HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

COVER LETTER

January 10, 2005

Cindy Hurtado
San Juan Refining
#50 CR 4990
Bloomfield, NM 87413
TEL: (505) 632-4161
FAX (505) 632-3911

RE: Injection Well 4th Qtr 2004 Order No.: 0412156

Dear Cindy Hurtado:

Hall Environmental Analysis Laboratory received 2 samples on 12/16/2004 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

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

Sincerely,

Andy Freeman, Business Manager
Nancy McDuffie, Laboratory Manager

ACCREDITED IN ACCORDANCE WITH nelac

4901 Hawkins NE ■ Suite D ■ Albuquerque, NM 87109
505.345.3975 ■ Fax 505.345.4107
www.hallenvironmental.com

Hall Environmental Analysis Laboratory

Date: *10-Jan-05*

CLIENT: San Juan Refining
Client Sample ID: Injection Well 4th
Lab Order: 0412156
Collection Date: 12/15/2004 9:10:00 AM
Project: Injection Well 4th Qtr 2004
Lab ID: 0412156-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **MAP**
Chloride	1500	5.0		mg/L	50	1/5/2005
Sulfate	500	25		mg/L	50	1/5/2005
EPA METHOD 310.1: ALKALINITY						Analyst: **MAP**
Alkalinity, Total (As CaCO3)	590	4.0		mg/L CaCO3	2	12/29/2004
Carbonate	ND	4.0		mg/L CaCO3	2	12/29/2004
Bicarbonate	590	4.0		mg/L CaCO3	2	12/29/2004
EPA METHOD 8260B: VOLATILES						Analyst: **BDH**
Benzene	ND	10		µg/L	10	12/18/2004
Toluene	ND	10		µg/L	10	12/18/2004
Ethylbenzene	13	10		µg/L	10	12/18/2004
Methyl tert-butyl ether (MTBE)	3900	100		µg/L	100	12/18/2004
1,2,4-Trimethylbenzene	ND	10		µg/L	10	12/18/2004
1,3,5-Trimethylbenzene	100	10		µg/L	10	12/18/2004
1,2-Dichloroethane (EDC)	ND	10		µg/L	10	12/18/2004
1,2-Dibromoethane (EDB)	ND	10		µg/L	10	12/18/2004
Naphthalene	ND	20		µg/L	10	12/18/2004
1-Methylnaphthalene	130	40		µg/L	10	12/18/2004
2-Methylnaphthalene	ND	40		µg/L	10	12/18/2004
Acetone	4000	100		µg/L	10	12/18/2004
Bromobenzene	ND	10		µg/L	10	12/18/2004
Bromochloromethane	ND	10		µg/L	10	12/18/2004
Bromodichloromethane	ND	10		µg/L	10	12/18/2004
Bromoform	ND	10		µg/L	10	12/18/2004
Bromomethane	ND	20		µg/L	10	12/18/2004
2-Butanone	ND	100		µg/L	10	12/18/2004
Carbon disulfide	ND	100		µg/L	10	12/18/2004
Carbon Tetrachloride	ND	10		µg/L	10	12/18/2004
Chlorobenzene	ND	10		µg/L	10	12/18/2004
Chloroethane	ND	20		µg/L	10	12/18/2004
Chloroform	ND	10		µg/L	10	12/18/2004
Chloromethane	ND	10		µg/L	10	12/18/2004
2-Chlorotoluene	ND	10		µg/L	10	12/18/2004
4-Chlorotoluene	ND	10		µg/L	10	12/18/2004
cis-1,2-DCE	ND	10		µg/L	10	12/18/2004
cis-1,3-Dichloropropene	ND	10		µg/L	10	12/18/2004
1,2-Dibromo-3-chloropropane	ND	20		µg/L	10	12/18/2004
Dibromochloromethane	ND	10		µg/L	10	12/18/2004
Dibromomethane	ND	20		µg/L	10	12/18/2004
1,2-Dichlorobenzene	ND	10		µg/L	10	12/18/2004
1,3-Dichlorobenzene	ND	10		µg/L	10	12/18/2004

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

Hall Environmental Analysis Laboratory

Date: *10-Jan-05*

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Client Sample ID: Injection Well 4th
Lab Order: 0412156
Collection Date: 12/15/2004 9:10:00 AM
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Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
1,4-Dichlorobenzene	ND	10		µg/L	10	12/18/2004
Dichlorodifluoromethane	ND	10		µg/L	10	12/18/2004
1,1-Dichloroethane	ND	10		µg/L	10	12/18/2004
1,1-Dichloroethene	ND	10		µg/L	10	12/18/2004
1,2-Dichloropropane	ND	10		µg/L	10	12/18/2004
1,3-Dichloropropane	ND	10		µg/L	10	12/18/2004
2,2-Dichloropropane	ND	10		µg/L	10	12/18/2004
1,1-Dichloropropene	ND	10		µg/L	10	12/18/2004
Hexachlorobutadiene	ND	10		µg/L	10	12/18/2004
2-Hexanone	ND	100		µg/L	10	12/18/2004
Isopropylbenzene	ND	10		µg/L	10	12/18/2004
4-Isopropyltoluene	ND	10		µg/L	10	12/18/2004
4-Methyl-2-pentanone	110	100		µg/L	10	12/18/2004
Methylene Chloride	ND	30		µg/L	10	12/18/2004
n-Butylbenzene	76	10		µg/L	10	12/18/2004
n-Propylbenzene	ND	10		µg/L	10	12/18/2004
sec-Butylbenzene	ND	10		µg/L	10	12/18/2004
Styrene	ND	10		µg/L	10	12/18/2004
tert-Butylbenzene	ND	10		µg/L	10	12/18/2004
1,1,1,2-Tetrachloroethane	ND	10		µg/L	10	12/18/2004
1,1,2,2-Tetrachloroethane	ND	10		µg/L	10	12/18/2004
Tetrachloroethene (PCE)	ND	10		µg/L	10	12/18/2004
trans-1,2-DCE	ND	10		µg/L	10	12/18/2004
trans-1,3-Dichloropropene	ND	10		µg/L	10	12/18/2004
1,2,3-Trichlorobenzene	ND	10		µg/L	10	12/18/2004
1,2,4-Trichlorobenzene	ND	10		µg/L	10	12/18/2004
1,1,1-Trichloroethane	ND	10		µg/L	10	12/18/2004
1,1,2-Trichloroethane	ND	10		µg/L	10	12/18/2004
Trichloroethene (TCE)	ND	10		µg/L	10	12/18/2004
Trichlorofluoromethane	ND	10		µg/L	10	12/18/2004
1,2,3-Trichloropropane	ND	20		µg/L	10	12/18/2004
Vinyl chloride	ND	10		µg/L	10	12/18/2004
Xylenes, Total	37	10		µg/L	10	12/18/2004
Surr: 1,2-Dichloroethane-d4	96.1	74.7-113		%REC	10	12/18/2004
Surr: 4-Bromofluorobenzene	94.2	86.1-120		%REC	10	12/18/2004
Surr: Dibromofluoromethane	98.1	93.1-112		%REC	10	12/18/2004
Surr: Toluene-d8	90.6	83.1-112		%REC	10	12/18/2004
EPA METHOD 8270C: SEMIVOLATILES						Analyst: GAB
Acenaphthene	ND	50		µg/L	1	12/21/2004
Acenaphthylene	ND	50		µg/L	1	12/21/2004
Aniline	ND	50		µg/L	1	12/21/2004
Anthracene	ND	50		µg/L	1	12/21/2004

