1R - 423 - 08

REPORTS

DATE:

5-12-2005

Justis D-1 Vent

IR 423-08

RECEIVED

APD - 3 2007

Environmental Bureau Oil Conservation Division

Report

Final

4

Closure

RICE OPERATING COMPANY JUNCTION BOX FINAL REPORT

			I	BOX LOCA	TION					
SWD SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE	COUNTY	BOX DI	MENSIONS	S - FEET	
luetie	D-1	n	1	265 1	375	1.00	Length	Width	Depth	
Justis	<u> </u>			203	SIL	Lea	mo	ved 46 ft N	orth	
LAND TYPE: B	LMSTA		FEE LAND	OWNER	George	Willis	OTHER			
Depth to Groun	dwater	184	feet	NMOCD	SITE ASSE	ESSMENT F	RANKING S	CORE:	0	
Date Started	11/29/2	004	Date Cor	npleted	4/12/2006		D Witness		no	
Soil Excavated	267	cubic ya	rds Exc	avation Le	ngth30	Width	20	Depth	12	feet
Soil Disposed	0	cubic ya	rds Off	site Facility	n	la	Location		n/a	
NAL ANALY	TICAL RES	SULTS:	Sample	e Date1	2/7/2004,	4/12/2006	Sample De	pth	12, 97 ft	

Procure 5-point composite sample of bottom and 4-point composite sample of excavation sidewalls. TPH, BTEX, and chloride laboratory test results completed by using an approved lab and testing procedures pursuant to NMOCD guidelines.

Sample	Benzene	Toluene	Ethylbenzene	Total Xylenes	GRO	<u>DRO</u>	<u>Chloride</u>
Location	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
4-WALL COMP.	0.0181	0.181	1.59	4.023	209	608	1280
BOTTOM COMP.	0.0435	0.74	4.62	12.82	511	1620	2700
REMED. BACKFILL		PID = 5	9.3 ppm		80.6	411	1150
SOIL BORE 97 ft		PID = ().0 ppm		<10.0	<10.0	166

General Description of Remedial Action:

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CHLORIDE FIELD TESTS

DEPTH (ft)

n/a

12

n/a 65

70

75

80

90

95

96

97

ppm

1132

1900

854

2523

2144

1855

1167

418

263

232

177

LOCATION

4-wall comp.

bottom comp.

remed. comp.

soil bore

This junction contained a vent and
was moved 46 ft north where a new watertight junction box was built to replace it. The former
junction location was delineated using a backhoe with PID readings and chloride field tests
performed on soil samples at regular intervals. Soil samples exhibited odors and staining
indicative of the presence of hydrocarbons but within NMOCD guideline concentrations.
Chloride concentrations were elevated within the 20 x 30 x 12-ft-deep excavation. The excavated
soil was blended on site and the backfilled in the excavation to 7 ft BGS were a 1-ft-thick
compacted clay barrier was installed to inhibit the downward migration of remaining chloride.
The remaining spoils were backfilled on top of the clay and contoured to the surface. An
identification plate was placed on the surface to mark the presence of the clay below. On
4/12/2006, a soil boring was initiated to further investigate the depth of chloride presence. The
bore was advanced to a depth of 97 ft where a conclusive trend of decline was observed,
indicative of non-saturated historical vadose conditions. The bore hole was plugged with
bentonite to the surface. The disturbed surface was seeded with a blend of native

vegetation on 9/21/2006 and is expected to return to productive capacity at a normal rate.

enclosures: chloride graph, photos, lab results (2), BTEX table, clay test, excavation diagram, cross-section, soil bore log

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF.

	Joe Gatts SIGNATURE	not available	COMPANY RICE Operating C	ompany
				2
REPORT ASSEMBLED BY	Kristin Farris Pope	SIGNATURE	Knutin Harris	tor
DATE	5/12/2005	TITLE	Project Scientist	



