

NM1 - _____ 10 B _____

**GENERAL
CORRESPONDENCE**

YEAR(S):

__2009 to Present__



New Mexico Energy, Minerals and Natural Resources Department

Susana Martinez

Governor

John H. Bemis

Cabinet Secretary-Designate

Brett F. Woods, Ph.D.

Deputy Cabinet Secretary

Jami Bailey

Division Director

Oil Conservation Division



June 30, 2011

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

RE: Compliance with the Transitional Provisions of the Surface Waste Management Facilities rule (Rule 36) and Treatment and Vadose Monitoring Requirements at Existing Landfarms
JFJ Landfarm LLC
Permit NM-1-010-B
Location: Unit J of Section 2, Township 29 North, Range 12 West, NMPM
San Juan County, New Mexico

Dear Owner/Operator:

The Oil Conservation Division (OCD) has received several landfarm monitoring reports which indicate Owner/Operators are not conducting the required sampling and assessment of the monitoring data required by existing permit conditions and the applicable requirements of the Surface Waste Management Facilities rule 19.15.36 NMAC (Rule 36). OCD wishes to remind such Owner/Operators that the requirements of Rule 36 have been in effect since February 14, 2007 and compliance is required. This letter is provided to help Owner/Operators understand the most common deficiencies regarding compliance in general operations, sampling of landfarms at existing surface waste management facilities, and the reporting of such results.

I. Transitional Provisions, Existing Surface Waste Management Facilities:

The transitional provision of Rule 36.20.A states that existing surface waste management facilities *shall comply with the operational, waste acceptance, and closure requirements* provided in the new rule, unless specifically addressed in the current permit, order, waiver, exception, or agreement granted in writing from OCD. Where the language in the existing permit is silent (i.e., where a specified requirement of Rule 36 is not addressed within the existing permit or in writing from OCD), the operational, waste acceptance, and closure provisions of Rule 36 apply and



supplement the conditions of the existing permit. Examples of how this transitional provision would be applied to Owner/Operators of existing landfarms are as follows:

A. Treatment Zone Monitoring (contaminated soils being remediated):

Most Owner/Operators of existing landfarms have common language or conditions specified within their permits. For this example, two of the following common permit conditions demonstrate how an Owner/Operator would request the necessary modification of their existing permit.

In an existing landfarm permit:

1. Soils will be spread on the surface in six-inch lifts or less.
2. Successive lifts of contaminated soils may not be spread until a laboratory measurement of:
 - a. total petroleum hydrocarbons (TPH) in the previous lift is less than 100 parts per million (ppm);
 - b. the sum of all aromatic hydrocarbons (BTEX) is less than 50 ppm; and
 - c. benzene is less than 10 ppm.
 - d. Comprehensive records of the laboratory analyses and the sampling locations must be maintained at the facility. Authorization from the OCD must be obtained prior to application of successive lifts and/or removal of the remediated soils.

In addition to the above permit conditions, an Owner/Operator also has to implement the following additional requirements of Rule 36:

- Chloride testing and limits (See 19.15.36.15.D NMAC)

If ground water is between 50' and 100' below the bottom of the oil field waste:	If ground water is more than 100' below the bottom of the oil field waste:
Chloride concentration cannot exceed 500 mg/kg	Chloride concentration cannot exceed 1000 mg/kg

- The following test methods would have to be utilized: TPH concentration of each lift determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, and chloride concentration, determined by EPA method 300.1. (See 19.15.36.15.D NMAC)
- The sampling protocol and frequency: *“The operator shall collect and analyze at least one composite soil sample, consisting of four discrete samples, from the treatment zone at least semi-annually using the methods specified below for TPH and chlorides.”* (See 19.15.36.15.D NMAC)
- The maximum thickness of remediated soils for closure: *“The maximum thickness of treated soils in a landfarm cell shall not exceed two feet or approximately 3000 cubic yards per acre. When that thickness is reached, the operator shall not place additional oil field waste in the landfarm cell until it has demonstrated by monitoring the treatment zone at least semi-*

annually that the contaminated soil has been treated to the standards specified in Subsection F of 19.15.36.15 NMAC or the contaminated soils have been removed to a division-approved surface waste management facility.” (See 19.15.36.15.D NMAC)

Therefore, in order to remain in compliance with existing permit conditions and Rule 36 the Owner/Operator shall ensure that:

1. Soils will be spread on the surface in **six-inch** lifts or less, and the addition of any remediated soils is not allowed until:
 - a. TPH concentration of each lift, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed **100 mg/kg (ppm)**,
 - b. the sum of all aromatic hydrocarbons (BTEX) is less than **50 ppm**,
 - c. benzene is less than **10 ppm**, and
 - d. the chloride concentration, as determined by EPA method 300.1, does not exceed **500 mg/kg or 1000 mg/kg**. (See depth to ground water restrictions above.)
2. The Owner/Operator shall collect and analyze at least **one** composite soil sample, consisting of **four** discrete samples, from the treatment zone at least **semi-annually** using the methods specified above for TPH and chlorides.
3. The maximum thickness of treated soils in a landfarm cell shall not exceed **two feet** or approximately **3000 cubic yards per acre**. When that thickness is reached, the Owner/Operator shall not place additional oil field waste in the landfarm cell until it has demonstrated by monitoring the treatment zone at least semi-annually that the contaminated soil has been treated to the standards specified in Rule 36.15.F or the contaminated soils have been removed to a division-approved surface waste management facility. Owner/Operators **must** obtain authorization from the OCD prior to application of successive lifts and/or removal of the remediated soils.

The requirements of Rule 36 that would require an Owner/Operator to submit a modification request regarding treatment zone monitoring to an existing landfarm are as follows:

- *“The operator shall spread contaminated soils on the surface in **eight-inch or less lifts or approximately 1000 cubic yards per acre per eight-inch lift**.” (See 19.15.36.15.D NMAC)*
- *“**TPH concentration of each lift, as determined by EPA SW-846 method 8015M or EPA method 418.1 or other EPA method approved by the division, does not exceed 2500 mg/kg**.” (See 19.15.36.15.D NMAC)*

B. Vadose Zone Monitoring (native soils beneath the contaminated soils being remediated):

In regards to vadose zone monitoring (commonly referred to by the misnomer of “Treatment Zone Monitoring” within existing landfarm permits), most Owner/Operators of existing surface waste management facilities that operate landfarms have common language or conditions specified within their permits. For this example two of the most common permit conditions regarding the vadose zone will be used to demonstrate how an Owner/Operator would comply with the

transitional provision of Rule 36.20.A, and what requirements of the rule would require an Owner/Operator to submit a request to modify an existing permit.

Two of the most common conditions in an existing landfarm permit are as follows:

1. A treatment zone not to exceed **three (3) feet** beneath the landfarm native ground surface must be monitored. A minimum of one random soil sample must be taken from each individual cell, with no cell being larger than five (5) acres, **six (6) months** after the first contaminated soils are received in the cell and then **quarterly** thereafter. The sample must be taken at two (2) to three (3) feet below the native ground surface.
2. The soil samples must be analyzed using EPA-approved methods for total petroleum hydrocarbons (TPH) and volatile aromatic organics (BTEX) **quarterly** and for major cations/anions and Water Quality Control Commission (WQCC) metals **annually**.

Based upon the transitional provision of Rule 36.20.A, an Owner/Operator would have to implement and integrate the following **additional requirements** while complying with the conditions specified above.

- The testing for chlorides and the comparison of the results to background: *“The operator shall collect and analyze a minimum... using the methods specified below for TPH, BTEX and chlorides and shall compare each result to the higher of the PQL or the background soil concentrations to determine whether a release has occurred.”* (See 19.15.36.15.E(2) NMAC).
 - i. *Note:* The “methods specified below for TPH, BTEX and chlorides” are those identified in Subsection F of 19.15.36.15 NMAC: “Total BTEX, as determined by EPA SW-846 method 8021B or 8260B...” (See 19.15.36.15.F(2) NMAC); “TPH, as determined by EPA method 418.1 or other EPA method approved by the division...” (See 19.15.36.15.F(3) NMAC); and “Chlorides, as determined by EPA method 300.1...” (See 19.15.36.15.F(3) NMAC).
- The five year monitoring program: *“The operator shall collect and analyze a minimum of four randomly selected, independent samples from the vadose zone, using the methods specified below for the constituents listed in Subsections A and B of 20.6.2.3103 NMAC at least every five years and shall compare each result to the higher of the PQL or the background soil concentrations to determine whether a release has occurred.”* (See 19.15.36.15.E(3) NMAC).
 - ii. *Note:* The “methods specified below for the constituents listed in Subsections A and B of 20.6.2.3103 NMAC” are those identified in Subsection F of 19.15.36.15 NMAC: “The concentration of constituents listed in Subsections A and B of 20.6.2.3103 NMAC shall be determined by EPA SW-846 methods 6010B or 6020 or other methods approved by the division.” (See 19.15.36.15.F(5) NMAC)

- The release response: *“If vadose zone sampling results show that the concentrations of TPH, BTEX or chlorides exceed the higher of the PQL or the background soil concentrations, then the operator shall notify the division’s environmental bureau of the exceedance, and shall **immediately collect and analyze** a minimum of **four** randomly selected, independent samples for TPH, BTEX, chlorides and the constituents listed in Subsections A and B of 20.6.2.3103 NMAC. The operator shall submit the results of the re-sampling event and a response action plan for the division’s approval within 45 days of the initial notification. The response action plan shall address changes in the landfarm’s operation to prevent further contamination and, if necessary, a plan for remediating existing contamination.”* (See 19.15.36.15.E(5) NMAC)

The requirements of Rule 36 that would require an Owner/Operator to submit a modification request regarding vadose zone monitoring to an existing landfarm are as follows:

- *“The operator shall take the vadose zone samples from soils between three and four feet below the cell’s original ground surface.”* (See 19.15.36.15.E(1) NMAC)
- *“The operator shall collect and analyze a minimum of four randomly selected, independent samples from the vadose zone at least **semi-annually**...”* (See 19.15.36.15.E(2) NMAC)

C. Transitional Provisions, New Landfarm Cells Constructed at an Existing Surface Waste Management Facility:

The transitional provision, Rule 36.20.B, states “Major modification of an existing surface waste management facility and new landfarm cells constructed at an existing surface waste management facility shall comply with the requirements provided in 19.15.36 NMAC.” In this case, an Owner/Operator is required to consider the siting criteria and operational requirements regarding landfarms specified in Rule 36.13; the specific requirements applicable to landfarms specified in Rule 36.15; and the closure and post closure requirements regarding landfarms of Rule 36.18. The existing permit conditions would not be applicable to new landfarm cells at the existing facility, but would continue to apply to landfarm cells that were constructed prior to the February 14, 2007 effective date of Rule 36.

II. Compliance with Additional Operational Requirements:

Other regulatory requirements that Owner/Operators of existing surface waste management facilities that operate landfarms should be aware of and consider when operating its facility are as follows:

A. Reuse of remediated soils:

Most existing surface waste management facility permits regarding landfarming do not specify the constituents and concentrations that must be achieved for reuse of treated or remediated soils. Rule 36 has a provision that specifically addresses the conditions of approval for reuse of treated soils. Rule 36.15.G(1), disposition of treated soils, states *“If the operator achieves the closure performance standards specified in Subsection F of 19.15.36 NMAC, then the operator may either leave the treated soils in place, or, with prior division approval, dispose or reuse of the treated soils in an alternative manner.”*

In accordance with the treatment zone closure performance standards of Rule 36.15.F, "the operator shall continue treatment until the contaminated soil has been remediated to the higher of the background concentrations or the following closure performance standards. The operator shall demonstrate compliance with the closure performance standards by collecting and analyzing a minimum of one composite soil sample, consisting of four discrete samples.

(1) Benzene, as determined by EPA SW-846 method 8021B or 8260B, shall not exceed **0.2 mg/kg**.

(2) Total BTEX, as determined by EPA SW-846 method 8021B or 8260B, shall not exceed **50 mg/kg**.

(3) The gasoline range organics (GRO) and diesel range organics (DRO) combined fractions, as determined by EPA SW-846 method 8015M, shall not exceed **500 mg/kg**. TPH, as determined by EPA method 418.1 or other EPA method approved by the division, shall not exceed **2500 mg/kg**.

(4) Chlorides, as determined by EPA method 300.1, shall not exceed **500 mg/kg** if the landfarm is located where ground water is less than **100 feet** but at least **50 feet** below the lowest elevation at which the operator will place oil field waste or **1000 mg/kg** if the landfarm is located where ground water is **100 feet** or more below the lowest elevation at which the operator will place oil field waste.

