

AP - 66

ANNUAL MONITORING REPORT

YEAR(S):

2003

RICE Operating Company

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

1 R O 427-90

CERTIFIED MAIL

RETURN RECEIPT NO. 7002 2410 0000 4940 1282

March 4, 2004

Mr. Wayne Price
New Mexico Energy, Minerals, & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

RE: 2003 MONITOR WELL REPORT/SAMPLING SUMMARY
EME SWD SYSTEM
LEA COUNTY, NEW MEXICO

Mr. Price:

Rice Operating Company (ROC) takes this opportunity to submit the 2003 Monitor Well Report for the Eunice Monument Eumont (EME) Salt Water Disposal System. Listed below are sites in this system that have monitor wells that are sampled quarterly pursuant to NMOCD guidelines. Groundwater impact became apparent at these sites during the remediation process of the Junction Box Upgrade Plan except for H-13, which was the result of a pipeline leak.

Site Name	Unit Letter	Section	Township/Range
E-5 jct.	E	5	T20S, R37E
N-5 jct.	N	5	T20S, R37E
K-6 jct.	K	6	T20S, R37E
M-16-1 jct.	M	16	T20S, R37E
K-33-1 jct.	K	33	T19S, R37E
H-13 leak	H	13	T20S, R36E
A-20 jct.	A	20	T20S, R37E

ROC samples these monitor wells each quarter. Analysis of the samples was provided by Cardinal Laboratories of Hobbs and Environmental Lab of Texas of Odessa. In 2004, ROC will continue to conduct the sampling of the monitor wells at these sites. As in 2003, either Environmental Lab of Texas of Odessa, Texas, or Cardinal Laboratories of Hobbs will continue to conduct analytical tests of the water samples of 2004.

ROC will continue to address the groundwater concerns at these sites in 2004 by contracting a consultant/groundwater specialist to generate work plans for remediation of the vadose zone at groundwater-impacted sites and to address the groundwater concerns. NMOCD can anticipate more work plan submissions for such sites as they are prioritized in 2004. After NMOCD approval, AFE's will be submitted to System Partners for approval. Sites with confirmed groundwater impact will also be evaluated for the extent of groundwater impact.

ROC is the service provider (operator) for the EME Salt Water Disposal System and has no ownership of any portion of pipeline, well, or facility. The EME SWD System is owned by a consortium of oil producers, System Partners, who provide all operating capital on a percentage ownership/usage basis.

Thank you for your consideration concerning this annual summary of groundwater monitoring information. If you have any questions, do not hesitate to contact me.

RICE OPERATING COMAPANY

Kristin Farris

Kristin Farris
Project Scientist

Enclosures: Summary table & graph for each site
 Analytical results

Cc: LBG, CDH, file, Wayne Price, Chris Williams
 NMOCD, District I Office
 1625 N. French Drive
 Hobbs, NM 88240

