

Summary Report

Mary Martino
Kinder Morgan-Colorado Springs
2 North Nevada Avenue
Colorado Springs, CO 80903

Report Date: August 17, 2016

Work Order: 16081001



Project Location: Lea County, NM
Project Name: EPNG Line 3031 Spike Test
Project Number: AFE 403828

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
426114	Rupture #5 Background	soil	2016-08-04	09:45	2016-08-08
426115	Rupture #5 Contaminated	soil	2016-08-04	09:45	2016-08-08
426117	Rupture #6 Background	soil	2016-08-04	09:50	2016-08-08
426118	Rupture #6 Contaminated	soil	2016-08-04	09:50	2016-08-08

Sample - Field Code	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
426114 - Rupture #5 Background	<50.0	<4.00
426115 - Rupture #5 Contaminated	<50.0	<4.00
426117 - Rupture #6 Background	<50.0	<4.00
426118 - Rupture #6 Contaminated	<50.0	<4.00

Sample: 426114 - Rupture #5 Background

Param	Flag	Result	Units	RL
Chloride		<250	mg/Kg	50
Bromochloromethane		<20.0	µg/Kg	20
Dichlorodifluoromethane	Qc	<20.0	µg/Kg	20
Chloromethane (methyl chloride)	Qc	<20.0	µg/Kg	20
Vinyl Chloride		<20.0	µg/Kg	20
Bromomethane (methyl bromide)	Qc	<100	µg/Kg	100
Chloroethane		<20.0	µg/Kg	20
Trichlorofluoromethane		<20.0	µg/Kg	20
Acetone	Qc, Qr	<200	µg/Kg	200
Iodomethane (methyl iodide)		<100	µg/Kg	100
Carbon Disulfide		<20.0	µg/Kg	20

continued ...

sample 426114 continued ...

Param	Flag	Result	Units	RL
Acrylonitrile		<20.0	µg/Kg	20
2-Butanone (MEK)	Qc	<100	µg/Kg	100
4-Methyl-2-pentanone (MIBK)	Qc	<100	µg/Kg	100
2-Hexanone	Qc	<100	µg/Kg	100
trans 1,4-Dichloro-2-butene	Qc	<200	µg/Kg	200
1,1-Dichloroethene		<20.0	µg/Kg	20
Methylene chloride		<100	µg/Kg	100
MTBE		<20.0	µg/Kg	20
trans-1,2-Dichloroethene		<20.0	µg/Kg	20
1,1-Dichloroethane		<20.0	µg/Kg	20
cis-1,2-Dichloroethene		<20.0	µg/Kg	20
2,2-Dichloropropane		<20.0	µg/Kg	20
1,2-Dichloroethane (EDC)		<20.0	µg/Kg	20
Chloroform		<20.0	µg/Kg	20
1,1,1-Trichloroethane		<20.0	µg/Kg	20
1,1-Dichloropropene		<20.0	µg/Kg	20
Benzene		<20.0	µg/Kg	20
Carbon Tetrachloride		<20.0	µg/Kg	20
1,2-Dichloropropane		<20.0	µg/Kg	20
Trichloroethene (TCE)		<20.0	µg/Kg	20
Dibromomethane (methylene bromide)		<20.0	µg/Kg	20
Bromodichloromethane		<20.0	µg/Kg	20
2-Chloroethyl vinyl ether		<20.0	µg/Kg	20
cis-1,3-Dichloropropene		<20.0	µg/Kg	20
trans-1,3-Dichloropropene		<20.0	µg/Kg	20
Toluene		<20.0	µg/Kg	20
1,1,2-Trichloroethane		<20.0	µg/Kg	20
1,3-Dichloropropane		<20.0	µg/Kg	20
Dibromochloromethane		<20.0	µg/Kg	20
1,2-Dibromoethane (EDB)		<20.0	µg/Kg	20
Tetrachloroethene (PCE)		<20.0	µg/Kg	20
Chlorobenzene		<20.0	µg/Kg	20
1,1,1,2-Tetrachloroethane		<20.0	µg/Kg	20
Ethylbenzene		<20.0	µg/Kg	20
m,p-Xylene		<20.0	µg/Kg	20
Bromoform		<20.0	µg/Kg	20
Styrene		<20.0	µg/Kg	20
o-Xylene		<20.0	µg/Kg	20
1,1,2,2-Tetrachloroethane	Qc	<20.0	µg/Kg	20
2-Chlorotoluene		<20.0	µg/Kg	20
1,2,3-Trichloropropane		<20.0	µg/Kg	20
Isopropylbenzene		<20.0	µg/Kg	20
Bromobenzene		<20.0	µg/Kg	20
n-Propylbenzene		<20.0	µg/Kg	20
1,3,5-Trimethylbenzene		<20.0	µg/Kg	20
tert-Butylbenzene		<20.0	µg/Kg	20
1,2,4-Trimethylbenzene		<20.0	µg/Kg	20