soil bore at former junction box site



1



Dec. 2004

delineation and excavation

undisturbed junction box

8/2/2004



Justis D-1 vent

T26S, R37E









Justis D-1 vent

30 x 20 x 12 ft Excavation Plan View

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						\
				So	il Bore	
System:	Justis	Locatio	n: Vent	<u>D-1 GW:</u>	184' Landowner: George Willis	
Soil Bor	<u>e: B1</u>			GPS Coord	d. System UTM	
UL/ D	Sec. 1	1265 R 3/E	=	Nad 27 La	at. & Long. 32*04.711 103*07.4	10 •
		T		т	Octor	
Depth		<u> </u>	PID			l ime
0.01	0040		0.4		Pale yellowish brown med-line	44.45
20	2249	┼┼-	0.4		Light brown Condu caliche	11.45
25	2042	<u> </u>	<u> </u>		Light brown Sandy caliche	11:54
30		<u> </u>	I./		Balavish orange fine sand	12:01
0.51	4504		0		Pale yellowish brown grayish	10.00
35	1594	<u> </u>			orange fine sand w/little caliche	12:02
40'	2404	┦───┤─		<u> </u>	Grayish orange tine sand	12:03
451	0705		~		Grayish orange Coarse sand	10.47
45'	2735	·	<u> </u>		W/calicne	12:17
50'	2692	┨─────┤──		<u> </u>	light redish brown fine sand	12:20
55'	3490	┟	<u> </u>	<u> </u>	Med sand pale yellowish prowr	12:23
60'	1952	↓↓ _	0	<u> </u>	fine-med sand grayish orange	12:26
	0500		0		Coarse med sand grayisn orang	
65	2523					12:30
-0	0114		0		Grayish orange fine sand little	40.00
70'	2144	<u></u>			calicne	12:33
/5'	1855	┦───┤──	<u> </u>		Light brown Med. Sand	12:36
	4107		~		Mod. Redish brown med-coarse	
80'	116/	┫────┤──		+	Sand w/ large Gravel	12:39
	110		~		Mod. Redish Brown med sand v	V/
90'	418	<u> </u>	<u> </u>	↓	Caliche	2:34
95'	263	ļ	0	<u> </u>	Fine sand Mod. Redish orange	2:36
96'	232		0		Mod. Redish orange medfine sa	and 2:39
97'	177	1	0		Sent to the Lab	2:43
				1		
				1		
				1		
		1		1		
		1		1	·	

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Notes: Hit large gravel at 80' had to inject water to break thru rock. 85' was still wet from injecting water next dry sample was caught at 90'. Sent 97' bgs to the lab for lab confirmation.

Signature Man Bate 4/12/04



Regulated by: Texas Dept. of Licensing & Regulation, Water Well Division, P.O. Box 12157, Austin, TX 78711, (800) 803-9202

1005

RICE OPERATING COMPANY

122 West Taylor Hobbs, NM 88240 Phone: (505) 393-9174 Fax: (505) 397-1471

VOC FIELD TEST REPORT FORM

PID METER READING & CALIBRATION

CK. MODEL: PGM 761S	SERIAL NO: 104412
MODEL MODEL: PGM 761S	SERIAL NO: 104490
NO. MODEL: PGM 7600	SERIAL NO: 110-12383
LOT NO: 05-0492	GAS COMPOSITION: ISOBUTYLENE 100PPM / AIR: BALANCE
FILL DATE: 11 01 05	EXP. DATE: 5/01/07
ACCURACY: +/- 2%	METER READING ACCURACY: COC.C

SYSTEM	JUNCTION	UNIT	SECTION	TOWNSHIP	RANGE
(Constant and			
JUSTIS	Nont D-1	\square		12100	, 137E

SAMPLE	PID RESULTS	SAMPLE	PID RESULTS
20' 695	D.4	97'bas	0.0
25' 245	0.2	<u> </u>	
30' bas	1.7		
<u>.35' bas</u>	\square		
40' 205	\bigcirc		
45' bas			
50 bàs	$\left \right\rangle$		
55' bas			
TOD' bois			
105° 1005			
10' baz			
T15' 1045			
90° bos			
90' bas			
95 bas			
96'095			

I verify that I have calibrated the above instrument in accordance to the manufacure operation manual.

١A lain SIGNATURE:

4 10 DATE:

CHLORIDE CONCENTRATION CURVE

RICE Operating Company

Justis D-1 vent

4/12/2006 SOIL BORE at junction

97	96	95	90	80	ب 75	70	65	60	55	50	45	40	35	30	25	Depth bgs (ft) 20	
177	232	263	418	1167	1855	2144	2523	1952	3490	2692	2735	2404	1594	2121	2642	[CI] ppm 2249	



Groundwater = 184 ft



Y Analytical Report

Prepared for:

Roy Rascon Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Justis Vent D-1 Project Number: None Given Location: None Given

Lab Order Number: 4L09004

Report Date: 12/13/04

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240

Project: Justis Vent D-1 Project Number: None Given Project Manager: Roy Rascon

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Bottom Lab Composite	4L09004-01	Soil	12/07/04 09:11	12/09/04 07:30
Bottom Field Composite 12'	4L09004-02	Soil	12/07/04 10:00	12/09/04 07:30
4 Wall Field Composite	4L09004-03	Soil	12/07/04 10:30	12/09/04 07:30
Remed. Backfill	4L09004-04	Soil	12/07/04 10:45	12/09/04 07:30
Four Wall Lab Composite	4L09004-05	Soil	12/07/04 09:55	12/09/04 07:30