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Date: *10-Jan-05*

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Azobenzene	ND	50		µg/L	1	12/21/2004
Benz(a)anthracene	ND	75		µg/L	1	12/21/2004
Benzo(a)pyrene	ND	50		µg/L	1	12/21/2004
Benzo(b)fluoranthene	ND	50		µg/L	1	12/21/2004
Benzo(g,h,i)perylene	ND	50		µg/L	1	12/21/2004
Benzo(k)fluoranthene	ND	50		µg/L	1	12/21/2004
Benzoic acid	ND	250		µg/L	1	12/21/2004
Benzyl alcohol	ND	100		µg/L	1	12/21/2004
Bis(2-chloroethoxy)methane	ND	50		µg/L	1	12/21/2004
Bis(2-chloroethyl)ether	ND	75		µg/L	1	12/21/2004
Bis(2-chloroisopropyl)ether	ND	75		µg/L	1	12/21/2004
Bis(2-ethylhexyl)phthalate	ND	75		µg/L	1	12/21/2004
4-Bromophenyl phenyl ether	ND	50		µg/L	1	12/21/2004
Butyl benzyl phthalate	ND	75		µg/L	1	12/21/2004
Carbazole	ND	50		µg/L	1	12/21/2004
4-Chloro-3-methylphenol	ND	100		µg/L	1	12/21/2004
4-Chloroaniline	ND	100		µg/L	1	12/21/2004
2-Chloronaphthalene	ND	50		µg/L	1	12/21/2004
2-Chlorophenol	ND	50		µg/L	1	12/21/2004
4-Chlorophenyl phenyl ether	ND	75		µg/L	1	12/21/2004
Chrysene	120	75		µg/L	1	12/21/2004
Di-n-butyl phthalate	ND	50		µg/L	1	12/21/2004
Di-n-octyl phthalate	ND	75		µg/L	1	12/21/2004
Dibenz(a,h)anthracene	ND	50		µg/L	1	12/21/2004
Dibenzofuran	ND	50		µg/L	1	12/21/2004
1,2-Dichlorobenzene	ND	50		µg/L	1	12/21/2004
1,3-Dichlorobenzene	ND	50		µg/L	1	12/21/2004
1,4-Dichlorobenzene	ND	50		µg/L	1	12/21/2004
3,3'-Dichlorobenzidine	ND	75		µg/L	1	12/21/2004
Diethyl phthalate	ND	50		µg/L	1	12/21/2004
Dimethyl phthalate	ND	50		µg/L	1	12/21/2004
2,4-Dichlorophenol	ND	50		µg/L	1	12/21/2004
2,4-Dimethylphenol	ND	50		µg/L	1	12/21/2004
4,6-Dinitro-2-methylphenol	ND	250		µg/L	1	12/21/2004
2,4-Dinitrophenol	ND	250		µg/L	1	12/21/2004
2,4-Dinitrotoluene	ND	50		µg/L	1	12/21/2004
2,6-Dinitrotoluene	ND	50		µg/L	1	12/21/2004
Fluoranthene	ND	50		µg/L	1	12/21/2004
Fluorene	ND	50		µg/L	1	12/21/2004
Hexachlorobenzene	ND	50		µg/L	1	12/21/2004
Hexachlorobutadiene	ND	50		µg/L	1	12/21/2004
Hexachlorocyclopentadiene	ND	50		µg/L	1	12/21/2004

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Lab Order: 0412156
Project: Injection Well 4th Qtr 2004
Lab ID: 0412156-01