continued ...

sample 426114 continued ...

Param	Flag	Result	Units	RL
1,4-Dichlorobenzene (para)		<20.0	µg/Kg	20
sec-Butylbenzene		<20.0	µg/Kg	20
1,3-Dichlorobenzene (meta)		<20.0	µg/Kg	20
p-Isopropyltoluene		<20.0	µg/Kg	20
4-Chlorotoluene		<20.0	µg/Kg	20
1,2-Dichlorobenzene (ortho)		<20.0	µg/Kg	20
n-Butylbenzene		<20.0	µg/Kg	20
1,2-Dibromo-3-chloropropane	Qc	<100	µg/Kg	100
1,2,3-Trichlorobenzene	Qr	<100	µg/Kg	100
1,2,4-Trichlorobenzene		<100	µg/Kg	100
Naphthalene	Qr	<100	µg/Kg	100
Hexachlorobutadiene		<100	µg/Kg	100

Sample: 426115 - Rupture #5 Contaminated

Param	Flag	Result	Units	RL
Chloride		<250	mg/Kg	50
Bromochloromethane		<20.0	µg/Kg	20
Dichlorodifluoromethane	Qc	<20.0	µg/Kg	20
Chloromethane (methyl chloride)	Qc	<20.0	µg/Kg	20
Vinyl Chloride		<20.0	µg/Kg	20
Bromomethane (methyl bromide)	Qc	<100	µg/Kg	100
Chloroethane		<20.0	µg/Kg	20
Trichlorofluoromethane		<20.0	µg/Kg	20
Acetone	Qc, Qr	<200	µg/Kg	200
Iodomethane (methyl iodide)		<100	µg/Kg	100
Carbon Disulfide		<20.0	µg/Kg	20
Acrylonitrile		<20.0	µg/Kg	20
2-Butanone (MEK)	Qc	<100	µg/Kg	100
4-Methyl-2-pentanone (MIBK)	Qc	<100	µg/Kg	100
2-Hexanone	Qc	<100	µg/Kg	100
trans 1,4-Dichloro-2-butene	Qc	<200	µg/Kg	200
1,1-Dichloroethene		<20.0	µg/Kg	20
Methylene chloride		<100	µg/Kg	100
MTBE		<20.0	µg/Kg	20
trans-1,2-Dichloroethene		<20.0	µg/Kg	20
1,1-Dichloroethane		<20.0	µg/Kg	20
cis-1,2-Dichloroethene		<20.0	µg/Kg	20
2,2-Dichloropropane		<20.0	µg/Kg	20
1,2-Dichloroethane (EDC)		<20.0	µg/Kg	20
Chloroform		<20.0	µg/Kg	20
1,1,1-Trichloroethane		<20.0	µg/Kg	20
1,1-Dichloropropene		<20.0	µg/Kg	20
Benzene		<20.0	µg/Kg	20
Carbon Tetrachloride		<20.0	µg/Kg	20
1,2-Dichloropropane		<20.0	µg/Kg	20

continued ...

sample 426115 continued ...

