

NM1 - ___ 10 B ___

APPROVALS

YEAR(S):

___ 2018 - 2019 ___

State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

Ken McQueen
Cabinet Secretary

Matthias Sayer
Deputy Cabinet Secretary

Matthias Sayer, Acting Division Director
Oil Conservation Division



January 12, 2018

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, 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) request, emailed to OCD on January 12, 2018, and associated analytical results to reuse the remediated soils for the stabilization and/or solidification of incoming drilling mud, tank bottoms, and sludge from following biopile(s): **883, 609, 608, 810, 143, 142, 549, and 537.**

Based upon the information provided in the request, 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 Brad Jones on my staff at (505) 476-3487 or brad.a.jones@state.nm.us.

Respectfully,

A handwritten signature in black ink, appearing to read "Jim Griswold", is written over a horizontal line.

Jim Griswold
Environmental Bureau Chief

JG/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

January 11, 2018

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 #

883	DRO, GRO, BTEX & Chlorides Passed 11/15/17
609	DRO, GRO, BTEX & Chlorides Passed 11/15/17
608	DRO, GRO, BTEX & Chlorides Passed 11/15/17
810	DRO, GRO, BTEX & Chlorides Passed 11/15/17
143	DRO, GRO, BTEX & Chlorides Passed 11/15/17
142	DRO, GRO, BTEX & Chlorides Passed 11/15/17
549	DRO, GRO, BTEX & Chlorides Passed 11/15/17
537	DRO, GRO, BTEX & Chlorides Passed 11/15/17

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

Respectfully Submitted,

Marcella Marquez
Regulatory/Compliance/HR

Enclosure(s) – Analytical Reports

Jones, Brad A., EMNRD

From: Marcella Marquez <marcella@industrialecosystems.com>
Sent: Friday, January 12, 2018 9:08 AM
To: Jones, Brad A., EMNRD
Subject: Request to Reuse Soils
Attachments: 011118 Request to Reuse Soil.pdf; 111517 Analyticals.pdf

Importance: High

Brad:

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

Thanks,
Marcella Marquez
Regulatory/Compliance/HR Manager
Industrial Ecosystems, Inc.
Phone: (505) 632-1782
Fax: (505) 632-1876 or (505) 334-1003

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PILE 883	H703016-01	Soil	31-Oct-17 07:00	02-Nov-17 10:40
PILE 609	H703016-02	Soil	31-Oct-17 07:35	02-Nov-17 10:40
PILE 608	H703016-03	Soil	31-Oct-17 08:10	02-Nov-17 10:40
PILE 810	H703016-04	Soil	31-Oct-17 08:40	02-Nov-17 10:40
PILE 143	H703016-05	Soil	31-Oct-17 09:15	02-Nov-17 10:40
PILE 142	H703016-06	Soil	31-Oct-17 09:55	02-Nov-17 10:40
PILE 549	H703016-07	Soil	31-Oct-17 10:35	02-Nov-17 10:40
PILE 537	H703016-08	Soil	31-Oct-17 11:10	02-Nov-17 10:40
	H703016-09	Soil	31-Oct-17 12:00	02-Nov-17 10:40

Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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PILE 883
H703016-01 (Soil)

Analyte	Result	MDI	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7110707	MS	07-Nov-17	8021B	

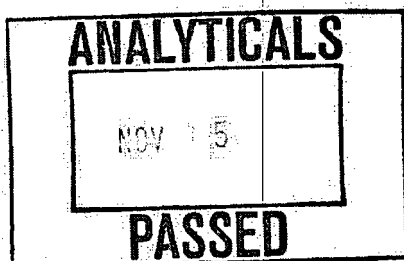
Surrogate: 4-Bromofluorobenzene (P11)			104 %		72-148	7110707	MS	07-Nov-17	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7110304	MS	05-Nov-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7110304	MS	05-Nov-17	8015B	
Surrogate: 1-Chlorooctane			88.4 %		28.3-164	7110304	MS	05-Nov-17	8015B	
Surrogate: 1-Chloroundecane			97.0 %		34.7-157	7110304	MS	05-Nov-17	8015B	

