE 595

H102681-04 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	**32.0**	16.0	mg/kg	4	1121505	HM	15-Dec-11	4500-Cl-B	
Organic Compounds									
TPH 418.1	**252**	100	mg/kg	10	1121704	CK	17-Dec-11	418.1	
GRO C6-C10	ND	10.0	mg/kg	1	1121507	MS	15-Dec-11	8015M	
DRO >C10-C28	ND	10.0	mg/kg	1	1121507	MS	15-Dec-11	8015M	
Surrogate: 1-Chlorooctane		*102 %*	*55.5-154*		*1121507*	MS	*15-Dec-11*	*8015M*	
Surrogate: 1-Chlorooctadecane		*118 %*	*57.6-158*		*1121507*	MS	*15-Dec-11*	*8015M*	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

December 19, 2011

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/11 10:15.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 10180 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 19-Dec-11 13:43

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 539	H102681-01	Soil	13-Dec-11 10:50	14-Dec-11 10:15
PILE 563	H102681-02	Soil	13-Dec-11 11:25	14-Dec-11 10:15
PILE 586	H102681-03	Soil	13-Dec-11 11:40	14-Dec-11 10:15
PILE 595	H102681-04	Soil	13-Dec-11 12:45	14-Dec-11 10:15
PILE 756	H102681-05	Soil	13-Dec-11 13:00	14-Dec-11 10:15
PILE 747	H102681-06	Soil	13-Dec-11 13:40	14-Dec-11 10:15
PILE 763	H102681-07	Soil	13-Dec-11 14:00	14-Dec-11 10:15
PILE 765	H102681-08	Soil	13-Dec-11 14:15	14-Dec-11 10:15
PILE 770	H102681-09	Soil	13-Dec-11 14:30	14-Dec-11 10:15
PILE 776	H102681-10	Soil	13-Dec-11 14:45	14-Dec-11 10:15

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 10180 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 19-Dec-11 13:43

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1121505 - General Prep - Wet Chem										
Blank (1121505-BLK1)				Prepared & Analyzed: 15-Dec-11						
Chloride	ND	16.0	mg/kg							
LCS (1121505-BS1)				Prepared & Analyzed: 15-Dec-11						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (1121505-BSD1)				Prepared & Analyzed: 15-Dec-11						
Chloride	416	16.0	mg/kg	400		104	80-120	3.77	20	
Duplicate (1121505-DUP1)		Source: H102677-07		Prepared & Analyzed: 15-Dec-11						
Chloride	1630	16.0	mg/kg		1620			0.985	20	
Matrix Spike (1121505-MS1)		Source: H102677-07		Prepared & Analyzed: 15-Dec-11						
Chloride	2260	16.0	mg/kg	400	1620	160	80-120			
Batch 1121904 - General Prep - Wet Chem										
Blank (1121904-BLK1)				Prepared & Analyzed: 17-Dec-11						
Chloride	ND	16.0	mg/kg							
LCS (1121904-BS1)				Prepared & Analyzed: 17-Dec-11						
Chloride	464	16.0	mg/kg	400		116	80-120			
LCS Dup (1121904-BSD1)				Prepared & Analyzed: 17-Dec-11						
Chloride	432	16.0	mg/kg	400		108	80-120	7.14	20	
Duplicate (1121904-DUP1)		Source: H102704-06		Prepared & Analyzed: 17-Dec-11						
Chloride	48.0	16.0	mg/kg		48.0			0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 10180 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 19-Dec-11 13:43

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1121904 - General Prep - Wet Chem										
Matrix Spike (1121904-MS1)		**Source: H102704-06**		Prepared & Analyzed: 17-Dec-11						
Chloride	464	16.0	mg/kg	400	48.0	104	80-120			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 10180 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 19-Dec-11 13:43

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1121507 - General Prep - Organics										
Blank (1121507-BLK1)				Prepared & Analyzed: 15-Dec-11						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Total TPH C6-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*48.5*		mg/kg	*50.0*		*97.1*	*55.5-154*			
Surrogate: 1-Chlorooctadecane	*53.7*		mg/kg	*48.7*		*110*	*57.6-158*			
LCS (1121507-BS1)				Prepared & Analyzed: 15-Dec-11						
GRO C6-C10	206	10.0	mg/kg	200		103	63.5-131			
DRO >C10-C28	168	10.0	mg/kg	200		84.1	52.3-130			
Total TPH C6-C28	374	10.0	mg/kg	400		93.6	62-129			
Surrogate: 1-Chlorooctane	*55.2*		mg/kg	*50.0*		*111*	*55.5-154*			
Surrogate: 1-Chlorooctadecane	*58.8*		mg/kg	*48.7*		*121*	*57.6-158*			
LCS Dup (1121507-BSD1)				Prepared & Analyzed: 15-Dec-11						
GRO C6-C10	208	10.0	mg/kg	200		104	63.5-131	1.05	13.9	
DRO >C10-C28	166	10.0	mg/kg	200		82.8	52.3-130	1.48	18.1	
Total TPH C6-C28	374	10.0	mg/kg	400		93.5	62-129	0.0791	16.2	
Surrogate: 1-Chlorooctane	*55.8*		mg/kg	*50.0*		*112*	*55.5-154*			
Surrogate: 1-Chlorooctadecane	*57.3*		mg/kg	*48.7*		*118*	*57.6-158*			
Batch 1121704 - Solvent Extraction										
Blank (1121704-BLK1)				Prepared & Analyzed: 17-Dec-11						
TPH 418.1	ND	100	mg/kg							
LCS (1121704-BS1)				Prepared & Analyzed: 17-Dec-11						
TPH 418.1	1240	100	mg/kg	1090		113	80-120			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 10180 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 19-Dec-11 13:43