Param	Flag	Result	Units	RL
Trichloroethene (TCE)		<20.0	µg/Kg	20
Dibromomethane (methylene bromide)		<20.0	µg/Kg	20
Bromodichloromethane		<20.0	µg/Kg	20
2-Chloroethyl vinyl ether		<20.0	µg/Kg	20
cis-1,3-Dichloropropene		<20.0	µg/Kg	20
trans-1,3-Dichloropropene		<20.0	µg/Kg	20
Toluene		<20.0	µg/Kg	20
1,1,2-Trichloroethane		<20.0	µg/Kg	20
1,3-Dichloropropane		<20.0	µg/Kg	20
Dibromochloromethane		<20.0	µg/Kg	20
1,2-Dibromoethane (EDB)		<20.0	µg/Kg	20
Tetrachloroethene (PCE)		<20.0	µg/Kg	20
Chlorobenzene		<20.0	µg/Kg	20
1,1,1,2-Tetrachloroethane		<20.0	µg/Kg	20
Ethylbenzene		<20.0	µg/Kg	20
m,p-Xylene		<20.0	µg/Kg	20
Bromoform		<20.0	µg/Kg	20
Styrene		<20.0	µg/Kg	20
o-Xylene		<20.0	µg/Kg	20
1,1,2,2-Tetrachloroethane	Qc	<20.0	µg/Kg	20
2-Chlorotoluene		<20.0	µg/Kg	20
1,2,3-Trichloropropane		<20.0	µg/Kg	20
Isopropylbenzene		<20.0	µg/Kg	20
Bromobenzene		<20.0	µg/Kg	20
n-Propylbenzene		<20.0	µg/Kg	20
1,3,5-Trimethylbenzene		<20.0	µg/Kg	20
tert-Butylbenzene		<20.0	µg/Kg	20
1,2,4-Trimethylbenzene		<20.0	µg/Kg	20
1,4-Dichlorobenzene (para)		<20.0	µg/Kg	20
sec-Butylbenzene		<20.0	µg/Kg	20
1,3-Dichlorobenzene (meta)		<20.0	µg/Kg	20
p-Isopropyltoluene		<20.0	µg/Kg	20
4-Chlorotoluene		<20.0	µg/Kg	20
1,2-Dichlorobenzene (ortho)		<20.0	µg/Kg	20
n-Butylbenzene		<20.0	µg/Kg	20
1,2-Dibromo-3-chloropropane	Qc	<100	µg/Kg	100
1,2,3-Trichlorobenzene	Qr	<100	µg/Kg	100
1,2,4-Trichlorobenzene		<100	µg/Kg	100
Naphthalene	Qr	<100	µg/Kg	100
Hexachlorobutadiene		<100	µg/Kg	100

Sample: 426117 - Rupture #6 Background

Param	Flag	Result	Units	RL
Chloride		<250	mg/Kg	50
Bromochloromethane		<20.0	µg/Kg	20

continued ...

sample 426117 continued ...