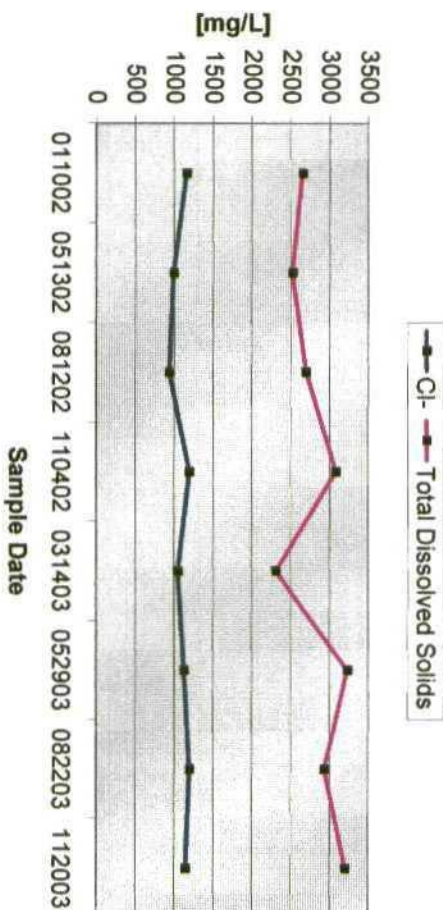
EME Jct. N-5
N. 5, 20S, 37E

Rice Operating Co. Monitor Well Data Sheet

All parameter concentrations are in mg/L

MW #	WATER LEVEL * (ft)	TOTAL DEPTH	WELL VOLUME (gal)	VOLUME BAILED	SAMPLE DATE	TIME	CL-	TDS	BENZENE	TOLUENE	ETHYL BENZENE	TOTAL XYLENES
1	35.50	41.30	0.900	2.80	011002	1415	1160	2652	<0.002	<0.002	<0.006	<0.006
1	37.47	40.18	0.434	2.25	051302	1445	993	2520	<0.001	0.00198	0.0028	0.00915 (Sandy)
1	37.75	40.19	0.390	1.50	081202	1100	939	2700	<0.001	<0.001	<0.001	<0.003
1	37.90	40.20	0.368	1.29	110402	1600	1200	3083	<0.002	<0.002	<0.002	<0.006 (sandy, slow recharge, TPH odor)
1	37.78	40.17	0.380	1.10	031403	1200	1050	2310	<0.001	0.002	0.004	0.011
1	38.00	42.21	0.600	2.02	052903	1400	1130	3230	<0.001	0.001	0.004	0.010
1	38.42	40.21	0.200	0.60	082203	1600	1200	2930				oil
1	38.63	41.55	0.400	1.40	112003	930	1150	3200	<0.001	0.002	0.003	0.012 oil skim

EME Jct. N-5 Monitor Well



* Depth to water is measured from the top of the casing
Casing is 2.125 ft

ANALYTICAL REPORT

Prepared for:

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

Project: N-5
PO#: 510
Order#: G0308001
Report Date: 11/25/2003

Certificates

US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating
122 W. Taylor
Hobbs, NM 88240
505-397-1471

Order#: G0308001
Project:
Project Name: N-5
Location: EME

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0308001-01	MW-1	WATER	11/20/03 9:30	11/20/03 20:30	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp: 4.0 C			
8021B/5030 BTEX						
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0308001
Project:
Project Name: N-5
Location: EME

Lab ID: 0308001-01
Sample ID: MW-1

8021B/5030 BTEX

Method	Date	Date	Sample	Dilution		
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0007531-02		11/22/03	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Toluene	0.002	0.001
Ethylbenzene	0.003	0.001
p/m-Xylene	0.009	0.001
o-Xylene	0.003	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	94%	80	120
Bromofluorobenzene	95%	80	120

Approval:

Raland K. Tuttle, Lab Director, QA Officer
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

Date

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0308001
Project:
Project Name: N-5
Location: EME

Lab ID: 0308001-01
Sample ID: MW-1

Anions

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Bicarbonate Alkalinity	338	mg/L	1	2.00	310.1	11/21/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	11/21/03	SB
Chloride	1150	mg/L	1	5.00	325	11/21/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	11/21/03	SB
SULFATE, 375.4	102	mg/L	2	1.0	375.4	11/24/03	SB

Cations

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Calcium	297	mg/L	100	1.0	6010B	11/21/03	SM
Magnesium	83.7	mg/L	10	0.010	6010B	11/21/03	SM
Potassium	8.61	mg/L	10	0.50	6010B	11/21/03	SM
Sodium	317	mg/L	100	1.0	6010B	11/21/03	SM

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Total Dissolved Solids (TDS)	3200	mg/L	1	5.0	160.1	11/22/03	SB

Approval: Raland K. Tuttle 11-26-03
Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0308001