Rice Operating Co. 122 W. Taylor Hobbs NM, 88240		P Project Nu Project Ma	roject: Jus imber: No inager: Roj	tis Vent E ne Given y Rascon)-1			Fax: (505) 3 Report 12/13/04	97-1471 ed: 16:28
		Or	ganics b	y GC					
		Environn	nental L	ab of T	Texas				
		Reporting				_			
	Result	Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Bottom Lab Composite (4L09004-0)	l) Soil		····.		, <u></u> _, ,				
Benzene	0.0942	0.0250	mg/kg dry	25	EL41316	12/09/04	12/09/04	EPA 8021B	
Toluene	1.47	0.0250	"	н	н	"	н		
Ethylbenzene	7.24	0.0250		"	U		u	"	
Xylene (p/m)	14.2	0.0250	"	и	п	**	11		
Xylene (0)	4.36	0.0250		"			"		
Surrogate: a,a,a-Trifluorotoluene		238 %	80-1	20	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		128 %	80-1	20	"	"	"	"	S-04
Bottom Field Composite 12' (4L090	04-02) Soil								
Benzene	0.0435	0.0250	mg/kg dry	25	EL41316	12/09/04	12/09/04	EPA 8021B	
Toluene	0.740	0.0250	"	'n	"	n	н	n	
Ethylbenzene	4.62	0.0250	n	"		11		n	
Xylene (p/m)	9.76	0.0250	"	"	u	Ð	11	u	
Xylene (0)	3.06	0.0250	H	н	"	н	н	"	
Surrogate: a,a,a-Trifluorotoluene		183 %	80	20	"	"	"	"	S-04
Surrogate: 4-Bromofluorobenzene		121 %	80	120	"	"	"	"	S-04
Gasoline Range Organics C6-C12	511	10.0	mg/kg dry	1	EL40912	12/09/04	12/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	1620	10.0	**	u	"	n	и	и	
Total Hydrocarbon C6-C35	2130	10.0	u.	11	n	"	11	u	
Surrogate: 1-Chlorooctane		116 %	70	130	"	"	"	11	
Surrogate: 1-Chlorooctadecane		114 %	70	130	"	"	"	"	
4 Wall Field Composite (4L09004-0	3) Soil								
Benzene	J [0.0181]	0.0250	mg/kg dry	25	EL41316	12/09/04	12/09/04	EPA 8021B	
Toluene	0.181	0.0250	"	11	4	11	1	н	
Ethylbenzene	1.59	0.0250	*		"	"		n	
Xylene (p/m)	3.51	0.0250	"	**	n	11	н	n	
Xylene (0)	0.513	0.0250	v		u.	н	"	n	
Surrogate: a,a,a-Trifluorotoluene		138 %		120	"	"	"	11	S-0-
Surrogate: 4-Bromofluorobenzene		112 %	80-	120	"	"	"	"	
Gasoline Range Organics C6-C12	209	10.0	mg/kg dry	1	EL40912	12/09/04	12/09/04	EPA 8015M	
Diesel Range Organics >C12-C35	608	10.0	u.	"	11	n	"	11	
Total Hydrocarbon C6-C35	817	10.0	n	"	11	и	u	u	
Surrogate: 1-Chlorooctane		121 %	70-	130	"	"	"	"	
Surrogate: 1-Chloropetadecane		120.02	70	120					

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Rice Operating Co. 122 W. Taylor Hobbs NM, 88240		Project: Justis Vent D-1 Project Number: None Given Project Manager: Roy Rascon							
		Org Environm	ganics nental l	by GC Lab of T	exas				
Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes

Gasoline Range Organics C6-C12	80.6	10.0	mg/kg dry	1	EL40912	12/09/04	12/09/04	EPA 8015M
Diesel Range Organics >C12-C35	411	10.0	"	н	u	11	11	11
Total Hydrocarbon C6-C35	492	10.0	n	11	н	н	н	n
Surrogate: 1-Chlorooctane		117 %	70-13	0	n	"	"	"
Surrogate: I-Chlorooctadecane		125 %	70-13	0	"	"	"	11
Four Wall Lab Composite (4L09004 Benzene	-05) Soil ND	0.0250	mg/kg dry	25	EI 41316	12/09/04	12/09/04	EPA 8021B
Toluene	0.0981	0.0250	H	17	"	"	12/05/01	11
Ethylbenzene	0.579	0.0250	"	11	**	n	"	и
Xylene (p/m)	1.34	0.0250	"	0	u	н	u	11
Xylene (0)	0.215	0.0250	n	n	11	11	11	n
Surrogate: a,a,a-Trifluorotoluene		119 %	80-12	0	"	"	"	"
Surrogate: 4-Bromofluorobenzene		93.6 %	80-12	0	"	"	"	"

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Rice Operating Co. 122 W. Taylor Hobbs NM, 88240

Project: Justis Vent D-1 Project Number: None Given Project Manager: Roy Rascon

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit Ur	nits Dilu	ion Batch	Prepared	Analyzed	Method	Notes
Bottom Lab Composite (4L09004-01) S	Soil							
% Moisture	14.0	0	% 1	EL41003	12/09/04	12/10/04	% calculation	
Bottom Field Composite 12' (4L09004	-02) Soil							
Chloride	2700	20.0 mg/k	g Wet 2	EL41001	12/09/04	12/10/04	SW 846 9253	
% Moisture	16.0	C	% 1	EL41003	12/09/04	12/10/04	% calculation	
4 Wall Field Composite (4L09004-03)	Soil			,				
Chloride	1280	20.0 mg/k	g Wet 2	EL41001	12/09/04	12/10/04	SW 846 9253	
% Moisture	10.0	C.	% 1	EL41003	12/09/04	12/10/04	% calculation	
Remed. Backfill (4L09004-04) Soil								
Chloride	1150	20.0 mg/k	g Wet 2	EL41001	12/09/04	12/10/04	SW 846 9253	
% Moisture	9.0	c.	%	EL41003	12/09/04	12/10/04	% calculation	
Four Wall Lab Composite (4L09004-0	5) Soil							
% Moisture	10.0	(%	EL41003	12/09/04	12/10/04	% calculation	