(5) The concentration of constituents listed in Subsections A and B of 20.6.2.3103 NMAC shall be determined by EPA SW-846 methods 6010B or 6020 or other methods approved by the division. If the concentration of those constituents exceed the PQL or background concentration, the operator shall **either** perform a site specific risk assessment using EPA approved methods and shall propose closure standards based upon individual site conditions that protect fresh water, public health, safety and the environment, which shall be subject to division approval **or** remove pursuant to Paragraph (2) of Subsection G of 19.15.36.15 NMAC. "

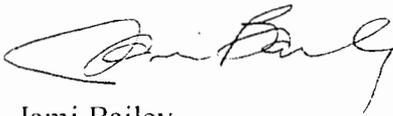
B. Waste Acceptance:

Based upon conversations with several landfarm Owner/Operators, it has come to OCD's attention that the proper waste acceptance protocol is not being implemented at all applicable facilities. In accordance with Rule 36.15.A, "Only soils and drill cuttings predominantly contaminated by petroleum hydrocarbons shall be placed in a landfarm. The division may approve placement of tank bottoms in a landfarm if the operator demonstrates that the tank bottoms do not contain economically recoverable petroleum hydrocarbons. Soils and drill cuttings placed in a landfarm shall be sufficiently free of liquid content to pass the paint filter test, and shall not have a chloride concentration exceeding **500 mg/kg** if the landfarm is located where ground water is less than **100 feet** but at least **50 feet** below the lowest elevation at which the operator will place oil field waste or exceeding **1000 mg/kg** if the landfarm is located where ground water is **100 feet** or more below the lowest elevation at which the operator will place oil field waste. The person tendering oil field waste for treatment at a landfarm shall **certify**, on form C-138, that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content, and that the samples have been found to conform to these requirements. The landfarm's operator shall not accept oil field waste for landfarm treatment unless accompanied by this certification."

All landfarm Owner/Operators should be implementing the above referenced requirements in order to ensure compliance to the transitional and waste acceptance provisions of Rule 36. Please note that pursuant to Rule 36.7.A(3), a landfarm "*means a discrete area of land designated and used for the remediation of petroleum hydrocarbon-contaminated soils and drill cuttings.*" Landfarm Owner/Operators should ensure that the waste material accepted for remediation at their facilities contains petroleum hydrocarbons. Acceptance of any other waste material could be considered disposal.

Please note that if you are currently implementing the protocols identified above, OCD appreciates your efforts to continually remain in compliance with the regulations. As for Owner/Operators that are not currently in compliance, the goal of OCD is to get you back on track and in compliance. OCD anticipates observing the changes identified above in the submittal of the results of the next sampling event. 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
Division Director
Oil Conservation Division

JB/baj

cc: OCD District III Office, Aztec



New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson

Governor

Jim Noel

Cabinet Secretary

Karen W. Garcia

Deputy Cabinet Secretary

Mark Fesmire

Division Director

Oil Conservation Division



July 20, 2010

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 # NM-1-0010B
NW/4, SE/4, 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, dated July 15, 2010, for on-site disposition of approximately 10,000 cubic yards of remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010B) to be utilized to "build up" the southwest portion of the property to use the area for additional parking and to store oilfield equipment. In order for OCD to consider the request, additional information is required.

Pursuant to Paragraph (1) of Subsection G of 19.15.36.15 NMAC, "If the operator achieves the closure performance standards specified in Subsection F of 19.15.36.15 NMAC, then the operator may either leave the treated soils in place, or, with prior division approval, dispose or reuse of the treated soils in an alternative manner." The laboratory analytical results provided in the request did not demonstrate that the proposed biopiles, Pile # 653 Conoco and Pile #656 Conoco, satisfy the required closure performance standards of Subsection F of 19.15.36.15 NMAC.

If JFJ wishes to pursue this proposal, OCD requires the following information in order to consider the request for reuse and disposition:

1. a facility map that illustrates the area in which the proposed disposition would occur;



Ms. Marquez
JFJ Landfarm, L.L.C.
JFJ Landfarm Permit NM-1-010B
July 20, 2010
Page 2 of 2

2. details regarding the proposed "build up" the southwest portion of the property, such as thickness of the proposed "build up" and measures that will be implemented stabilize the soils to prevent erosion and fugitive dust issues; and
3. the identification of each biopile sampled, the volume of each biopile, and the analytical results that demonstrate compliance to the closure performance standards specified in Subsection F of 19.15.36.15 NMAC.

If JFJ is not the surface owner of the proposed alternative disposition location, OCD requires the following additional information in order to consider the request for reuse and disposition:

1. the name, mailing address, and telephone number of the surface owner of record of the proposed location and a copy of the county tax record to demonstrate ownership;
2. the legal description (unit letter or quarter-quarter section, township and range) and street address for the proposed off-site location;
3. a topographic map showing the proposed off-site location in relation to governmental surveys (quarter-quarter section, township and range); watercourses, lakebeds, sinkholes or playa lakes on the property or within 200 feet of the proposed site's property boundary; existing water well and springs on the property or within 1000 feet of the proposed site's property boundary; wetlands on the property or within 500 feet of the proposed site's property boundary; and the nearest permanent residences, schools, hospitals, institutions or churches on the property or within 500 feet of the proposed site's property boundary;
4. a FIRM/FEMA maps illustrating the 100-year floodplain assessment of the proposed off-site location and the area surrounding the property boundary;
5. supporting documentation that demonstrates the depth to ground water at the proposed off-site location; and
6. a written proposal from the surface owner of record which acknowledges the nature of the soils that may be received and demonstrates that the proposed reuse and disposition of the remediated soils effectively prevents erosion and protects fresh water, human health and the environment.

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



**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 15, 2010

Edward Hansen, Geologist
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

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

Dear Edward:

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 southwest portion of the property. It is anticipated that we would use approximately 10,000 yards of treated soils to accomplish this task.

Using the treated soils in this matter would allow us to use the area to park and store oilfield equipment. This would be a beneficial way to reuse/recycle treated soils without having to transport to an off-site location.

Enclosed you will find the analytical reports showing the treated soils have reached acceptable levels and have previously been approved for reuse.

Respectfully Submitted,

Marcella Marquez
HSE Administrator

Enclosures-Analytical Reports

RECEIVED
JUL 19 2010

Marcella Marquez

From: Hansen, Edward J., EMNRD [edwardj.hansen@state.nm.us]

nt: Tuesday, March 31, 2009 9:52 AM

To: Marcella Marquez

Cc: Powell, Brandon, EMNRD

Subject: Approval to Reuse Remediated Biopile Soils for the Stabilization/Solidification of Drilling Mud and Tank Bottoms and Sludge

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 # NM01-0010B

NW/4, SE/4, Section 2, Township 29 North, Range 12 West, NMPM,

San Juan County, New Mexico

Dear Ms. Marquez:

The New Mexico Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) request, dated February 27, 2009, and analytical results to reuse the remediated soils in the following biopiles for the stabilization and/or solidification of incoming drilling mud and tank bottoms and sludge:

Pile # 106 Conoco

Pile # 587 Basin

Pile # 617 Burlington

Pile # 651 Burlington

Pile # 570 Basin

Pile # 616 Burlington

Pile # 645 Conoco

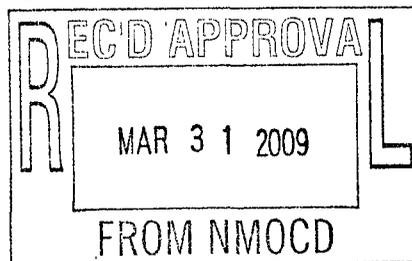
Pile # 653 Conoco

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 the 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) 476-3489 or edwardj.hansen@state.nm.us.

Edward J. Hansen
Hydrologist
Environmental Bureau



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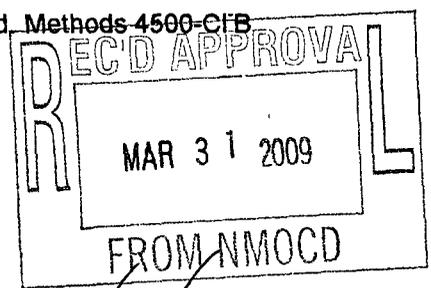
ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 02/03/09
 Reporting Date: 02/04/09
 Project Number: 7036
 Project Name: SOIL SAMPLES
 Project Location: NOT GIVEN

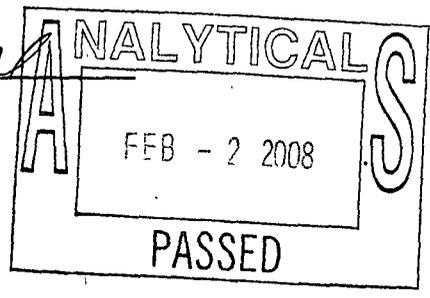
Sampling Date: 02/02/09
 Sample Type: SOIL/SEDIMENT
 Sample Condition: COOL & INTACT
 Sample Received By: ML
 Analyzed By: AB/HM

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)	CI* (mg/kg)
ANALYSIS DATE		02/04/09	02/04/09	02/03/09
H16803-11	PILE [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
H16803-12	PILE 653	<10.0	<10.0	48
H16803-13	PILE [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
H16803-14	PILE [REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]
Quality Control		492	583	510
True Value QC		500	500	500
% Recovery		98.4	117	102
Relative Percent Difference		1.2	1.8	2.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; CI: Std. Methods 4500-CIB
 *Analyses performed on 1:4 w:v aqueous extracts.



Cheryl Keen
 Lab Director



02/04/09
 Date

H16803 TCL IE1

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories



New Mexico Energy, Minerals and Natural Resources Department

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Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



March 3, 2009

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MAR 5 2009

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

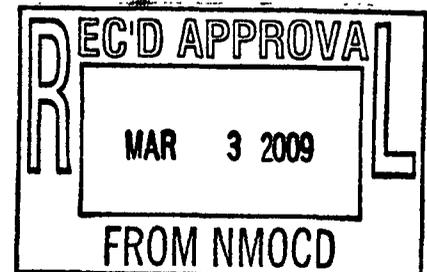
RE: Request for Approval to Reuse Remediated Biopile Soils for the Stabilization/Solidification of Drilling Mud and Tank Bottoms and Sludge JFJ Landfarm, LLC - Industrial Ecosystems Inc. JFJ Landfarm - Permit # NM01-0010B NW/4, SE/4, Section 2, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico

Dear Ms. Marquez:

The New Mexico Oil Conservation Division (OCD) has reviewed JFJ Landfarm, LLC's (JFJ) your request, dated February 26, 2009, and analytical results to reuse the remediated soils in the following biopile for the stabilization and/or solidification of incoming drilling mud and tank bottoms and sludge:

Pile # 105B Graves
Pile # 4 Elmridge
Pile # 17 Burlington
Pile # 46 Basin
Pile #54 Basin
Pile # 65 Duke
Pile # 212 Basin
Pile # 503 Williams
Pile # 516 Burlington
Pile # 557 Dugan
Pile # 571 Burlington
Pile # 575 Basin
Pile # 612 Burlington
Pile # 627 XTO
Pile # 631 Burlington
Pile # 656 Conoco

Pile # 110 Key Energy
Pile # 12 Basin
Pile # 26 Conoco
Pile # 48 Williams
Pile # 60 Red Willow
Pile # 67 Basin
Pile # 334 Basin
Pile # 504 Community
Pile # 518 Burlington
Pile # 559 Basin
Pile # 574 Basin
Pile # 610 Burlington
Pile # 625 Burlington
Pile # 655 Community
Pile # 634 Burlington





ARDINAL LABORATORIES

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

ANALYTICAL RESULTS FOR:
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 02/23/09
Reporting Date: 02/24/09
Project Number: 7085
Project Name: SOIL SAMPLES
Project Location: NOT GIVEN

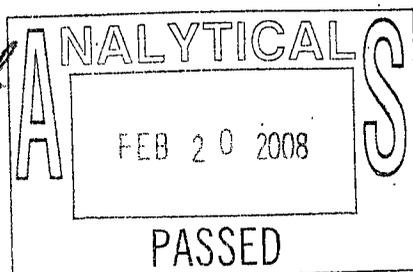
Analysis Date: 02/24/09
Sampling Date: 02/20/09
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: CK
Analyzed By: TR

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H16948-18	PILE #656	80
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-Cl⁻B

Note: Analyses performed on 1:4 w:v aqueous extracts.

Alan S. Keene
Chemist



02/24/09
Date

H16948 IEI

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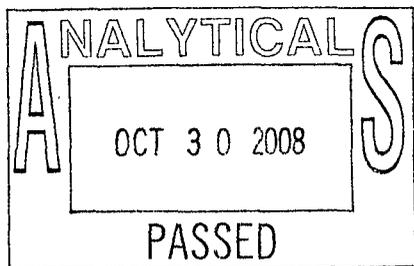
Hall Environmental Analysis Laboratory, Inc.

Date: 11-Nov-08

CLIENT: Industrial Ecosystems, Inc.
Lab Order: 0810611
Project: JFJ Land Farm
Lab ID: 0810611-21

Client Sample ID: Conoco #656
Collection Date: 10/29/2008 2:55:00 PM
Date Received: 10/30/2008
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	ND	10		mg/Kg	1	11/3/2008
Surr: DNOP	95.1	61.7-135		%REC	1	11/3/2008
EPA METHOD 8015B: GASOLINE RANGE						Analyst: DAM
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	11/2/2008 2:36:46 AM
Surr: BFB	95.8	58.8-123		%REC	1	11/2/2008 2:36:46 AM
EPA METHOD 8021B: VOLATILES						Analyst: DAM
Benzene	ND	0.050		mg/Kg	1	11/2/2008 2:36:46 AM
Toluene	ND	0.050		mg/Kg	1	11/2/2008 2:36:46 AM
Ethylbenzene	ND	0.050		mg/Kg	1	11/2/2008 2:36:46 AM
Xylenes, Total	ND	0.15		mg/Kg	1	11/2/2008 2:36:46 AM
Surr: 4-Bromofluorobenzene	118	66.8-139		%REC	1	11/2/2008 2:36:46 AM



Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit



New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Joanna Prukop
Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division



November 19, 2009

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 Off-Site Disposition of Remediated Soils
JFJ Landfarm, LLC - Industrial Ecosystems Inc.
JFJ Landfarm – Permit # NM-1-0010B
NW/4, SE/4, 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, dated November 6, 2009, to remove remediated soils from the OCD permitted landfarm (Surface Waste Management Facility Permit # NM-1-0010B) to two proposed off-site locations for reuse and disposition. In order for the OCD to consider the request, additional information is required.