Green Analytical Laboratories
Soluble (DI Water Extraction)

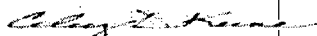
Chloride	35.5		10.0	mg/kg wet	10	B711109	JDA	14-Nov-17	EPA300.0	
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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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**PILE 609
H703016-02 (Soil)**

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Volatile Organic Compounds by EPA Method 8021

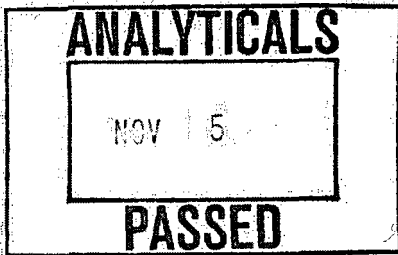
Benzene*	<0.050	0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Toluene*	<0.050	0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Ethylbenzene*	<0.050	0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total Xylenes*	<0.150	0.150	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total BTEX	<0.300	0.300	mg/kg	50	7110707	MS	07-Nov-17	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>		105 %	72-148		7110707	MS	07-Nov-17	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0	10.0	mg/kg	1	7110304	MS	05-Nov-17	8015B	
DRO >C10-C28	<10.0	10.0	mg/kg	1	7110304	MS	05-Nov-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>		79.4 %	28.3-164		7110304	MS	05-Nov-17	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>		79.5 %	34.7-157		7110304	MS	05-Nov-17	8015B	

Green Analytical Laboratories
Soluble (DI Water Extraction)

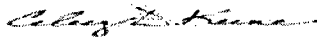
Chloride	<10.0	10.0	mg/kg wet	10	B711109	JDA	14-Nov-17	EPA300.0	
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Cardinal Laboratories

*=Accredited Analyte.

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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PILE 608
H703016-03 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Volatile Organic Compounds by EPA Method 8021

Benzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7110707	MS	07-Nov-17	8021B	

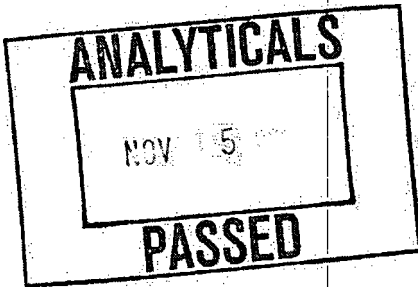
Surrogate: 4-Bromofluorobenzene (PID)			103 %	72-148		7110707	MS	07-Nov-17	8021B	
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Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7110304	MS	05-Nov-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7110304	MS	05-Nov-17	8015B	
Surrogate: 1-Chlorononane			80.9 %	28.3-164		7110304	MS	05-Nov-17	8015B	
Surrogate: 1-Chlorooctadecane			90.1 %	34.7-157		7110304	MS	05-Nov-17	8015B	

Green Analytical Laboratories
Soluble (DI Water Extraction)

Chloride	10.4		10.0	mg/kg wet	10	B711109	JDA	14-Nov-17	EPA300.0	
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*=Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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PILE 810
H703016-04 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Volatile Organic Compounds by EPA Method 8021

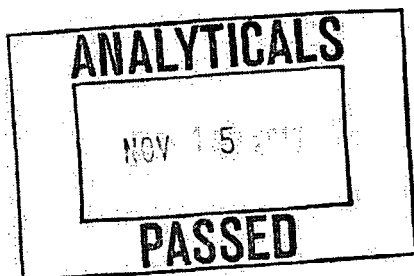
Benzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total BTEX:	<0.300		0.300	mg/kg	50	7110707	MS	07-Nov-17	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			107 %	72-148		7110707	MS	07-Nov-17	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7110304	MS	05-Nov-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7110304	MS	05-Nov-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>			94.6 %	28.3-164		7110304	MS	05-Nov-17	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			98.4 %	34.7-157		7110304	MS	05-Nov-17	8015B	