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Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL40912 - Solvent Extraction ((GC)									
Blank (EL40912-BLK1)	()			Prepared	& Analyze	ed: 12/09/	04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	11							
Total Hydrocarbon C6-C35	ND	10.0	и							
Surrogate: 1-Chlorooctane	38.1		mg/kg	50.0		76.2	70-130			
Surrogate: 1-Chlorooctadecane	41.7		"	50.0		83.4	70-130			
Blank (EL40912-BLK2)		_		Prepared:	12/09/04	Analyzed	1: 12/10/04			
Gasoline Range Organics C6-C12	ND	10.0	mg/kg wet							
Diesel Range Organics >C12-C35	ND	10.0	n							
Total Hydrocarbon C6-C35	ND	10.0	11							
Surrogate: 1-Chlorooctane	47.9		mg/kg	50.0		95.8	70-130			
Surrogate: 1-Chlorooctadecane	46.7		"	50.0		93.4	70-130			
LCS (EL40912-BS1)				Prepared	& Analyz	ed: 12/09/	04			
Gasoline Range Organics C6-C12	454	10.0	mg/kg wet	500		90.8	75-125			
Diesel Range Organics >C12-C35	475	10.0		500		95.0	75-125			
Total Hydrocarbon C6-C35	929	10.0	11	1000		92.9	75-125			
Surrogate: 1-Chlorooctane	48.5		mg/kg	50.0		97.0	70-130			
Surrogate: 1-Chlorooctadecane	47.8		"	50.0		95.6	70-130			
LCS (EL40912-BS2)				Prepared	& Analyz	ed: 12/09/	04			
Gasoline Range Organics C6-C12	466	10.0	mg/kg wet	500		93.2	75-125			
Diesel Range Organics >C12-C35	496	10.0	н	500		99.2	75-125			
Total Hydrocarbon C6-C35	962	10.0	**	1000		96.2	75-125			
Surrogate: 1-Chlorooctane	46.7		mg/kg	50.0		93.4	70-130			
Surrogate: 1-Chlorooctadecane	45.7		"	50.0		91.4	70-130			
Calibration Check (EL40912-CCV1)				Prepared	& Analyz	ed: 12/09/	'04			•
Gasoline Range Organics C6-C12	526		mg/kg	500		105	80-120			
Diesel Range Organics >C12-C35	537			500		107	80-120			
Total Hydrocarbon C6-C35	1060		"	1000		106	80-120			
Surrogate: 1-Chlorooctane	57.3		"	50.0		115	70-130			
Surrogate: 1-Chlorooctadecane	64.4		п	50.0		129	70-130			

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Rice Operating Co.
122 W. Taylor
Hobbs NM, 88240

Project: Justis Vent D-1 Project Number: None Given Project Manager: Roy Rascon

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EL40912 - Solvent Extraction (GC)									
Calibration Check (EL40912-CCV2)				Prepared	& Analyze	d: 12/09/0	4			
Gasoline Range Organics C6-C12	539		mg/kg	500		108	80-120			
Diesel Range Organics >C12-C35	563		н	500		113	80-120			
Total Hydrocarbon C6-C35	1100		н	1000		110	80-120			
Surrogate: 1-Chlorooctane	60.4		"	50.0		121	70-130			
Surrogate: 1-Chlorooctadecane	63.6		"	50.0		127	70-130			
Matrix Spike (EL40912-MS1)	So	urce: 4L090	07-03	Prepared:	12/09/04	Analyzed:	12/10/04			
Gasoline Range Organics C6-C12	591	10.0	mg/kg dry	610	ND	96.9	75-125			
Diesel Range Organics >C12-C35	645	10.0	и	610	ND	106	75-125			
Total Hydrocarbon C6-C35	1240	10.0	*1	1220	ND	102	75-125			
Surrogate: 1-Chlorooctane	56.2		mg/kg	50.0		112	70-130			
Surrogate: 1-Chlorooctadecane	55.5		"	50.0		111	70-130			
Matrix Spike (EL40912-MS2)	So	urce: 4L090	08-01	Prepared:	12/09/04	Analyzed	12/10/04			
Gasoline Range Organics C6-C12	609	10.0	mg/kg dry	568	ND	107	75-125			
Diesel Range Organics >C12-C35	626	10.0	11	568	ND	110	75-125			
Total Hydrocarbon C6-C35	1230	10.0	11	1140	ND	108	75-125			
Surrogate: 1-Chlorooctane	55.6		mg/kg	50.0		111	70-130			
Surrogate: 1-Chlorooctadecane	50.9		"	50.0		102	70-130			
Matrix Spike Dup (EL40912-MSD1)	So	urce: 4L090	07-03	Prepared:	12/09/04	Analyzed	: 12/10/04			
Gasoline Range Organics C6-C12	616	10.0	mg/kg dry	610	ND	101	75-125	4.14	20	
Diesel Range Organics >C12-C35	653	10.0	a	610	ND	107	75-125	1.23	20	
Total Hydrocarbon C6-C35	1270	10.0	11	1220	ND	104	75-125	2.39	20	
Surrogate: 1-Chlorooctane	53.0		mg/kg	50.0		106	70-130			
Surrogate: 1-Chlorooctadecane	48.5		"	50.0		97.0	70-130			
Matrix Spike Dup (EL40912-MSD2)	So	urce: 4L090	08-01	Prepared	12/09/04	Analyzed	: 12/10/04			
Gasoline Range Organics C6-C12	616	10.0	mg/kg dry	568	ND	108	75-125	1.14	20	
Diesel Range Organics >C12-C35	640	10.0	н	568	ND	113	75-125	2.21	20	
Total Hydrocarbon C6-C35	1260	10.0	U	1140	ND	111	75-125	2.41	20	
Surrogate: 1-Chlorooctane	56.7		mg/kg	50.0		113	70-130		<u> </u>	
Surrogate: 1-Chlorooctadecane	50.6		"	50.0		101	70-130			