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0007531-02			<0.001		
Toluene-mg/L		0007531-02			<0.001		
Ethylbenzene-mg/L		0007531-02			<0.001		
p/m-Xylene-mg/L		0007531-02			<0.001		
o-Xylene-mg/L		0007531-02			<0.001		
CONTROL							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0007531-03		0.1	0.096	96.%	
Toluene-mg/L		0007531-03		0.1	0.092	92.%	
Ethylbenzene-mg/L		0007531-03		0.1	0.091	91.%	
p/m-Xylene-mg/L		0007531-03		0.2	0.182	91.%	
o-Xylene-mg/L		0007531-03		0.1	0.090	90.%	
CONTROL DUP							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0007531-04		0.1	0.101	101.%	5.1%
Toluene-mg/L		0007531-04		0.1	0.097	97.%	5.3%
Ethylbenzene-mg/L		0007531-04		0.1	0.092	92.%	1.1%
p/m-Xylene-mg/L		0007531-04		0.2	0.183	91.5%	0.5%
o-Xylene-mg/L		0007531-04		0.1	0.087	87.%	3.4%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0007531-05		0.1	0.099	99.%	
Toluene-mg/L		0007531-05		0.1	0.094	94.%	
Ethylbenzene-mg/L		0007531-05		0.1	0.091	91.%	
p/m-Xylene-mg/L		0007531-05		0.2	0.181	90.5%	
o-Xylene-mg/L		0007531-05		0.1	0.087	87.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0308001

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0007511-01			<2.00		
Carbonate Alkalinity-mg/L		0007513-01			<0.10		
Chloride-mg/L		0007517-01			<5.00		
Hydroxide Alkalinity-mg/L		0007515-01			<0.10		
SULFATE, 375.4-mg/L		0007546-01			<0.50		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0308005-01	362		364		0.6%
Carbonate Alkalinity-mg/L		0308005-01	0		<0.10		0.0%
Hydroxide Alkalinity-mg/L		0308005-01	0		<0.10		0.0%
SULFATE, 375.4-mg/L		0307979-01	20.9		21.6		3.3%
MS		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Chloride-mg/L		0308000-01	1990	1000	2980	99.0%	
MSD		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Chloride-mg/L		0308000-01	1990	1000	3000	101.0%	0.7%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Bicarbonate Alkalinity-mg/L		0007511-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L		0007513-04		0.05	0.0496	99.2%	
Chloride-mg/L		0007517-04		5000	4960	99.2%	
Hydroxide Alkalinity-mg/L		0007515-04		0.05	0.0496	99.2%	
SULFATE, 375.4-mg/L		0007546-04		50	49.0	98.0%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0308001

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0007495-02			<0.010		
Magnesium-mg/L		0007495-02			<0.001		
Potassium-mg/L		0007495-02			<0.050		
Sodium-mg/L		0007495-02			<0.010		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0307979-01	81		81.6		0.7%
Magnesium-mg/L		0307979-01	20.1		19.9		1.1%
Potassium-mg/L		0307979-01	7.1		7.25		2.1%
Sodium-mg/L		0307979-01	1290		1280		0.8%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0007495-05		2	1.76	88.1%	
Magnesium-mg/L		0007495-05		2	2.17	108.5%	
Potassium-mg/L		0007495-05		2	1.93	96.5%	
Sodium-mg/L		0007495-05		2	2.21	110.5%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0308001

BLANK						
WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L	0007522-01			<5.00		
DUPLICATE						
WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L	0308000-01	7400		7360		0.5%

ANALYTICAL REPORT

Prepared for:

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

Project: N
W-5

PO#:

Order#: G0307306

Report Date: 08/27/2003

Certificates

US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating
122 W. Taylor
Hobbs, NM 88240
505-397-1471

Order#: G0307306
Project:
Project Name: W-5
Location: EME

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0307306-01	MW1	WATER	8/22/03 16:00	8/25/03 9:03	1L HDPE	ice
<u>Lab Testing:</u>		Rejected: No	Temp: 4.5 C			
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0307306
Project:
Project Name: W-5
Location: EME

Lab ID: 0307306-01
Sample ID: MW1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	354	mg/L	2	4.0	310.1	8/25/03	SB
Carbonate Alkalinity	< 0.20	mg/L	2	0.20	310.1	8/25/03	SB
Chloride	1200	mg/L	1	5.00	9253	8/27/03	SB
Hydroxide Alkalinity	< 0.20	mg/L	2	0.20	310.1	8/25/03	SB
SULFATE, 375.4	100	mg/L	2	1.0	375.4	8/26/03	SB