Param	Flag	Result	Units	RL
Dichlorodifluoromethane	Qc	<20.0	µg/Kg	20
Chloromethane (methyl chloride)	Qc	<20.0	µg/Kg	20
Vinyl Chloride		<20.0	µg/Kg	20
Bromomethane (methyl bromide)	Qc	<100	µg/Kg	100
Chloroethane		<20.0	µg/Kg	20
Trichlorofluoromethane		<20.0	µg/Kg	20
Acetone	Qc, Qr	<200	µg/Kg	200
Iodomethane (methyl iodide)		<100	µg/Kg	100
Carbon Disulfide		<20.0	µg/Kg	20
Acrylonitrile		<20.0	µg/Kg	20
2-Butanone (MEK)	Qc	<100	µg/Kg	100
4-Methyl-2-pentanone (MIBK)	Qc	<100	µg/Kg	100
2-Hexanone	Qc	<100	µg/Kg	100
trans 1,4-Dichloro-2-butene	Qc	<200	µg/Kg	200
1,1-Dichloroethene		<20.0	µg/Kg	20
Methylene chloride		<100	µg/Kg	100
MTBE		<20.0	µg/Kg	20
trans-1,2-Dichloroethene		<20.0	µg/Kg	20
1,1-Dichloroethane		<20.0	µg/Kg	20
cis-1,2-Dichloroethene		<20.0	µg/Kg	20
2,2-Dichloropropane		<20.0	µg/Kg	20
1,2-Dichloroethane (EDC)		<20.0	µg/Kg	20
Chloroform		<20.0	µg/Kg	20
1,1,1-Trichloroethane		<20.0	µg/Kg	20
1,1-Dichloropropene		<20.0	µg/Kg	20
Benzene		<20.0	µg/Kg	20
Carbon Tetrachloride		<20.0	µg/Kg	20
1,2-Dichloropropane		<20.0	µg/Kg	20
Trichloroethene (TCE)		<20.0	µg/Kg	20
Dibromomethane (methylene bromide)		<20.0	µg/Kg	20
Bromodichloromethane		<20.0	µg/Kg	20
2-Chloroethyl vinyl ether		<20.0	µg/Kg	20
cis-1,3-Dichloropropene		<20.0	µg/Kg	20
trans-1,3-Dichloropropene		<20.0	µg/Kg	20
Toluene		<20.0	µg/Kg	20
1,1,2-Trichloroethane		<20.0	µg/Kg	20
1,3-Dichloropropane		<20.0	µg/Kg	20
Dibromochloromethane		<20.0	µg/Kg	20
1,2-Dibromoethane (EDB)		<20.0	µg/Kg	20
Tetrachloroethene (PCE)		<20.0	µg/Kg	20
Chlorobenzene		<20.0	µg/Kg	20
1,1,1,2-Tetrachloroethane		<20.0	µg/Kg	20
Ethylbenzene		<20.0	µg/Kg	20
m,p-Xylene		<20.0	µg/Kg	20
Bromoform		<20.0	µg/Kg	20
Styrene		<20.0	µg/Kg	20
o-Xylene		<20.0	µg/Kg	20

continued ...

sample 426117 continued ...

Param	Flag	Result	Units	RL
1,1,2,2-Tetrachloroethane	Qc	<20.0	µg/Kg	20
2-Chlorotoluene		<20.0	µg/Kg	20
1,2,3-Trichloropropane		<20.0	µg/Kg	20
Isopropylbenzene		<20.0	µg/Kg	20
Bromobenzene		<20.0	µg/Kg	20
n-Propylbenzene		<20.0	µg/Kg	20
1,3,5-Trimethylbenzene		<20.0	µg/Kg	20
tert-Butylbenzene		<20.0	µg/Kg	20
1,2,4-Trimethylbenzene		<20.0	µg/Kg	20
1,4-Dichlorobenzene (para)		<20.0	µg/Kg	20
sec-Butylbenzene		<20.0	µg/Kg	20
1,3-Dichlorobenzene (meta)		<20.0	µg/Kg	20
p-Isopropyltoluene		<20.0	µg/Kg	20
4-Chlorotoluene		<20.0	µg/Kg	20
1,2-Dichlorobenzene (ortho)		<20.0	µg/Kg	20
n-Butylbenzene		<20.0	µg/Kg	20
1,2-Dibromo-3-chloropropane	Qc	<100	µg/Kg	100
1,2,3-Trichlorobenzene	Qr	<100	µg/Kg	100
1,2,4-Trichlorobenzene		<100	µg/Kg	100
Naphthalene	Qr	<100	µg/Kg	100
Hexachlorobutadiene		<100	µg/Kg	100

Sample: 426118 - Rupture #6 Contaminated

Param	Flag	Result	Units	RL
Chloride		<250	mg/Kg	50
Bromochloromethane		<20.0	µg/Kg	20
Dichlorodifluoromethane	Qc	<20.0	µg/Kg	20
Chloromethane (methyl chloride)	Qc	<20.0	µg/Kg	20
Vinyl Chloride		<20.0	µg/Kg	20
Bromomethane (methyl bromide)	Qc, Qs	<100	µg/Kg	100
Chloroethane	Qs	<20.0	µg/Kg	20
Trichlorofluoromethane		<20.0	µg/Kg	20
Acetone	Qc, Qr	<200	µg/Kg	200
Iodomethane (methyl iodide)		<100	µg/Kg	100
Carbon Disulfide		<20.0	µg/Kg	20
Acrylonitrile		<20.0	µg/Kg	20
2-Butanone (MEK)	Qc	<100	µg/Kg	100
4-Methyl-2-pentanone (MIBK)	Qc	<100	µg/Kg	100
2-Hexanone	Qc	<100	µg/Kg	100
trans 1,4-Dichloro-2-butene	Qc	<200	µg/Kg	200
1,1-Dichloroethene		<20.0	µg/Kg	20
Methylene chloride		<100	µg/Kg	100
MTBE		<20.0	µg/Kg	20
trans-1,2-Dichloroethene		<20.0	µg/Kg	20
1,1-Dichloroethane		<20.0	µg/Kg	20

continued ...