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Project: Jüstis Vent D-1 Project Number: None Given Project Manager: Roy Rascon

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes
Batch EL41316 - EPA 5030C (GC)										
Blank (EL41316-BLK1)				Prepared	& Analyze	ed: 12/09/0	4			
Benzene	ND	0.0250	mg/kg wet							
Toluene	ND	0.0250	*							
Ethylbenzene	ND	0.0250	· N							
Xylene (p/m)	ND	0.0250	и							
Xylene (0)	ND	0.0250	11							
Surrogate: a,a,a-Trifluorotoluene	101		ug/kg	100	8 0	101	80-120			
Surrogate: 4-Bromofluorobenzene	97.3		"	100	•	97.3	80-120			
LCS (EL41316-BS1)				Prepared	& Analyz	ed: 12/09/0	4			
Benzene	85.9		ug/kg	100		85.9	80-120			
Toluene	87.7		u	100		87.7	80-120			
Ethylbenzene	102		. 0	100		102	80-120			
Xylene (p/m)	231		11	200		116	80-120			
Xylene (o)	117		11	100		117	80-120			
Surrogate: a,a,a-Trifluorotoluene	116		"	100		116	80-120			
Surrogate: 4-Bromofluorobenzene	119		"	100		119	80-120			
Calibration Check (EL41316-CCV1)				Prepared	: 12/09/04	Analyzed	12/10/04			
Benzene	101		ug/kg	100		101	80-120			
Toluene	101		11	100		101	80-120			
Ethylbenzene	100		11	100		100	80-120			
Xylene (p/m)	222		0	200		111	80-120			
Xylene (o)	109			100		109	80-120			
Surrogate: a,a,a-Trifluorotoluene	112		"	100		112	80-120			
Surrogate: 4-Bromofluorobenzene	110		"	100		110	80-120			
Matrix Spike (EL41316-MS1)	So	urce: 4L09(07-04	Prepared	: 12/09/04	Analyzed	: 12/13/04			
Benzene	87.4		ug/kg	100	ND	87.4	80-120			
Toluene	85.0		n	100	ND	85.0	80-120			
Ethylbenzene	93.9		**	100	ND	93.9	80-120			
Xylene (p/m)	212		"	200	ND	106	80-120			
Xylene (o)	106		"	100	ND	106	80-120			
Surrogate: a,a,a-Trifluorotoluene	112		"	100		112	80-120			
Surrogate: 4-Bromofluorobenzene	104		"	100		104	80-120			

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Project: Justis Vent D-1 Project Number: None Given Project Manager: Roy Rascon

Organics by GC - Quality Control

Environmental Lab of Texas

		Reporting		Spike	Source		%REC		RPD	
Analyte	Result	Limit	Units	Level	Result	%REC	Limits	RPD	Limit	Notes

Batch EL41316 - EPA 5030C (GC)

Matrix Spike Dup (EL41316-MSD1)	Source:	4L09007-04	Prepared:	12/09/04	Analyzed	d: 12/13/04		
Benzene	92.2	ug/kg	100	ND	92.2	80-120	5.35	20
Toluene	96.6	11	100	ND	96.6	80-120	12.8	20
Ethylbenzene	107	"	100	ND	107	80-120	13.0	20
Xylene (p/m)	239	"	200	ND	120	80-120	12.4	20
Xylene (o)	117	н	100	ND	117	80-120	9.87	20
Surrogate: a,a,a-Trifluorotoluene	117	, it	100		117	80-120		
Surrogate: 4-Bromofluorobenzene	108	"	100		108	80-120		