Pursuant to Paragraph (1) of Subsection G of 19.15.36.15 NMAC, “If the operator achieves the closure performance standards specified in Subsection F of 19.15.36.15 NMAC, then the operator may either leave the treated soils in place, or, with prior division approval, dispose or reuse of the treated soils in an alternative manner.” The “closure performance standards” are associated with specific siting criteria. The OCD requires JFJ to submit the following for each of the proposed locations in order to consider the request for reuse and disposition:

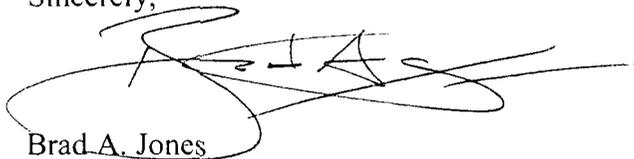
1. the name, mailing address, and telephone number of the surface owner of record of the proposed off-site location and a copy of the county tax record to demonstrate ownership;
2. the legal description (unit letter or quarter-quarter section, township and range) and street address for the proposed off-site location;
3. a topographic map showing the proposed off-site location in relation to governmental surveys (quarter-quarter section, township and range); watercourses, lakebeds, sinkholes or playa lakes on the property or within 200 feet of the proposed site’s property boundary; existing water well and springs on the property or within 1000 feet of the proposed site’s property boundary; wetlands on the property or within 500 feet of the



- proposed site's property boundary; and the nearest permanent residences, schools, hospitals, institutions or churches on the property or within 500 feet of the proposed site's property boundary;
4. a FIRM/FEMA maps illustrating the 100-year floodplain assessment of the proposed off-site location and the area surrounding the property boundary;
 5. supporting documentation that demonstrates the depth to ground water at the proposed off-site location;
 6. the proposed volume (cubic yards) of remediated soil to be delivered to the proposed off-site location;
 7. a written proposal from the surface owner of record which acknowledges the nature of the soils that may be received and demonstrates that the proposed reuse and disposition of the remediated soils effectively prevents erosion and protects fresh water, human health and the environment; and
 8. the identification of each biopile sampled, the volume of each biopile, and the analytical results that demonstrate compliance to the closure performance standards specified in Subsection F of 19.15.36.15 NMAC.

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,

A handwritten signature in black ink, appearing to read 'Brad A. Jones', written over a circular scribble.

Brad A. Jones
Environmental Engineer

BAJ/baj

cc: OCD District III Office, Aztec



RECEIVED
2009 NOV 10 AM 11 58

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 6, 2009

Edward Hansen, Geologist
NM Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: JFJ Landfarm Permit # NM01-0010B
Disposition of treated soils

Dear Edward:

This letter is being submitted to you as a request to remove and reuse treated soils from the JFJ Landfarm.

As previously discussed with Brad, we have been in contact with Waste Management regarding utilizing treated soils at the local county landfill as daily cover; however this does not appear to be a viable option at this time.

We do have two additional options for removing and reusing the treated soils. The options are as follows:

1. Treated soils will be transported, spread and compacted on industrial property. This property is an ideal location because it is an industrial site located just north of our facility. Bill and Vanessa Bailey (Bailey's Welding) are the owners of the property. Soils need to be brought in to enable them to best utilize the site.
2. Treated soils will be transported, spread and compacted on commercial property located at 1301 W. Main Street in Farmington, NM. The property is zoned commercial and once it has been developed, would require blacktop pavement over the treated soils for its commercial use.

The owners are aware that the soil is "remediated" according to our permit standards for reuse. There are no watercourses or live water located near either location and both locations are used as commercial or industrial sites.

We have been working closely with Dr. Bruce Buchanan, Certified Soil Scientist, regarding the disposition of treated soils. It is Dr. Buchanan's opinion that either of these locations would be viable options for reusing the treated soils.

If you should have any questions or if additional information is needed, please feel free to contact me at the above listed telephone number.

Respectfully Submitted,

Marcella Marquez
Administrative Officer



**Industrial Ecosystems Inc.
Soil Reclamation Center**

RECEIVED

2009 JUL 29 PM 1 02

P.O. Box 2043
Farmington, NM 87499

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

#49 CR 3150
Aztec, NM 87410

July 27, 2009

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

RE: Use of reclaimed soil

Dear Edward:

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

<u>Pile #</u>	
# 115	XTO
# 593	Conoco
# 663	Conoco
# 664	Conoco
# 677	Conoco

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

Respectfully Submitted,

Marcella Marquez
Administrative Officer

Enclosure(s) – Analytical Reports



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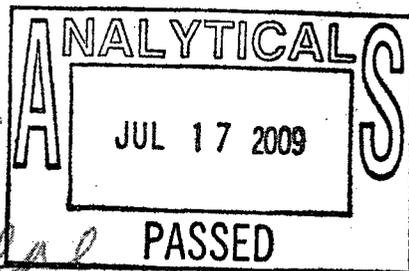
ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

Receiving Date: 07/15/09
Reporting Date: 07/17/09
Project Number: 7620
Project Name: JFJ
Project Location: NOT GIVEN

Sampling Date: 07/13/09
Sample Type: SOIL
Sample Condition: INTACT @ 18°C
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		07/16/09	07/16/09
H17814-2	PILE #115	<10.0	71.3
Quality Control		574	535
True Value QC		500	500
% Recovery		115	107
Relative Percent Difference		2.7	4.3

METHOD: SW-846 8015.M Reported on wet weight.
Analysis not accredited with NELAC.



Clayton Keene
Chemist

07/22/09
Date

H17814 TPH IEI



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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 07/15/09
Reporting Date: 07/17/09
Project Number: NOT GIVEN
Project Name: JFJ
Project Location: NOT GIVEN

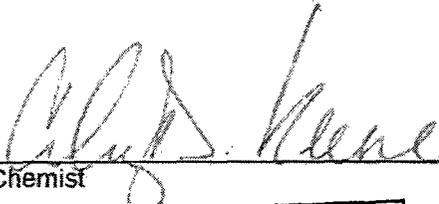
Sampling Date: 07/13/09
Sample Type: SOIL
Sample Condition: INTACT @18 °C
Sample Received By: ML
Analyzed By: ZL

LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
----------------------	--------------------	--------------------	-----------------------------	-----------------------------

LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	07/16/09	07/16/09	07/16/09	07/16/09
H17814-2 PILE #115	<0.050	<0.050	<0.050	<0.300
Quality Control	0.050	0.051	0.050	0.154
True Value QC	0.050	0.050	0.050	0.150
% Recovery	100	102	100	103
Relative Percent Difference	10.6	11.3	10.6	10.6

METHOD: EPA SW-846 8021B

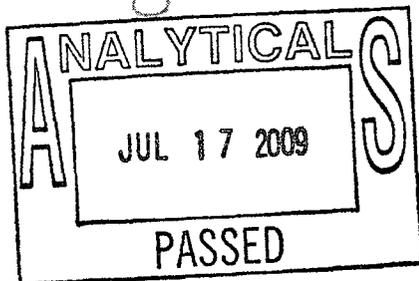
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,
AND TOTAL XYLENES. Reported on wet weight.



Chemist



Date



ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

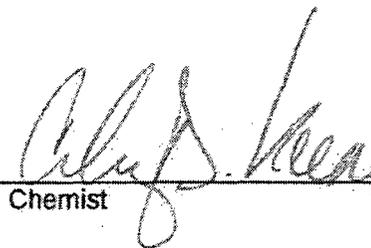
Receiving Date: 07/15/09
Reporting Date: 07/17/09
Project Number: 7620
Project Name: JFJ
Project Location: NOT GIVEN

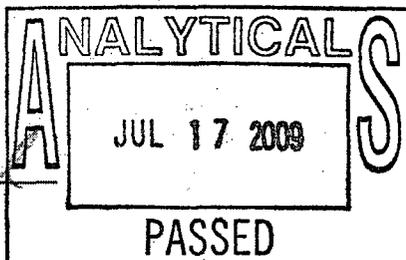
Analysis Date: 07/16/09
Sampling Date: 07/13/09
Sample Type: SOIL
Sample Condition: INTACT @ 18°C
Sample Received By: ML
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17814-2	PILE #115	64
Quality Control		490
True Value QC		500
% Recovery		98.0
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-Cl⁻B

Note: Analysis performed on a 1:4 w:v aqueous extract.
Analysis not accredited with NELAP.


Chemist




Date

H17814 IEI



ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 07/15/09
Reporting Date: 07/17/09
Project Number: NOT GIVEN
Project Name: JFJ
Project Location: NOT GIVEN

Sampling Date: 07/13/09
Sample Type: SOIL
Sample Condition: INTACT @18 °C
Sample Received By: ML
Analyzed By: ZL

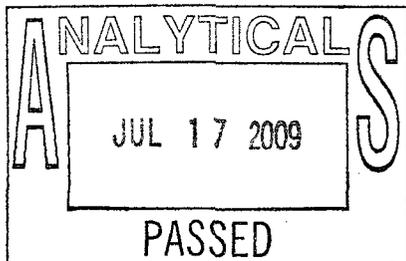
LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	07/16/09	07/16/09	07/16/09	07/16/09
H17814-3 PILE #593	<0.050	<0.050	<0.050	<0.300
Quality Control	0.050	0.051	0.050	0.154
True Value QC	0.050	0.050	0.050	0.150
% Recovery	100	102	100	103
Relative Percent Difference	10.6	11.3	10.6	10.6

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,
AND TOTAL XYLENES. Reported on wet weight.

Cheryl Keene
Chemist

07/22/09
Date





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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 07/15/09
Reporting Date: 07/17/09
Project Number: 7620
Project Name: JFJ
Project Location: NOT GIVEN

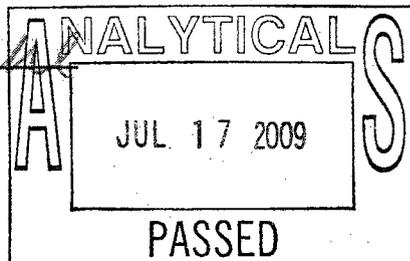
Analysis Date: 07/16/09
Sampling Date: 07/13/09
Sample Type: SOIL
Sample Condition: INTACT @ 18°C
Sample Received By: ML
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17814-3	PILE #593	32
Quality Control		490
True Value QC		500
% Recovery		98.0
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-ClB

Note: Analysis performed on a 1:4 w:v aqueous extract.
Analysis not accredited with NELAP.

Cheryl Keenan
Chemist



07/22/09
Date

H17814 IEI

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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUÉZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

Receiving Date: 07/15/09
Reporting Date: 07/17/09
Project Number: 7620
Project Name: JFJ
Project Location: NOT GIVEN

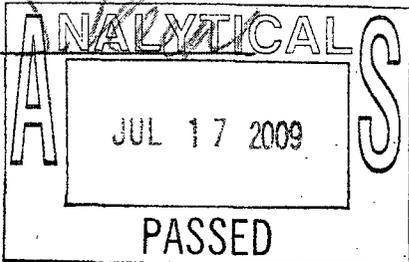
Sampling Date: 07/13/09
Sample Type: SOIL
Sample Condition: INTACT @ 18°C
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		07/17/09
H17814-9	PILE #663	80.1
Quality Control		535
True Value QC		500
% Recovery		107
Relative Percent Difference		4.3

METHOD: SW-846 8015 M Reported on wet weight.
Analysis not accredited with NELAC.
Second surrogate out of historical limits due to matrix interference.

[Handwritten Signature]
Chemist

[Handwritten Signature]
Date



H17814 TPH IEI

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 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1782

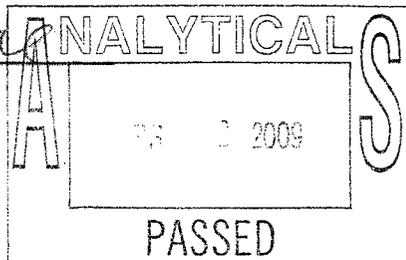
Receiving Date: 03/30/09
 Reporting Date: 04/02/09
 Project Number: 7211
 Project Name: SOIL SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 03/30/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)
ANALYSIS DATE:		04/01/09
H17161-10	PILE #663	<10.0
Quality Control		536
True Value QC		500
% Recovery		107
Relative Percent Difference		1.8

METHOD: SW-846 8015 M

Cely D. Keenan
 Chemist



6/09

H17161-10 TPH8015 IEI

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ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 03/31/09
 Reporting Date: 04/02/09
 Project Number: 7211
 Project Name: SOIL SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 03/30/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: ZL

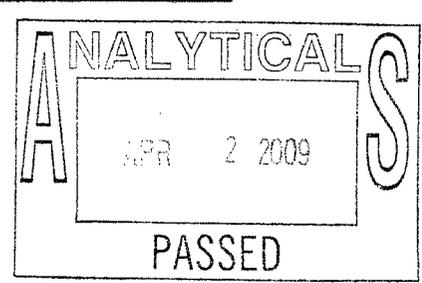
LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	04/02/09	04/02/09	04/02/09	04/02/09
H17161-10 PILE #663	<0.050	<0.050	<0.050	<0.300
Quality Control	0.049	0.049	0.048	0.149
True Value QC	0.050	0.050	0.050	0.150
% Recovery	98.0	98.0	96.0	99.3
Relative Percent Difference	<1.0	2.0	1.2	<1.0

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Clay J. Keene
 Chemist

04/02/09
 Date



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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 03/31/09
Reporting Date: 04/02/09
Project Number: 7211
Project Name: SOIL SAMPLES
Project Location: NOT GIVEN

Analysis Date: 03/31/09
Sampling Date: 03/30/09
Sample Type: SOIL/SEDIMENT
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: TR

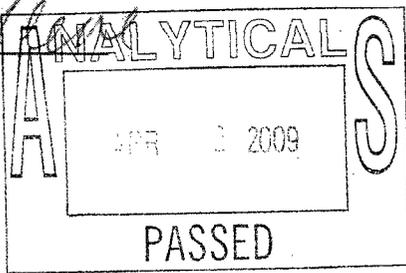
LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17161-10	PILE #663	< 16
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-ClB

Note: Analysis performed on a 1:4 w:v aqueous extract.