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1121704 - Solvent Extraction										
LCS Dup (1121704-BSD1)				Prepared & Analyzed: 17-Dec-11						
TPH 418.1	1240	100	mg/kg	1090		114	80-120	0.565	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 10180 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 19-Dec-11 13:43

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1121402 - Volatiles										
Blank (1121402-BLK1)				Prepared & Analyzed: 14-Dec-11						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0520*		mg/kg	*0.0488*		*107*	*64.4-134*			
LCS (1121402-BS1)				Prepared & Analyzed: 14-Dec-11						
Benzene	2.02	0.050	mg/kg	2.00		101	65.2-126			
Toluene	1.90	0.050	mg/kg	2.00		95.1	73.2-126			
Ethylbenzene	2.15	0.050	mg/kg	2.00		107	74.4-131			
Total Xylenes	6.14	0.150	mg/kg	6.00		102	73.5-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0512*		mg/kg	*0.0488*		*105*	*64.4-134*			
LCS Dup (1121402-BSD1)				Prepared & Analyzed: 14-Dec-11						
Benzene	1.99	0.050	mg/kg	2.00		99.6	65.2-126	1.23	26.9	
Toluene	1.89	0.050	mg/kg	2.00		94.5	73.2-126	0.630	27.9	
Ethylbenzene	2.13	0.050	mg/kg	2.00		107	74.4-131	0.633	28.5	
Total Xylenes	6.12	0.150	mg/kg	6.00		102	73.5-130	0.343	27.7	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0515*		mg/kg	*0.0488*		*106*	*64.4-134*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Green Analytical Laboratories

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505 632-1782
FAX Number: 505 632-1876
marcella@industrialecosystems.com

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.
PO# 10180
Project Name: JFJ
Samplers Signature:

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO+GRO (TPH) 418.1	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H102681																
1	1. Pile 539	12/13/11	10:50	CT	3	1	N							✓	✓	✓	
2	2. Pile 563		11:25											✓		✓	
3	3. Pile 586		1:40											✓			
4	4. Pile 595		12:45											✓		✓	
5	Pile 756		1:00											✓			
6	6. Pile 747		1:40											✓			
7	Pile 763		2:00											✓			
8	8. Pile 765		2:15											✓			
9	9. Pile 770		2:30											✓	✓	✓	
10	10. Pile 776	↓	2:45	↓	↓	↓	↓							✓	✓	✓	

Relinquished by:		Date: 12-13-11	Time: 2:47	Received by:		Date: 12-13-11	Time: 2:48
Relinquished by:		Date: 12-13-11	Time: 7:15	Received by: Marcella Clay		Date: 12/13/11	Time: 7:15
				Jodi Henson	12/14/11 10:15		

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #629

H203007-03 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	**704**	16.0	mg/kg	4	2121911	HM	19-Dec-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	**ND**	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
DRO >C10-C28	**87.4**	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*86.8 %*	*65.2-140*		*2121701*	MS	*18-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*105 %*	*63.6-154*		*2121701*	MS	*18-Dec-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	**ND**	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Toluene*	**0.313**	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Ethylbenzene*	**0.111**	0.050	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total Xylenes*	**0.599**	0.150	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Total BTEX	**1.02**	0.300	mg/kg	50	2121901	AP	19-Dec-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*115 %*	*89.4-126*		*2121901*	AP	*19-Dec-12*	*8021B*	

ANALYTICALS
DEC 20 2012
PASSED

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December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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CHAIN OF CUSTODY RECORD

Page 1 of 2

Green Analytical Laboratories

Client: I.E.I

Contact: Marcella

Address: 46 CR 3150

Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1876

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 1047

Project Name: JFJ Samples

Samplers Signature: S. A. Alcaya

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY

GAL JOB # ____

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H2D3007																	13.7 c
01	1. Pit #132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 773		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S. A. Alcaya	Date: 12/12/12	Time: 12:30	Received by: M. Magnes	Date: 12/12/12	Time: 12:30
Relinquished by: M. Magnes	Date: 12/13/12	Time: 15:00	Received by: Christine Walsh	Date: 12/13/12	Time: 730
			Jodi Henson	12/14/12	11:00

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

#210 4°C

CHAIN OF CUSTODY RECORD

Green Analytical Laboratories

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S A Alvey

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015m	Analyses Required: GRO 8015m	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H203007																	13.7 conical
11	1. Pit #763	12/12/12	10:30	SA	3	1	N							✓				
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S A Alvey	Date: 12/12/12	Time: 12:30	Received by: M. Magee	Date: 12/12/12	Time: 18:20
Relinquished by: M. Pacheco	Date: 12/13/12	Time: 13:00	Received by: Kristen Dodson	Date: 12/13/12	Time: 1300