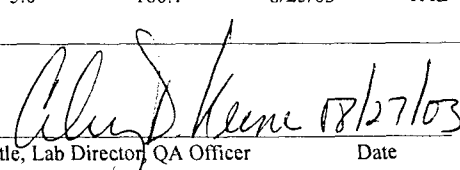
Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	264	mg/L	100	1.0	6010B	8/26/03	SM
Magnesium	70.7	mg/L	10	0.010	6010B	8/26/03	SM
Potassium	33.4	mg/L	10	0.50	6010B	8/26/03	SM
Sodium	566	mg/L	100	1.0	6010B	8/26/03	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	2930	mg/L	1	5.0	160.1	8/25/03	TAL

Approval:


Raland K. Tuttle, Lab Director, QA Officer
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

Date

RL = Reporting Limit N/A = Not Applicable

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS I, LTD.

12600 West I-20 East, Odessa, TX 79765 Ph: 915-563-1800

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0307306

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0006617-01			<2.00		
Carbonate Alkalinity-mg/L		0006618-01			<0.10		
Chloride-mg/L		0006640-01			<5.00		
Hydroxide Alkalinity-mg/L		0006619-01			<0.10		
SULFATE, 375.4-mg/L		0006634-01			<0.50		
DUPLICATE							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0307300-01	500		502		0.4%
Carbonate Alkalinity-mg/L		0307300-01	0		< 0.20		0.0%
Hydroxide Alkalinity-mg/L		0307300-01	0		< 0.20		0.0%
SULFATE, 375.4-mg/L		0307300-01	4.9		5.00		2.0%
MS							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0307300-01	2060	1000	3050	99.0%	
MSD							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Chloride-mg/L		0307300-01	2060	1000	3070	101.0%	0.7%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Bicarbonate Alkalinity-mg/L		0006617-04		0.05	0.0496	99.2%	
Carbonate Alkalinity-mg/L		0006618-04		0.05	0.0496	99.2%	
Chloride-mg/L		0006640-04		5000	4960	99.2%	
Hydroxide Alkalinity-mg/L		0006619-04		0.05	0.0496	99.2%	
SULFATE, 375.4-mg/L		0006634-04		50	50.7	101.4%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0307306

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0006632-01			<0.010		
Magnesium-mg/L		0006632-01			<0.001		
Potassium-mg/L		0006632-01			<0.050		
Sodium-mg/L		0006632-01			<0.010		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0307300-01	78.1		77.3		1.0%
Magnesium-mg/L		0307300-01	30.4		29.8		2.0%
Potassium-mg/L		0307300-01	5.82		4.95		16.2%
Sodium-mg/L		0307300-01	1150		1160		0.9%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0006632-04		2	2.05	102.5%	
Magnesium-mg/L		0006632-04		2	2.04	102.0%	
Potassium-mg/L		0006632-04		2	1.73	86.5%	
Sodium-mg/L		0006632-04		2	1.73	86.5%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0307306

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Total Dissolved Solids (TDS)-mg/L		0006633-01			<5.0		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Total Dissolved Solids (TDS)-mg/L		0307303-01	2550		2830		10.4%

LABORATORY RECORD AND ANALYSIS REQUEST

12600 West I-20 East
Odessa, Texas 79763

Phone: 915-563-1800
Fax: 915-563-1713

Project Manager: Kristin Farris

Company Name: RICE Operating

Company Address: 132 W. Taylor

City/State/Zip: Hobbs, NM 88240

Telephone No: (505) 393-9174

Fax No: (505) 397-1471

Samplet Signature: J. Farris

Project Name: N-5

Project #: _____

Project Loc: EM6

PO #: _____

Analyze For:

ICP: _____
TOTAL: _____

Metals: As Ag Ba Cd Cr Pb Hg Se
TPH 8015M GRO/DRO
TPH TX 1005/1006
TPH 418.1
TDS/CL/SAR/EC

Volatiles: _____
Semi-volatiles: _____
BTX 8021B/5030

Standard TAT (Pre-Schedule)

Matrix: _____
Soil: _____
Sludge: _____
Water: _____
Other (Specify): _____

Preservative: _____
None: _____
H₂SO₄: _____
HNO₃: _____
HCl: _____
H₂O₂: _____
Ice: _____