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Page 8 of 10

Rice Operating Co.	Project: Justis Vent D-1	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	12/13/04 16:28

General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch EL41001 - Water Extraction									····	
Blank (EL41001-BLK1)				Prepared:	12/09/04	Analyzed:	12/10/04			
Chloride	ND	20.0	mg/kg Wet			<u> </u>				
Matrix Spike (EL41001-MS1)	S	Source: 4L090	04-02	Prepared:	12/09/04	Analyzed:	12/10/04			
Chloride	3200	20.0	mg/kg Wet	500	2700	100	80-120			
Matrix Spike Dup (EL41001-MSD1)	S	Source: 4L090	04-02	Prepared:	12/09/04	Analyzed:	12/10/04			
Chloride	3200	20.0	mg/kg Wet	500	2700	100	80-120	0.00	20	
Reference (EL41001-SRM1)				Prepared:	12/09/04	Analyzed:	12/10/04			
Chloride	5000		mg/kg	5000		100	80-120			
Batch EL41003 - General Preparation (P	rep)									
Blank (EL41003-BLK1)				Prepared:	12/09/04	Analyzed:	12/10/04			
% Moisture	0.0		%							
Duplicate (EL41003-DUP1)	S	Source: 4L090	02-01	Prepared:	12/09/04	Analyzed:	12/10/04			
% Moisture	4.0		%		4.0			0.00	20	

Environmental Lab of Texas

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Rice Operating Co.	Project: Justis Vent D-1	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Roy Rascon	12/13/04 16:28

Notes and Definitions

S-04	The surrogate recover	v for this sample is outside of	f established control limits of	due to a sample matrix effect.
------	-----------------------	---------------------------------	---------------------------------	--------------------------------

- J Detected but below the Reporting Limit; therefore, result is an estimated concentration (CLP J-Flag).
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference
- LCS Laboratory Control Spike
- MS Matrix Spike

Dup Duplicate

alandk tu Report Approved By: Date:

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director James L. Hawkins, Chemist/Geologist Sandra Sanchez, Lab Tech.

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Pg 2 of 3



Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

Client: <u>Rice Operating</u>
Date/Time: 12-09-0400730
Order #: 4609004
Initials: JMM

Sample Receipt Checklist

Temperature of container/cooler?	(es)	No	0,5	С
Shipping container/cooler in good condition?	Yes	No		
Custody Seals intact on shipping container/cooler?	Yes	No	Not prese	
Custody Seals intact on sample bottles?	Yes	No	Not prese	ent
Chain of custody present?	(es)	No		
Sample Instructions complete on Chain of Custody?	Yes	No		
Chain of Custody signed when relinquished and received?	(res)	No		
Chain of custody agrees with sample label(s)	res	No		
Container labels legible and intact?	Kes/	No	ļ	
Sample Matrix and properties same as on chain of custody?	Yes	No		
Samples in proper container/bottle?	(es)	No		
Samples properly preserved?	(es)	No		
Sample bottles intact?	Tes	No		
Preservations documented on Chain of Custody?	Yes	No		
Containers documented on Chain of Custody?	YES	No		
Sufficient sample amount for indicated test?	res	No		
All samples received within sufficient hold time?	(Yes)	No		
VOC samples have zero headspace?	(Yes)	No	Not Applica	able

Other observations:

Contact Person: Regarding:	Variance Documentation: _ Date/Time:	_Contacted by:
Corrective Action Taken:		
•		
		·
	· · · · · · · · · · · · · · · · · · ·	

ENGLISHED SHO		LABORATORY TEST F PETTIGREW & ASSO(1110 N. GRIMES HOBBS, NM 88240 (505) 393-9827	REPORT CIATES, P.A.	ASHTO RIS DEBRA P. HICKS, P.E./L.S.I. WILLIAM M. HICKS. III, P.E./P.S.	SM SM SM
То:	Rice Operating Attn: Carolyn Haynes	5	Material:	Red Clay	
	Hobbs, NM 88240	DECEIVER	Test Method:	ASTM: D 2922	
Project:	Justis Vent D-1	APR 9 2005			
Date of Test:	April 6, 2005	HICE OPERATING HOBBS, NM	Depth:	Finished Subgrade	۰ ۱۹۹۰ - ۲۰۰۹ ۱۹۹۰ - ۲۰۰۹
			1		

		Dry Density		· .
Test No.	Location	% Maximum	% Moisture	Depth
SG-2	Pit - 12' E. & 12' S. of the NW Corner	100.9	16.8	

COPY

Control Density:	104.6
	ASTM: D 698

Required Compaction: 95%

Lab No.: 05 3435-3436

Copies To: Rice 🗸

Optimum Moisture: 21.7

PETTIGREW & ASSOCIATES

<u>/ S.E.T.</u> BY:





Analytical Report

Prepared for:

Kristin Farris-Pope Rice Operating Co. 122 W. Taylor Hobbs, NM 88240

Project: Justis Vent D-1 Project Number: None Given Location: None Given

Lab Order Number: 6D14012

Report Date: 04/20/06

1	Rice Operating Co.	Project: Justis Vent D-1	Fax: (505) 397-1471
	122 W. Taylor	Project Number: None Given	Reported:
	Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	04/20/06 11:29

ANALYTICAL REPORT FOR SAMPLES

, •.