Jodi Denson 12/14/12 11:00
#2640

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #752

H203007-08 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Organic Compounds									
DRO >C10-C28	**68.2**	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*82.3 %*	*65.2-140*		*2121701*	MS	*18-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*94.1 %*	*63.6-154*		*2121701*	MS	*18-Dec-12*	*8015M*	

ANALYTICAL
DEC 20 2012
PASSED

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Celey D. Keene, Lab Director/Quality Manager

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December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Celey D. Keene, Lab Director/Quality Manager

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)	Prepared & Analyzed: 19-Dec-12									
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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CHAIN OF CUSTODY RECORD

Page 1 of 2

Client: I.E.I

Contact: Marcella

Address: 4G CR 3150

Aztec NM 87410

Phone Number: 505.632.1782

FAX Number: 505-632-1876

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 1047

Project Name: JFJ Samples

Samplers Signature: S.A. Allen

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY

GAL JOB #

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H2D3007																	13.7c
01	1. Pit #132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 713		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S.A. Allen	Date: 12/12/12	Time: 12:30	Received by: M. Morgan	Date: 12/12/12	Time: 12:30
Relinquished by: M. Morgan	Date: 12/13/12	Time: 15:00	Received by: Christine Clark	Date: 12/13/12	Time: 730
			Jodi Henson	12/14/12	11:00

#210 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CHAIN OF CUSTODY RECORD

Green Analytical Laboratories

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S A Alonzo

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015m	Analyses Required: GRO 8015m	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H203007																	13.7 c on ice
11	1. Pile #763	12/11/12	10:30	SA	3	1	N							✓				
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S A Alonzo	Date: 12/12/12	Time: 12:30	Received by: N. M. Marquez	Date: 12/12/12	Time: 18:20
Relinquished by: M. Davis	Date: 12/13/12	Time: 13:00	Received by: Kristen Podish	Date: 12/13/12	Time: 1300

Jodi Denson 12/14/12 11:00
#26 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

PILE 752

H201672-05 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	2072306	MS	23-Jul-12	8015M	
DRO >C10-C28	103	10.0	mg/kg	1	2072306	MS	23-Jul-12	8015M	
Surrogate: 1-Chlorooctane		*85.1 %*	*65.2-140*		*2072306*	MS	*23-Jul-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*106 %*	*63.6-154*		*2072306*	MS	*23-Jul-12*	*8015M*	

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Celey D. Keene, Lab Director/Quality Manager

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July 25, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 07/20/12 10:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 13	H201672-01	Soil	19-Jul-12 06:40	20-Jul-12 10:35
PILE 14	H201672-02	Soil	19-Jul-12 07:10	20-Jul-12 10:35
PILE 603	H201672-03	Soil	19-Jul-12 07:35	20-Jul-12 10:35
PILE 633	H201672-04	Soil	19-Jul-12 07:40	20-Jul-12 10:35
PILE 752	H201672-05	Soil	19-Jul-12 08:20	20-Jul-12 10:35
PILE 755	H201672-06	Soil	19-Jul-12 09:00	20-Jul-12 10:35
PILE 761	H201672-07	Soil	19-Jul-12 09:40	20-Jul-12 10:35
PILE 790	H201672-08	Soil	19-Jul-12 10:15	20-Jul-12 10:35
PILE 791	H201672-09	Soil	19-Jul-12 10:30	20-Jul-12 10:35
PILE 814	H201672-10	Soil	19-Jul-12 11:10	20-Jul-12 10:35

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2072304 - 1:4 DI Water										
Blank (2072304-BLK1)				Prepared & Analyzed: 23-Jul-12						
Chloride	ND	16.0	mg/kg							
LCS (2072304-BS1)				Prepared & Analyzed: 23-Jul-12						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (2072304-BSD1)				Prepared & Analyzed: 23-Jul-12						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2072306 - General Prep - Organics										
Blank (2072306-BLK1)				Prepared & Analyzed: 23-Jul-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*38.6*		mg/kg	*50.0*		*77.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*51.3*		mg/kg	*50.0*		*103*	*63.6-154*			
LCS (2072306-BS1)				Prepared & Analyzed: 23-Jul-12						
GRO C6-C10	169	10.0	mg/kg	200		84.3	66.4-124		23.4	
DRO >C10-C28	181	10.0	mg/kg	200		90.4	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*42.7*		mg/kg	*50.0*		*85.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*54.7*		mg/kg	*50.0*		*109*	*63.6-154*			
LCS Dup (2072306-BSD1)				Prepared & Analyzed: 23-Jul-12						
GRO C6-C10	174	10.0	mg/kg	200		87.1	66.4-124	3.19	23.4	
DRO >C10-C28	180	10.0	mg/kg	200		89.8	61.6-132	0.622	23.1	
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.0*		*88.8*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.1*		mg/kg	*50.0*		*110*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2072403 - Volatiles										
Blank (2072403-BLK1)				Prepared & Analyzed: 24-Jul-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0519*		mg/kg	*0.0500*		*104*	*89.4-126*			
LCS (2072403-BS1)				Prepared & Analyzed: 24-Jul-12						
Benzene	1.87	0.050	mg/kg	2.00		93.6	80.7-116			
Toluene	1.91	0.050	mg/kg	2.00		95.5	89.7-121			
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.4	91.4-124			
Total Xylenes	6.00	0.150	mg/kg	6.00		100	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0525*		mg/kg	*0.0500*		*105*	*89.4-126*			
LCS Dup (2072403-BSD1)				Prepared & Analyzed: 24-Jul-12						
Benzene	1.83	0.050	mg/kg	2.00		91.7	80.7-116	2.04	16.4	
Toluene	1.83	0.050	mg/kg	2.00		91.7	89.7-121	4.10	16.6	
Ethylbenzene	1.87	0.050	mg/kg	2.00		93.4	91.4-124	5.17	16.1	
Total Xylenes	5.64	0.150	mg/kg	6.00		94.0	93.4-130	6.27	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0517*		mg/kg	*0.0500*		*103*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Client: IEI