Cheryl S. K...
Chemist

04/02/09
Date



H17161 IEI

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

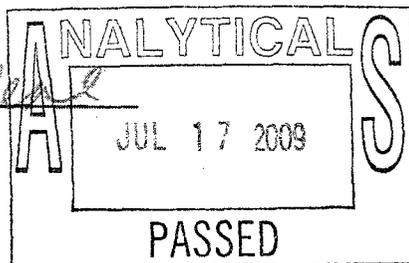
Receiving Date: 07/15/09
Reporting Date: 07/17/09
Project Number: 7620
Project Name: JFJ
Project Location: NOT GIVEN

Sampling Date: 07/13/09
Sample Type: SOIL
Sample Condition: INTACT @ 18°C
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		07/17/09
H17814-10	PILE #664	<10.0
Quality Control		535
True Value QC		500
% Recovery		107
Relative Percent Difference		4.3

METHOD: SW-846 8015 M Reported on wet weight.
Analysis not accredited with NELAC.
Second surrogate out of historical limits due to matrix interference.

Cheryl Keane
Chemist



07/22/09
Date

H17814 TPH IEI

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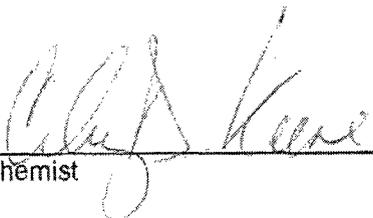
ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1782

Receiving Date: 04/16/09
 Reporting Date: 04/23/09
 Project Number: 7276
 Project Name: JFJ SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 04/15/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)
ANALYSIS DATE:		04/23/09
H17249-15	PILE #664	<10.0
Quality Control		574
True Value QC		500
% Recovery		115
Relative Percent Difference		3.4

METHOD: SW-846 8015 M


 Chemist


 Date

H17249 TPH IEI

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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 04/16/09
Reporting Date: 04/17/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Sampling Date: 04/15/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: ZL

LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	04/16/09	04/16/09	04/16/09	04/16/09
H17249-15 PILE #664	<0.050	0.157	<0.050	0.628
Quality Control	0.055	0.052	0.054	0.164
True Value QC	0.050	0.050	0.050	0.150
% Recovery	110	104	108	109
Relative Percent Difference	1.8	3.5	2.4	7.4

METHOD: EPA SW-846 8021B

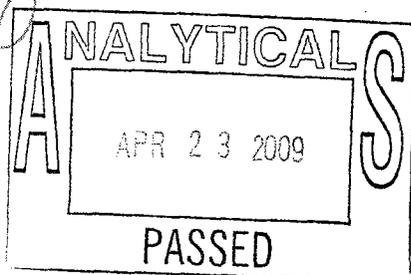
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.



Chemist



Date



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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 04/16/09
Reporting Date: 04/16/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Analysis Date: 04/16/09
Sampling Date: 04/15/09
Sample Type: SOIL/SEDIMENT
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: TR

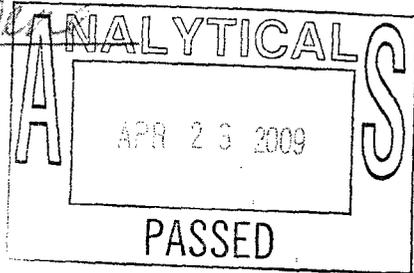
LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17249-15	PILE #664	432
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-Cl⁻B

Note: Analysis performed on a 1:4 w:v aqueous extract.

Ally D. Ke...
Chemist

09/23/09
Date



H17249 IEI

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INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

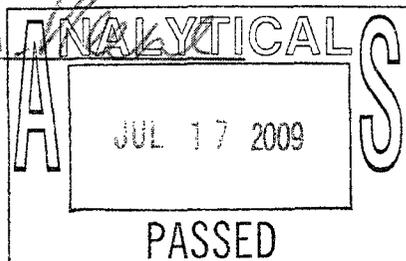
Receiving Date: 07/15/09
Reporting Date: 07/17/09
Project Number: 7620
Project Name: JFJ
Project Location: NOT GIVEN

Sampling Date: 07/13/09
Sample Type: SOIL
Sample Condition: INTACT @ 18°C
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		07/17/09
H17814-16	PILE #677	58.7
Quality Control		535
True Value QC		500
% Recovery		107
Relative Percent Difference		4.3

METHOD: SW-846 8015 M Reported on wet weight.
Analysis not accredited with NELAC.
Second surrogate out of historical limits due to matrix interference.


Chemist



07/22/09
Date

H17814 TPH IEI

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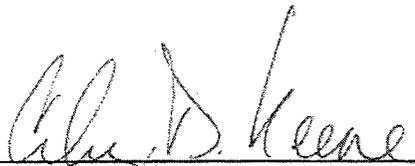
ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

Receiving Date: 05/13/09
Reporting Date: 05/18/09
Project Number: 7385
Project Name: JFJ SOIL SAMPLES
Project Location: NOT GIVEN

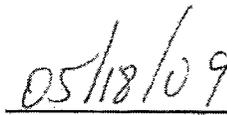
Sampling Date: 05/11/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)
ANALYSIS DATE:		05/16/09
H17414-19	PILE #677	<10.0
Quality Control		512
True Value QC		500
% Recovery		102
Relative Percent Difference		2.8

METHOD: SW-846 8015 M



Chemist



Date

H17414 TPH IEI

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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 05/13/09
Reporting Date: 05/14/09
Project Number: 7385
Project Name: JFJ SOIL SAMPLES
Project Location: NOT GIVEN

Analysis Date: 05/14/09
Sampling Date: 05/11/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17414-19	PILE #677	64
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods 4500-Cl⁻B

Note: Analysis performed on a 1:4 w:v aqueous extract.

Ally D. Neal
Chemist

ANALYTICAL
PASSED

05/19/09
Date



**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

RECEIVED

2009 JUL 23 PM 12 57

July 21, 2009

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

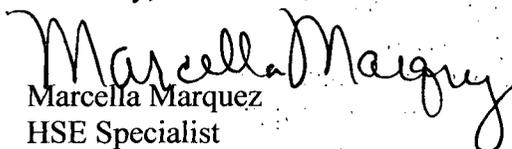
Re: JFJ Landfarm Permit # NM01-0010B

Dear Brad:

This letter is being submitted to you as a reply to concerns voiced during your last visit to the facility. The following actions have been taken to address your concerns as outlined below:

- **Berm Integrity and Depth**
 - Tank Battery - Berm area and depth has been increased by use of concrete barriers and additional soils to contain 1 1/3 volume of the largest tank or all interconnected tanks.
 - Centrate & Fresh Water Tanks – Berm area and depth has been increased by use of concrete barriers and additional soils to contain 1 1/3 of the largest tank or all interconnected tanks.
 - The Facility Weekly Inspection Log has been updated to include inspection of berm integrity (Depth & Erosion Control).
- Contaminated soils received (after 02/14/07) will not be placed within 100 feet of the facility's boundary.
- Excessive accumulation of soils within the facility - As per your recommendation, we contacted the San Juan County Landfill to discuss the possibility of providing them with treated soils to be used for coverage of daily refuse. You gave us John Hammond's name as a point of contact; unfortunately he is no longer with the landfill. We have been in contact with Schult Forester with Waste Management. Waste Management currently holds the contract to oversee the day to day operations of the landfill. Mr. Forester has decided to refer us to their Regional Representative, Mark Allen. We will be meeting with Mr. Allen to discuss this opportunity further. I will keep you updated with the outcome of our meeting(s) with Mr. Allen.

Sincerely,


Marcella Marquez
HSE Specialist

xc: Edward Hansen, NMOCD



Industrial Ecosystems Inc.
Soil Reclamation Center

RECEIVED

P.O. Box 2043
Farmington, NM 87499

Phone: (505) 632-1776
Fax: (505) 632-1876

2009 JUL 24 PM 1 20
#49 CR 3150
Aztec, NM 87410

July 21, 2009

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

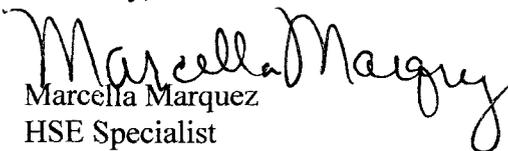
Re: JFJ Landfarm Permit # NM01-0010B

Dear Brad:

This letter is being submitted to you as a reply to concerns voiced during your last visit to the facility. The following actions have been taken to address your concerns as outlined below:

- **Berm Integrity and Depth**
 - Tank Battery - Berm area and depth has been increased by use of concrete barriers and additional soils to contain 1½ volume of the largest tank or all interconnected tanks.
 - Centrate & Fresh Water Tanks – Berm area and depth has been increased by use of concrete barriers and additional soils to contain 1½ of the largest tank or all interconnected tanks.
 - The Facility Weekly Inspection Log has been updated to include inspection of berm integrity (Depth & Erosion Control).
- Contaminated soils received (after 02/14/07) will not be placed within 100 feet of the facility's boundary.
- Excessive accumulation of soils within the facility - As per your recommendation, we contacted the San Juan County Landfill to discuss the possibility of providing them with treated soils to be used for coverage of daily refuse. You gave us John Hammond's name as a point of contact; unfortunately he is no longer with the landfill. We have been in contact with Schult Forester with Waste Management. Waste Management currently holds the contract to oversee the day to day operations of the landfill. Mr. Forester has decided to refer us to their Regional Representative, Mark Allen. We will be meeting with Mr. Allen to discuss this opportunity further. I will keep you updated with the outcome of our meeting(s) with Mr. Allen.

Sincerely,


Marcella Marquez
HSE Specialist

xc: Edward Hansen, NMOCD



**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 21, 2009

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

RE: Use of reclaimed soil

Dear Edward:

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

<u>Pile #</u>	
# 341	Burlington
# 599	Community
# 620	Community
# 642	Basin
# 660	Community
# 661	Conoco
# 666	Conoco
# 670	Conoco
# 671	Conoco
# 675	Conoco

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

Respectfully Submitted,

A handwritten signature in cursive script that reads 'Marcella Marquez'.

Marcella Marquez
Administrative Officer

Enclosure(s) – Analytical Reports



ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1782

Receiving Date: 06/04/09
 Reporting Date: 06/05/09
 Project Number: 7451
 Project Name: JFJ SAMPLING
 Project Location: NOT GIVEN

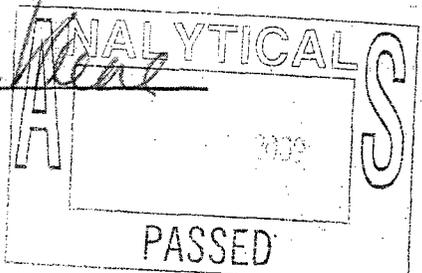
Sampling Date: 06/03/09
 Sample Type: SOIL
 Sample Condition: COOL & INTACT @ 6°C
 Sample Received By: ML
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		06/04/09
H17556-1	PILE #341	39.2
Quality Control		466
True Value QC		500
% Recovery		93.2
Relative Percent Difference		7.4

METHOD: SW-846 8015 M Reported on wet weight.
 Analysis not accredited with NELAC.

Ally D. [Signature]
 Chemist

06/05/09
 Date



H17556 TPH IEI

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CLIENT:	Industrial Ecosystems, Inc.	Client Sample ID:	Conco #341
Lab Order:	0811466	Collection Date:	11/24/2008 1:15:00 PM
Project:	JFJ Land Farm	Date Received:	11/26/2008
Lab ID:	0811466-15	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8015B: GASOLINE RANGE

Analyst: DAM

Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	12/3/2008 2:38:57 PM
Surr: BFB	86.6	58.8-123		%REC	1	12/3/2008 2:38:57 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Estimated value
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

Date: 30-Jul-08

CLIENT: Industrial Ecosystems, Inc.
Lab Order: 0807323
Project: JFJ Land Farm
Lab ID: 0807323-03

Client Sample ID: Conoco #341
Collection Date: 7/22/2008 10:45:00 AM
Date Received: 7/24/2008
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8021B: VOLATILES

Analyst: NSB

Methyl tert-butyl ether (MTBE)	ND	0.10		mg/Kg	1	7/26/2008 2:17:51 AM
Benzene	ND	0.050		mg/Kg	1	7/26/2008 2:17:51 AM
Toluene	ND	0.050		mg/Kg	1	7/26/2008 2:17:51 AM
Ethylbenzene	ND	0.050		mg/Kg	1	7/26/2008 2:17:51 AM
Xylenes, Total	ND	0.10		mg/Kg	1	7/26/2008 2:17:51 AM
Surr: 4-Bromofluorobenzene	95.3	81.4-117		%REC	1	7/26/2008 2:17:51 AM

EPA METHOD 300.0: ANIONS

Analyst: IC

Chloride	160	3.0		mg/Kg	10	7/29/2008 7:05:42 PM
----------	-----	-----	--	-------	----	----------------------

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit



ARDINAL LABORATORIES

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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

Receiving Date: 06/04/09
Reporting Date: 06/05/09
Project Number: 7451
Project Name: JFJ SAMPLING
Project Location: NOT GIVEN

Sampling Date: 06/03/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 5°C
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₂) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		06/04/09	06/04/09
H17556-12	PILE #599	<10.0	88.9
Quality Control		506	466
True Value QC		500	500
% Recovery		101	93.2
Relative Percent Difference		8.1	7.4

METHOD: SW-846 8015 M. Reported on wet weight.
Analysis not accredited with NELAC.