No. of Containers: _____

Time Sampled: _____

Date Sampled: _____

FIELD CODE: _____

LAB # (lab use only): _____

0307306

01

MW1

8-22-03

4:00

1X

8/22/03

5:00

8/25/03

0900

8/25/03

0900

8/25/03

0900

8/25/03

0900

8/25/03

0900

8/25/03

0900

8/25/03

0900

Special Instructions:

Anions & Cations TDS

Relinquished by: J. Farris

Date: 8-22-03

Time: 5:00

Received by: J. Farris

Date: 8/22/03

Time: 5:00

Relinquished by: J. Farris

Date: 8/25/03

Time: 0900

Relinquished by: J. Farris

Date: 8-22-03

Time: 5:00

Received by: J. Farris

Date: 8/22/03

Time: 5:00

Relinquished by: J. Farris

Date: 8/25/03

Time: 0900

Relinquished by: J. Farris

Date: 8-22-03

Time: 5:00

Received by: J. Farris

Date: 8/22/03

Time: 5:00

Relinquished by: J. Farris

Date: 8/25/03

Time: 0900

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Date: 8/25/03

Time: 0900

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Date: 8/25/03

Time: 0900

Relinquished by: J. Farris

Date: 8-22-03

Time: 5:00

Received by: J. Farris

Date: 8/22/03

Time: 5:00

Relinquished by: J. Farris

Date: 8/25/03

Time: 0900

12500 West 120 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Kristin Farris

Project Name:

U-5

RICE Operating

Project #:

122 W. Taylor

Project Loc:

Em

6/665, NM 88240

PO #:

Fax No: (505) 397-1471

Fax No:

Sampler Signature:

J. Best

[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: N-5
PO#: 510
Order#: G0306598
Report Date: 06/04/2003

Certificates

US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating
122 W. Taylor
Hobbs, NM 88240
505-397-1471

Order#: G0306598
Project:
Project Name: N-5
Location: EME

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0306598-01	MW1	WATER	5/29/03 13:15	5/29/03 19:40	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp:	4.0 C		
8021B/5030 BTEX						
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0306598
Project:
Project Name: N-5
Location: EME

Lab ID: 0306598-01
Sample ID: MW1

8021B/5030 BTEX

Method Blank	Date Prepared	Date Analyzed	Sample Amount	Dilution Factor	Analyst	Method
0005706-02		5/30/03 13:03	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Toluene	0.001	0.001
Ethylbenzene	0.004	0.001
p/m-Xylene	0.008	0.001
o-Xylene	0.002	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	100%	80	120
Bromofluorobenzene	112%	80	120

Approval:

Celey D. Keene
Raland K. Tuttle, Lab Director, QA Officer
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

06/04/13
Date

DL = Diluted out N/A = Not Applicable RL = Reporting Limit

Page 1 of 1

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0306598
Project:
Project Name: N-5
Location: EME

Lab ID: 0306598-01
Sample ID: MW1

Anions

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Bicarbonate Alkalinity	354	mg/L	1	2.00	310.1	5/30/03	WL
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	5/30/03	WL
Chloride	1130	mg/L	1	5.00	9253	5/30/03	WL
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	5/30/03	WL
SULFATE, 375.4	90.4	mg/L	2	1.0	375.4	6/2/03	SB

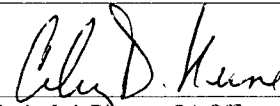
Cations

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Calcium	310	mg/L	100	1.0	6010B	6/3/03	SM
Magnesium	79.7	mg/L	10	0.010	6010B	6/3/03	SM
Potassium	9.32	mg/L	10	0.50	6010B	6/3/03	SM
Sodium	347	mg/L	100	1.0	6010B	6/3/03	SM

Test Parameters

Parameter	Result	Units	Dilution Factor	RL	Method	Date Analyzed	Analyst
Total Dissolved Solids (TDS)	3230	mg/L	1	5.0	160.1	6/2/03	TAL

Approval:


Raland K. Tuttle, Lab Director, QA Officer
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