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Collection Date: 12/15/2004 9:10:00 AM
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachloroethane	ND	50		µg/L	1	12/21/2004
Indeno(1,2,3-cd)pyrene	ND	50		µg/L	1	12/21/2004
Isophorone	ND	50		µg/L	1	12/21/2004
2-Methylnaphthalene	ND	50		µg/L	1	12/21/2004
2-Methylphenol	ND	75		µg/L	1	12/21/2004
3+4-Methylphenol	ND	50		µg/L	1	12/21/2004
N-Nitrosodi-n-propylamine	ND	50		µg/L	1	12/21/2004
N-Nitrosodimethylamine	ND	50		µg/L	1	12/21/2004
N-Nitrosodiphenylamine	ND	50		µg/L	1	12/21/2004
Naphthalene	ND	50		µg/L	1	12/21/2004
2-Nitroaniline	ND	250		µg/L	1	12/21/2004
3-Nitroaniline	ND	250		µg/L	1	12/21/2004
4-Nitroaniline	ND	100		µg/L	1	12/21/2004
Nitrobenzene	ND	50		µg/L	1	12/21/2004
2-Nitrophenol	ND	75		µg/L	1	12/21/2004
4-Nitrophenol	ND	250		µg/L	1	12/21/2004
Pentachlorophenol	ND	250		µg/L	1	12/21/2004
Phenanthrene	170	50		µg/L	1	12/21/2004
Phenol	ND	50		µg/L	1	12/21/2004
Pyrene	140	75		µg/L	1	12/21/2004
Pyridine	ND	150		µg/L	1	12/21/2004
1,2,4-Trichlorobenzene	ND	50		µg/L	1	12/21/2004
2,4,5-Trichlorophenol	ND	50		µg/L	1	12/21/2004
2,4,6-Trichlorophenol	ND	75		µg/L	1	12/21/2004
Surr: 2,4,6-Tribromophenol	92.0	16.6-115		%REC	1	12/21/2004
Surr: 2-Fluorobiphenyl	79.9	37-95.7		%REC	1	12/21/2004
Surr: 2-Fluorophenol	66.6	9.54-89.8		%REC	1	12/21/2004
Surr: 4-Terphenyl-d14	84.8	47.9-115		%REC	1	12/21/2004
Surr: Nitrobenzene-d5	81.0	38-106		%REC	1	12/21/2004
Surr: Phenol-d6	51.0	10.7-63.4		%REC	1	12/21/2004
EPA 120.1: SPECIFIC CONDUCTANCE						Analyst: MAP
Specific Conductance	8500	0.010		µmhos/cm	1	12/29/2004
EPA METHOD 7470: MERCURY						Analyst: CMC
Mercury	0.0067	0.00020		mg/L	1	12/21/2004
EPA 6010C: TOTAL RECOVERABLE METALS						Analyst: NMO
Arsenic	ND	0.020		mg/L	1	12/28/2004 10:10:12 AM
Barium	0.33	0.020		mg/L	1	12/28/2004 10:10:12 AM
Cadmium	ND	0.0020		mg/L	1	12/28/2004 10:10:12 AM
Calcium	95	1.0		mg/L	1	12/28/2004 10:10:12 AM
Chromium	ND	0.0060		mg/L	1	12/28/2004 10:10:12 AM
Lead	0.0052	0.0050		mg/L	1	12/28/2004 10:10:12 AM

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Hall Environmental Analysis Laboratory

Date: *10-Jan-05*

CLIENT: San Juan Refining
Client Sample ID: Injection Well 4th
Lab Order: 0412156
Collection Date: 12/15/2004 9:10:00 AM
Project: Injection Well 4th Qtr 2004
Lab ID: 0412156-01
Matrix: AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Magnesium	29	1.0		mg/L	1	12/28/2004 10:10:12 AM
Potassium	34	1.0		mg/L	1	12/28/2004 10:10:12 AM
Selenium	ND	0.050		mg/L	1	12/28/2004 10:10:12 AM
Silver	ND	0.0050		mg/L	1	12/28/2004 10:10:12 AM
Sodium	1000	10		mg/L	10	12/28/2004 11:12:50 AM
EPA METHOD 150.1: PH						Analyst: **MAP**
pH	7.54	0.010		pH units	1	12/29/2004

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Hall Environmental Analysis Laboratory

Date: *10-Jan-05*

CLIENT: San Juan Refining
Client Sample ID: Trip Blank
Lab Order: 0412156
Collection Date:
Project: Injection Well 4th Qtr 2004
Lab ID: 0412156-02
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
EPA METHOD 8260B: VOLATILES						Analyst: BDH
Benzene	ND	1.0		µg/L	1	12/18/2004
Toluene	ND	1.0		µg/L	1	12/18/2004
Ethylbenzene	ND	1.0		µg/L	1	12/18/2004
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	12/18/2004
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	12/18/2004
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	12/18/2004
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	12/18/2004
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	12/18/2004
Naphthalene	ND	2.0		µg/L	1	12/18/2004
1-Methylnaphthalene	ND	4.0		µg/L	1	12/18/2004
2-Methylnaphthalene	ND	4.0		µg/L	1	12/18/2004
Acetone	ND	10		µg/L	1	12/18/2004
Bromobenzene	ND	1.0		µg/L	1	12/18/2004
Bromochloromethane	ND	1.0		µg/L	1	12/18/2004
Bromodichloromethane	ND	1.0		µg/L	1	12/18/2004
Bromoform	ND	1.0		µg/L	1	12/18/2004
Bromomethane	ND	2.0		µg/L	1	12/18/2004
2-Butanone	ND	10		µg/L	1	12/18/2004
Carbon disulfide	ND	10		µg/L	1	12/18/2004
Carbon Tetrachloride	ND	1.0		µg/L	1	12/18/2004
Chlorobenzene	ND	1.0		µg/L	1	12/18/2004
Chloroethane	ND	2.0		µg/L	1	12/18/2004
Chloroform	ND	1.0		µg/L	1	12/18/2004
Chloromethane	ND	1.0		µg/L	1	12/18/2004
2-Chlorotoluene	ND	1.0		µg/L	1	12/18/2004
4-Chlorotoluene	ND	1.0		µg/L	1	12/18/2004
cis-1,2-DCE	ND	1.0		µg/L	1	12/18/2004
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	12/18/2004
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	12/18/2004
Dibromochloromethane	ND	1.0		µg/L	1	12/18/2004
Dibromomethane	ND	2.0		µg/L	1	12/18/2004
1,2-Dichlorobenzene	ND	1.0		µg/L	1	12/18/2004
1,3-Dichlorobenzene	ND	1.0		µg/L	1	12/18/2004
1,4-Dichlorobenzene	ND	1.0		µg/L	1	12/18/2004
Dichlorodifluoromethane	ND	1.0		µg/L	1	12/18/2004
1,1-Dichloroethane	ND	1.0		µg/L	1	12/18/2004
1,1-Dichloroethene	ND	1.0		µg/L	1	12/18/2004
1,2-Dichloropropane	ND	1.0		µg/L	1	12/18/2004
1,3-Dichloropropane	ND	1.0		µg/L	1	12/18/2004
2,2-Dichloropropane	ND	1.0		µg/L	1	12/18/2004
1,1-Dichloropropene	ND	1.0		µg/L	1	12/18/2004