Ally S. Keene
Chemist

ANALYTICAL
509
PASSED

06/05/09
Date

H17556 TPH IEI

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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 06/04/09
Reporting Date: 06/05/09
Project Number: 7451
Project Name: JFJ SAMPLING
Project Location: NOT GIVEN

Sampling Date: 06/03/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 5°C
Sample Received By: ML
Analyzed By: ZL

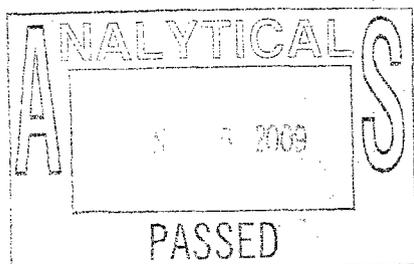
LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	06/04/09	06/04/09	06/04/09	06/04/09
H17556-12 PILE 599	<0.050	0.057	<0.050	<0.300
Quality Control	0.053	0.050	0.046	0.146
True Value QC	0.050	0.050	0.050	0.150
% Recovery	106	100	92.0	97.3
Relative Percent Difference	<1.0	1.9	<1.0	<1.0

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES. Reported on wet weight.

Cheryl Keene
Chemist

06/05/09
Date



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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

Receiving Date: 06/04/09
Reporting Date: 06/05/09
Project Number: 7451
Project Name: JFJ SAMPLING
Project Location: NOT GIVEN

Sampling Date: 06/03/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 5°C
Sample Received By: ML
Analyzed By: AB

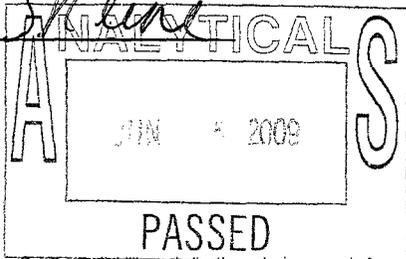
DRO
($>C_{10}-C_{28}$)
(mg/kg)

LAB NUMBER	SAMPLE ID	
ANALYSIS DATE:		06/05/09
H17556-20	PILE #620	81.3
Quality Control		422
True Value QC		500
% Recovery		84.4
Relative Percent Difference		1.1

METHOD: SW-846 8015 M Reported on wet weight.
Analysis not accredited with NELAC.

Clay Stene
Chemist

06/05/09
Date



H17556 TPH IEI

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Hall Environmental Analysis Laboratory, Inc.

Date: 16-Oct-08

CLIENT: Industrial Ecosystems, Inc.
Lab Order: 0810074
Project: JFJ Land Farm
Lab ID: 0810074-08

Client Sample ID: Community #620
Collection Date: 10/2/2008 1:40:00 PM
Date Received: 10/3/2008
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8015B: GASOLINE RANGE

Analyst: DAM

Gasoline Range Organics (GRO)	12	5.0		mg/Kg	1	10/15/2008 6:05:10 PM
Surr: BFB	100	58.8-123		%REC	1	10/15/2008 6:05:10 PM

Qualifiers: * Value exceeds Maximum Contaminant Level
E Value above quantitation range
J Analyte detected below quantitation limits
ND Not Detected at the Reporting Limit
S Spike recovery outside accepted recovery limits

B Analyte detected in the associated Method Blank
H Holding times for preparation or analysis exceeded
MCL Maximum Contaminant Level
RL Reporting Limit



ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 04/16/09
 Reporting Date: 04/17/09
 Project Number: 7276
 Project Name: JFJ SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 04/15/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: ZL

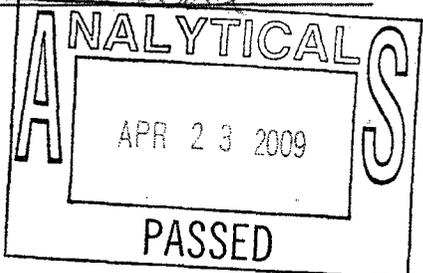
LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	04/16/09	04/16/09	04/16/09	04/16/09
H17249-9 PILE #620	<0.050	<0.050	<0.050	<0.300
Quality Control	0.055	0.052	0.054	0.164
True Value QC	0.050	0.050	0.050	0.150
% Recovery	110	104	108	109
Relative Percent Difference	1.8	3.5	2.4	7.4

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Cheryl D. Kone
 Chemist

04/23/09
 Date



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INDUSTRIAL ECOSYSTEMS, INC.
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AZTEC, NM 87410
FAX TO: (505) 632-1876

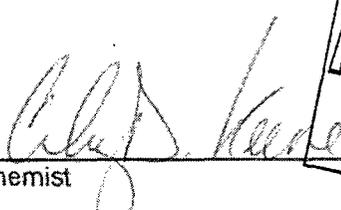
Receiving Date: 04/16/09
Reporting Date: 04/16/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Analysis Date: 04/16/09
Sampling Date: 04/15/09
Sample Type: SOIL/SEDIMENT
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: TR

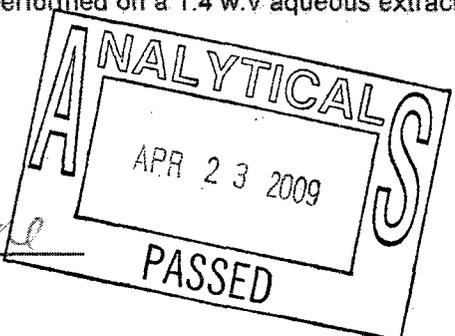
LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17249-9	PILE #620	208
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-Cl/B

Note: Analysis performed on a 1:4 w:v aqueous extract.



Chemist





Date

H17249 IEI

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ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1782

Receiving Date: 06/04/09
 Reporting Date: 06/05/09
 Project Number: 7451
 Project Name: JFJ SAMPLING
 Project Location: NOT GIVEN

Sampling Date: 06/03/09
 Sample Type: SOIL
 Sample Condition: COOL & INTACT @ 5°C
 Sample Received By: ML
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₅ -C ₁₂) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		06/04/09	06/04/09
H17556-5	PILE #842	<10.0	17.0
Quality Control		506	466
True Value QC		500	500
% Recovery		101	93.2
Relative Percent Difference		8.1	7.4

METHOD: SW-846 8015 M Reported on wet weight.
 Analysis not accredited with NELAC.

Cheryl Keene
 Chemist

06/05/09
 Date

ANALYTICAL
 PASSED

H17556 TPH IEI

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ATTN: MARCELLA MARQUEZ
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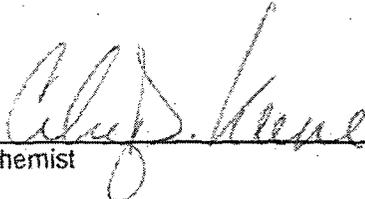
Receiving Date: 06/04/09
Reporting Date: 06/05/09
Project Number: 7451
Project Name: JFJ SAMPLING
Project Location: NOT GIVEN

Sampling Date: 06/03/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 5°C
Sample Received By: ML
Analyzed By: ZL

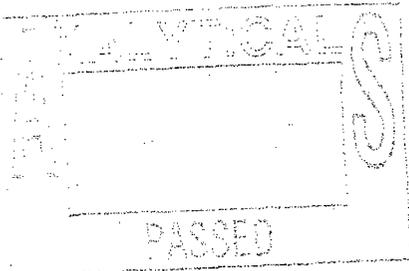
LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	06/04/09	06/04/09	06/04/09	06/04/09
H17556-5 PILE 642	<0.050	0.056	<0.050	<0.300
Quality Control	0.053	0.050	0.046	0.146
True Value QC	0.050	0.050	0.050	0.150
% Recovery	106	100	92.0	97.3
Relative Percent Difference	<1.0	1.9	<1.0	<1.0

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,
AND TOTAL XYLENES. Reported on wet weight.


Chemist


Date





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ANALYTICAL RESULTS FOR
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ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 06/04/09
Reporting Date: 06/05/09
Project Number: 7451
Project Name: JFJ SAMPLING
Project Location: NOT GIVEN

Analysis Date: 06/04/09
Sampling Date: 06/03/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 5°C
Sample Received By: ML
Analyzed By: AB

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17556-5	PILE #642	48
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		2.0

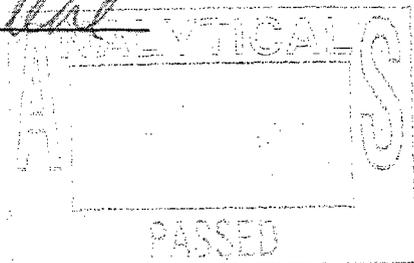
METHOD: Standard Methods 4500-Cl⁻B
Note: Analysis performed on a 1:4 w:v aqueous extract.
Analysis not accredited with NELAP.

[Signature]

Chemist

[Signature]

Date



H17556 IEI

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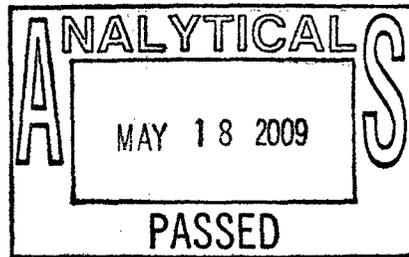
ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1782

Receiving Date: 05/13/09
 Reporting Date: 05/18/09
 Project Number: 7385
 Project Name: JFJ SOIL SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 05/11/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		05/16/09	05/16/09
H17414-10	PILE #660	<10.0	58.8
Quality Control		512	476
True Value QC		500	500
% Recovery		102	95.2
Relative Percent Difference		2.8	4.3

METHOD: SW-846 8015 M



Clyde D. Keene
 Chemist

05/18/09
 Date

H17414 TPH IEI



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ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 05/13/09
 Reporting Date: 05/21/09
 Project Number: 7385
 Project Name: JFJ SOIL SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 05/11/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: ZL

LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	05/20/09	05/20/09	05/20/09	05/20/09
H17414-10 PILE #660	<0.050	<0.050	<0.050	<0.300
Quality Control	0.044	0.057	0.050	0.150
True Value QC	0.050	0.050	0.050	0.150
% Recovery	88.0	114	100	100
Relative Percent Difference	5.3	8.2	8.9	7.5

METHOD: EPA SW-846 8021B

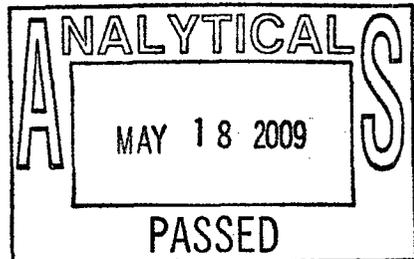
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Cathy D. Keene

 Chemist

05/21/09

 Date



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ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 05/13/09
 Reporting Date: 05/14/09
 Project Number: 7385
 Project Name: JFJ SOIL SAMPLES
 Project Location: NOT GIVEN

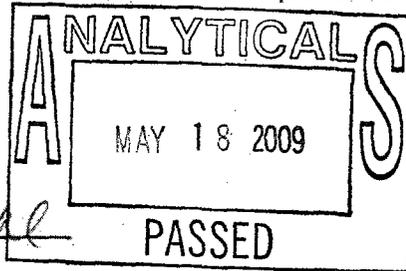
Analysis Date: 05/14/09
 Sampling Date: 05/11/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: TR

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17414-10	PILE #660	160
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods 4500-ClB

Note: Analysis performed on a 1:4 w:v aqueous extract.