Contact: Marcella

Address: 45 CR 3150

Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1782

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 701

Project Name: JFJ

Table 1. – Matrix Type

1 = Surface Water, 2 = Ground Water

3 = Soil/Sediment, 4 = Rinsate, 5 = Oil

6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY

GAL JOB # _____

Samplers Signature: [signature] 7/19

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO	GRO	BTEX	Chlorides	Comments
H201672																	2
1. Pile 13	7/19/12	6:40	MCT	3	1								✓	✓	✓	✓	27.1 ice on ice
2. Pile 14		7:10											✓	✓	✓	✓	
3. Pile 603		7:35											✓	✓	✓	✓	
4. Pile 633		7:40											✓	✓	✓	✓	
5. Pile 752		8:20											✓	✓			
6. Pile 755		9:00											✓	✓	✓	✓	
7. Pile 761		9:40											✓	✓	✓	✓	
8. Pile 790		10:15											✓	✓	✓	✓	
9. Pile 791		10:30											✓	✓	✓	✓	
10. Pile 814	✓	11:10	✓	✓	✓								✓	✓	✓	✓	

Relinquished by: [signature] 7/19	Date: 7/19/12	Time: 1:50	Received by: [signature]	Date: 7-19-12	T
Relinquished by: [signature]	Date: 7-19-12	Time: 7:36	Received by: Christine Claus Alysheine	Date: 7/19/12 7/20/12	

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Fed EX

5.5°C #26

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS
MARCELLA MARQUEZ
49 CR 3150
AZTEC NM, 87410
Fax To: (505) 632-1876

Received:	08/05/2011	Sampling Date:	08/04/2011
Reported:	08/11/2011	Sampling Type:	Soil
Project Name:	JFJ	Sampling Condition:	Cool & Intact
Project Number:	9875	Sample Received By:	Jodi Henson
Project Location:	NOT GIVEN		

Sample ID: PILE 752 (H101629-02)

BTEX 8021B mg/kg **Analyzed By: CMS**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Benzene*	<0.050	0.050	08/10/2011	ND	1.93	96.6	2.00	0.499	
Toluene*	<0.050	0.050	08/10/2011	ND	1.87	93.4	2.00	0.698	
Ethylbenzene*	**0.083**	0.050	08/10/2011	ND	1.92	96.0	2.00	0.642	
Total Xylenes*	**0.504**	0.150	08/10/2011	ND	5.79	96.6	6.00	0.856	

Surrogate: 4-Bromofluorobenzene (PIL 96.3 % 70-130

Chloride, SM4500Cl-B mg/kg **Analyzed By: AP**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	**32.0**	16.0	08/09/2011	ND	432	108	400	0.00	

TPH 418.1 mg/kg **Analyzed By: AB**

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
TPH 418.1	**117**	100	08/11/2011	ND	1140	113	1010	3.45	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

August 11, 2011

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 08/05/11 10:30.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydorcarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: I & I
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 9875
Project Name: JFJ Piles

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: Clyde J/7—

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: TPH 418.1	Analyses Required: DRO	Analyses Required: BTEX 8021B	Analyses Required: Chlorides 300.0	Comments
	H1D1629																	
1	1. Pile 747	8/4/11	7:20	CT	3	1	N							✓				
2	2. Pile 752	"	7:40	"	"	"	"							✓	✓	✓	✓	
3	3. Pile 759	"	8:10	"	"	"	"							✓	✓	✓	✓	
4	4. Pile 763	"	8:30	"	"	"	"							✓				
5	5. Pile 765	"	9:10	"	"	"	"							✓				
	6.																	
	7.																	
	8.																	
	9.																	
	10.																	