Green Analytical Laboratories
Soluble (DI Water Extraction)

Chloride	36.8		10.0	mg/kg wet	10	B711109	JDA	14-Nov-17	EPA300.0	
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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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PILE 143
H703016-06 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Volatile Organic Compounds by EPA Method 8021

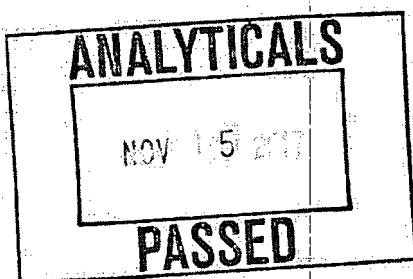
Benzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Surrogate: 4-Bromofluorobenzene (PID)			104 %	72-148		7110707	MS	07-Nov-17	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7110304	MS	05-Nov-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7110304	MS	05-Nov-17	8015B	
Surrogate: 1-Chlorooctane			86.1 %	28.3-164		7110304	MS	05-Nov-17	8015B	
Surrogate: 1-Chlorooctadecane			95.1 %	34.7-157		7110304	MS	05-Nov-17	8015B	

Green Analytical Laboratories
Soluble (DI Water Extraction)

Chloride	14.7		10.0	mg/kg wet	10	B711109	JDA	14-Nov-17	EPA300.0	
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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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PILE 142
H703016-07 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Volatile Organic Compounds by EPA Method 8021

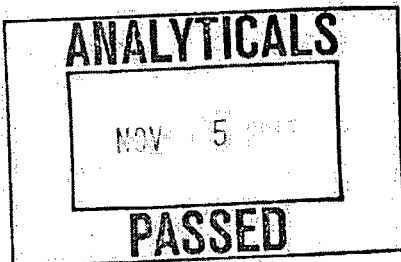
Benzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7110707	MS	07-Nov-17	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			105 %		72-148	7110707	MS	07-Nov-17	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7110304	MS	06-Nov-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7110304	MS	06-Nov-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>			84.9 %		28.3-164	7110304	MS	06-Nov-17	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			95.5 %		34.7-157	7110304	MS	06-Nov-17	8015B	

Green Analytical Laboratories
Soluble (DI Water Extraction)

Chloride	23.5		10.0	mg/kg wet	10	B711109	JDA	15-Nov-17	EPA300.0	
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Cardinal Laboratories

* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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PILE 549
H703016-08 (Soil)

Analyte	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories:
Volatile Organic Compounds by EPA Method 8021

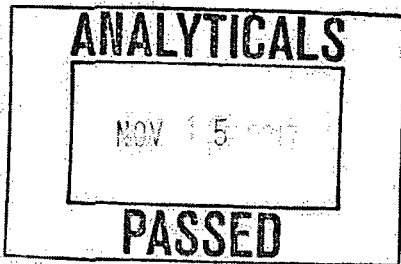
Benzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Surrogate: 1-Bromofluorobenzene (P1D)			105 %	72-148		7110707	MS	07-Nov-17	8021B	

Petroleum Hydrocarbons by GC/FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7110304	MS	06-Nov-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7110304	MS	06-Nov-17	8015B	
Surrogate: 1-Chlorooctane			84.6 %	28.3-164		7110304	MS	06-Nov-17	8015B	
Surrogate: 1-Chlorooctadecane			93.4 %	34.7-157		7110304	MS	06-Nov-17	8015B	

Green Analytical Laboratories:
Soluble (DI Water Extraction)

Chloride	13.8		10.0	mg/kg wet	10	B711109	JDA	15-Nov-17	EPA300.0	
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* = Accredited Analyte

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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**PILE 537
H703016-09 (Soil)**