Ally D. Keene
 Chemist



05/18/09
 Date

H17414 IEI



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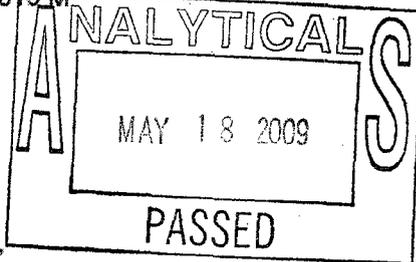
ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

Receiving Date: 05/13/09
Reporting Date: 05/18/09
Project Number: 7385
Project Name: JFJ SOIL SAMPLES
Project Location: NOT GIVEN

Sampling Date: 05/11/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	DRO ($>C_{10}-C_{28}$) (mg/kg)
ANALYSIS DATE:		05/16/09
H17414-11	PILE #661	51.0
Quality Control		476
True Value QC		500
% Recovery		95.2
Relative Percent Difference		4.3

METHOD: SW-846 8015 M



Ally D. Keene
Chemist

05/18/09
Date

H17414 TPH IEI

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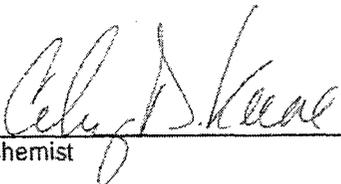
ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1782

Receiving Date: 03/30/09
 Reporting Date: 04/02/09
 Project Number: 7211
 Project Name: SOIL SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 03/30/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)
ANALYSIS DATE:		04/01/09
H17161-2	PILE # 661	<10.0
Quality Control		536
True Value QC		500
% Recovery		107
Relative Percent Difference		1.8

METHOD: SW-846 8015 M


 Chemist


 Date

H17161-2 TPH8015 IEI

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49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 03/31/09
Reporting Date: 04/02/09
Project Number: 7211
Project Name: SOIL SAMPLES
Project Location: NOT GIVEN

Sampling Date: 03/30/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: ZL

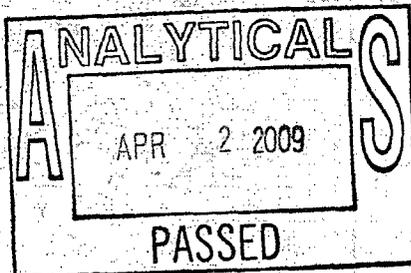
LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	04/02/09	04/02/09	04/02/09	04/02/09
H17161-2 PILE #661	<0.050	<0.050	<0.050	<0.300
Quality Control	0.049	0.049	0.048	0.149
True Value QC	0.050	0.050	0.050	0.150
% Recovery	98.0	98.0	96.0	99.3
Relative Percent Difference	<1.0	2.0	1.2	<1.0

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,
AND TOTAL XYLENES.

Alfred Keene
Chemist

04/02/09
Date



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ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 03/31/09
Reporting Date: 04/02/09
Project Number: 7211
Project Name: SOIL SAMPLES
Project Location: NOT GIVEN

Analysis Date: 03/31/09
Sampling Date: 03/30/09
Sample Type: SOIL/SEDIMENT
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: TR

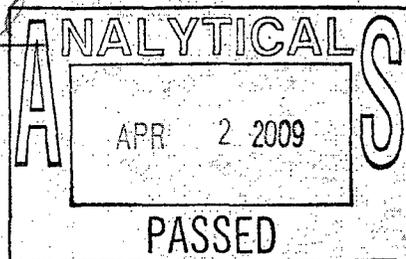
LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17161-2	PILE #661	< 16
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-ClB

Note: Analysis performed on a 1:4 w:v aqueous extract.

Cheryl D. Moore
Chemist

04/02/09
Date



H17161 IEI

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 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1782

Receiving Date: 06/04/09
 Reporting Date: 06/05/09
 Project Number: 7451
 Project Name: JFJ SAMPLING
 Project Location: NOT GIVEN

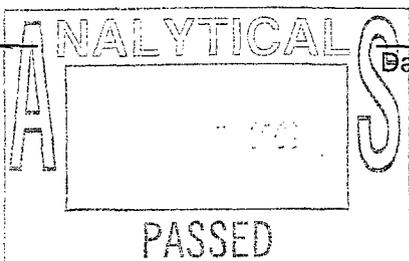
Sampling Date: 06/03/09
 Sample Type: SOIL
 Sample Condition: COOL & INTACT @ 5°C
 Sample Received By: ML
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		06/04/09
H17556-11	PILE #666	<10.0
Quality Control		466
True Value QC		500
% Recovery		93.2
Relative Percent Difference		7.4

METHOD: SW-846 8015 M Reported on wet weight.
 Analysis not accredited with NELAC.

Alfred Keene
 Chemist

06/05/09
 Date



H17556 TPH IEI

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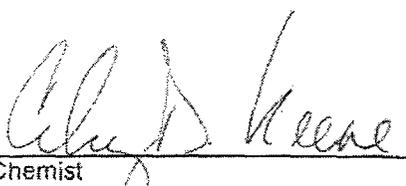
ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1782

Receiving Date: 05/13/09
 Reporting Date: 05/18/09
 Project Number: 7385
 Project Name: JFJ SOIL SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 05/11/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)
ANALYSIS DATE:		05/16/09
H17414-14	PILE #666	<10.0
Quality Control		512
True Value QC		500
% Recovery		102
Relative Percent Difference		2.8

METHOD: SW-846 8015 M


 Chemist


 Date

H17414 TPH IEI



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ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
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 FAX TO: (505) 632-1876

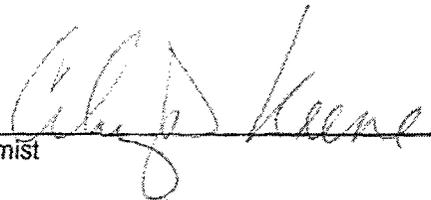
Receiving Date: 05/13/09
 Reporting Date: 05/21/09
 Project Number: 7385
 Project Name: JFJ SOIL SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 05/11/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: ZL

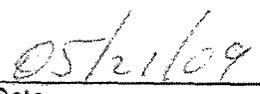
LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	05/20/09	05/20/09	05/20/09	05/20/09
H17414-14 PILE #666	0.164	0.719	0.211	1.81
Quality Control	0.044	0.057	0.050	0.150
True Value QC	0.050	0.050	0.050	0.150
% Recovery	88.0	114	100	100
Relative Percent Difference	5.3	8.2	8.9	7.5

METHOD: EPA SW-846 8021B.

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,
 AND TOTAL XYLENES.



 Chemist



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Receiving Date: 05/13/09
Reporting Date: 05/14/09
Project Number: 7385
Project Name: JFJ SOIL SAMPLES
Project Location: NOT GIVEN

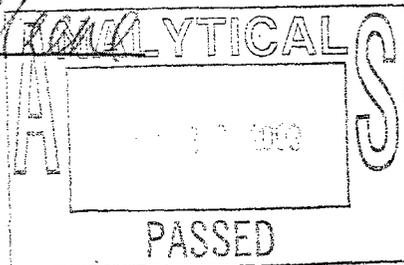
Analysis Date: 05/14/09
Sampling Date: 05/11/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17414-14	PILE #666	736
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods 4500-Cl⁻B

Note: Analysis performed on a 1:4 w:v aqueous extract.

Allyson K...
Chemist



05/18/09
Date

H17414 IEI

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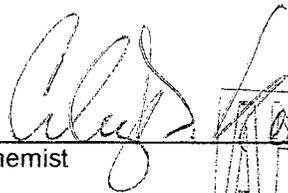
ANALYTICAL RESULTS FOR
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ATTN: MARCELLA MARQUEZ
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AZTEC, NM 87410
FAX TO: (505) 632-1782

Receiving Date: 06/04/09
Reporting Date: 06/05/09
Project Number: 7451
Project Name: JFJ SAMPLING
Project Location: NOT GIVEN

Sampling Date: 06/03/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 5°C
Sample Received By: ML
Analyzed By: AB

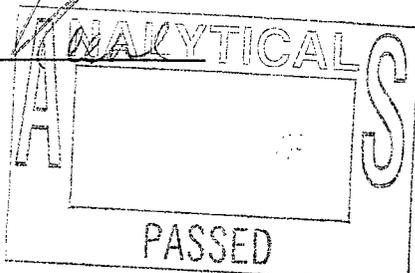
LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		06/04/09
H17556-13	PILE #670	54.5
Quality Control		466
True Value QC		500
% Recovery		93.2
Relative Percent Difference		7.4

METHOD: SW-846 8015 M Reported on wet weight.
Analysis not accredited with NELAC.


Chemist


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H17556 TPH IEI



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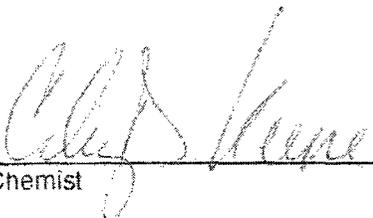
ANALYTICAL RESULTS FOR
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ATTN: MARCELLA MARQUEZ
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FAX TO: (505) 632-1782

Receiving Date: 04/16/09
Reporting Date: 04/23/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Sampling Date: 04/15/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)
ANALYSIS DATE:		04/23/09
H17249-19	PILE #670	<10.0
Quality Control		574
True Value QC		500
% Recovery		115
Relative Percent Difference		3.4

METHOD: SW-846 8015 M



Chemist



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H17249 TPH IEI

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FAX TO: (505) 632-1876

Receiving Date: 04/16/09
Reporting Date: 04/17/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Sampling Date: 04/15/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: ZL

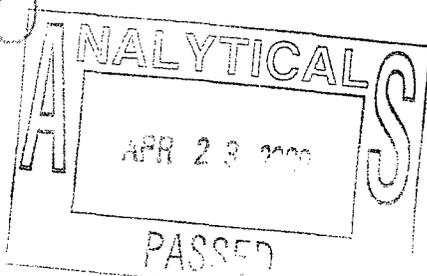
LAB NUMBER	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE		04/16/09	04/16/09	04/16/09	04/16/09
H17249-19	PILE #670	<0.050	<0.050	<0.050	<0.300
Quality Control		0.055	0.052	0.054	0.164
True Value QC		0.050	0.050	0.050	0.150
% Recovery		110	104	108	109
Relative Percent Difference		1.8	3.5	2.4	7.4

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Cheryl Keene
Chemist

04/23/09
Date



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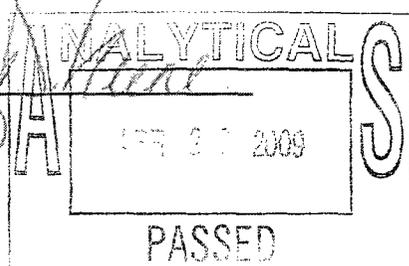
Receiving Date: 04/16/09
Reporting Date: 04/16/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Analysis Date: 04/16/09
Sampling Date: 04/15/09
Sample Type: SOIL/SEDIMENT
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: TR

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17249-19	PILE #670	528
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-ClB

Note: Analysis performed on a 1:4 w:v aqueous extract.


 Chemist



 Date

H17249 IEI



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Receiving Date: 06/04/09
Reporting Date: 06/05/09
Project Number: 7451
Project Name: JFJ SAMPLING
Project Location: NOT GIVEN

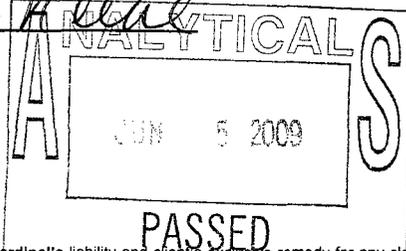
Sampling Date: 06/03/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 5°C
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		06/04/09
H17556-14	PILE #671	89.9
Quality Control		466
True Value QC		500
% Recovery		93.2
Relative Percent Difference		7.4

METHOD: SW-846 8015 M Reported on wet weight.
Analysis not accredited with NELAC.

Colin S. Kneue
Chemist

06/05/09
Date



H17556 TPH IEI

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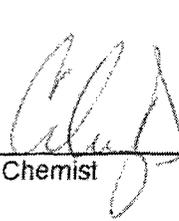
ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

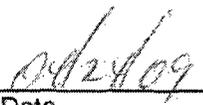
Receiving Date: 04/16/09
Reporting Date: 04/23/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

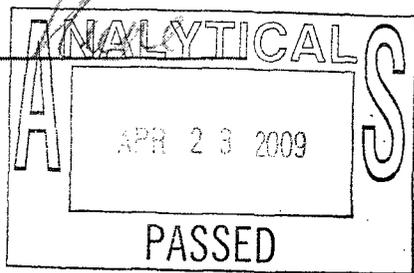
Sampling Date: 04/15/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)
ANALYSIS DATE:		04/23/09
H17249-20	PILE #671	12.7
Quality Control		574
True Value QC		500
% Recovery		115
Relative Percent Difference		3.4

METHOD: SW-846 8015 M


Chemist


Date



H17249 TPH IEI

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FAX TO: (505) 632-1876

Receiving Date: 04/16/09
Reporting Date: 04/17/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Sampling Date: 04/15/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: ZL

LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	04/16/09	04/16/09	04/16/09	04/16/09
H17249-20 PILE #671	<0.050	<0.050	<0.050	0.873
Quality Control	0.055	0.052	0.054	0.164
True Value QC	0.050	0.050	0.050	0.150
% Recovery	110	104	108	109
Relative Percent Difference	1.8	3.5	2.4	7.4

METHOD: EPA SW-846 8021B

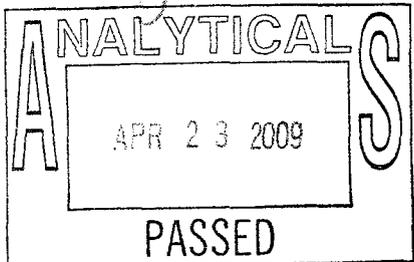
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,
AND TOTAL XYLENES.

Celia Keene

Chemist

04/23/09

Date



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FAX TO: (505) 632-1876

Receiving Date: 04/16/09
Reporting Date: 04/16/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Analysis Date: 04/16/09
Sampling Date: 04/15/09
Sample Type: SOIL/SEDIMENT
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: TR

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17249-20	PILE #671	<16
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-Cl⁻B

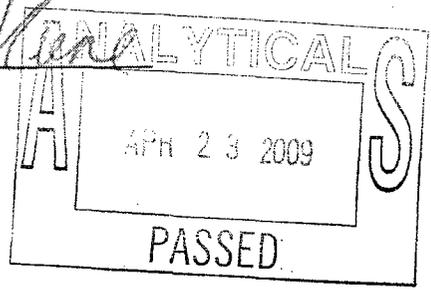
Note: Analysis performed on a 1:4 w:v aqueous extract.