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
97' bgs	6D14012-01	Soil	04/12/06 15:10	04/14/06 10:15

Rice Operating Co.	Project: Justis Vent D-1	Fax: (505) 397-1471
122 W. Taylor	Project Number: None Given	Reported:
Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	04/20/06 11:29

Organics by GC **Environmental Lab of Texas**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
97' bgs (6D14012-01) Soil									I
Carbon Ranges C6-C12	ND	10.0	mg/kg dry	1	ED61418	04/14/06	04/18/06	EPA 8015M	
Carbon Ranges C12-C28	ND	10.0	н	n		н	н	**	
Carbon Ranges C28-C35	ND	10.0	"	н	11	н	"	в	
Total Hydrocarbon C6-C35	ND	10.0	н	н	"	n	"	u.	
Surrogate: I-Chlorooctane		104 %	70-1	30	"	"	"	"	
Surrogate: 1-Chlorooctadecane		93.6%	70-1	30	"	"	· <i>n</i>	"	

Environmental Lab of Texas

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•	Rice Operating Co.	Project: Justis Vent D-1	Fax: (505) 397-1471
	122 W. Taylor	Project Number: None Given	Reported:
	Hobbs NM, 88240	Project Manager: Kristin Farris-Pope	04/20/06 11:29

General Chemistry Parameters by EPA / Standard Methods

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
97' bgs (6D14012-01) Soil									
Chloride	166	5.00	mg/kg	10	ED62005	04/18/06	04/18/06	EPA 300.0	
% Moisture	6.8	0.1	%	1	ED61704	04/14/06	04/17/06	% calculation	

Environmental Lab of Texas

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Project: Justis Vent D-1 Project Number: None Given Project Manager: Kristin Farris-Pope

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED61418 - Solvent Extraction	(GC)									
Blank (ED61418-BLK1)				Prepared	& Analyz	ed: 04/14/	06			
Carbon Ranges C6-C12	ND	10.0	mg/kg wet							
Carbon Ranges C12-C28	ND	10.0	u							
Carbon Ranges C28-C35	ND	10.0	11							
Total Hydrocarbon C6-C35	ND	. 10.0	11							
Surrogate: 1-Chlorooctane	45.7		mg/kg	50.0		91.4	70-130			
Surrogate: 1-Chlorooctadecane	46.3		"	50.0		92.6	70-130			
LCS (ED61418-BS1)				Prepared	& Analyze	ed: 04/14/0	06			
Carbon Ranges C6-C12	477	10.0	mg/kg wet	500		95.4	75-125			
Carbon Ranges C12-C28	491	10.0	"	500		98.2	75-125			
Total Hydrocarbon C6-C35	968	10.0	"	1000		96.8	75-125			
Surrogate: 1-Chlorooctane	51.8		mg/kg	50.0		104	70-130			
Surrogate: 1-Chlorooctadecane	45.2		"	50.0		90.4	70-130			
Calibration Check (ED61418-CCV1)				Prepared	: 04/14/06	Analyzed	1: 04/15/06)		
Carbon Ranges C6-C12	266		mg/kg	250		106	80-120			
Carbon Ranges C12-C28	294		н	250		118	80-120			
Total Hydrocarbon C6-C35	560			500		112	80-120			
Surrogate: 1-Chlorooctane	45.6		"	50.0		91.2	70-130			
Surrogate: 1-Chlorooctadecane	38.7		"	50.0		77.4	70-130			
Matrix Spike (ED61418-MS1)	So	ource: 6D14(012-01	Prepared	& Analyz	ed: 04/14/	06			
Carbon Ranges C6-C12	509	10.0	mg/kg dry	536	ND	95.0	75-125			
Carbon Ranges C12-C28	510	10.0	н	536	ND	95.1	75-125			
Total Hydrocarbon C6-C35	1020	10.0	"	1070	ND	95.3	75-125			
Surrogate: 1-Chlorooctane	56.1	· · · · · · · · · · · · · · · · · · ·	mg/kg	50.0		112	70-130			
Surrogate: 1-Chlorooctadecane	47.4		"	50.0		94.8	70-130			

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Rice Operating Co. 122 W. Taylor Hobbs NM, 88240

Project: Justis Vent D-1 Project Number: None Given Project Manager: Kristin Farris-Pope

04/20/06 11:29

Organics by GC - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED61418 - Solvent Extraction	(GC)									