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Hall Environmental Analysis Laboratory

Date: *10-Jan-05*

CLIENT: San Juan Refining
Lab Order: 0412156
Project: Injection Well 4th Qtr 2004
Lab ID: 0412156-02

Client Sample ID: Trip Blank
Collection Date:
Matrix: TRIP BLANK

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
Hexachlorobutadiene	ND	1.0		µg/L	1	12/18/2004
2-Hexanone	ND	10		µg/L	1	12/18/2004
Isopropylbenzene	ND	1.0		µg/L	1	12/18/2004
4-Isopropyltoluene	ND	1.0		µg/L	1	12/18/2004
4-Methyl-2-pentanone	ND	10		µg/L	1	12/18/2004
Methylene Chloride	ND	3.0		µg/L	1	12/18/2004
n-Butylbenzene	ND	1.0		µg/L	1	12/18/2004
n-Propylbenzene	ND	1.0		µg/L	1	12/18/2004
sec-Butylbenzene	ND	1.0		µg/L	1	12/18/2004
Styrene	ND	1.0		µg/L	1	12/18/2004
tert-Butylbenzene	ND	1.0		µg/L	1	12/18/2004
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	12/18/2004
1,1,2,2-Tetrachloroethane	ND	1.0		µg/L	1	12/18/2004
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	12/18/2004
trans-1,2-DCE	ND	1.0		µg/L	1	12/18/2004
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	12/18/2004
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	12/18/2004
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	12/18/2004
1,1,1-Trichloroethane	ND	1.0		µg/L	1	12/18/2004
1,1,2-Trichloroethane	ND	1.0		µg/L	1	12/18/2004
Trichloroethene (TCE)	ND	1.0		µg/L	1	12/18/2004
Trichlorofluoromethane	ND	1.0		µg/L	1	12/18/2004
1,2,3-Trichloropropane	ND	2.0		µg/L	1	12/18/2004
Vinyl chloride	ND	1.0		µg/L	1	12/18/2004
Xylenes, Total	ND	1.0		µg/L	1	12/18/2004
Surr: 1,2-Dichloroethane-d4	94.7	74.7-113		%REC	1	12/18/2004
Surr: 4-Bromofluorobenzene	98.5	86.1-120		%REC	1	12/18/2004
Surr: Dibromofluoromethane	99.6	93.1-112		%REC	1	12/18/2004
Surr: Toluene-d8	94.3	83.1-112		%REC	1	12/18/2004

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S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
E - Value above quantitation range

ENERGY LABORATORIES, INC. *2393 Salt Creek Highway (82601)* P.O. Box 3258 * Casper, WY 82602
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LABORATORY ANALYTICAL REPORT

Client: Hall Environmental
Project: Inj Well
Lab ID: C04120904-001
Client Sample ID: Injection Well 4th (0412156-01)

Report Date: 01/10/05
Collection Date: 12/15/04 09:10
Date Received: 12/21/04
Matrix: Aqueous

Analyses	Result	Units	Qual	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL PROPERTIES							
Corrosivity - pH	8.38	s.u.		0.01		SW9045C	12/28/04 12:30 lmh
Flash Point (Ignitability)	> 140	°F		60	140	SW1010	12/28/04 12:50 dj
- Flashpoint has been corrected for barometric pressure.							
REACTIVITY							
Sulfide, Reactive	ND	mg/kg		20.0	500	SW846 Ch 7	12/22/04 15:00 / jl
Cyanide, Reactive	ND	mg/kg		1.0	250	SW846 Ch 7	12/28/04 10:48 / eli-b

Report Definitions:
RL - Analyte reporting limit.
QCL - Quality control limit.
MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.

QA/QC Summary Report

Client: Hall Environmental
Project: Inj Well

Report Date: 01/10/05
Work Order: C04120904

Analyte	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW1010								Batch: 041228A-FLSHPNT-LIQ	
Sample ID: MBLK1_041228A	Method Blank							12/28/04 14:17	
Flash Point (Ignitability)	ND	°F	0						
- Flashpoint has been corrected for barometric pressure.									
Sample ID: LCS1_041228A	Laboratory Control Spike							12/28/04 15:54	
Flash Point (Ignitability)	82.0	°F	60	100	96	104			
- Flashpoint has not been corrected for barometric pressure.									
Method: SW846 Ch 7								Batch: 6983	
Sample ID: MB-6983	Method Blank							12/22/04 14:57	
Sulfide, Reactive	ND	mg/kg	0.1						
Sample ID: C04120904-001B	Sample Duplicate							12/22/04 15:03	
Sulfide, Reactive	ND	mg/kg	20				0	10	
Method: SW846 Ch 7								Batch: B_13859	
Sample ID: MB-13859	Method Blank							12/28/04 10:50	
Cyanide, Reactive	ND	mg/kg	0.05						
Method: SW9045C								Batch: 6999	
Sample ID: C04120904-001ADUP	Sample Duplicate							12/28/04 12:30	
Corrosivity - pH	8.46	s.u.	0.010						