[Handwritten Signature]

Chemist

[Handwritten Date]

Date



H17249 IEI

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AZTEC, NM 87410
FAX TO: (505) 632-1782

Receiving Date: 06/04/09
Reporting Date: 06/05/09
Project Number: 7451
Project Name: JFJ SAMPLING
Project Location: NOT GIVEN

Sampling Date: 06/03/09
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 5°C
Sample Received By: ML
Analyzed By: AB

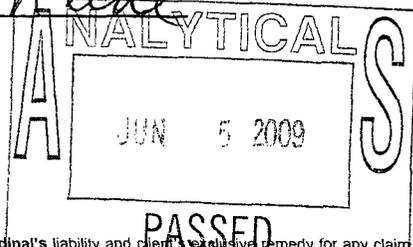
LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		06/05/09
H17556-18	PILE #675	<10.0
Quality Control		422
True Value QC		500
% Recovery		84.4
Relative Percent Difference		1.1

METHOD: SW-846 8015 M Reported on wet weight.
Analysis not accredited with NELAC.

Clay A. Acree
Chemist

06/05/09
Date

H17556 TPH IEI



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FAX TO: (505) 632-1782

Receiving Date: 04/16/09
Reporting Date: 04/23/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Sampling Date: 04/15/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)
ANALYSIS DATE:		04/23/09
H17249-24	PILE #675	<10.0
Quality Control		574
True Value QC		500
% Recovery		115
Relative Percent Difference		3.4

METHOD: SW-846 8015 M



Chemist



Date

H17249 TPH IEI

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 FAX TO: (505) 632-1876

Receiving Date: 04/16/09
 Reporting Date: 04/17/09
 Project Number: 7276
 Project Name: JFJ SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 04/15/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: ZL

LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	04/16/09	04/16/09	04/16/09	04/16/09
H17249-24 PILE #675	<0.050	<0.050	<0.050	<0.300
Quality Control	0.055	0.052	0.054	0.164
True Value QC	0.050	0.050	0.050	0.150
% Recovery	110	104	108	109
Relative Percent Difference	1.8	3.5	2.4	7.4
METHOD: EPA SW-846 8021B				

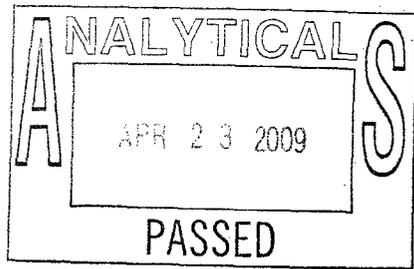
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Clay D. Keene

 Chemist

04/23/09

 Date



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ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 04/16/09
 Reporting Date: 04/16/09
 Project Number: 7276
 Project Name: JFJ SAMPLES
 Project Location: NOT GIVEN

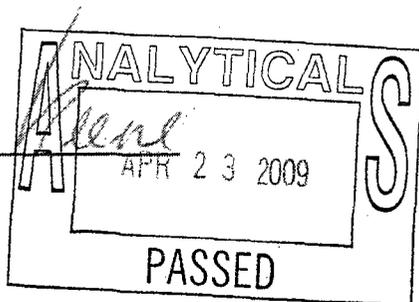
Analysis Date: 04/16/09
 Sampling Date: 04/15/09
 Sample Type: SOIL/SEDIMENT
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: TR

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17249-24	PILE #675	<16
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-Cl⁻B

Note: Analysis performed on a 1:4 w:v aqueous extract.

[Signature]
 Chemist



04/23/09
 Date

H17249 IEI

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**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 27, 2009

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

RECEIVED
2009 APR 28 PM 1 45

RE: Use of reclaimed soil

Dear Edward:

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

<u>Pile #</u>	
# 31	Conoco
# 33	Conoco
# 611	Burlington
# 623	Burlington
# 644	Community
# 668	Conoco
# 669	Conoco

*ow sent ~ 3-10-09
What of
disposition of
biopiles?*

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

Respectfully Submitted,

Marcella Marquez
Administrative Officer

Enclosure(s) – Analytical Reports



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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

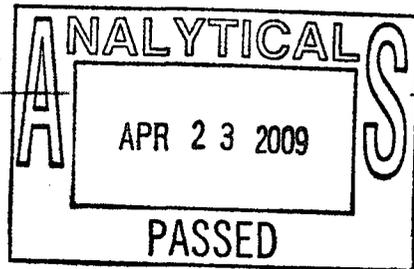
Receiving Date: 04/16/09
Reporting Date: 04/23/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Sampling Date: 04/15/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		04/22/09
H17249-1	PILE #31	<10.0
Quality Control		544
True Value QC		500
% Recovery		109
Relative Percent Difference		16.6

METHOD: SW-846 8015 M

Alan D Keene
Chemist



04/24/09
Date

H17249 TPH IEI

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Hall Environmental Analysis Laboratory, Inc.

Date: 01-Oct-08

CLIENT: Industrial Ecosystems, Inc.	Client Sample ID: Conco #31
Lab Order: 0809404	Collection Date: 9/16/2008 10:50:00 AM
Project: JFJ Land Farm	Date Received: 9/19/2008
Lab ID: 0809404-22	Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: GASOLINE RANGE						
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/24/2008 11:24:34 PM
Surr: BFB	92.1	58.8-123		%REC	1	9/24/2008 11:24:34 PM
EPA METHOD 300.0: ANIONS						
Chloride	170	3.0		mg/Kg	10	9/29/2008 2:38:07 PM

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit



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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 03/31/09
Reporting Date: 04/02/09
Project Number: 7211
Project Name: SOIL SAMPLES
Project Location: NOT GIVEN

Sampling Date: 03/30/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: ZL

LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	04/02/09	04/02/09	04/02/09	04/02/09
H17161-1 PILE #31	<0.050	<0.050	<0.050	<0.300
Quality Control	0.049	0.049	0.048	0.149
True Value QC	0.050	0.050	0.050	0.150
% Recovery	98.0	98.0	96.0	99.3
Relative Percent Difference	<1.0	2.0	1.2	<1.0

METHOD: EPA SW-846 8021B

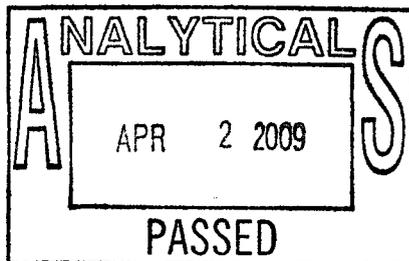
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,
AND TOTAL XYLENES.



Chemist



Date



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INDUSTRIAL ECOSYSTEMS, INC.
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AZTEC, NM 87410
FAX TO: (505) 632-1782

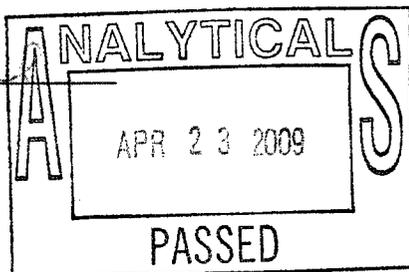
Receiving Date: 04/16/09
Reporting Date: 04/23/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Sampling Date: 04/15/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		04/22/09
H17249-2	PILE #33	<10.0
Quality Control		544
True Value QC		500
% Recovery		109
Relative Percent Difference		16.6

METHOD: SW-846 8015 M

Cheryl Keen
Chemist



04/24/09
Date

H17249 TPH IEI

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Hall Environmental Analysis Laboratory, Inc.

Date: 01-Oct-08

CLIENT:	Industrial Ecosystems, Inc.	Client Sample ID:	Conco #33
Lab Order:	0809404	Collection Date:	9/16/2008 11:10:00 AM
Project:	JFJ Land Farm	Date Received:	9/19/2008
Lab ID:	0809404-23	Matrix:	SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
----------	--------	-----	------	-------	----	---------------

EPA METHOD 8015B: GASOLINE RANGE

Analyst: DAM

Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	9/24/2008 11:55:02 PM
Surr: BFB	92.9	58.8-123		%REC	1	9/24/2008 11:55:02 PM

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	MCL Maximum Contaminant Level
	ND Not Detected at the Reporting Limit	RL Reporting Limit
	S Spike recovery outside accepted recovery limits	



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ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

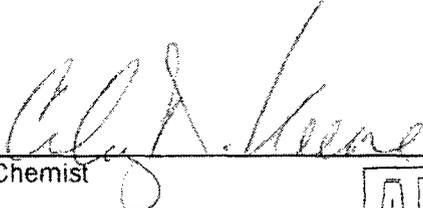
Receiving Date: 04/16/09
Reporting Date: 04/17/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Sampling Date: 04/15/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: ZL

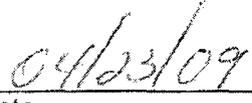
LAB NUMBER	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE		04/16/09	04/16/09	04/16/09	04/16/09
H17249-2	PILE #33	<0.050	<0.050	<0.050	<0.300
Quality Control		0.055	0.052	0.054	0.164
True Value QC		0.050	0.050	0.050	0.150
% Recovery		110	104	108	109
Relative Percent Difference		1.8	3.5	2.4	7.4

METHOD: EPA SW-846 8021B

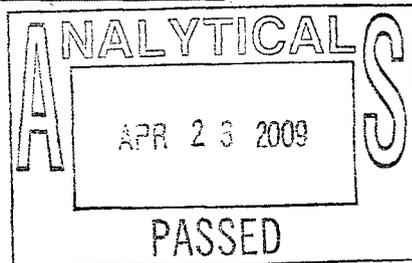
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,
AND TOTAL XYLENES.



Chemist



Date



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49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 04/16/09
Reporting Date: 04/16/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

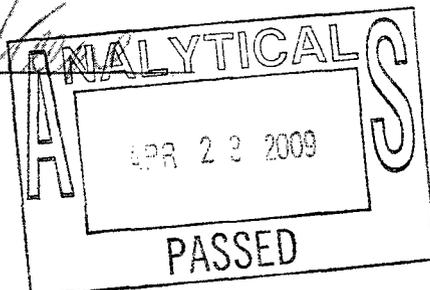
Analysis Date: 04/16/09
Sampling Date: 04/15/09
Sample Type: SOIL/SEDIMENT
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: TR

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17249-2	PILE #33	80
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-Cl⁻B

Note: Analysis performed on a 1:4 w:v aqueous extract.

[Signature]
Chemist



04/23/09
Date

H17249 IEI

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INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

Receiving Date: 03/30/09
Reporting Date: 04/02/09
Project Number: 7211
Project Name: SOIL SAMPLES
Project Location: NOT GIVEN

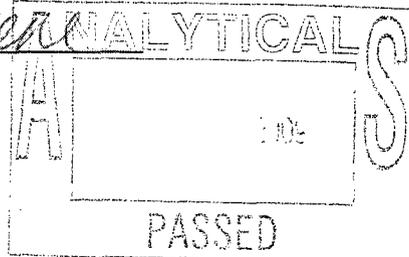
Sampling Date: 03/30/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		04/01/09	04/01/09
H17161-12	PILE #611	<10.0	65.4
Quality Control		536	477
True Value QC		500	500
% Recovery		107	95.4
Relative Percent Difference		1.8	3.3

METHOD: SW-846 8015 M

Allyson Kern
Chemist

04/02/09
Date



H17161-12 TPH8015 IEI

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 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 03/31/09
 Reporting Date: 04/02/09
 Project Number: 7211
 Project Name: SOIL SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 03/30/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: ZL

LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	04/02/09	04/02/09	04/02/09	04/02/09
H17161-12 PILE #611	<0.050	<0.050	<0.050	<0.300
Quality Control	0.049	0.049	0.048	0.149
True Value QC	0.050	0.050	0.050	0.150
% Recovery	98.0	98.0	96.0	99.3
Relative Percent Difference	<1.0	2.0	1.2	<1.0

METHOD: EPA SW-846 8021B

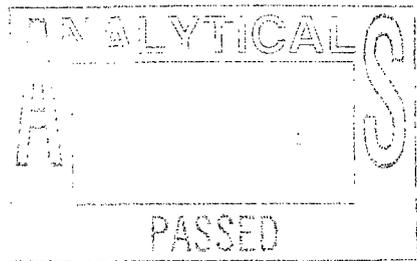
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Allyl Keene

 Chemist

04/06/09

 Date



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ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 03/31/09
Reporting Date: 04/02/09
Project Number: 7211
Project Name: SOIL SAMPLES
Project Location: NOT GIVEN

Analysis Date: 03/31/09
Sampling Date: 03/30/09
Sample Type: SOIL/SEDIMENT
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: TR

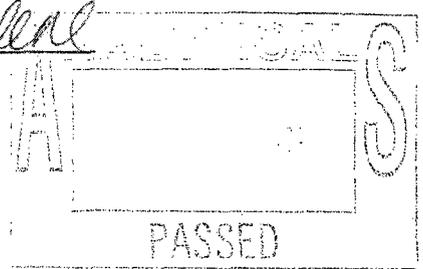
LAB NO.	SAMPLE ID	CF (mg/kg)
H17161-12	PILE #611	112
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-CF/B

Note: Analysis performed on a 1:4 w:v aqueous extract.