Date

06/04/03

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0306598

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0005706-02			<0.001		
Toluene-mg/L		0005706-02			<0.001		
Ethylbenzene-mg/L		0005706-02			<0.001		
p/m-Xylene-mg/L		0005706-02			<0.001		
o-Xylene-mg/L		0005706-02			<0.001		
MS							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0306601-01	0	0.1	0.097	97.%	
Toluene-mg/L		0306601-01	0	0.1	0.096	96.%	
Ethylbenzene-mg/L		0306601-01	0	0.1	0.094	94.%	
p/m-Xylene-mg/L		0306601-01	0	0.2	0.196	98.%	
o-Xylene-mg/L		0306601-01	0	0.1	0.094	94.%	
MSD							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0306601-01	0	0.1	0.096	96.%	1.%
Toluene-mg/L		0306601-01	0	0.1	0.093	93.%	3.2%
Ethylbenzene-mg/L		0306601-01	0	0.1	0.093	93.%	1.1%
p/m-Xylene-mg/L		0306601-01	0	0.2	0.193	96.5%	1.5%
o-Xylene-mg/L		0306601-01	0	0.1	0.095	95.%	1.1%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0005706-05		0.1	0.093	93.%	
Toluene-mg/L		0005706-05		0.1	0.089	89.%	
Ethylbenzene-mg/L		0005706-05		0.1	0.087	87.%	
p/m-Xylene-mg/L		0005706-05		0.2	0.181	90.5%	
o-Xylene-mg/L		0005706-05		0.1	0.088	88.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0306598

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Bicarbonate Alkalinity-mg/L		0005720-01			<2.00	
Carbonate Alkalinity-mg/L		0005721-01			<0.10	
Chloride-mg/L		0005723-01			<5.00	
Hydroxide Alkalinity-mg/L		0005722-01			<0.10	
SULFATE, 375.4-mg/L		0005697-01			<0.5	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Bicarbonate Alkalinity-mg/L		0306596-01	484		480	0.8%
Carbonate Alkalinity-mg/L		0306596-01	0		<0.10	0.0%
Hydroxide Alkalinity-mg/L		0306596-01	0		<0.10	0.0%
SULFATE, 375.4-mg/L		0306599-01	920		895	2.8%
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Chloride-mg/L		0306596-01	12400	5000	17700	106.0%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Chloride-mg/L		0306596-01	12400	5000	17500	102.0%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Bicarbonate Alkalinity-mg/L		0005720-04		0.05	0.0496	99.2%
Carbonate Alkalinity-mg/L		0005721-04		0.05	0.0496	99.2%
Chloride-mg/L		0005723-04		5000	5320	106.4%
Hydroxide Alkalinity-mg/L		0005722-04		0.05	0.0496	99.2%
SULFATE, 375.4-mg/L		0005697-04		50	51.1	102.2%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0306598

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0005716-02			<0.010		
Magnesium-mg/L		0005716-02			<0.001		
Potassium-mg/L		0005716-02			<0.050		
Sodium-mg/L		0005716-02			<0.010		
DUPLICATE							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0306596-01	1080		1100		1.8%
Magnesium-mg/L		0306596-01	355		358		0.8%
Potassium-mg/L		0306596-01	63.1		61.8		2.1%
Sodium-mg/L		0306596-01	6910		6790		1.8%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Calcium-mg/L		0005716-05		2	1.98	99.%	
Magnesium-mg/L		0005716-05		2	2.10	105.%	
Potassium-mg/L		0005716-05		2	1.82	91.%	
Sodium-mg/L		0005716-05		2	1.93	96.5%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0306598

BLANK	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0005714-01			<5.0		
DUPLICATE	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L		0306599-01	5600		5540		1.1%

12600 West 1-20 East
Odessa, Texas 79763

Phone: 915-563-1800
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CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Kristin Ferris

Project Name:

11-5

Company Name

RICE Operating

Project #:

Company Address:

122 W. Taylor

Project Loc:

FMF

City/State/Zip:

Flabbs, NM 88240

PO #:

510

Telephone No (505) 393-9174

Fax No: (505) 397-1471

7/4

Sample Signature:

Joe Batt

[illegible]

ANALYTICAL REPORT

Prepared for:

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

Project: EME N-5
PO#: 510
Order#: G0305984
Report Date: 03/21/2003

Certificates

US EPA Laboratory Code TX00158

ENVIRONMENTAL LAB OF TEXAS

SAMPLE WORK LIST

Rice Operating
122 W. Taylor
Hobbs, NM 88240
505-397-1471

Order#: G0305984
Project:
Project Name: EME N-5
Location: EME

The samples listed below were submitted to Environmental Lab of Texas and were received under chain of custody. Environmental Lab of Texas makes no representation or certification as to the method of sample collection, sample identification, or transportation/handling procedures used prior to the receipt of samples by Environmental Lab of Texas, unless otherwise noted.

<u>Lab ID:</u>	<u>Sample :</u>	<u>Matrix:</u>	<u>Date / Time</u> <u>Collected</u>	<u>Date / Time</u> <u>Received</u>	<u>Container</u>	<u>Preservative</u>
0305984-01	MW-1	WATER	3/14/03	3/14/03 19:30	See COC	See COC
<u>Lab Testing:</u>		Rejected: No	Temp:	2.0C		
8021B/5030 BTEX						
Anions						
Cations						
Total Dissolved Solids (TDS)						

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0305984
Project:
Project Name: EME N-5
Location: EME

Lab ID: 0305984-01
Sample ID: MW-1

8021B/5030 BTEX

Method	Date	Date	Sample	Dilution		
<u>Blank</u>	<u>Prepared</u>	<u>Analyzed</u>	<u>Amount</u>	<u>Factor</u>	<u>Analyst</u>	<u>Method</u>
0005010-02		3/20/03 15:47	1	1	CK	8021B

Parameter	Result mg/L	RL
Benzene	<0.001	0.001
Toluene	0.002	0.001
Ethylbenzene	0.004	0.001
p/m-Xylene	0.009	0.001
o-Xylene	0.002	0.001

Surrogates	% Recovered	QC Limits (%)	
aaa-Toluene	93%	80	120
Bromofluorobenzene	107%	80	120

Approval:

Raland K. Tuttle, Lab Director, QA Officer
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

Date

Raland K. Tuttle 3-25-03

ENVIRONMENTAL LAB OF TEXAS

ANALYTICAL REPORT

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

Order#: G0305984
Project:
Project Name: EME N-5
Location: EME

Lab ID: 0305984-01
Sample ID: MW-1

Anions

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Bicarbonate Alkalinity	358	mg/L	1	2.00	310.1	3/17/03	SB
Carbonate Alkalinity	<0.10	mg/L	1	0.10	310.1	3/17/03	SB
Chloride	1050	mg/L	1	5.00	9253	3/17/03	SB
Hydroxide Alkalinity	<0.10	mg/L	1	0.10	310.1	3/17/03	SB
SULFATE, 375.4	103	mg/L	2	1.0	375.4	3/17/03	SB

Cations

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Calcium	239	mg/L	100	1.0	6010B	3/19/03	SM
Magnesium	79.3	mg/L	10	0.010	6010B	3/19/03	SM
Potassium	7.40	mg/L	10	0.50	6010B	3/19/03	SM
Sodium	400	mg/L	100	1.0	6010B	3/19/03	SM

Test Parameters

<u>Parameter</u>	<u>Result</u>	<u>Units</u>	<u>Dilution Factor</u>	<u>RL</u>	<u>Method</u>	<u>Date Analyzed</u>	<u>Analyst</u>
Total Dissolved Solids (TDS)	2310	mg/L	1	5.0	160.1	3/17/03	TAL

Approval: Raland K Tuttle 3-25-03
Raland K. Tuttle, Lab Director, QA Officer Date
Celey D. Keene, Org. Tech. Director
Jeanne McMurrey, Inorg. Tech. Director
Sandra Biezugbe, Lab Tech.
Sara Molina, Lab Tech.