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

Hall Environmental Analysis Laboratory

Date: *10-Jan-05*

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK**	Batch ID: **R14062**	Test Code: **E300**	Units: **mg/L**	Analysis Date **12/16/2004**	Prep Date
Client ID:		Run ID: **LC_041216A**		SeqNo: **326901**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.1									
Sulfate	ND	0.5									

Sample ID **MBLK**	Batch ID: **R14062**	Test Code: **E300**	Units: **mg/L**	Analysis Date **12/16/2004**	Prep Date
Client ID:		Run ID: **LC_041216A**		SeqNo: **326916**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.1									
Sulfate	ND	0.5									

Sample ID **MBLK**	Batch ID: **R14208**	Test Code: **E300**	Units: **mg/L**	Analysis Date **1/4/2005**	Prep Date
Client ID:		Run ID: **LC_050104A**		SeqNo: **330551**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.1									
Sulfate	ND	0.5									

Sample ID **MBLK**	Batch ID: **R14208**	Test Code: **E300**	Units: **mg/L**	Analysis Date **1/5/2005**	Prep Date
Client ID:		Run ID: **LC_050104A**		SeqNo: **330645**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	ND	0.1									
Sulfate	ND	0.5									

10/27

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

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CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Method Blank

Sample ID **MBLK** Batch ID: **R14171** Test Code: **E310.1** Units: **mg/L CaCO3** Analysis Date **12/29/2004** Prep Date

Client ID: Run ID: **WC_041229B** SeqNo: **329559**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Alkalinity, Total (As CaCO3)	ND	2									
Carbonate	ND	2									
Bicarbonate	ND	2									

11/27

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Method Blank

Sample ID **mb-7081** Batch ID: **7081** Test Code: **SW8270C** Units: **µg/L** Analysis Date **12/21/2004** Prep Date **12/17/2004**
Client ID: Run ID: **ELMO_041221A** SeqNo: **327952**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	ND	10									
Acenaphthylene	ND	10									
Aniline	ND	10									
Anthracene	ND	10									
Azobenzene	ND	10									
Benz(a)anthracene	ND	15									
Benzo(a)pyrene	ND	10									
Benzo(b)fluoranthene	ND	10									
Benzo(g,h,i)perylene	ND	10									
Benzo(k)fluoranthene	ND	10									
Benzoic acid	ND	50									
Benzyl alcohol	ND	20									
Bis(2-chloroethoxy)methane	ND	10									
Bis(2-chloroethyl)ether	ND	15									
Bis(2-chloroisopropyl)ether	ND	15									
Bis(2-ethylhexyl)phthalate	ND	15									
4-Bromophenyl phenyl ether	ND	10									
Butyl benzyl phthalate	ND	15									
Carbazole	ND	10									
4-Chloro-3-methylphenol	ND	20									
4-Chloroaniline	ND	20									
2-Chloronaphthalene	ND	10									
2-Chlorophenol	ND	10									
4-Chlorophenyl phenyl ether	ND	15									
Chrysene	ND	15									
Di-n-butyl phthalate	ND	10									
Di-n-octyl phthalate	ND	15									
Dibenz(a,h)anthracene	ND	10									

12/27

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Method Blank

Dibenzofuran	ND	10
1,2-Dichlorobenzene	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
3,3'-Dichlorobenzidine	ND	15
Diethyl phthalate	ND	10
Dimethyl phthalate	ND	10
2,4-Dichlorophenol	ND	10
2,4-Dimethylphenol	ND	10
4,6-Dinitro-2-methylphenol	ND	50
2,4-Dinitrophenol	ND	50
2,4-Dinitrotoluene	ND	10
2,6-Dinitrotoluene	ND	10
Fluoranthene	ND	10
Fluorene	ND	10
Hexachlorobenzene	ND	10
Hexachlorobutadiene	ND	10
Hexachlorocyclopentadiene	ND	10
Hexachloroethane	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Isophorone	ND	10
2-Methylnaphthalene	ND	10
2-Methylphenol	ND	15
3+4-Methylphenol	ND	10
N-Nitrosodi-n-propylamine	ND	10
N-Nitrosodimethylamine	ND	10
N-Nitrosodiphenylamine	ND	10
Naphthalene	ND	10
2-Nitroaniline	ND	50
3-Nitroaniline	ND	50
4-Nitroaniline	ND	20
Nitrobenzene	ND	10
2-Nitrophenol	ND	15

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Qualifiers: ND - Not Detected at the Reporting Limit; J - Analyte detected below quantitation limits; S - Spike Recovery outside accepted recovery limits; R - RPD outside accepted recovery limits; B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Method Blank

4-Nitrophenol	ND	50							
Pentachlorophenol	ND	50							
Phenanthrene	ND	10							
Phenol	ND	10							
Pyrene	ND	15							
Pyridine	ND	30							
1,2,4-Trichlorobenzene	ND	10							
2,4,5-Trichlorophenol	ND	10							
2,4,6-Trichlorophenol	ND	15							
Surr: 2,4,6-Tribromophenol	152.2	0	200	0	76.1	16.6	115	0	
Surr: 2-Fluorobiphenyl	80.52	0	100	0	80.5	37	95.7	0	
Surr: 2-Fluorophenol	145	0	200	0	72.5	9.54	89.8	0	
Surr: 4-Terphenyl-d14	91.38	0	100	0	91.4	51.2	125	0	
Surr: Nitrobenzene-d5	84.96	0	100	0	85.0	38	106	0	
Surr: Phenol-d6	107.1	0	200	0	53.6	10.7	63.4	0	

Sample ID **MB-7107** Batch ID: **7107** Test Code: **SW7470** Units: **mg/L** Analysis Date **12/21/2004** Prep Date **12/21/2004**
Client ID: Run ID: **MI-LA254_041221B** SeqNo: **327858**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	ND	0.0002									