Cheryl D. Keene
Chemist

04/06/09
Date



H17161 IEI

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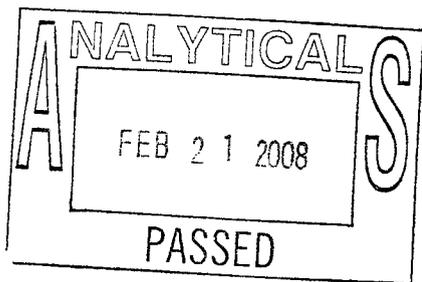
Hall Environmental Analysis Laboratory, Inc.

Date: 26-Feb-08

CLIENT: Industrial Ecosystems, Inc.
Lab Order: 0802255
Project: JFJ Land Farm
Lab ID: 0802255-12

Client Sample ID: Burlington #623
Collection Date: 2/19/2008 11:50:00 AM
Date Received: 2/21/2008
Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8015B: DIESEL RANGE ORGANICS						Analyst: SCC
Diesel Range Organics (DRO)	10	10		mg/Kg	1	2/22/2008 9:01:43 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/22/2008 9:01:43 PM
Surr: DNOP	90.3	61.7-135		%REC	1	2/22/2008 9:01:43 PM
EPA METHOD 8015B: GASOLINE RANGE						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/22/2008 6:56:21 PM
Surr: BFB	101	84-138		%REC	1	2/22/2008 6:56:21 PM
EPA METHOD 8260B: VOLATILES SHORT LIST						Analyst: SMP
Methyl tert-butyl ether (MTBE)	ND	0.050		mg/Kg	1	2/23/2008 5:50:32 AM
Benzene	ND	0.050		mg/Kg	1	2/23/2008 5:50:32 AM
Toluene	ND	0.050		mg/Kg	1	2/23/2008 5:50:32 AM
Ethylbenzene	ND	0.050		mg/Kg	1	2/23/2008 5:50:32 AM
Xylenes, Total	ND	0.10		mg/Kg	1	2/23/2008 5:50:32 AM
1,2,4-Trimethylbenzene	ND	0.050		mg/Kg	1	2/23/2008 5:50:32 AM
1,3,5-Trimethylbenzene	ND	0.050		mg/Kg	1	2/23/2008 5:50:32 AM
Surr: Dibromofluoromethane	88.0	64.4-119		%REC	1	2/23/2008 5:50:32 AM



Qualifiers:

- * Value exceeds Maximum Contaminant Level
- E Value above quantitation range
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- S Spike recovery outside accepted recovery limits

- B Analyte detected in the associated Method Blank
- H Holding times for preparation or analysis exceeded
- MCL Maximum Contaminant Level
- RL Reporting Limit

ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 03/31/09
Reporting Date: 04/02/09
Project Number: 7211
Project Name: SOIL SAMPLES
Project Location: NOT GIVEN

Analysis Date: 03/31/09
Sampling Date: 03/30/09
Sample Type: SOIL/SEDIMENT
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: TR

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17161-9	PILE #623	112
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-ClB

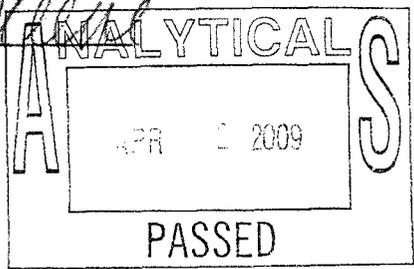
Note: Analysis performed on a 1:4 w:v aqueous extract.

Cheryl S. K...

Chemist

04/02/09

Date



H17161 IEI

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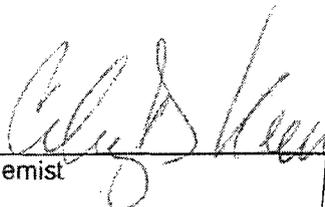
ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 832-1782

Receiving Date: 04/16/09
 Reporting Date: 04/23/09
 Project Number: 7276
 Project Name: JFJ SAMPLES
 Project Location: NOT GIVEN

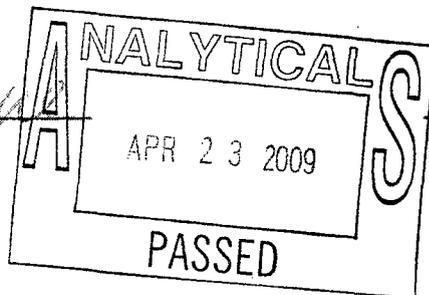
Sampling Date: 04/15/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		04/23/09	04/23/09
H17249-10	PILE #644	<10.0	<10.0
Quality Control		596	544
True Value QC		500	500
% Recovery		119	109
Relative Percent Difference		2.4	16.6

METHOD: SW-846 8015 M



 Chemist _____ Date 04/24/09



H17249 TPH IEI

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 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 04/16/09
 Reporting Date: 04/17/09
 Project Number: 7276
 Project Name: JFJ SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 04/15/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: ZL

LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	04/16/09	04/16/09	04/16/09	04/16/09
H17249-10 PILE #644	<0.050	<0.050	<0.050	<0.300
Quality Control	0.055	0.052	0.054	0.164
True Value QC	0.050	0.050	0.050	0.150
% Recovery	110	104	108	109
Relative Percent Difference	1.8	3.5	2.4	7.4

METHOD: EPA SW-846 8021B

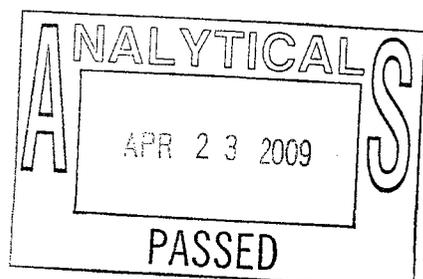
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Clayton Keene

 Chemist

04/23/09

 Date



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 ATTN: MARCELLA MARQUEZ
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 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 04/16/09
 Reporting Date: 04/16/09
 Project Number: 7276
 Project Name: JFJ SAMPLES
 Project Location: NOT GIVEN

Analysis Date: 04/16/09
 Sampling Date: 04/15/09
 Sample Type: SOIL/SEDIMENT
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: TR

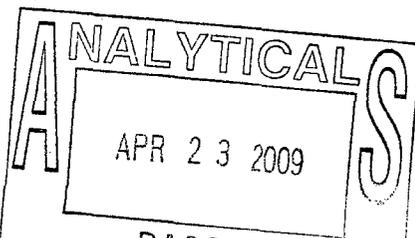
LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17249-10	PILE #644	80
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-Cl⁻B

Note: Analysis performed on a 1:4 w:v aqueous extract.

Cheryl Kline
 Chemist

04/23/09
 Date



H17249 IEI

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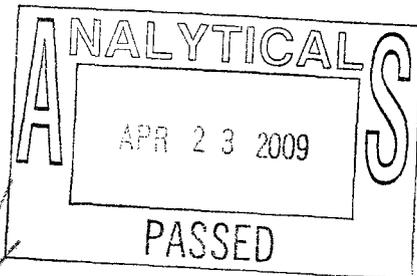
ANALYTICAL RESULTS FOR
INDUSTRIAL ECOSYSTEMS, INC.
ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1782

Receiving Date: 04/16/09
Reporting Date: 04/23/09
Project Number: 7276
Project Name: JFJ SAMPLES
Project Location: NOT GIVEN

Sampling Date: 04/15/09
Sample Type: SOIL
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: AB

LAB NUMBER	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		04/23/09	04/23/09
H17249-17	PILE #668	<10.0	<10.0
Quality Control		574	559
True Value QC		500	500
% Recovery		115	112
Relative Percent Difference		3.4	0.6

METHOD: SW-846 8015 M



Clay S. Keene
Chemist

04/23/09
Date

H17249 TPH IEI

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 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 04/16/09
 Reporting Date: 04/17/09
 Project Number: 7276
 Project Name: JFJ SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 04/15/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: ZL

LAB NUMBER	SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
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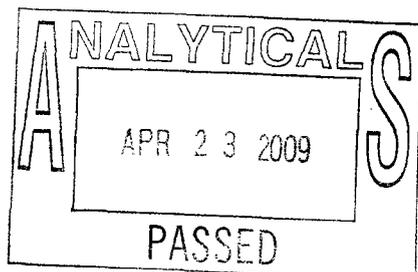
ANALYSIS DATE		04/16/09	04/16/09	04/16/09	04/16/09
H17249-17	PILE #668	<0.050	<0.050	<0.050	<0.300
Quality Control		0.055	0.052	0.054	0.164
True Value QC		0.050	0.050	0.050	0.150
% Recovery		110	104	108	109
Relative Percent Difference		1.8	3.5	2.4	7.4

METHOD: EPA SW-846 8021B

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,
 AND TOTAL XYLENES.

Cheryl Keene
 Chemist

04/23/09
 Date



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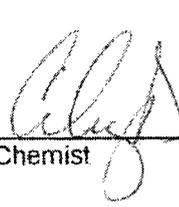
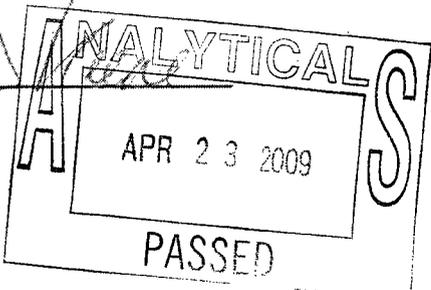
Receiving Date: 04/16/09
 Reporting Date: 04/16/09
 Project Number: 7276
 Project Name: JFJ SAMPLES
 Project Location: NOT GIVEN

Analysis Date: 04/16/09
 Sampling Date: 04/15/09
 Sample Type: SOIL/SEDIMENT
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: TR

LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17249-17	PILE #668	80
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods	4500-ClB
--------------------------	----------

Note: Analysis performed on a 1:4 w:v aqueous extract.


 Chemist



 Date

H17249 IEI

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 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1782

Receiving Date: 04/16/09
 Reporting Date: 04/23/09
 Project Number: 7276
 Project Name: JFJ SAMPLES
 Project Location: NOT GIVEN

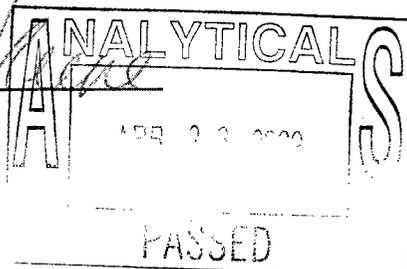
Sampling Date: 04/15/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: AB

LAB NUMBER	SAMPLE ID	DRO (>C ₁₀ -C ₂₈) (mg/kg)
ANALYSIS DATE:		04/23/09
H17249-18	PILE #669	78.3
Quality Control		559
True Value QC		500
% Recovery		112
Relative Percent Difference		0.6

METHOD: SW-846 8015 M

Cheryl Anne

 Chemist



04/24/09

 Date

H17249 TPH IEI

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ANALYTICAL RESULTS FOR
 INDUSTRIAL ECOSYSTEMS, INC.
 ATTN: MARCELLA MARQUEZ
 49 CR 3150
 AZTEC, NM 87410
 FAX TO: (505) 632-1876

Receiving Date: 03/31/09
 Reporting Date: 04/02/09
 Project Number: 7211
 Project Name: SOIL SAMPLES
 Project Location: NOT GIVEN

Sampling Date: 03/30/09
 Sample Type: SOIL
 Sample Condition: INTACT
 Sample Received By: ML
 Analyzed By: ZL

LAB NUMBER SAMPLE ID	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)
ANALYSIS DATE	04/02/09	04/02/09	04/02/09	04/02/09
H17161-11 PILE #669	<0.050	<0.050	<0.050	<0.300
Quality Control	0.049	0.049	0.048	0.149
True Value QC	0.050	0.050	0.050	0.150
% Recovery	98.0	98.0	96.0	99.3
Relative Percent Difference	<1.0	2.0	1.2	<1.0

METHOD: EPA SW-846 8021B

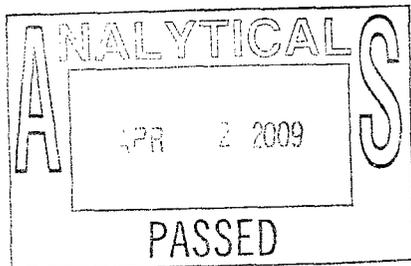
TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE, AND TOTAL XYLENES.

Cheryl Keene

 Chemist

04/06/09

 Date



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ATTN: MARCELLA MARQUEZ
49 CR 3150
AZTEC, NM 87410
FAX TO: (505) 632-1876

Receiving Date: 03/31/09
Reporting Date: 04/02/09
Project Number: 7211
Project Name: SOIL SAMPLES
Project Location: NOT GIVEN

Analysis Date: 03/31/09
Sampling Date: 03/30/09
Sample Type: SOIL/SEDIMENT
Sample Condition: INTACT
Sample Received By: ML
Analyzed By: TR

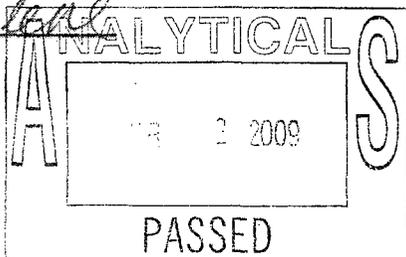
LAB NO.	SAMPLE ID	Cl ⁻ (mg/kg)
H17161-11	PILE #669	16
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		<0.1

METHOD: Standard Methods 4500-Cl⁻B

Note: Analysis performed on a 1:4 w:v aqueous extract.

Cheryl Steene
Chemist

04/02/09
Date



H17161 IEI

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