Matrix Spike Dup (ED61418-MSD1)	Sour	ce: 6D14012	2-01	Prepared a	& Analyz	ed: 04/14/	06			
Carbon Ranges C6-C12	518	10.0 r	ng/kg dry	536	ND	96.6	75-125	1.75	20	
Carbon Ranges C12-C28	531	10.0	ų	536	ND	99.1	75-125	4.03	20	
Total Hydrocarbon C6-C35	1050	10.0	Ħ	1070	ND	98.1	75-125	2.90	20	
Surrogate: 1-Chlorooctane	57.0		mg/kg	50.0		114	70-130			
Surrogate: 1-Chlorooctadecane	47.9		"	50.0		95.8	70-130			

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General Chemistry Parameters by EPA / Standard Methods - Quality Control

Environmental Lab of Texas

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch ED61704 - General Preparatio	n (Prep)									
Blank (ED61704-BLK1)				Prepared:	04/14/06	Analyzed	1: 04/17/06			
% Solids	100		%							
Duplicate (ED61704-DUP1)	So	urce: 6D1301	7-01	Prepared:	04/14/06	Analyzed	1: 04/17/06			
% Solids	96.1		%		92.4			3.93	20	
Duplicate (ED61704-DUP2)	So	urce: 6D140()8-03	Prepared:	04/14/06	Analyzed	l: 04/17/06			
% Solids	95.6		%		95.7			0.105	20	
Batch ED62005 - Water Extraction				<u></u>						
Blank (ED62005-BLK1)				Prepared	& Analyz	ed: 04/18/0	06			
Chloride	ND	0.500	mg/kg							
LCS (ED62005-BS1)				Prepared	& Analyze	ed: 04/18/0	06			
Chloride	9.08		mg/L	10.0		90.8	80-120			
Calibration Check (ED62005-CCV1)				Prepared	& Analyz	ed: 04/18/	06			
Chloride	8.90		mg/L	10.0		89.0	80-120			
Duplicate (ED62005-DUP1)	So	urce: 6D1401	6-01	Prepared	& Analyz	ed: 04/18/	06			
Chloride	1960	25.0	mg/kg		1930			1.54	20	

Environmental Lab of Texas

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Notes and Definitions

DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference
LCS	Laboratory Control Spike
MS	Matrix Spike

Dup Duplicate

alandkind Report Approved By: Date: -21-06

Raland K. Tuttle, Lab Manager Celey D. Keene, Lab Director, Org. Tech Director Peggy Allen, QA Officer Jeanne Mc Murrey, Inorg. Tech Director LaTasha Cornish, Chemist Sandra Sanchez, Lab Tech.

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Environmental Lab of Texas Variance / Corrective Action Report – Sample Log-In

ient:	Rice op.	
ate/Time:	4/19/06 10:15	
rder #:	601401Z	
itials:	CK	

Sample Receipt Checklist

		the second s	
mperature of container/cooler?	Yes	No	1.5 CI
ipping container/cooler in good condition?	Tes	No	
stody Seals intact on shipping container/cooler?	CES	No	Not present
istody Seals intact on sample bottles?	ates	No	Not present
ain of custody present?	(CO)	No	
mple Instructions complete on Chain of Custody?	3	No	
nain of Custody signed when relinguished and received?	(ES)	No	
nain of custody agrees with sample label(s)	(ES)	No	
ontainer labels legible and intact?	3	No	
ample Matrix and properties same as on chain of custody?	Xes	No	
amples in proper container/bottle?	1 Nes	No	
amples properly preserved?	Hes	No	
ample bottles intact?	Tes	No	
eservations documented on Chain of Custody?	1 (Tep	NO	**************************************
ontainers documented on Chain of Custody?	(e)	No I	
Ifficient sample amount for indicated test?	Yes	No	
I samples received within sufficient hold time?	(23)	No	
C samples have zero headspace?	(Yes)	No	Not Applicable

ther observations:

× ······

entact Person:	Variance Documentation: Date/Time:	_ Contacted by:
orrective Action Taken:		
antes company considerations		

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n di Kata

1.555	0.579	0.0981	<0.025			
	TE (mg/kg)	LAB COMPOSI				
4.023	1.59	0.181	0.0181	267.0		4-wall composite
	ITE (mg/kg)	FIELD COMPOS				
18.56	7.24	1.47	0.0942			
	TE (mg/kg)	LAB COMPOSI				
10.82	4.62	0.740	0.0435	1523.0 18.2 219.0 0.1 0.1	1 2 5	bottom composite at 12 ft BGS
Fotal Xylenes	TE (mg/kg) Ethyl Benzene	FIELD COMPOS Toluene	Benzene	PID reading (ppm)	Component	Location
iboratory:	La	12/7/2004 Joe Gatts	Date: Sampler:		Justis D-1 vent	System: Site:

Field PID tests <100 ppm are considered final for BTEX. If PID is >100 ppm, the components of the BTEX composite sample will be collected individually and will be composited under laboratory conditions to prevent excessive volatilization. A 15-box, 30-sample study will be made to compare field-compositing with lab-compositing BTEX samples. Composite components are collected in a skewed 'W' pattern. Revised Junction Box Upgrade Work Plan (July 16, 2003)

2005 BTEX Study

Revised Junction Box Upgrade Plan (2003)

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