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT

Method Blank

Sample ID **5ml rb** Batch ID: **R14072** Test Code: **SW8260B** Units: **µg/L** Analysis Date **12/17/2004** Prep Date

Client ID: Run ID: **THOR_041217A** SeqNo: **327056**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	1									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Method Blank

cis-1,3-Dichloropropene	ND	1
1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Method Blank

1,1,2-Trichloroethane	ND	1						
Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9.688	0	10	0	96.9	74.7	113	0
Surr: 4-Bromofluorobenzene	9.514	0	10	0	95.1	86.1	120	0
Surr: Dibromofluoromethane	9.844	0	10	0	98.4	93.1	112	0
Surr: Toluene-d8	9.814	0	10	0	98.1	83.1	112	0

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Method Blank

Sample ID **5ml rb-b** Batch ID: **R14073** Test Code: **SW8260B** Units: **µg/L** Analysis Date **12/18/2004** Prep Date

Client ID: Run ID: **THOR_041217B** SeqNo: **327062**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	ND	1									
Toluene	ND	1									
Ethylbenzene	ND	1									
Methyl tert-butyl ether (MTBE)	ND	1									
1,2,4-Trimethylbenzene	ND	1									
1,3,5-Trimethylbenzene	ND	1									
1,2-Dichloroethane (EDC)	ND	1									
1,2-Dibromoethane (EDB)	ND	1									
Naphthalene	ND	2									
1-Methylnaphthalene	ND	4									
2-Methylnaphthalene	ND	4									
Acetone	ND	10									
Bromobenzene	ND	1									
Bromochloromethane	ND	1									
Bromodichloromethane	ND	1									
Bromoform	ND	1									
Bromomethane	ND	2									
2-Butanone	ND	10									
Carbon disulfide	ND	10									
Carbon Tetrachloride	ND	1									
Chlorobenzene	ND	1									
Chloroethane	ND	2									
Chloroform	ND	1									
Chloromethane	ND	1									
2-Chlorotoluene	ND	1									
4-Chlorotoluene	ND	1									
cis-1,2-DCE	ND	1									
cis-1,3-Dichloropropene	ND	1									

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Method Blank

1,2-Dibromo-3-chloropropane	ND	2
Dibromochloromethane	ND	1
Dibromomethane	ND	2
1,2-Dichlorobenzene	ND	1
1,3-Dichlorobenzene	ND	1
1,4-Dichlorobenzene	ND	1
Dichlorodifluoromethane	ND	1
1,1-Dichloroethane	ND	1
1,1-Dichloroethene	ND	1
1,2-Dichloropropane	ND	1
1,3-Dichloropropane	ND	1
2,2-Dichloropropane	ND	1
1,1-Dichloropropene	ND	1
Hexachlorobutadiene	ND	1
2-Hexanone	ND	10
Isopropylbenzene	ND	1
4-Isopropyltoluene	ND	1
4-Methyl-2-pentanone	ND	10
Methylene Chloride	ND	3
n-Butylbenzene	ND	1
n-Propylbenzene	ND	1
sec-Butylbenzene	ND	1
Styrene	ND	1
tert-Butylbenzene	ND	1
1,1,1,2-Tetrachloroethane	ND	1
1,1,2,2-Tetrachloroethane	ND	1
Tetrachloroethene (PCE)	ND	1
trans-1,2-DCE	ND	1
trans-1,3-Dichloropropene	ND	1
1,2,3-Trichlorobenzene	ND	1
1,2,4-Trichlorobenzene	ND	1
1,1,1-Trichloroethane	ND	1
1,1,2-Trichloroethane	ND	1

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Method Blank

Trichloroethene (TCE)	ND	1						
Trichlorofluoromethane	ND	1						
1,2,3-Trichloropropane	ND	2						
Vinyl chloride	ND	1						
Xylenes, Total	ND	1						
Surr: 1,2-Dichloroethane-d4	9.848	0	10	0	98.5	74.7	113	0
Surr: 4-Bromofluorobenzene	9.2	0	10	0	92.0	86.1	120	0
Surr: Dibromofluoromethane	10.03	0	10	0	100	93.1	112	0
Surr: Toluene-d8	9.566	0	10	0	95.7	83.1	112	0

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT

Sample Duplicate

Sample ID **0412156-01D DUP** Batch ID: **7136** Test Code: **SW6010A** Units: **mg/L** Analysis Date **12/28/2004 10:23:33 A** Prep Date **12/27/2004**
Client ID: **Injection Well 4th** Run ID: **ICP_041228A** SeqNo: **329084**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	ND	0.02	0	0	0	0	0	0.01447	0	30	
Barium	0.3498	0.02	0	0	0	0	0	0.3251	7.33	30	
Cadmium	ND	0.002	0	0	0	0	0	0	0	30	
Calcium	95.58	1	0	0	0	0	0	94.87	0.744	30	
Chromium	0.004884	0.006	0	0	0	0	0	0.005122	0	30	J
Lead	0.005996	0.005	0	0	0	0	0	0.005232	13.6	30	
Magnesium	28.78	1	0	0	0	0	0	28.68	0.347	30	
Potassium	34.9	1	0	0	0	0	0	34.24	1.90	30	
Selenium	ND	0.05	0	0	0	0	0	0	0	30	
Silver	ND	0.005	0	0	0	0	0	0	0	30	

Sample ID **0412156-01D DUP** Batch ID: **7136** Test Code: **SW6010A** Units: **mg/L** Analysis Date **12/28/2004 11:15:54 A** Prep Date **12/27/2004**
Client ID: **Injection Well 4th** Run ID: **ICP_041228A** SeqNo: **329098**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Sodium	997	10	0	0	0	0	0	0			