Analytic	Result	MDL	Reporting Limit	Units	Dilution	Batch	Analyst	Analyzed	Method	Notes
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Cardinal Laboratories
Volatile Organic Compounds by EPA Method 8021

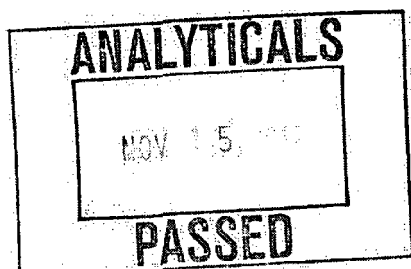
Benzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Toluene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Ethylbenzene*	<0.050		0.050	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total Xylenes*	<0.150		0.150	mg/kg	50	7110707	MS	07-Nov-17	8021B	
Total BTEX	<0.300		0.300	mg/kg	50	7110707	MS	07-Nov-17	8021B	
<i>Surrogate: 4-Bromofluorobenzene (PID)</i>			104 %	72-148		7110707	MS	07-Nov-17	8021B	

Petroleum Hydrocarbons by GC FID

GRO C6-C10	<10.0		10.0	mg/kg	1	7110304	MS	06-Nov-17	8015B	
DRO >C10-C28	<10.0		10.0	mg/kg	1	7110304	MS	06-Nov-17	8015B	
<i>Surrogate: 1-Chlorooctane</i>			78.6 %	28.3-164		7110304	MS	06-Nov-17	8015B	
<i>Surrogate: 1-Chlorooctadecane</i>			89.6 %	34.7-157		7110304	MS	06-Nov-17	8015B	

Green Analytical Laboratories
Soluble (DI Water Extraction)

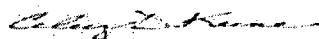
Chloride	<10.0		10.0	mg/kg wet	10	B711109	JDA	15-Nov-17	EPA300.0	
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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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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
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Batch 7110707 - Volatiles
Blank (7110707-BLK1)

Prepared & Analyzed: 07-Nov-17

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	0.0250		106	72-148			

LCS (7110707-BS1)

Prepared & Analyzed: 07-Nov-17

Benzene	1.74	0.050	mg/kg	2.00		86.8	79.5-124			
Toluene	1.75	0.050	mg/kg	2.00		87.3	75.5-127			
Ethylbenzene	1.72	0.050	mg/kg	2.00		85.8	77.7-125			
Total Xylenes	5.45	0.150	mg/kg	6.00		90.9	70.9-124			
Surrogate: 4-Bromofluorobenzene (PID)	0.0259		mg/kg	0.0250		104	72-148			

LCS Dup (7110707-BSD1)


Prepared & Analyzed: 07-Nov-17

Benzene	1.72	0.050	mg/kg	2.00		86.0	79.5-124	0.947	6.5	
Toluene	1.71	0.050	mg/kg	2.00		85.5	75.5-127	2.15	7.02	
Ethylbenzene	1.69	0.050	mg/kg	2.00		84.5	77.7-125	1.61	7.83	
Total Xylenes	5.40	0.150	mg/kg	6.00		90.1	70.9-124	0.914	7.78	
Surrogate: 4-Bromofluorobenzene (PID)	0.0260		mg/kg	0.0250		104	72-148			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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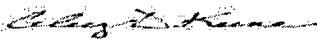
Petroleum Hydrocarbons by GC FID - Quality Control
Cardinal Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 7110304 - General Prep - Organics										
Blank (7110304-BLK1)										
Prepared: 03-Nov-17 Analyzed: 05-Nov-17										
GRO C6-C10	ND	10.0	mg/kg							
DRO >C10-C28	ND	10.0	mg/kg							
Surrogate: 1-Chlorooctane	47.4		mg/kg	50.0		94.8	28.3-164			
Surrogate: 1-Chlorooctadecane	50.1		mg/kg	50.0		100	34.7-157			
LCS (7110304-BS1)										
Prepared: 03-Nov-17 Analyzed: 05-Nov-17										
GRO C6-C10	192	10.0	mg/kg	200		96.0	76.6-119			
DRO >C10-C28	207	10.0	mg/kg	200		103	81.4-124			
Surrogate: 1-Chlorooctane	49.4		mg/kg	50.0		98.8	28.3-164			
Surrogate: 1-Chlorooctadecane	50.8		mg/kg	50.0		102	34.7-157			
LCS Dup (7110304-BSD1)										
Prepared: 03-Nov-17 Analyzed: 05-Nov-17										
GRO C6-C10	186	10.0	mg/kg	200		93.1	76.6-119	3.03	7.94	
DRO >C10-C28	199	10.0	mg/kg	200		99.6	81.4-124	3.63	9.83	
Surrogate: 1-Chlorooctane	47.1		mg/kg	50.0		94.2	28.3-164			
Surrogate: 1-Chlorooctadecane	47.8		mg/kg	50.0		95.5	34.7-157			