Relinquished by: Clyde J/7—	Date: 8/04/11	Time: 9:40	Received by: T.M. Maguire	Date: 8/04/11	Time: 9:40
Relinquished by: T.M. Maguire	Date: 8/04/11	Time: 12:06	Received by: Christie Pond	Date: 8/4/11	Time: 1206
			Joni Henson	8/5/11	10:30

#26 4°C

* Sample Reject: [ ] Return [X] Dispose [ ] Store (30 Days)

Page 8 of 8

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #755

H203007-09 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Organic Compounds									
DRO >C10-C28	**99.5**	10.0	mg/kg	1	2121701	MS	18-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*80.3 %*	*65.2-140*		*2121701*	MS	*18-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*88.0 %*	*63.6-154*		*2121701*	MS	*18-Dec-12*	*8015M*	

ANALYTICAL
DEC 20 2012
PASSED

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

Cardinal Laboratories

*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

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PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Client: I.E.I
Contact: Marcella
Address: 4G CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ Samples

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S. A. Alsup

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H2D3007																	13.7 c
01	1. Pit #132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 773		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S. A. Alsup	Date: 12/12/12	Time: 12:30	Received by: M. Magers	Date: 12/12/12	Time: 12:30
Relinquished by: M. Magers	Date: 12/13/12	Time: 15:00	Received by: Christine Clark	Date: 12/13/12	Time: 730
			Jodi Henson	12/14/12	11:00

#210 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CHAIN OF CUSTODY RECORD

Green Analytical Laboratories

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec, NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) ____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: [signature]

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015m	Analyses Required: GRO 8015m	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
	H203007																	13.7 c on ice
11	1. Pile #763	12/11/12	10:30	SA	3	1	N							✓				
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: [signature]	Date: 12/12/12	Time: 12:30	Received by: M. Marquez	Date: 12/12/12	Time: 12:30
Relinquished by: M. Jaramillo	Date: 12/13/12	Time: 13:00	Received by: Kristen Dodson	Date: 12/13/12	Time: 1300

Jodi Stenson 12/14/12 11:00
#26 4°c

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

PILE 755

H201672-06 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	**608**	16.0	mg/kg	4	2072304	HM	23-Jul-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	2072306	MS	23-Jul-12	8015M	
DRO >C10-C28	**490**	10.0	mg/kg	1	2072306	MS	23-Jul-12	8015M	
Surrogate: 1-Chlorooctane		*88.5 %*	*65.2-140*		*2072306*	MS	*23-Jul-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*129 %*	*63.6-154*		*2072306*	MS	*23-Jul-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	2072403	AP	24-Jul-12	8021B	
Toluene*	**0.079**	0.050	mg/kg	50	2072403	AP	24-Jul-12	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	2072403	AP	24-Jul-12	8021B	
Total Xylenes*	**0.261**	0.150	mg/kg	50	2072403	AP	24-Jul-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*102 %*	*89.4-126*		*2072403*	AP	*24-Jul-12*	*8021B*	

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

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July 25, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 07/20/12 10:35.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 13	H201672-01	Soil	19-Jul-12 06:40	20-Jul-12 10:35
PILE 14	H201672-02	Soil	19-Jul-12 07:10	20-Jul-12 10:35
PILE 603	H201672-03	Soil	19-Jul-12 07:35	20-Jul-12 10:35
PILE 633	H201672-04	Soil	19-Jul-12 07:40	20-Jul-12 10:35
PILE 752	H201672-05	Soil	19-Jul-12 08:20	20-Jul-12 10:35
PILE 755	H201672-06	Soil	19-Jul-12 09:00	20-Jul-12 10:35
PILE 761	H201672-07	Soil	19-Jul-12 09:40	20-Jul-12 10:35
PILE 790	H201672-08	Soil	19-Jul-12 10:15	20-Jul-12 10:35
PILE 791	H201672-09	Soil	19-Jul-12 10:30	20-Jul-12 10:35
PILE 814	H201672-10	Soil	19-Jul-12 11:10	20-Jul-12 10:35

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2072304 - 1:4 DI Water										
Blank (2072304-BLK1)				Prepared & Analyzed: 23-Jul-12						
Chloride	ND	16.0	mg/kg							
LCS (2072304-BS1)				Prepared & Analyzed: 23-Jul-12						
Chloride	432	16.0	mg/kg	400		108	80-120			
LCS Dup (2072304-BSD1)				Prepared & Analyzed: 23-Jul-12						
Chloride	432	16.0	mg/kg	400		108	80-120	0.00	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2072306 - General Prep - Organics										
Blank (2072306-BLK1)				Prepared & Analyzed: 23-Jul-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*38.6*		mg/kg	*50.0*		*77.2*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*51.3*		mg/kg	*50.0*		*103*	*63.6-154*			
LCS (2072306-BS1)				Prepared & Analyzed: 23-Jul-12						
GRO C6-C10	169	10.0	mg/kg	200		84.3	66.4-124		23.4	
DRO >C10-C28	181	10.0	mg/kg	200		90.4	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*42.7*		mg/kg	*50.0*		*85.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*54.7*		mg/kg	*50.0*		*109*	*63.6-154*			
LCS Dup (2072306-BSD1)				Prepared & Analyzed: 23-Jul-12						
GRO C6-C10	174	10.0	mg/kg	200		87.1	66.4-124	3.19	23.4	
DRO >C10-C28	180	10.0	mg/kg	200		89.8	61.6-132	0.622	23.1	
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.0*		*88.8*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*55.1*		mg/kg	*50.0*		*110*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 701 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 25-Jul-12 10:20