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: *10-Jan-05*

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Sample Matrix Spike

Sample ID **0412156-01D MS** Batch ID: **7136** Test Code: **SW6010A** Units: **mg/L** Analysis Date **12/28/2004 10:27:23 A** Prep Date **12/27/2004**
Client ID: **Injection Well 4th** Run ID: **ICP_041228A** SeqNo: **329085**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5796	0.02	0.5	0.01447	113	75	125	0			
Barium	0.8507	0.02	0.5	0.3251	105	75	125	0			
Cadmium	0.5166	0.002	0.5	0	103	75	125	0			
Calcium	141.5	1	50	94.87	93.2	75	125	0			
Chromium	0.5051	0.006	0.5	0.005122	100	75	125	0			
Lead	0.4704	0.005	0.5	0.005232	93.0	75	125	0			
Magnesium	75.72	1	50	28.68	94.1	75	125	0			
Potassium	83.86	1	50	34.24	99.2	75	125	0			
Selenium	0.4519	0.05	0.5	0	90.4	75	125	0			
Silver	0.5002	0.005	0.5	0	100	75	125	0			

Sample ID **0412156-01D MSD** Batch ID: **7136** Test Code: **SW6010A** Units: **mg/L** Analysis Date **12/28/2004 10:31:15 A** Prep Date **12/27/2004**
Client ID: **Injection Well 4th** Run ID: **ICP_041228A** SeqNo: **329086**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Arsenic	0.5734	0.02	0.5	0.01447	112	75	125	0.5796	1.08	20	
Barium	0.9059	0.02	0.5	0.3251	116	75	125	0.8507	6.28	20	
Cadmium	0.5051	0.002	0.5	0	101	75	125	0.5166	2.26	20	
Calcium	138	1	50	94.87	86.2	75	125	141.5	2.47	20	
Chromium	0.4929	0.006	0.5	0.005122	97.6	75	125	0.5051	2.46	20	
Lead	0.4607	0.005	0.5	0.005232	91.1	75	125	0.4704	2.09	20	
Magnesium	74.15	1	50	28.68	90.9	75	125	75.72	2.10	20	
Potassium	83.15	1	50	34.24	97.8	75	125	83.86	0.856	20	
Selenium	0.4689	0.05	0.5	0	93.8	75	125	0.4519	3.69	20	
Silver	0.4855	0.005	0.5	0	97.1	75	125	0.5002	2.99	20	

Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT

Laboratory Control Spike - generic

Sample ID **LCS**	Batch ID: **R14062**	Test Code: **E300**	Units: **mg/L**	Analysis Date **12/16/2004**	Prep Date
Client ID:		Run ID: **LC_041216A**		SeqNo: **326902**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.575	0.1	5	0	91.5	90	110	0			
Sulfate	9.528	0.5	10	0	95.3	90	110	0			

Sample ID **LCS**	Batch ID: **R14062**	Test Code: **E300**	Units: **mg/L**	Analysis Date **12/16/2004**	Prep Date
Client ID:		Run ID: **LC_041216A**		SeqNo: **326917**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.505	0.1	5	0	90.1	90	110	0			
Sulfate	9.502	0.5	10	0	95.0	90	110	0			

Sample ID **LCS**	Batch ID: **R14208**	Test Code: **E300**	Units: **mg/L**	Analysis Date **1/4/2005**	Prep Date
Client ID:		Run ID: **LC_050104A**		SeqNo: **330552**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.737	0.1	5	0	94.7	90	110	0			
Sulfate	9.923	0.5	10	0	99.2	90	110	0			

Sample ID **LCS**	Batch ID: **R14208**	Test Code: **E300**	Units: **mg/L**	Analysis Date **1/5/2005**	Prep Date
Client ID:		Run ID: **LC_050104A**		SeqNo: **330646**	

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	4.707	0.1	5	0	94.1	90	110	0			
Sulfate	9.876	0.5	10	0	98.8	90	110	0			

Qualifiers:
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B - Analyte detected in the associated Method Blank

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CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **100ng lcs** Batch ID: **R14072** Test Code: **SW8260B** Units: **µg/L** Analysis Date **12/17/2004** Prep Date

Client ID: Run ID: **THOR_041217A** SeqNo: **327057**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	24.83	1	20	0	124	80	130	0			
Toluene	23.01	1	20	0	115	77.8	122	0			
Chlorobenzene	23.76	1	20	0	119	76.2	130	0			
1,1-Dichloroethene	25.76	1	20	0	129	73.3	130	0			
Trichloroethene (TCE)	22.63	1	20	0	113	76.9	130	0			

Sample ID **100ng lcs-b** Batch ID: **R14073** Test Code: **SW8260B** Units: **µg/L** Analysis Date **12/18/2004** Prep Date

Client ID: Run ID: **THOR_041217B** SeqNo: **327063**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Benzene	23.02	1	20	0	115	80	130	0			
Toluene	21.63	1	20	0	108	77.8	122	0			
Chlorobenzene	21.73	1	20	0	109	76.2	130	0			
1,1-Dichloroethene	24.31	1	20	0	122	73.3	130	0			
Trichloroethene (TCE)	20.9	1	20	0	105	76.9	130	0			

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Qualifiers:
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B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **lcs-7081** Batch ID: **7081** Test Code: **SW8270C** Units: **µg/L** Analysis Date **12/21/2004** Prep Date **12/17/2004**
Client ID: Run ID: **ELMO_041221A** SeqNo: **327953**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	80.4	10	100	0	80.4	11	123	0			
4-Chloro-3-methylphenol	169.5	20	200	0	84.8	15.4	119	0			
2-Chlorophenol	172.2	10	200	0	86.1	12.2	122	0			
1,4-Dichlorobenzene	81.06	10	100	0	81.1	16.9	100	0			
2,4-Dinitrotoluene	84.08	10	100	0	84.1	13	138	0			
N-Nitrosodi-n-propylamine	75.76	10	100	0	75.8	9.93	122	0			
4-Nitrophenol	86.86	50	200	0	43.4	-20.5	87.4	0			
Pentachlorophenol	162.1	50	200	0	81.1	-0.355	114	0			
Phenol	98.58	10	200	0	49.3	7.53	73.1	0			
Pyrene	90.82	15	100	0	90.8	12.6	140	0			
1,2,4-Trichlorobenzene	77.66	10	100	0	77.7	17.4	98.7	0			