sample 426118 continued ...

Param	Flag	Result	Units	RL
cis-1,2-Dichloroethene		<20.0	µg/Kg	20
2,2-Dichloropropane		<20.0	µg/Kg	20
1,2-Dichloroethane (EDC)		<20.0	µg/Kg	20
Chloroform		<20.0	µg/Kg	20
1,1,1-Trichloroethane		<20.0	µg/Kg	20
1,1-Dichloropropene		<20.0	µg/Kg	20
Benzene		<20.0	µg/Kg	20
Carbon Tetrachloride	Qs	<20.0	µg/Kg	20
1,2-Dichloropropane		<20.0	µg/Kg	20
Trichloroethene (TCE)		<20.0	µg/Kg	20
Dibromomethane (methylene bromide)		<20.0	µg/Kg	20
Bromodichloromethane	Qs	<20.0	µg/Kg	20
2-Chloroethyl vinyl ether		<20.0	µg/Kg	20
cis-1,3-Dichloropropene		<20.0	µg/Kg	20
trans-1,3-Dichloropropene		<20.0	µg/Kg	20
Toluene		<20.0	µg/Kg	20
1,1,2-Trichloroethane		<20.0	µg/Kg	20
1,3-Dichloropropane		<20.0	µg/Kg	20
Dibromochloromethane	Qs	<20.0	µg/Kg	20
1,2-Dibromoethane (EDB)		<20.0	µg/Kg	20
Tetrachloroethene (PCE)		<20.0	µg/Kg	20
Chlorobenzene		<20.0	µg/Kg	20
1,1,1,2-Tetrachloroethane	Qs	<20.0	µg/Kg	20
Ethylbenzene		<20.0	µg/Kg	20
m,p-Xylene		<20.0	µg/Kg	20
Bromoform	Qs	<20.0	µg/Kg	20
Styrene		<20.0	µg/Kg	20
o-Xylene		<20.0	µg/Kg	20
1,1,2,2-Tetrachloroethane	Qc, Qs	<20.0	µg/Kg	20
2-Chlorotoluene		<20.0	µg/Kg	20
1,2,3-Trichloropropane	Qs	<20.0	µg/Kg	20
Isopropylbenzene		<20.0	µg/Kg	20
Bromobenzene		<20.0	µg/Kg	20
n-Propylbenzene		<20.0	µg/Kg	20
1,3,5-Trimethylbenzene		<20.0	µg/Kg	20
tert-Butylbenzene		<20.0	µg/Kg	20
1,2,4-Trimethylbenzene		<20.0	µg/Kg	20
1,4-Dichlorobenzene (para)		<20.0	µg/Kg	20
sec-Butylbenzene		<20.0	µg/Kg	20
1,3-Dichlorobenzene (meta)		<20.0	µg/Kg	20
p-Isopropyltoluene		<20.0	µg/Kg	20
4-Chlorotoluene		<20.0	µg/Kg	20
1,2-Dichlorobenzene (ortho)		<20.0	µg/Kg	20
n-Butylbenzene		<20.0	µg/Kg	20
1,2-Dibromo-3-chloropropane	Qc, Qs	<100	µg/Kg	100
1,2,3-Trichlorobenzene	Qr	<100	µg/Kg	100
1,2,4-Trichlorobenzene		<100	µg/Kg	100

continued ...

sample 426118 continued ...

Param	Flag	Result	Units	RL
Naphthalene	Q _r	<100	μg/Kg	100
Hexachlorobutadiene		<100	μg/Kg	100