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Celey D. Keene, Lab Director/Quality Manager

Analytical Results For:

INDUSTRIAL ECOSYSTEMS 49 CR 3150 AZTEC NM, 87410	Project: JFJ Project Number: 5023 Project Manager: MARCELLA MARQUEZ Fax To: (505) 632-1876	Reported: 15-Nov-17 14:31
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Soluble (DI Water Extraction) - Quality Control
Green Analytical Laboratories

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch B711109 - General Prep - Wet Chem

Blank (B711109-BLK1)		Prepared: 13-Nov-17 Analyzed: 14-Nov-17								
Chloride	ND	10.0	mg/kg wet							
LCS (B711109-BS1)		Prepared: 13-Nov-17 Analyzed: 14-Nov-17								
Chloride	250	10.0	mg/kg wet	250		99.9	85-115			
LCS Dup (B711109-BSD1)		Prepared: 13-Nov-17 Analyzed: 14-Nov-17								
Chloride	245	10.0	mg/kg wet	250		98.1	85-115	1.83	20	

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Celey D. Keene, Lab Director/Quality Manager

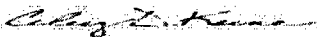
Notes and Definitions

- 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 AND ANALYSIS REQUEST

(970) 247-4220
Fax: (970) 247-4227

service@greenanalytical.com or dzufelt@greenanalytical.com
75 Suttle St Durango, CO 81303

Company Name: LEI
Project Manager: Marcella
Address: 49CR 3150
City: Aztec State: Nm Zip: 87400
Phone #: 632-1782 Email:
Additional Report To:
Project Name: JFI
Project Number:
Sampler Name (Print):

ANALYSIS REQUEST table with columns for Matrix (check one) and # of containers. Includes handwritten entries: DRO 8016B, GRO 8015B, BTEX 8021B, Chlorides 300.0

Table with columns: Lab I.D., Sample Name or Location, Date, Time, Matrix (check one), # of containers. Includes handwritten entries for Lab I.D. (H703016, 883, 609, 608, 810, 143, 142, 549, 537) and Date/Time (10-31-17 7:00 to 12:00).

Vertical handwritten note on the left side of the table: 1 PILE 883, 2 609, 3 608, 4 810, 5 143, 6 142, 7 549, 8 537

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Relinquished By: (Signature) Date: 11/1/17 Time: 1500 Received By: Christina Carr
Relinquished By: Christina Carr Date: 11/1/17 Time: 1600 Received By: Fed Ex
Relinquished By: Date: 10/1-2/17 Time: 10:40 AM Received By: [Signature]
Delivered By: (Circle One) 4.7° Temperature at receipt: 3.3° CHECKED BY: [Signature]
Sampler - UPS FedEx Kangaroo Other: Corrected 4.95° on the #15 at T. Some head space

* Chain of Custody must be signed in "Relinquished By:" as an acceptance of services and all applicable charges.