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2072403 - Volatiles										
Blank (2072403-BLK1)				Prepared & Analyzed: 24-Jul-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0519*		mg/kg	*0.0500*		*104*	*89.4-126*			
LCS (2072403-BS1)				Prepared & Analyzed: 24-Jul-12						
Benzene	1.87	0.050	mg/kg	2.00		93.6	80.7-116			
Toluene	1.91	0.050	mg/kg	2.00		95.5	89.7-121			
Ethylbenzene	1.97	0.050	mg/kg	2.00		98.4	91.4-124			
Total Xylenes	6.00	0.150	mg/kg	6.00		100	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0525*		mg/kg	*0.0500*		*105*	*89.4-126*			
LCS Dup (2072403-BSD1)				Prepared & Analyzed: 24-Jul-12						
Benzene	1.83	0.050	mg/kg	2.00		91.7	80.7-116	2.04	16.4	
Toluene	1.83	0.050	mg/kg	2.00		91.7	89.7-121	4.10	16.6	
Ethylbenzene	1.87	0.050	mg/kg	2.00		93.4	91.4-124	5.17	16.1	
Total Xylenes	5.64	0.150	mg/kg	6.00		94.0	93.4-130	6.27	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0517*		mg/kg	*0.0500*		*103*	*89.4-126*			

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

Cardinal Laboratories

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Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 1

Client: IEI

Contact: Marcella

Address: 46 CR 3150

Aztec NM 87410

Phone Number: 505-632-1782

FAX Number: 505-632-1782

NOTES:

1) Ensure proper container packaging.

2) Ship samples promptly following collection.

3) Designate Sample Reject Disposition.

PO# 701

Project Name: JFJ

Table 1. – Matrix Type

1 = Surface Water, 2 = Ground Water

3 = Soil/Sediment, 4 = Rinsate, 5 = Oil

6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY

GAL JOB #

Samplers Signature: Clyde 7/17

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227

Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO	Analyses Required: GRO	Analyses Required: BTEX	Analyses Required: Chlorides	Comments
H201672																	2°
1. Pile 13	7/19/12	6:40	CT	3	1								✓	✓	✓	✓	27.1 on ice
2. Pile 14		7:10											✓	✓	✓	✓	
3. Pile 603		7:35											✓	✓	✓	✓	
4. Pile 633		7:40											✓	✓	✓		
5. Pile 752		8:20											✓	✓			
6. Pile 755		9:00											✓	✓	✓	✓	
7. Pile 761		9:40											✓	✓	✓	✓	
8. Pile 790		10:15											✓	✓	✓	✓	
9. Pile 791		10:30											✓	✓	✓	✓	
10. Pile 814	✓	11:10	✓	✓	✓								✓	✓	✓	✓	

Relinquished by: Clyde 7/17	Date: 7/19/12	Time: 5:00	Received by:	Date: 7-19-12	
Relinquished by:	Date: 7-19-12	Time: 7:36	Received by: Courtney Clark	Date: 7/19/12	
			Alysheine	7/20/12	

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

Fed Ex

5.5°C #26

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

PILE #813

H203007-19 (Soil)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
Cardinal Laboratories									
Inorganic Compounds									
Chloride	256	16.0	mg/kg	4	2121911	HM	19-Dec-12	4500-Cl-B	
Organic Compounds									
GRO C6-C10	ND	10.0	mg/kg	1	2121903	MS	19-Dec-12	8015M	
DRO >C10-C28	24.2	10.0	mg/kg	1	2121903	MS	19-Dec-12	8015M	
Surrogate: 1-Chlorooctane		*82.2 %*	*65.2-140*		*2121903*	MS	*19-Dec-12*	*8015M*	
Surrogate: 1-Chlorooctadecane		*95.7 %*	*63.6-154*		*2121903*	MS	*19-Dec-12*	*8015M*	
Volatile Organic Compounds by EPA Method 8021									
Benzene*	ND	0.050	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Toluene*	ND	0.050	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Ethylbenzene*	ND	0.050	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Total Xylenes*	ND	0.150	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Total BTEX	ND	0.300	mg/kg	50	2121901	AP	20-Dec-12	8021B	
Surrogate: 4-Bromofluorobenzene (PID)		*115 %*	*89.4-126*		*2121901*	AP	*20-Dec-12*	*8021B*	

ANALYTICAL
DEC 20 2012
PASSED

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

December 20, 2012

MARCELLA MARQUEZ

INDUSTRIAL ECOSYSTEMS

49 CR 3150

AZTEC, NM 87410

RE: JFJ

Enclosed are the results of analyses for samples received by the laboratory on 12/14/12 11:00.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list on accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/qa/lab_accred_certif.html.

Cardinal Laboratories is accreditated through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene

Celey D. Keene

Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 * 101 E. MARLAND * HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE #132	H203007-01	Soil	12-Dec-12 07:10	14-Dec-12 11:00
PILE #595	H203007-02	Soil	12-Dec-12 07:40	14-Dec-12 11:00
PILE #629	H203007-03	Soil	12-Dec-12 08:05	14-Dec-12 11:00
PILE #637	H203007-04	Soil	12-Dec-12 08:15	14-Dec-12 11:00
PILE #713	H203007-05	Soil	12-Dec-12 08:30	14-Dec-12 11:00
PILE #738	H203007-06	Soil	12-Dec-12 08:50	14-Dec-12 11:00
PILE #747	H203007-07	Soil	12-Dec-12 09:20	14-Dec-12 11:00
PILE #752	H203007-08	Soil	12-Dec-12 09:30	14-Dec-12 11:00
PILE #755	H203007-09	Soil	12-Dec-12 09:40	14-Dec-12 11:00
PILE #761	H203007-10	Soil	12-Dec-12 10:10	14-Dec-12 11:00
PILE #763	H203007-11	Soil	12-Dec-12 10:30	14-Dec-12 11:00
PILE #769	H203007-12	Soil	12-Dec-12 10:50	14-Dec-12 11:00
PILE #773	H203007-13	Soil	12-Dec-12 11:00	14-Dec-12 11:00
PILE #785	H203007-14	Soil	12-Dec-12 11:15	14-Dec-12 11:00
PILE #789	H203007-15	Soil	12-Dec-12 11:25	14-Dec-12 11:00
PILE #792	H203007-16	Soil	12-Dec-12 11:45	14-Dec-12 11:00
PILE #795	H203007-17	Soil	12-Dec-12 11:57	14-Dec-12 11:00
PILE #799	H203007-18	Soil	12-Dec-12 12:05	14-Dec-12 11:00
PILE #813	H203007-19	Soil	12-Dec-12 12:10	14-Dec-12 11:00
PILE #825	H203007-20	Soil	12-Dec-12 12:20	14-Dec-12 11:00

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Celey D. Keene, Lab Director/Quality Manager

CARDINAL Laboratories

PHONE (575) 393-2326 ° 101 E. MARLAND ° HOBBS, NM 88240

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Inorganic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121911 - 1:4 DI Water										
Blank (2121911-BLK1)				Prepared & Analyzed: 19-Dec-12						
Chloride	ND	16.0	mg/kg							
LCS (2121911-BS1)				Prepared & Analyzed: 19-Dec-12						
Chloride	416	16.0	mg/kg	400		104	80-120			
LCS Dup (2121911-BSD1)				Prepared & Analyzed: 19-Dec-12						
Chloride	432	16.0	mg/kg	400		108	80-120	3.77	20	

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121701 - General Prep - Organics										
Blank (2121701-BLK1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*41.9*		mg/kg	*50.5*		*83.0*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*45.3*		mg/kg	*50.0*		*90.7*	*63.6-154*			
LCS (2121701-BS1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	198	10.0	mg/kg	200		98.8	66.4-124		23.4	
DRO >C10-C28	215	10.0	mg/kg	200		108	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*48.4*		mg/kg	*50.5*		*95.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.6*	*63.6-154*			
LCS Dup (2121701-BSD1)				Prepared: 17-Dec-12 Analyzed: 18-Dec-12						
GRO C6-C10	206	10.0	mg/kg	200		103	66.4-124	4.22	23.4	
DRO >C10-C28	230	10.0	mg/kg	200		115	61.6-132	6.87	23.1	
Surrogate: 1-Chlorooctane	*50.1*		mg/kg	*50.5*		*99.3*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*50.2*		mg/kg	*50.0*		*100*	*63.6-154*			
Batch 2121903 - General Prep - Organics										
Blank (2121903-BLK1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	*44.4*		mg/kg	*50.5*		*87.9*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.8*		mg/kg	*50.0*		*99.6*	*63.6-154*			
LCS (2121903-BS1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	184	10.0	mg/kg	200		92.1	66.4-124		23.4	
DRO >C10-C28	199	10.0	mg/kg	200		99.5	61.6-132		23.1	
Surrogate: 1-Chlorooctane	*46.1*		mg/kg	*50.5*		*91.4*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*47.0*		mg/kg	*50.0*		*94.0*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Organic Compounds - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121903 - General Prep - Organics										
LCS Dup (2121903-BSD1)				Prepared & Analyzed: 19-Dec-12						
GRO C6-C10	191	10.0	mg/kg	200		95.6	66.4-124	3.64	23.4	
DRO >C10-C28	210	10.0	mg/kg	200		105	61.6-132	5.25	23.1	
Surrogate: 1-Chlorooctane	*48.0*		mg/kg	*50.5*		*95.1*	*65.2-140*			
Surrogate: 1-Chlorooctadecane	*49.3*		mg/kg	*50.0*		*98.5*	*63.6-154*			

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Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: NONE GIVEN Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 20-Dec-12 11:18

Volatile Organic Compounds by EPA Method 8021 - Quality Control

Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2121901 - Volatiles										
Blank (2121901-BLK1)				Prepared & Analyzed: 19-Dec-12						
Benzene	ND	0.050	mg/kg							
Toluene	ND	0.050	mg/kg							
Ethylbenzene	ND	0.050	mg/kg							
Total Xylenes	ND	0.150	mg/kg							
Total BTEX	ND	0.300	mg/kg							
Surrogate: 4-Bromofluorobenzene (PID)	*0.0552*		mg/kg	*0.0500*		*110*	*89.4-126*			
LCS (2121901-BS1)				Prepared & Analyzed: 19-Dec-12						
Benzene	1.98	0.050	mg/kg	2.00		99.2	80.7-116			
Toluene	2.21	0.050	mg/kg	2.00		110	89.7-121			
Ethylbenzene	2.17	0.050	mg/kg	2.00		109	91.4-124			
Total Xylenes	6.78	0.150	mg/kg	6.00		113	93.4-130			
Surrogate: 4-Bromofluorobenzene (PID)	*0.0539*		mg/kg	*0.0500*		*108*	*89.4-126*			
LCS Dup (2121901-BSD1)				Prepared & Analyzed: 19-Dec-12						
Benzene	2.04	0.050	mg/kg	2.00		102	80.7-116	2.63	16.4	
Toluene	2.15	0.050	mg/kg	2.00		108	89.7-121	2.60	16.6	
Ethylbenzene	2.06	0.050	mg/kg	2.00		103	91.4-124	5.28	16.1	
Total Xylenes	6.29	0.150	mg/kg	6.00		105	93.4-130	7.51	15.8	
Surrogate: 4-Bromofluorobenzene (PID)	*0.0524*		mg/kg	*0.0500*		*105*	*89.4-126*			

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Notes and Definitions

ND	Analyte NOT DETECTED at or above the reporting limit
RPD	Relative Percent Difference
**	Samples not received at proper temperature of 6°C or below.
***	Insufficient time to reach temperature.
-	Chloride by SM4500Cl-B does not require samples be received at or below 6°C
	Samples reported on an as received basis (wet) unless otherwise noted on report

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Celey D. Keene

Celey D. Keene, Lab Director/Quality Manager

CHAIN OF CUSTODY RECORD

Page 1 of 2

Client: I.E.I
Contact: Marcella
Address: 46 CR 3150
Aztec NM 87410
Phone Number: 505.632.1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ Samples

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify)

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S. A. Alcup

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

H2D3007

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	Preservative(s): HNO3	Preservative(s): HCL	Preservative(s): H2SO4	Preservative(s): NAOH	Preservative(s): Other (Specify)	Analyses Required: DRO 8015M	Analyses Required: GRO 8015M	Analyses Required: BTEX 8021B	Analyses Required: Chloride 300.0	Comments
01	1. Pit #132	12/12/12	7:10	SA	3	1	N							✓	✓	✓	✓	13.7 c on ice
02	2. 595		7:40											✓	✓	✓		
03	3. 629		8:05											✓	✓	✓	✓	
04	4. 637		8:15											✓	✓	✓	✓	
05	5. 713		8:30											✓	✓	✓	✓	
06	6. 738		8:50											✓	✓	✓	✓	
07	7. 747		9:20											✓	✓	✓	✓	
08	8. 752		9:30											✓				
09	9. 755		9:40											✓				
10	10. 761		10:10											✓	✓	✓	✓	

Relinquished by: S. A. Alcup	Date: 12/12/12	Time: 12:30	Received by: M. Morgan	Date: 12/12/12	Time: 12:30
Relinquished by: M. Morgan	Date: 12/13/12	Time: 15:00	Received by: Christy Clark	Date: 12/13/12	Time: 730
			Jodi Henson	12/14/12	11:00

#210 4°C

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)

CHAIN OF CUSTODY RECORD

Green Analytical Laboratories

Client: I.E.I.
Contact: Marcella
Address: 49 CR 3150
Aztec NM 87410
Phone Number: 505-632-1782
FAX Number: 505-632-1876

NOTES:
1) Ensure proper container packaging.
2) Ship samples promptly following collection.
3) Designate Sample Reject Disposition.

PO# 1047
Project Name: JFJ

Table 1. – Matrix Type
1 = Surface Water, 2 = Ground Water
3 = Soil/Sediment, 4 = Rinsate, 5 = Oil
6 = Waste, 7 = Other (Specify) _____

FOR GAL USE ONLY
GAL JOB #

Samplers Signature: S A Alunbo

Lab Name: Green Analytical Laboratories (970) 247-4220 FAX (970) 247-4227
Address: 75 Suttle Street, Durango, CO 81303 www.greenanalytical.com

	Sample ID	Collection: Date	Collection: Time	Misc: Collected by: (Init.)	Misc: Matrix Type From Table 1	Misc: No. of Containers	Misc: Sample Filtered ? Y/N	Preservative(s): Unpreserved (Ice Only)	HNO3	HCL	H2SO4	NAOH	Other (Specify)	Analyses Required: DRO 8015m	GRO 8015m	BTEX 8021B	Chloride 300.0	Comments
	H203007																	
11	1. Pile #763	12/11/12	10:30	SA	3	1	N							✓				13.7 c on ice
12	2. 769		10:50											✓	✓	✓	✓	
13	3. 773		11:00											✓	✓	✓	✓	
14	4. 785		11:15											✓	✓	✓	✓	
15	5. 789		11:25											✓				
16	6. 792		11:45											✓	✓	✓	✓	
17	7. 795		11:57											✓				
18	8. 799		12:05											✓	✓	✓	✓	
19	9. 813		12:10											✓	✓	✓	✓	
20	10. 825		12:20											✓	✓	✓	✓	

Relinquished by: S A Alunbo	Date: 12/12/12	Time: 12:30	Received by: R. M. Marquez	Date: 12/12/12	Time: 18:20
Relinquished by: M. Pacheco	Date: 12/13/12	Time: 13:00	Received by: Kristen Podish	Date: 12/13/12	Time: 1300

Jodi Henson 12/14/12 11:00
#26 4°c

* Sample Reject: [ ] Return [ ] Dispose [ ] Store (30 Days)