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

8021B/5030 BTEX

Order#: G0305984

BLANK							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0005010-02			<0.001		
Toluene-mg/L		0005010-02			<0.001		
Ethylbenzene-mg/L		0005010-02			<0.001		
p/m-Xylene-mg/L		0005010-02			<0.001		
o-Xylene-mg/L		0005010-02			<0.001		
CONTROL							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0005010-03		0.1	0.109	109.%	
Toluene-mg/L		0005010-03		0.1	0.115	115.%	
Ethylbenzene-mg/L		0005010-03		0.1	0.112	112.%	
p/m-Xylene-mg/L		0005010-03		0.2	0.231	115.5%	
o-Xylene-mg/L		0005010-03		0.1	0.111	111.%	
CONTROL DUP							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0005010-04		0.1	0.113	113.%	3.6%
Toluene-mg/L		0005010-04		0.1	0.115	115.%	0.%
Ethylbenzene-mg/L		0005010-04		0.1	0.115	115.%	2.6%
p/m-Xylene-mg/L		0005010-04		0.2	0.227	113.5%	1.7%
o-Xylene-mg/L		0005010-04		0.1	0.113	113.%	1.8%
SRM							
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Benzene-mg/L		0005010-05		0.1	0.107	107.%	
Toluene-mg/L		0005010-05		0.1	0.112	112.%	
Ethylbenzene-mg/L		0005010-05		0.1	0.109	109.%	
p/m-Xylene-mg/L		0005010-05		0.2	0.224	112.%	
o-Xylene-mg/L		0005010-05		0.1	0.104	104.%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Anions

Order#: G0305984

BLANK						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Bicarbonate Alkalinity-mg/L		0004955-01			,2.00	
Carbonate Alkalinity-mg/L		0004957-01			<0.10	
Chloride-mg/L		0004953-01			<5.00	
Hydroxide Alkalinity-mg/L		0004959-01			<0.10	
SULFATE, 375.4-mg/L		0004961-01			<0.50	
DUPLICATE						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Bicarbonate Alkalinity-mg/L		0305981-01	226		225	0.4%
Carbonate Alkalinity-mg/L		0305981-01	0		<010	0.0%
Hydroxide Alkalinity-mg/L		0305981-01	0		<0.10	0.0%
SULFATE, 375.4-mg/L		0305966-02	319		311	2.5%
MS						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Chloride-mg/L		0305981-01	53.2	100	152	98.8%
MSD						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Chloride-mg/L		0305981-01	53.2	100	151	97.8%
SRM						
	WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery
						RPD
Bicarbonate Alkalinity-mg/L		0004955-04		0.05	0.0496	99.2%
Carbonate Alkalinity-mg/L		0004957-04		0.05	0.0496	99.2%
Chloride-mg/L		0004953-04		5000	4960	99.2%
Hydroxide Alkalinity-mg/L		0004959-04		0.05	0.0496	99.2%
SULFATE, 375.4-mg/L		0004961-04		50	52	104.0%

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Cations

Order#: G0305984

BLANK		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0004974-02			<0.010		
Magnesium-mg/L		0004974-02			<0.001		
Potassium-mg/L		0004974-02			<0.050		
Sodium-mg/L		0004974-02			<0.010		
DUPLICATE		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0305966-01	12.8		13.0		1.6%
Magnesium-mg/L		0305966-01	2.5		2.57		2.8%
Potassium-mg/L		0305966-01	5.38		5.44		1.1%
Sodium-mg/L		0305966-01	360		365		1.4%
SRM		LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
	WATER						
Calcium-mg/L		0004974-05		2	2.19	109.5%	
Magnesium-mg/L		0004974-05		2	2.06	103.5%	
Potassium-mg/L		0004974-05		2	1.87	93.5%	
Sodium-mg/L		0004974-05		2	1.96	98.5%	

ENVIRONMENTAL LAB OF TEXAS

QUALITY CONTROL REPORT

Test Parameters

Order#: G0305984

BLANK						
WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L	0004969-01			<5.0		
DUPLICATE						
WATER	LAB-ID #	Sample Concentr.	Spike Concentr.	QC Test Result	Pct (%) Recovery	RPD
Total Dissolved Solids (TDS)-mg/L	0305984-01	2310		2330		0.9%

12500 West I-20 East
Odessa, Texas 79763
Phone: 915-563-1800
Fax: 915-563-1713

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager: Kristin Farris
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Project #: _____

Project Loc: _____

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