Sample ID **lcsd-7081** Batch ID: **7081** Test Code: **SW8270C** Units: **µg/L** Analysis Date **12/21/2004** Prep Date **12/17/2004**
Client ID: Run ID: **ELMO_041221A** SeqNo: **327958**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Acenaphthene	82.72	10	100	0	82.7	11	123	80.4	2.84	30.5	
4-Chloro-3-methylphenol	162.4	20	200	0	81.2	15.4	119	169.5	4.30	28.6	
2-Chlorophenol	162.1	10	200	0	81.1	12.2	122	172.2	6.01	107	
1,4-Dichlorobenzene	82.06	10	100	0	82.1	16.9	100	81.06	1.23	62.1	
2,4-Dinitrotoluene	86.48	10	100	0	86.5	13	138	84.08	2.81	14.7	
N-Nitrosodi-n-propylamine	74.64	10	100	0	74.6	9.93	122	75.76	1.49	30.3	
4-Nitrophenol	49.82	50	200	0	24.9	12.5	87.4	86.86	0	36.3	J
Pentachlorophenol	80.31	50	200	0	40.2	3.55	114	162.1	67.5	49	R
Phenol	92.98	10	200	0	46.5	7.53	73.1	98.58	5.85	52.4	
Pyrene	90.24	15	100	0	90.2	12.6	140	90.82	0.641	16.3	
1,2,4-Trichlorobenzene	80.88	10	100	0	80.9	17.4	98.7	77.66	4.06	36.4	

Qualifiers:
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B - Analyte detected in the associated Method Blank

CLIENT: San Juan Refining
Work Order: 0412156
Project: Injection Well 4th Qtr 2004

QC SUMMARY REPORT
Laboratory Control Spike - generic

Sample ID **LCS-7107** Batch ID: **7107** Test Code: **SW7470** Units: **mg/L** Analysis Date **12/21/2004** Prep Date **12/21/2004**
Client ID: Run ID: **MI-LA254_041221B** SeqNo: **327859**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.004669	0.0002	0.005	0	93.4	75.2	134	0			

Sample ID **LCSD-7107** Batch ID: **7107** Test Code: **SW7470** Units: **mg/L** Analysis Date **12/21/2004** Prep Date **12/21/2004**
Client ID: Run ID: **MI-LA254_041221B** SeqNo: **327883**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Mercury	0.00461	0.0002	0.005	0	92.2	75.2	134	0.004669	1.27	0	

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Qualifiers:
ND - Not Detected at the Reporting Limit
J - Analyte detected below quantitation limits
S - Spike Recovery outside accepted recovery limits
R - RPD outside accepted recovery limits
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name SJR | Date and Time Received:

Work Order Number 0412156 | Received by AMG

Checklist completed by Gonzales 12/16/04
Signature | Date

Matrix | Carrier name UPS

Shipping container/cooler in good condition?	Yes ☑	No ☐	Not Present ☐		
Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	Not Present ☑	Not Shipped ☐	
Custody seals intact on sample bottles?	Yes ☐	No ☐	N/A ☑		
Chain of custody present?	Yes ☑	No ☐			
Chain of custody signed when relinquished and received?	Yes ☑	No ☐			
Chain of custody agrees with sample labels?	Yes ☑	No ☐			
Samples in proper container/bottle?	Yes ☑	No ☐			
Sample containers intact?	Yes ☑	No ☐			
Sufficient sample volume for indicated test?	Yes ☑	No ☐			
All samples received within holding time?	Yes ☑	No ☐			
Water - VOA vials have zero headspace?	No VOA vials submitted ☐	Yes ☑	No ☐		
Water - pH acceptable upon receipt?	Yes ☐	No ☐	N/A ☑		
Container/Temp Blank temperature?	1°	*4° C ± 2 Acceptable* If given sufficient time to cool.			

COMMENTS:

Client contacted _____ Date contacted: _____ Person contacted _____

Contacted by: _____ Regarding _____

Comments: _____

Corrective Action _____

CHAIN-OF-CUSTODY RECORD

QA / QC Package:
Std ☐ Level 4 ☐
Other: _____

Client: San Juan Refining

Project Name: Injection Well - 4th QTR 2004

Address: #50 CR 4990
Bloomfield, NM
87413

Project #:

Project Manager:

Phone #: 505-632-4161

Sampler: Cindy Huntado

Fax #: 505-632-3911

Sample Temperature: 1.C

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative $HgCl_2$	Preservative HNO_3	Preservative	HEAL No.
12/15/04	910AM	H_2O	Injection Well - 4th	3-VOA	X			041256 1
				1-liter			Amber	1
				1-500ml		X		1
				1-500 ml				1
				1-500 ml				1
				1-250 ml			NaOH	1
				1-250 ml			Zn Acetate	1
			Trip Blank					-2

HALL ENVIRONMENTAL ANALYSIS LABORATORY
4901 Hawkins NE, Suite D
Albuquerque, New Mexico 87109
Tel. 505.345.3975 Fax 505.345.4107
www.hallenvironmental.com

ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals, Na, K, Mg, Ca	Anions (F, Cl, NO_3, NO_2, PO_4, SO_4)	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	EC, pH, SO4, Alk, Cl	Ignitability, Corrosivity	Reactivity	Sulfide	Air Bubbles or Headspace (Y or N)
										X						
											X					
							X									
												X				
													X			
														X		
															X	

Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)
12/15/04	930 Am	Cindy Huntado	Gonzales 12/16/04 1001
Date:	Time:	Relinquished By: (Signature)	Received By: (Signature)

Remarks: